

Valencia Acres Community Development District

Engineer's Report
Infrastructure Improvements

Prepared for
Valencia Acres Community Development District
Board of Supervisors
Miami-Dade County, Florida

Prepared by
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February 17, 2004
Amended June 3, 2004

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I. Introduction.

The Valencia Acres Community Development District (the District) was created for the purpose of financing and managing the acquisition, construction and maintenance of the infrastructure of Valencia Acres, a 63.89 gross acre residential development located in Southwest Miami-Dade County, Florida. The plat of the Valencia Acres project includes a school site located on the northwest corner of the development. The school site measures approximately 3.67 acres and is not part of the 63.89 acre District. The infrastructure is a network of roadway, stormwater management, water and sanitary sewer systems that will give access and service to 144 single family dwelling units.

See Exhibit 1 for a graphical representation of the development.

Construction of the infrastructure is already underway, with clearing, grubbing and grading activities currently taking place. As of the date of this report, it is estimated that the infrastructure will be completed according to the following schedule:

Earthwork: Second quarter, 2004.

Sanitary Sewer System: Third quarter, 2004.

Water Distribution System: Third quarter, 2004.

Stormwater Management: Fourth quarter, 2004.

Roadway Improvements: First quarter, 2005.

II. District Description.

The District was established under Ordinance No. 03-208 of the Miami-Dade County Commission. The Ordinance was passed and adopted on October 7, 2003 and became effective ten days later, on October 17, 2003.

The District is located in Section 2, Township 56 South, Range 39 East, in Miami-Dade County, Florida. It is bounded by SW 133 Avenue on the west, SW 184 Street (Eureka Drive) on the north, SW 130 Avenue on the east, and SW 192 Street on the south. The development is located within Zip Code 33177.

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 general public.

The development may be accessed from the north from SW 184 Street (Eureka Drive) at SW 132 Place, SW 132 Avenue and at SW 130 Avenue. From the south the project may be entered from SW 192 Street at SW 132 Avenue. From these entrances a series of interior roads originate in order to provide access to the dwelling units. SW 184 Street is being widened in front of the project and utility work is taking place. The interior streets consist of crowned sections with grassed swales on the sides. The streets are located within 50 foot right of ways, with pavement widths of 20 feet (Ft) and 15 foot swales on each side. The typical cross sections for the interior streets consist of a 12 inch stabilized subgrade, an 8 inch limerock base and a 1 inch asphalt course. NW 132 Avenue is an existing road within a 70 foot right of way. As part of the road and stormwater management infrastructure, the existing swales of NW 132 Avenue will be re-graded. All roads are to be constructed to Miami-Dade County Public Works Standards.

The roads within this development will be open to the public and will be owned and maintained by the

County.

See Exhibits 2A and 2B for a graphical representation of the roadway improvements.

2. Stormwater Management.

The stormwater management facilities consist of inlets, storm pipes and approximately 1,997 Linear Feet (LF) of exfiltration trenches. The pipes within the exfiltration trenches vary in size from 15 to 24 inches in diameter. The stormwater management system has been designed so that it retains the storm runoff within the development at levels that provide flood protection for the road and residential dwelling units.

In accordance with the Federal Emergency Management Agency (FEMA, Map Number 12025C0265, Panel 269 Suffix J dated March 2, 1994) approximately the 400 most northerly feet of the development fall within Zone AH, with 100-year flood elevation of 9 Ft above the National Geodetic Vertical Datum of 1929 (NGVD). The rest of the project falls within Zone X, which are areas located outside the 500-year flood zone. In accordance with the Dade County Flood Criteria Map (Plat Book 120 Page 13), the minimum allowable elevation of the ground surface and crown grade of roads within this development varies between elevation 6.5 Ft and 8.3 Ft above the Mean Sea Level National Datum of 1929. The finish floor of the residences will be set at elevations that range between 9.87 and 12.88 Ft above NGVD. The crown of the roads will vary from elevation 7.75 to 11.40 Ft above NGVD.

See Exhibits 3A and 3B for a graphical representation of the stormwater management system.

3. Water Distribution System.

The water distribution system is composed of variable pipe sizes ranging from 6 to 12 inch diameters for water service and fire protection. The water distribution system will be connected to an existing 16 inch water main on SW 184 Street, to a 12 inch water main on SW 196 Street and to existing 8 inch water mains at SW 185 Terrace and SW 189 Street. The existing facilities are owned by the Miami-Dade County Water and Sewer Department (WASD). The proposed water system encompasses approximately 3,193 LF of 12 inch pipe, 7,860 LF of 8 inch pipe, 575 LF of 6 inch pipe, 6 single services, 69 dual services and 23 fire hydrants.

When completed, the water distribution system will be donated to WASD for operation and maintenance.

See Exhibits 4A and 4B for a graphical representation of the water distribution system.

4. Sanitary Sewer System.

The sanitary sewer collection system consists of approximately 11,914 LF of gravity pipe that varies from 8 to 10 inches in diameter, 65 service laterals, and 42 manholes. The system also includes the construction of a lift station and approximately 1,120 LF of 8 inch Ductile Iron Pipe (DIP) force main.

When completed, the sanitary sewer collection system will be donated to WASD for operation and maintenance.

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
Roads within the development	Miami-Dade County	Miami-Dade County
Stormwater Management:	Miami-Dade County	Miami-Dade County
Water Distribution System	WASD	WASD
Sanitary Sewer System	WASD	WASD

V. Permitting Status.**1. Platting.**

Tentative Plat T-21472 was approved.

2. Roadway, Paving, Grading and Drainage Permits.

Approval by Miami-Dade County Public Works Department on December 17, 2003 (Traffic) and on January 16, 2004 (Paving and Drainage). Permit Number T-21472.

