

**Two Lakes Community Development District**

**First Supplemental Engineer's Report**  
Infrastructure Improvements

Prepared for  
**Two Lakes Community Development District**  
**Board of Supervisors**  
Miami-Dade County, Florida

Prepared by  
**Alvarez Engineers, Inc.**  
10305 NW 41 Street, Suite 103  
Miami, FL 33178  
Telephone 305-640-1345  
Facsimile 305-640-1346  
E-Mail Address: [Info@Alvarezeng.com](mailto:Info@Alvarezeng.com)

**November 6, 2018**

## TABLE OF CONTENTS

### Narrative

I. Introduction .....	1
II. Purpose of this First Supplemental Engineer's Report .....	1
III. Configuration of the District .....	2
IV. Current & Future Ownership of the Land in the Aquabella North Plat ..	2
V. Description of the Expansion Area Project .....	3
VI. Estimated Schedule of Construction of the Public Infrastructure .....	5
VII. Ownership and Maintenance .....	5
VIII. Permitting Status .....	5
IX. Estimate of the Expansion Area Project Costs .....	6
X. Engineer's Certification .....	6

### Exhibits (Maps)

Exhibit 1, Expansion Area Location Map .....	8
Exhibit 2, Expansion Area Boundary, .....	9
Exhibit 3, Plats in the District .....	10
Exhibit 4, Expansion Area Map .....	11

### Tables

Estimate of Construction Costs .....	12 - 23
--------------------------------------	---------

## **I. Introduction.**

The original 130.14-acre Two Lakes Community Development District was established by the enactment of Miami-Dade County Ordinance No. 16-78 on September 7, 2016 (the "Original District"). The public infrastructure that supported the development within the Original District is described in the Engineer's Report dated September 21, 2016 and amended on May 17, 2017 (the "Original Engineer's Report").

On June 15, 2017 the Board of Supervisors of the District petitioned the Board of Commissioners of Miami-Dade County to enact an ordinance expanding the boundaries of the Original District by 91.44 acres (the "Expansion Area"). The petition to expand was approved by the Board of Commissioners on September 5, 2018 through its enacting of Miami-Dade County Ordinance No. 18-90. The Ordinance became effective ten days later on September 15, 2018.

The Expansion Area is generally bounded on the south by the Original District, on the north, by Golden Glades Canal and NW 170 Street, on the east, by State Road 93/ I-75 and on the west by NW 97 Ave. Refer to Exhibits 1 and 2 for the boundaries of the Original District and the Expansion Area.

Together, the areas of the Original District and of the Expansion Area constitute the District Lands, which measure 221.58 acres. The District Lands are, or are expected to be, subdivided in accordance with the following three plats (Refer to Exhibit 3):

1. Aquabella Section One recorded at PB 172, PG 51 on November 2, 2017.
2. Aquabella Section Two recorded at PB 173, PG 8 on May 31, 2018.
3. Aquabella North, Tentative Plat No. 24055 approved on March 2, 2018.

As shown in Exhibit 3, Aquabella Section One is wholly contained in the Original District. Aquabella Section Two is mostly contained in the Original District with the exception of a portion north of W 106 Terrace that extends into the Expansion Area. That portion contains six single family lots. The plat of Aquabella North encompasses all of the Expansion Area less the six-lot area occupied by Aquabella Section Two. The plat of Aquabella North extends into the Original District in the area located east of and including, W 32 Lane (that portion of land is commonly known as the "Antenna") the Antenna contains 48 townhome lots.

In 2017, the District issued its Two Lakes Community Development District Special Assessment Bonds, Series 2017 to partially finance the public infrastructure supporting the development in Aquabella Section One, Aquabella Section Two and the 48 townhome lots in the Antenna, as described in more detail in the Original Engineer's Report. The District now intends to issue additional bonds to partially finance the onsite and offsite public infrastructure that will support the development within the Aquabella North Plat, as described in more detail in this First Supplemental Engineer's Report.