3. Stormwater Management System and Wetlands

Approval by Miami-Dade County Department of Environmental Resources Management (DERM), Water Control Section on February 3, 2004. Surface Water Management Standard General Permit No. 13-02244-P.

4. Water Distribution System

Approval by WASD on January 5, 2004. Permit Number DW 2003-228.

Approval by Miami-Dade County Fire Department on January 14, 2004. Permit Number 04340-00013.

Approval by Miami-Dade Department of Health on February 10, 2004. Permit Number 216896-172 DSGP.

Approval by DERM on February 12, 2004. Permit Number WE 2004-48.

5. Sanitary Sewer System.

Approval of gravity system by WASD on January 5, 2004. Permit Number DS 2003-643.

Approval of gravity system by DERM on March 15, 2004. Permit Number SE 2004-007.

Approval of pump station by WASD on February 18, 2004. Permit Number SB 2003-643.

Approval of pump station by DERM on March 15, 2004. Permit Number SE 2004-007.

VI. Estimate of Capital Improvement Costs.

Roadway Improvements	\$ 738,667.13
Stormwater Management	\$ 316,499.27
Water Distribution System	\$ 550,275.14
Sanitary Sewer System	\$ 982,005.09
Total	\$2,587,446.64

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

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 Cutler Cay 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 Valencia Acres Community Development District.

Juan R. Alvarez, PE
Florida Registration No. 38522
Alvarez Engineers, Inc.
June 3, 2004.

TABLES AND EXHIBITS

**VALENCIA ACRES CDD
Construction Cost Estimate
Roadway Improvements**

Description of Work	Quantity	Unit	Unit Price (\$/Unit)	Total Estimated Cost (\$)
Clearing & Grubbing (Road R/W's)	14.83	AC	7,650.00	113,415.29
Earthwork (Road R/W's)	14.83	AC	3,500.00	51,889.35
12" Subgrade (Public Roads)	23,276	SY	0.50	11,637.78
8" Baserock	23,276	SY	5.75	133,834.44
6" Baserock (CB Aprons)	506	SY	5.50	2,780.56
1" Asphaltic Concrete (CB Aprons)	506	SY	4.00	2,022.22
1" A.C.S.C.	19,522	SY	4.50	87,850.00
Curb & Gutter	233	LF	8.75	2,039.63
Finish Soil layer (swales)	40,650	SY	0.75	30,487.50
Sod (swales)	40,650	SY	2.50	101,625.00
Signing and Pavement Marking	14.83	AC	2,350.00	34,839.99
Surveying and As-Builts	4%	LS	459,006.46	18,360.26
Maintenance of Traffic	1	LS	20,000.00	20,000.00
Densities	100	EA	60.00	6,000.00
Permits	1	LS	20,000.00	20,000.00
Soft Costs (Eng and Prof. Fees)	6%	LS	636,782.01	38,206.92
Contingency	10%	LS	636,782.01	63,678.20
Total				738,667.13

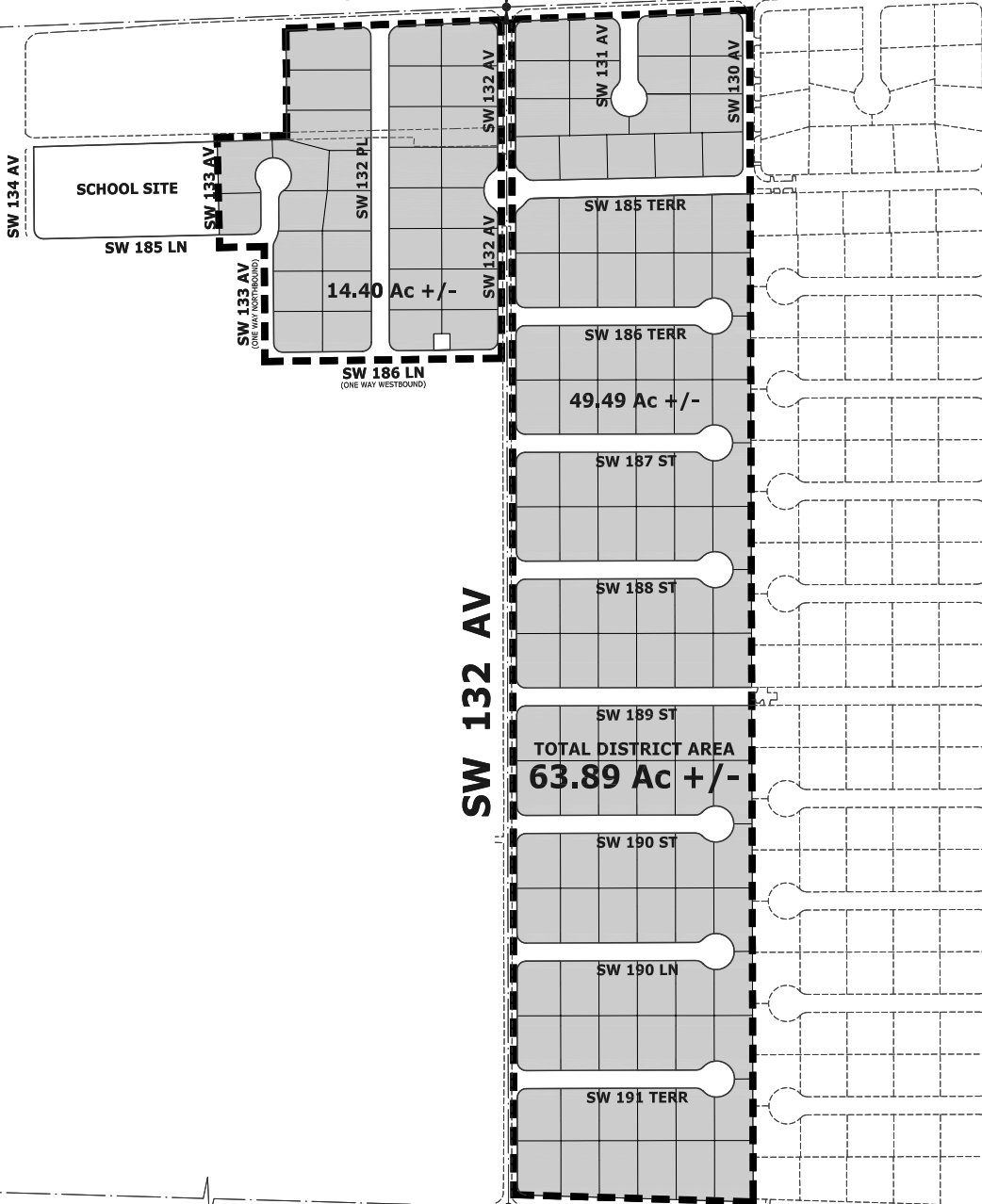
VALENCIA ACRES CDD				
Construction Cost Estimate				
Sanitary Sewer System				
Description of Work	Quantity	Unit	Unit Price (\$/Unit)	Total Estimated Cost (\$)
Gravity System				
8" PVC SDR-35 (0'-6')	4,643	LF	20.00	92,869.94
8" PVC SDR-35 (6'-8')	2,421	LF	23.50	56,903.53
8" PVC SDR-35 (8'-10')	1,208	LF	30.00	36,249.17
8" PVC SDR 35 (10'-12')	806	LF	32.00	25,794.46
8" PVC SDR-35 (12'-14')	846	LF	38.00	32,136.36
8" DIP (0'-6')	321	LF	40.00	12,852.03
8" DIP (6'-8')	63	LF	45.00	2,821.47
8" DIP (12'-14')	399	LF	60.00	23,959.66
8" DIP (14'-16')	651	LF	70.00	45,546.76
8" DIP (16'-18')	529	LF	95.00	50,255.41
10" DIP (16'-18')	27	LF	100.00	2,700.00
MH (0'-6')	23	EA	1,250.00	28,750.00
MH (6'-8')	5	EA	1,600.00	8,000.00
MH (8'-10')	3	EA	1,870.00	5,610.00
MH (10'-12')	2	EA	2,080.00	4,160.00
MH (12'-14')	1	EA	2,400.00	2,400.00
MH (12'-14') W/Drop Inlet	4	EA	3,320.00	13,280.00
MH (14'-16') W/Drop Inlet	1	EA	3,410.00	3,410.00
MH (16'-18')	2	EA	3,360.00	6,720.00
MH (16'-18') W/Drop Inlet	1	EA	3,700.00	3,700.00
MH Inverts & Ring	42	EA	175.00	7,350.00
6" PVC SDR 35 Lateral (SS1.0)	28	EA	475.00	13,300.00
6" PVC SDR 35 Lateral (SS1.0)	37	EA	555.00	20,535.00
MH Connection	42	EA	165.00	6,930.00
Surveying & As-Builts	4%	LS	506,233.79	20,249.35
Gravel # 57	2,922	TN	10.50	30,677.72
Miscellaneous	1	LS	2,500.00	2,500.00
Maintenance of Traffic	1	LS	7,500.00	7,500.00
Densities	30	EA	60.00	1,800.00
Cleaning & Testing	11,915	LF	1.75	20,851.25
Permit	1	LS	7,500.00	7,500.00
Soft Costs (Eng and Prof. Fees)	6%		597,312.11	35,838.73
Contingency	10%		597,312.11	59,731.21
Sub-total Gravity Sewer System				692,882.05
Force Main & Lift Station				
Connect to Existing 8" Force Main	1	LS	1,700.00	1,700.00
8"DIP	1,120	LF	25.00	28,000.00
8" x 90 Degrees Bend	3	EA	500.00	1,500.00
2" Air Release Valve	1	EA	1,250.00	1,250.00
12" x 8" Reducer	1	EA	250.00	250.00
Lift Station	1	EA	200,000.00	200,000.00
Surveying & As-Builts	4%	LS	232,700.00	9,308.00
Maintenance of Traffic	1	LS	2,500.00	2,500.00
Densities	10	EA	50.00	500.00
Cleaning & Testing	1,120	LF	1.55	1,736.00
Permit	1	LS	2,500.00	2,500.00
Soft Costs (Eng and Prof. Fees)	6%		249,244.00	14,954.64
Contingency	10%		249,244.00	24,924.40
Sub-total Force Main and Lift Station				289,123.04
Grand Total Sanitary Sewer System				982,005.09

Table 5 of 5

N.W. CORNER OF
SEC. 2-56-39

N.E. CORNER OF
SEC. 2-56-39

SW 184 ST (EUREKA DRIVE)



LEGEND

--- DISTRICT BOUNDARY

S.W. CORNER OF
SEC. 2-56-39

S.E. CORNER OF
SEC. 2-56-39

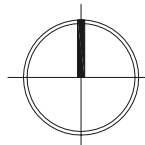
SW 192 ST

ALVAREZ ENGINEERS, INC.

MASTER PLAN COPYRIGHT LUDOVICI & ORANGE CONSULTING ENGINEERS, INC.