The configuration and boundaries of the three plats that make up the District Land, and the number of residential units within each, are shown in Exhibit 3. The number of residential units within the Original District and the Expansion Area are tabulated in Section III of this First Supplemental Engineer's Report.

## **II. Purpose of this First Supplemental Engineer's Report.**

This First Supplemental Engineer's Report was prepared for describing the onsite and offsite public infrastructure (the "Expansion Area Project") that will support the development within the Aquabella North Plat (the "Aquabella North Development") and to report as to its estimated construction costs, status of permits, and schedule of construction. The Expansion Area Project is to be partially financed by the District and is to benefit the residents living within the boundaries of the Aquabella North Plat, as well as the public in general.

### III. Configuration of the District.

After recording the plats for Aquabella Sections One and Two, and the approval of the T-Plat for Aquabella North, the number of residential lots in the Original and Expanded areas of the District is as listed in Table 1.

Table 1							
Plat Name	Residential Type and Location						Total
	Single Family Residences		Townhomes		Villas		
	Original Area	Expansion Area	Original Area	Expansion Area	Original Area	Expansion Area	
Aquabella Section One	85	0	288	0	0	0	373
Aquabella Section Two	118	6	431	0	0	0	555
Aquabella North	0	251	48	186	0	212	697
Total	203	257	767	186	0	212	1625

The Aquabella North plat received tentative approval from the Department of Regulatory and Economic Resources of Miami-Dade County under T-Plat Number T-24055 on March 2, 2018. This approval is valid until December 2, 2018 at which time either the final plat will be recorded, or the T-Plat approval will be extended. The Aquabella North Development is wholly contained – and its boundaries coincide with – the boundaries of the Aquabella North Plat, and contains 251 Single Family Residential lots, all included in the Expansion Area, 234 Townhomes, of which 48 are in the Original Area and 186 in the Expansion Area and 212 Villas in the Expansion Area

### IV. Current and Future Ownership of the Land in the Aquabella North Plat.

The land within the Aquabella North Plat is currently owned by Two Lakes Lennar LLC (the “Developer”) (Refer to Special Warranty Deed recorded at ORB 30361, PG 465). The Developer intends to create a homeowners association (the “HOA”) to own, maintain and operate the private common areas of the Development.

Upon recording of the final plat for Aquabella North, and the completion of the Aquabella North Development, the Aquabella North land will be made up of CDD and Non-CDD-owned areas as shown in Table 2 below.

Table 2						
Tract ID (Per T-Plat No. 24055)	Use	Future Ownership of Land and Easements				
		CDD	HOA	CDD Drain Easmt.	CDD Entry Feature Easmt.	Resid. Lots Owner
Portion of A*	Entrance Road to the Entry Gates	X				
Portion of Tract A*	Interior Private Roads, Parking and Utilities		X	X		
B	Landscape/Common Areas/Entry Features					
C, D, E, F, G, H, I, K, L, N, O, P, Q, R, T, U, V, W, X, Y, A1, B1, D1, E1, G1, H1, I1, J1, K1, L1, N1, P1, O1, R1, S1, T1, V1, W1, X1, Y1, A2, B2, C2, D2, E2, F2, H2, I2, J2, L2, M2, N2, O2, R2, S2,	Landscape/Common Areas		X	X		

Table 2						
Tract ID (Per T-Plat No. 24055)	Use	Future Ownership of Land and Easements				
		CDD	HOA	CDD Drain Easmt.	CDD Entry Feature Easmt.	Resid. Lots Owner
U2, V2, W2, X2, Y2, Z2, A3, C3, D3, F3, G3						
E, M, S, Z, F1, M1, U1, Z1, G2,	Alleys		X	X		
J, C1, Q1, K2, T2, B3	Private Park		X	X		
R2	Private Park		X	X		
P2	(City) Lift Station					
E3	Lake/ Storm Water Management	X				
697 Residential Units	234 Townhomes, 251 Single Family Residences and 212 Villas					X

\*Portions of tracts to be legally described by metes and bounds at the time of ownership transfer.