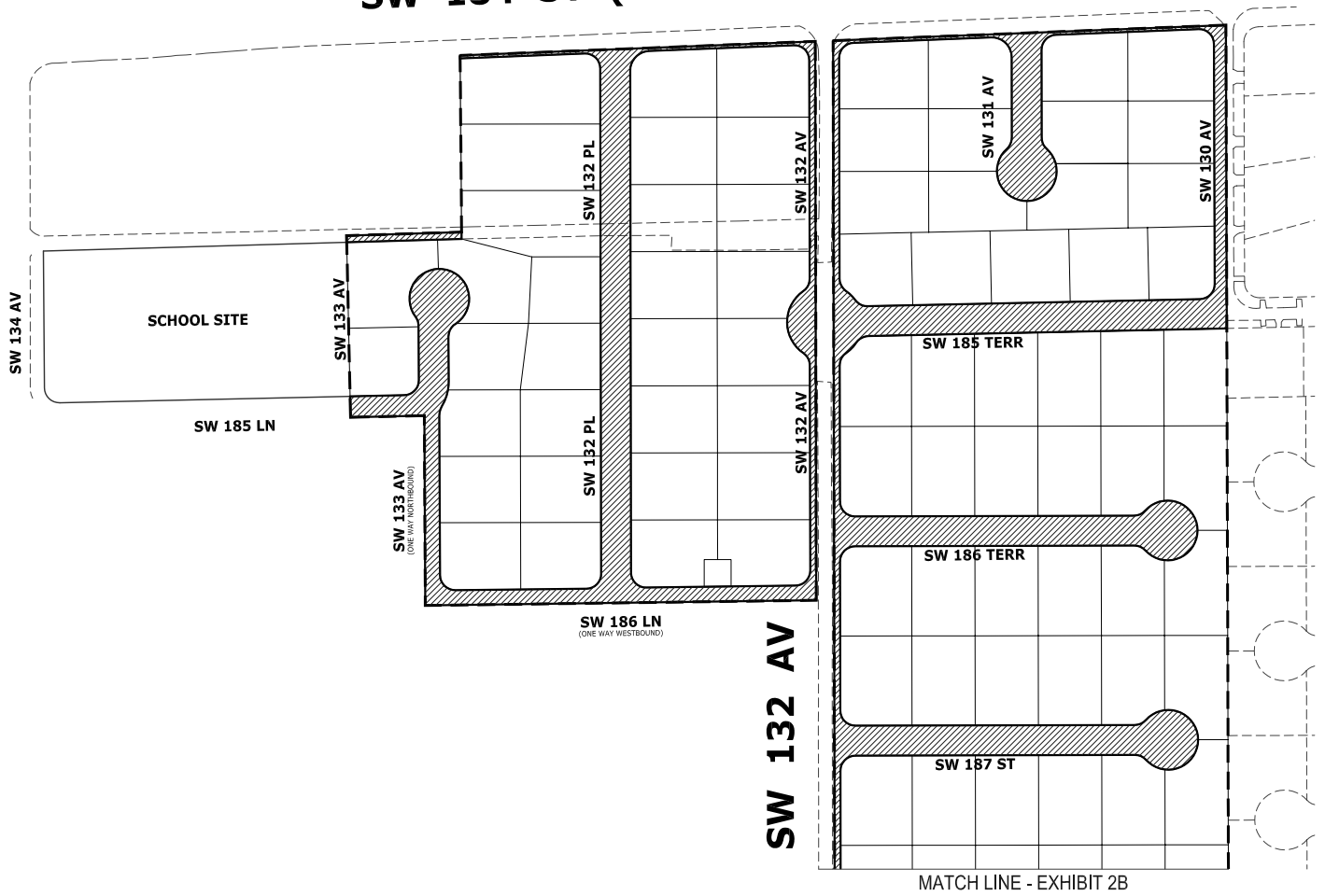
VALENCIA ACRES C.D.D.

EXHIBIT 1 - DISTRICT BOUNDARY



1" = 500'

SW 184 ST (EUREKA DRIVE)



LEGEND

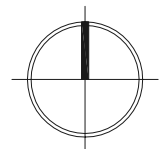
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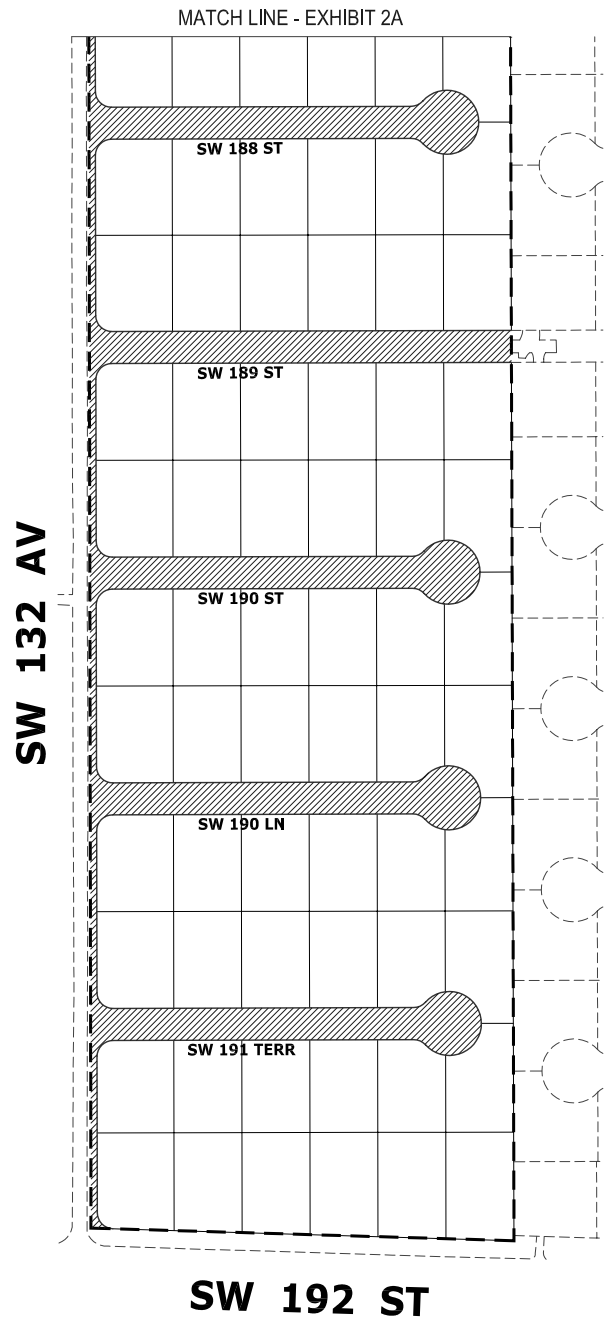
MASTER PLAN COPYRIGHT LUDOVICI & ORANGE CONSULTING ENGINEERS, INC.

VALENCIA ACRES C.D.D.


EXHIBIT 2A - **ROADWAY IMPROVEMENTS**



1" = 300' 



LEGEND

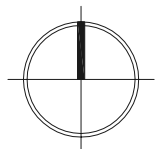
 ROADWAYS TO BE IMPROVED

ALVAREZ ENGINEERS, INC.

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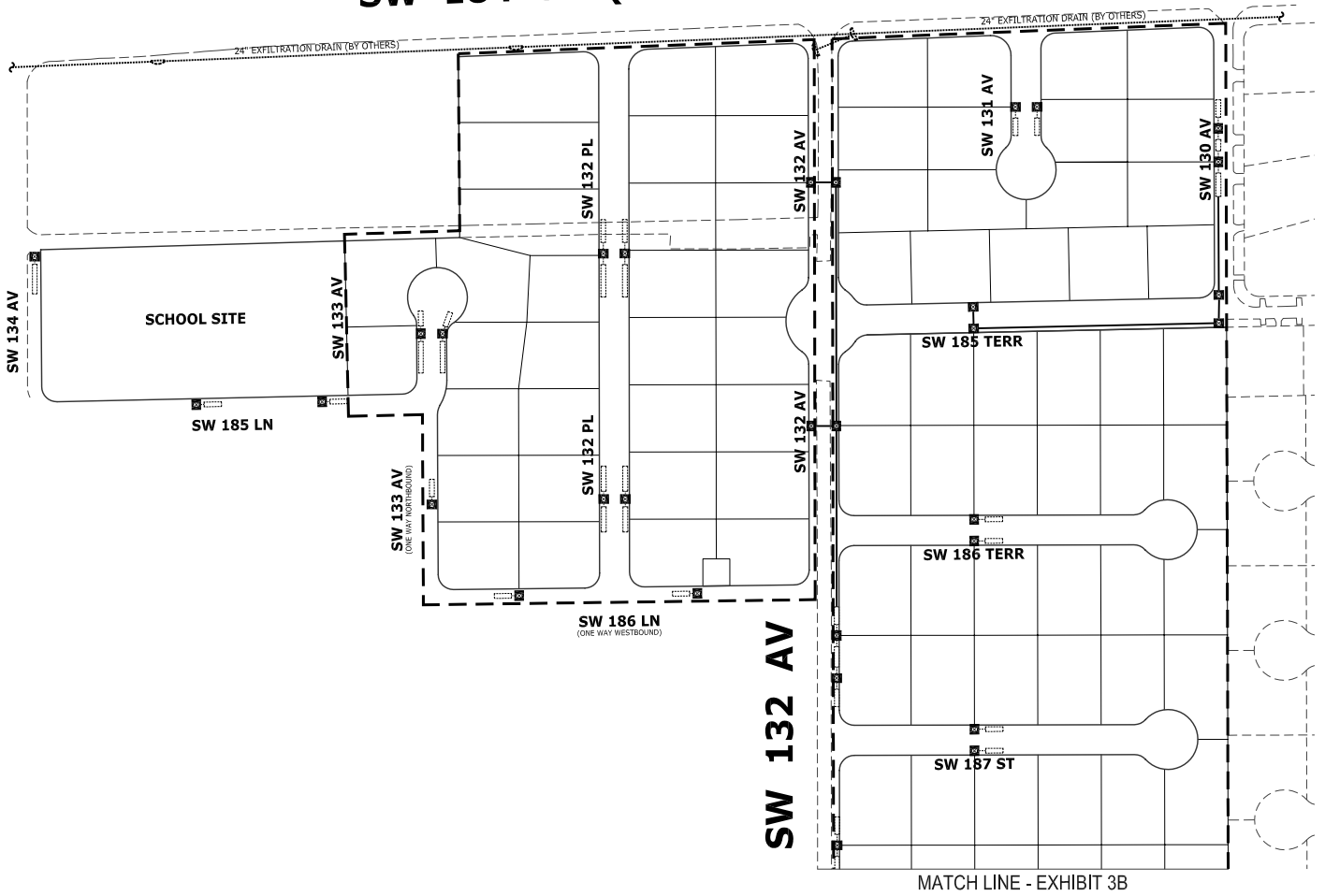
VALENCIA ACRES C.D.D.

EXHIBIT 2B - **ROADWAY IMPROVEMENTS**



1" = 300' 

SW 184 ST (EUREKA DRIVE)



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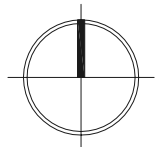
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- ⋯ EXFILTRATION TRENCH
- CATCH BASINS
- ⋯ EXFILTRATION DRAIN (BY OTHERS)

ALVAREZ ENGINEERS, INC.