## V. Description of the Expansion Area Project.

The Expansion Area Project, as described in this First Supplemental Engineer's Report, consists of offsite and partial onsite roadway improvements, stormwater management, drainage, water and sanitary sewer improvements that will give service and access to 649 residential units located in the Aquabella North Development within the Aquabella North Plat. The proposed Expansion Area Project, as outlined herein, are necessary for the functional development of the District and will provide a direct and special benefit to the lands within the Aquabella North Plat.

### a. Roadway Improvements

**Offsite.** The offsite roadway improvements consist of reconstructing portions of NW 170 Street and NW 97 Avenue, and of constructing a new road connector to provide access to the CDD. Refer to Exhibit 4 for the location of the offsite improvements.

**Onsite.** The Developer intends to gate the Aquabella North Development interior roads to limit access to the residents only, making those roads, in effect, private, and consequently, ineligible for CDD financing. The estimate of costs presented herein do not include the cost of constructing the interior roads behind the gates.

The onsite roadway costs included in the estimate costs are the costs of constructing the onsite road at W 113 Terrace and at West 106 Street extending from the adjacent municipal roads to the entrance gates. The Developer intends to grant the District, at no cost and in fee simple, the land of the entrance roads.

The Developer intends to grant the District, at no cost, an easement over the interior roads to provide access to the onsite stormwater management and drainage facilities which the District will own.

The Miami-Dade County Road Impact Fees related to the Aquabella North Plat and offsite improvements described above, are included in the estimated cost of roadway improvements. The Developer intends to advance the funds to pay for the impact fees on behalf of the District.

b. Stormwater Management and Drainage Facilities.

The District will fund the construction of the stormwater management and drainage facilities of the offsite roads, the culvert in the Golden Gate Canal, the entrance roads, the interior roads, and the improvements to the shoreline of the existing lake in Aquabella North. Although the interior roads are private roads, their drainage components, including curbs and gutters, are included in the Expansion Area Project because they are part of the stormwater management plan that gives flood protection to the District and the surrounding lands.

The quarry shot rock fill material related to the construction of the stormwater management facilities in the Expansion Area, will be funded by the Developer as described in a separate Materials Purchase Agreement between the District and Allied Trucking of Florida, Inc.

The South Florida Water Management District (SFWMD), as part of the permit-approval conditions, requires the purchase of 94.65 wetland mitigation credits from the Hole-In-The-Donut wetland mitigation bank. The credits are estimated to cost \$12,765 each, for a total of \$1,208,207. The total amount has been included in the stormwater management cost.

The Developer intends to grant the District, at no cost, an easement over the interior roads to provide access to the stormwater management and drainage facilities which the District will own.

c. Water Distribution and Sewer Collection Systems.

The cost of constructing the water and sewer systems is included in the 2018 Public Infrastructure. The systems extend from the point of connection with the City of Hialeah Utilities, to the property lines of the residential lots. The sewer collection system includes the cost of the lift stations and related force main.

The Developer intends to grant the District, at no cost, the necessary easements for constructing and accessing the improvements. The District intends to convey to the City of Hialeah the completed improvements for future ownership and maintenance.

The City Connection Charges are included in the estimated costs of the Expansion Area Project. The Developer intends to advance the funds to pay for the connection charges on behalf of the District.

d. Land Acquisition.

**The Lake Tract.** The Developer intends to grant the District the lake tract within Aquabella North Plat in fee simple for ownership and maintenance as part of the stormwater management system. The purchase price to be paid by the District will not exceed either the appraised value of the land, or Developer's cost. For the purpose of this Report, the purchase price is estimated based on the cost paid by the Developer for the land as follows:

The Office of the County Property Appraiser indicates that the Developer purchased the 91.439-acre Expansion Area land and an adjacent 10.844-acre offsite parcel in December 23, 2016 for \$51,000,000, which equates to \$498,616.58 per acre (\$51 m / 102.283 Ac). Using the Developer cost per acre, the District purchase price of the lake tract is estimated to be \$10,868,363.41 (21.80 Ac x \$498,616.58/Ac).