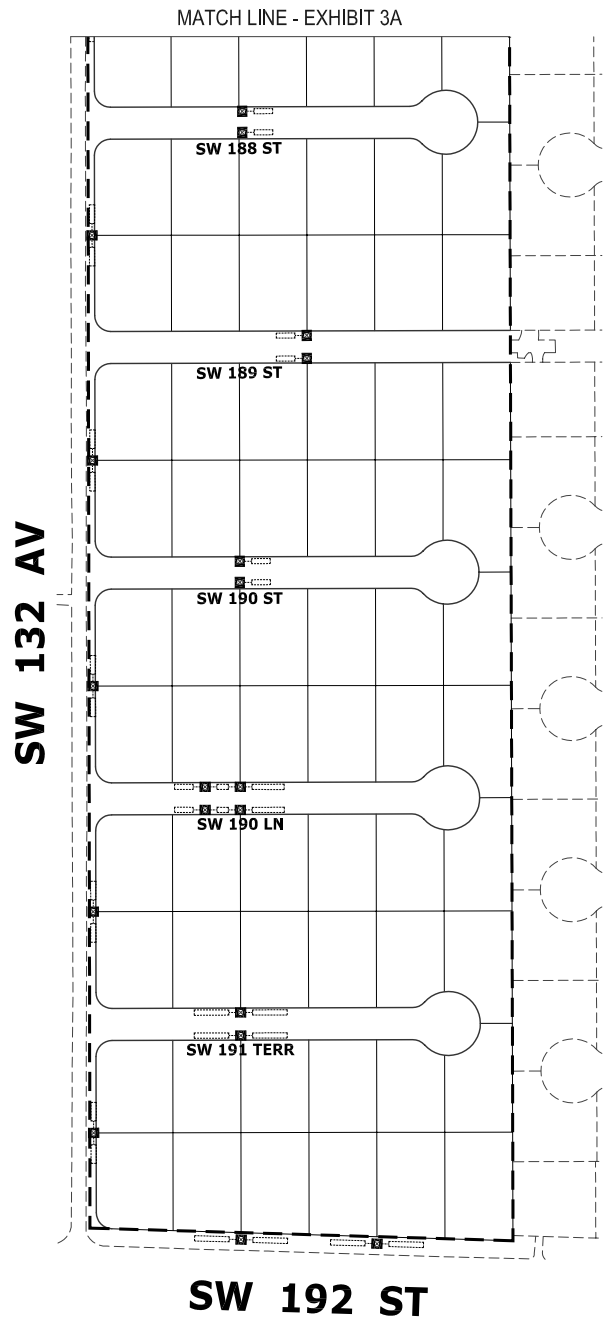
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VALENCIA ACRES C.D.D.

EXHIBIT 3A - STORMWATER MANAGEMENT



1" = 300'



LEGEND

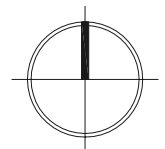
- PIPE LINES
- ⋯ EXFILTRATION TRENCH
- CATCH BASINS
- ⋯ EXFILTRATION DRAIN (BY OTHERS)

ALVAREZ ENGINEERS, INC.

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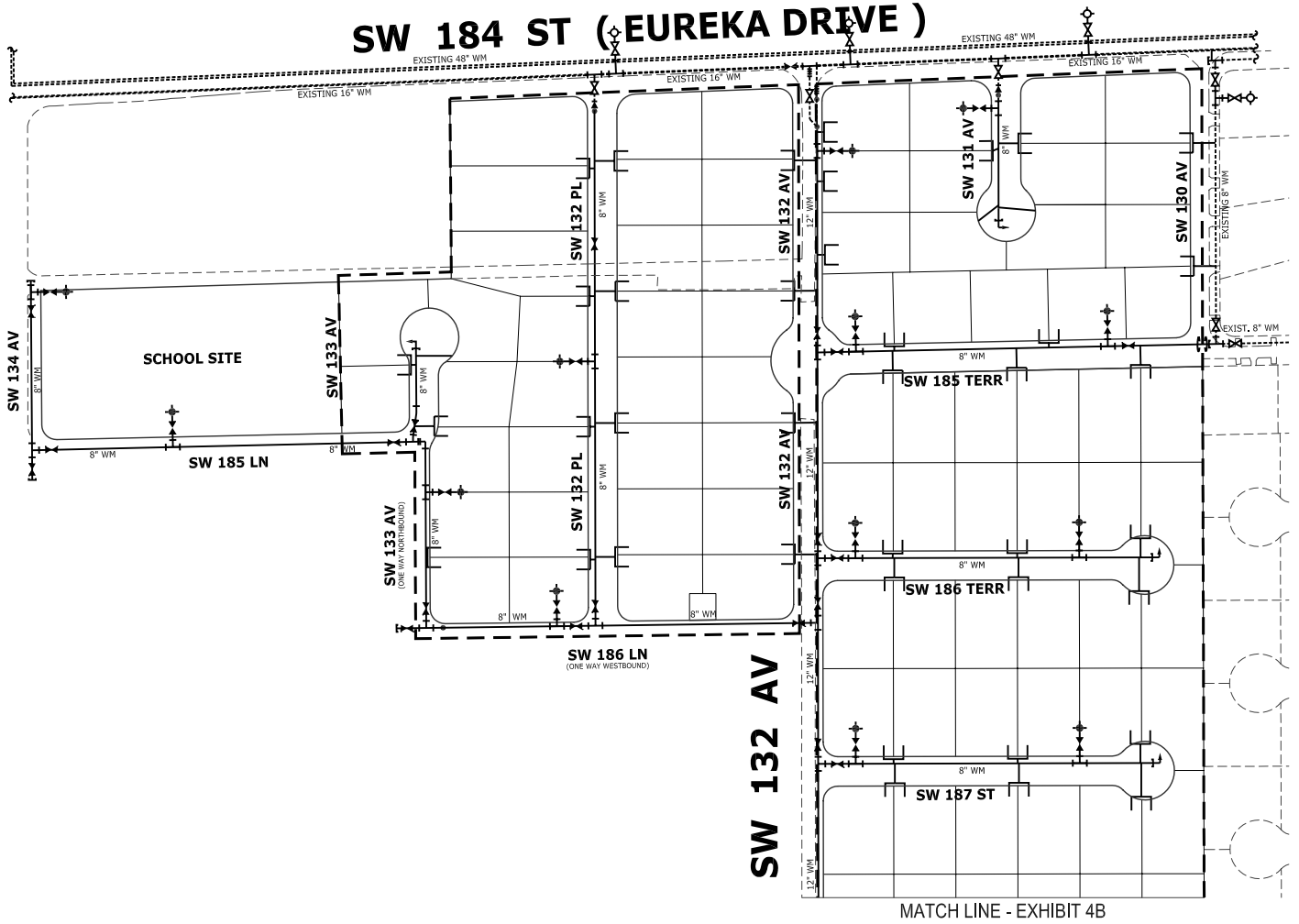
VALENCIA ACRES C.D.D.

EXHIBIT 3B - STORMWATER MANAGEMENT



1" = 300'

SW 184 ST (EUREKA DRIVE)



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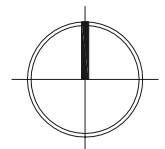
- PIPE LINES
- ⊕ FIRE HYDRANT
- ⊕ DOUBLE SERVICE AND WATER METER
- ⋯ EXISTING WATER MAIN

ALVAREZ ENGINEERS, INC.

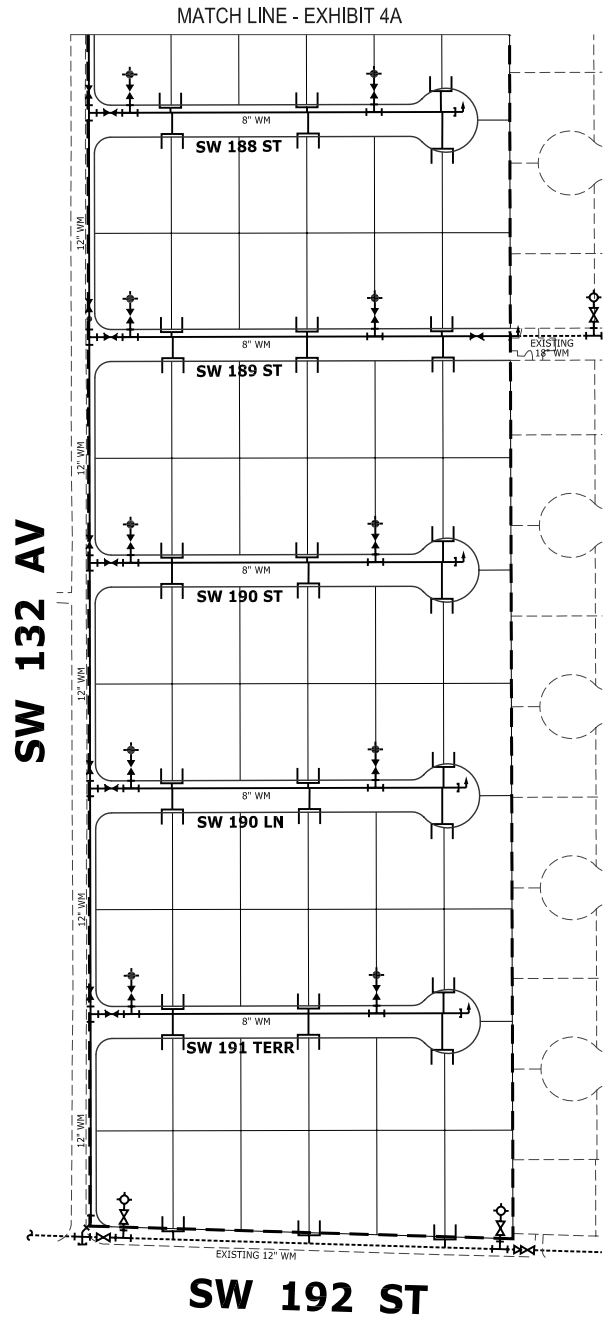
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VALENCIA ACRES C.D.D.

EXHIBIT 4A - WATER DISTRIBUTION SYSTEM



1" = 300'



LEGEND

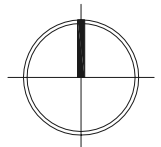
- PIPE LINES
- ⊕ FIRE HYDRANT
- |— DOUBLE SERVICE AND WATER METER
- EXISTING WATER MAIN