The District's "Lake Purchase Price" of \$10,868,363.41 has been added to the Stormwater Component of the 2018 Public Infrastructure described in this Report.

## VI. Estimated Schedule of Construction of the Public Infrastructure.

Table 3		
Work Description	Begin Date	End Date
Earthwork	2018	2019
Water	2018	2019
Sewer	2018	2019
Drainage	2018	2019
Paving and Grading	2018	2019
Landscaping	2018	2019
Final Lift of Asphalt	2020	2020

## VII. Ownership and Maintenance.

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

Description	Future Ownership	Future Maintenance
Offsite Roads	County/City	County/City
Entrance Roads	CDD	CDD
Entry Features	CDD	CDD
Interior roads drainage with easement	CDD	CDD
Stormwater Management Lake	CDD	CDD
Water Distribution System	City	City
Sanitary Sewer System	City	City

## VIII. Permitting Status.

The table below reflects the permitting status of the development as of the date of this Report.

Table 4				
Permit	Agency	In Process	Approved	Date/Anticipated
Site Plan Review and Development Order	City		X	
T-Plat	County		X	
Final Plat	County			Surveyor preparing
Paving and Drainage Plans	County	X		
Paving and Drainage Plans	County Highway Division	X		
Subdivision Bond	County			
Water and Sewer Availability Certification	City		X	
Sewer	County RER	X		
Water	County RER	X		
FPL Undergrounding	FPL/County			
Stormwater Management	SFWMD		X	
Stormwater Management	County RER	X		
Tree Program	County DERM	X		
FLA Dept. Of Transportation	FDOT	X		

Table 4				
Permit	Agency	In Process	Approved	Date/Anticipated
Water & Sewer Agreement	City	X		
CDD Petition	Miami-Dade County		X	

**IX. Estimate of the Expansion Area Project Costs.**

Table 5	
Roadway Improvements*	\$ 7,495,682
Stormwater Management and Drainage**	\$15,595,998
Water Distribution System***	\$4,633,216
Sanitary Collection System***	\$ 3,839,132
Total	\$ 31,564,028

\*Includes Earthwork, Road Impact Fees Discussed in Section V.a.

\*\*Includes the Wetland Mitigation Credits Discussed in Section V.b and the Lake Purchase Discussed in Section V.d.

\*\*\*Includes City of Hialeah Water and Sewer Connection Charges Discussed in Section V.c.

Details of the estimates of costs may be found in the Appendix.

**X. Engineer's Certification.**

It is our opinion that the proposed improvements constituting the Expansion Area Project and their estimated costs are fair and reasonable, and that the residential lots within the assessment areas described in the Methodology Report prepared by Special District Services, Inc. will receive a special benefit equal to or greater than the cost of such improvements. We believe that the improvements can be permitted, constructed and installed at the costs described in this report. The District will pay the lesser of the actual costs of the Public Infrastructure or the fair market value.

I hereby certify that the foregoing is a true and correct copy of the First Supplemental Engineer's Report for Two Lakes Community Development District.