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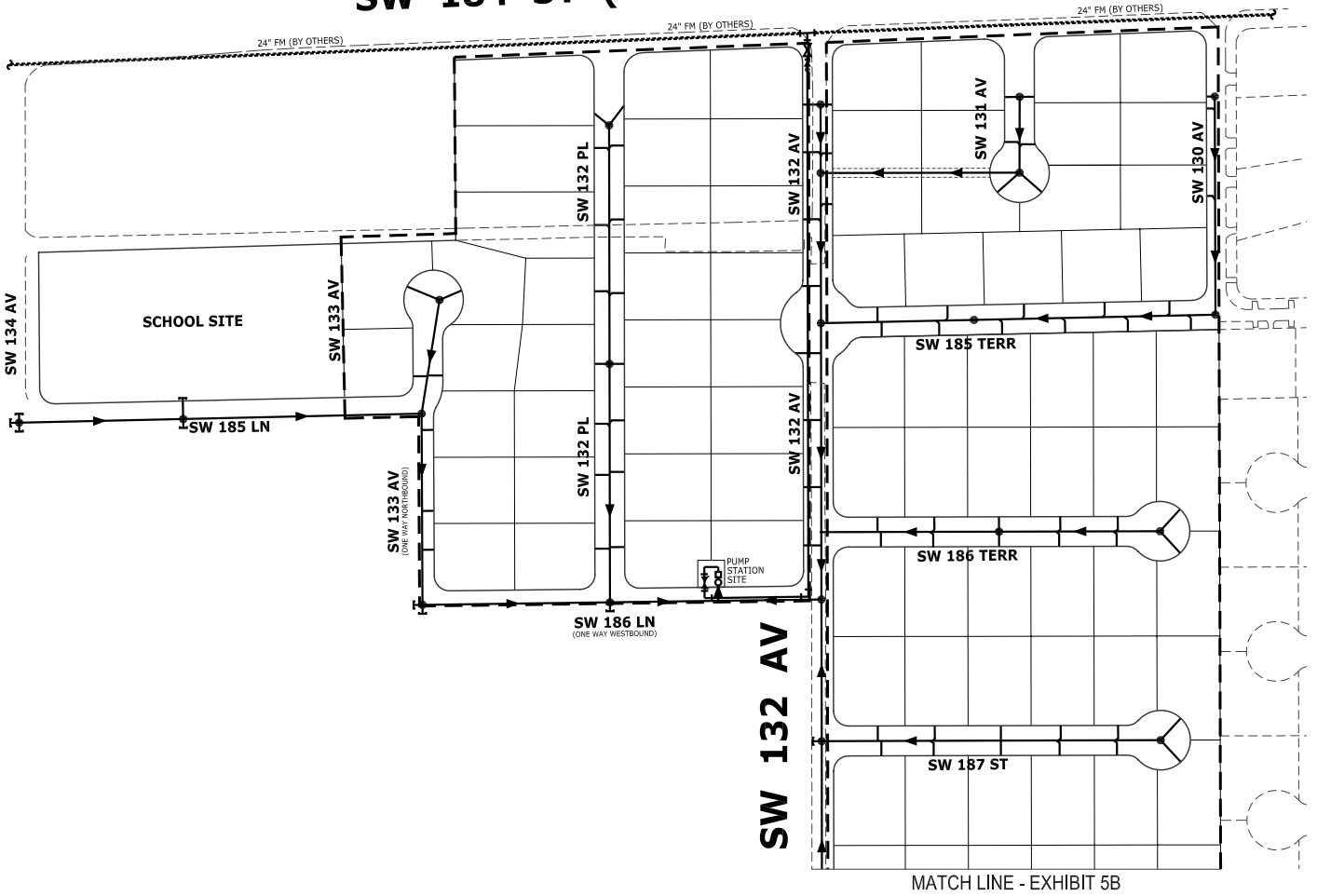
VALENCIA ACRES C.D.D.

EXHIBIT 4B - WATER DISTRIBUTION SYSTEM







1" = 300'

SW 184 ST (EUREKA DRIVE)



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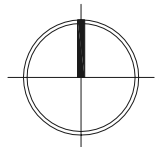
-  8" GRAVITY PIPE WITH LATERAL
-  MANHOLE
-  FLOW DIRECTION
-  EXISTING FORCE MAIN

ALVAREZ ENGINEERS, INC.

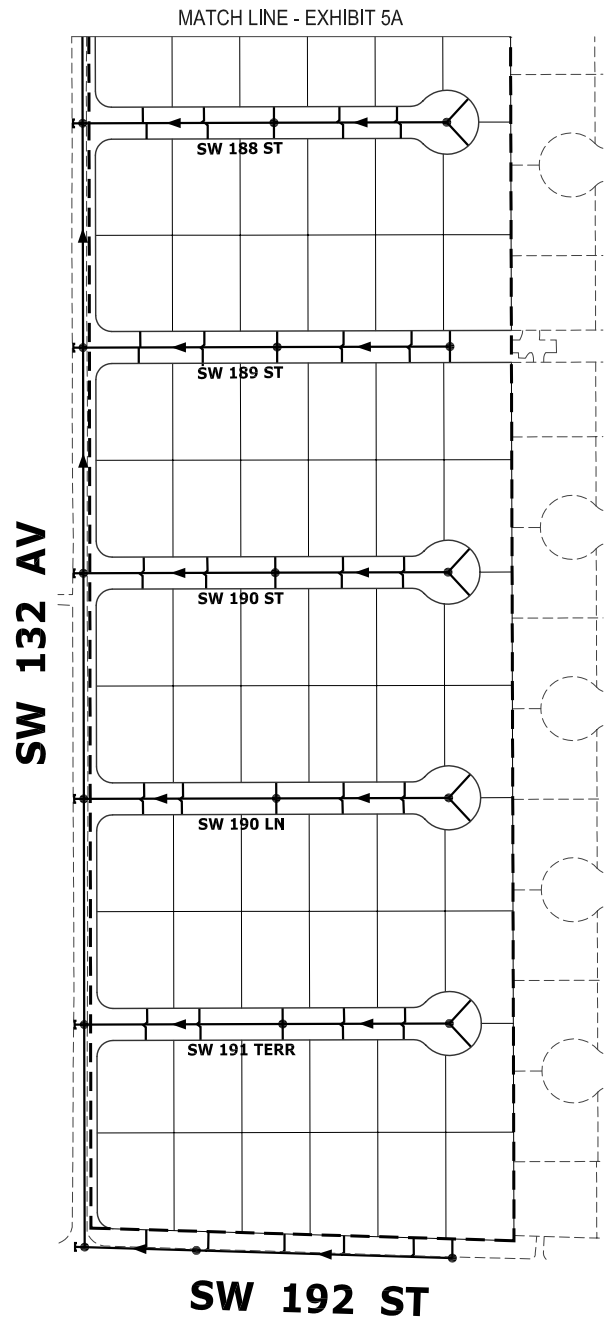
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VALENCIA ACRES C.D.D.





EXHIBIT 5A - **SANITARY SEWER SYSTEM**



1" = 300'



LEGEND

-  8" GRAVITY PIPE WITH LATERAL
-  MANHOLE
-  FLOW DIRECTION
-  EXISTING FORCE MAIN