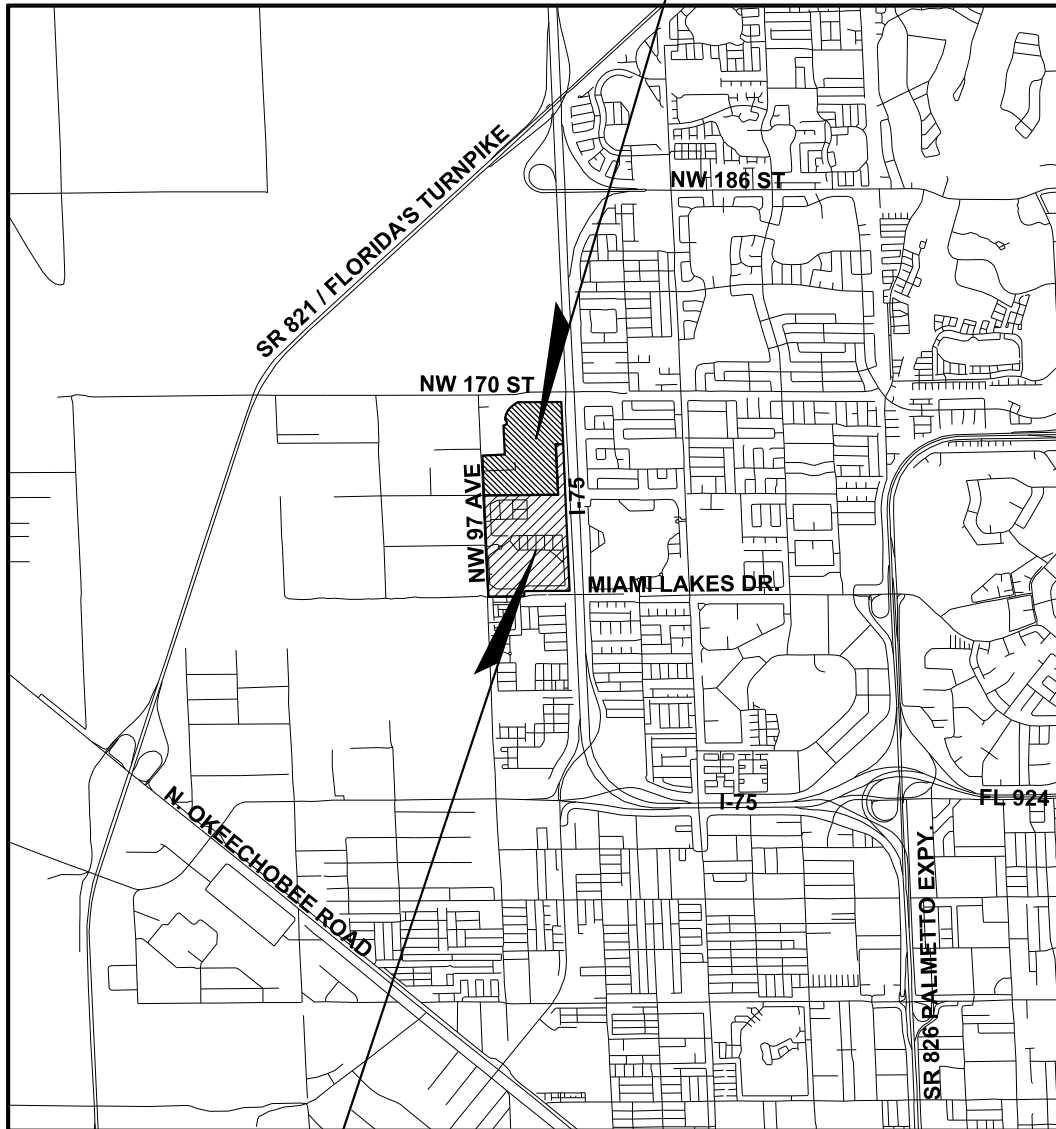
Juan R. Alvarez, PE  
Florida Registration No. 38522  
Alvarez Engineers, Inc.  
November 6, 2018



## APPENDIX

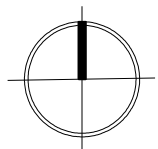
**TWO LAKES CDD  
EXPANSION AREA  
AREA 91.44 ACRES**

MIAMI DADE COUNTY  
FLORIDA



**ORIGINAL  
TWO LAKES CDD  
AREA 130.14 ACRES**

MIAMI DADE COUNTY  
FLORIDA

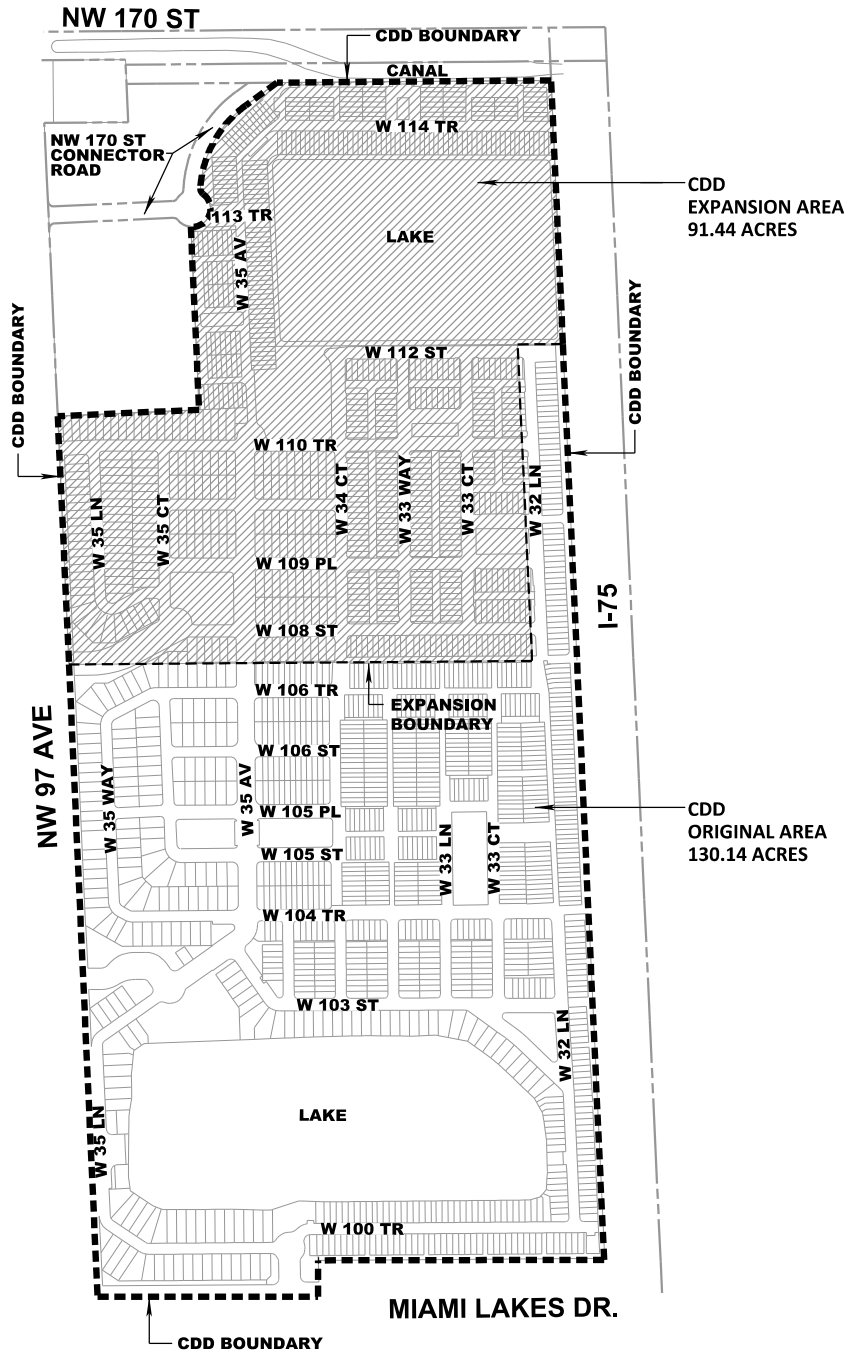


0 500' 1500' 5000'

**ALVAREZ ENGINEERS, INC.**

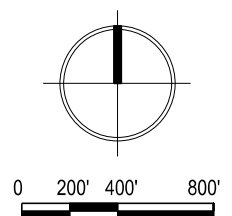
**TWO LAKES C.D.D.  
EXPANSION AREA LOCATION MAP**

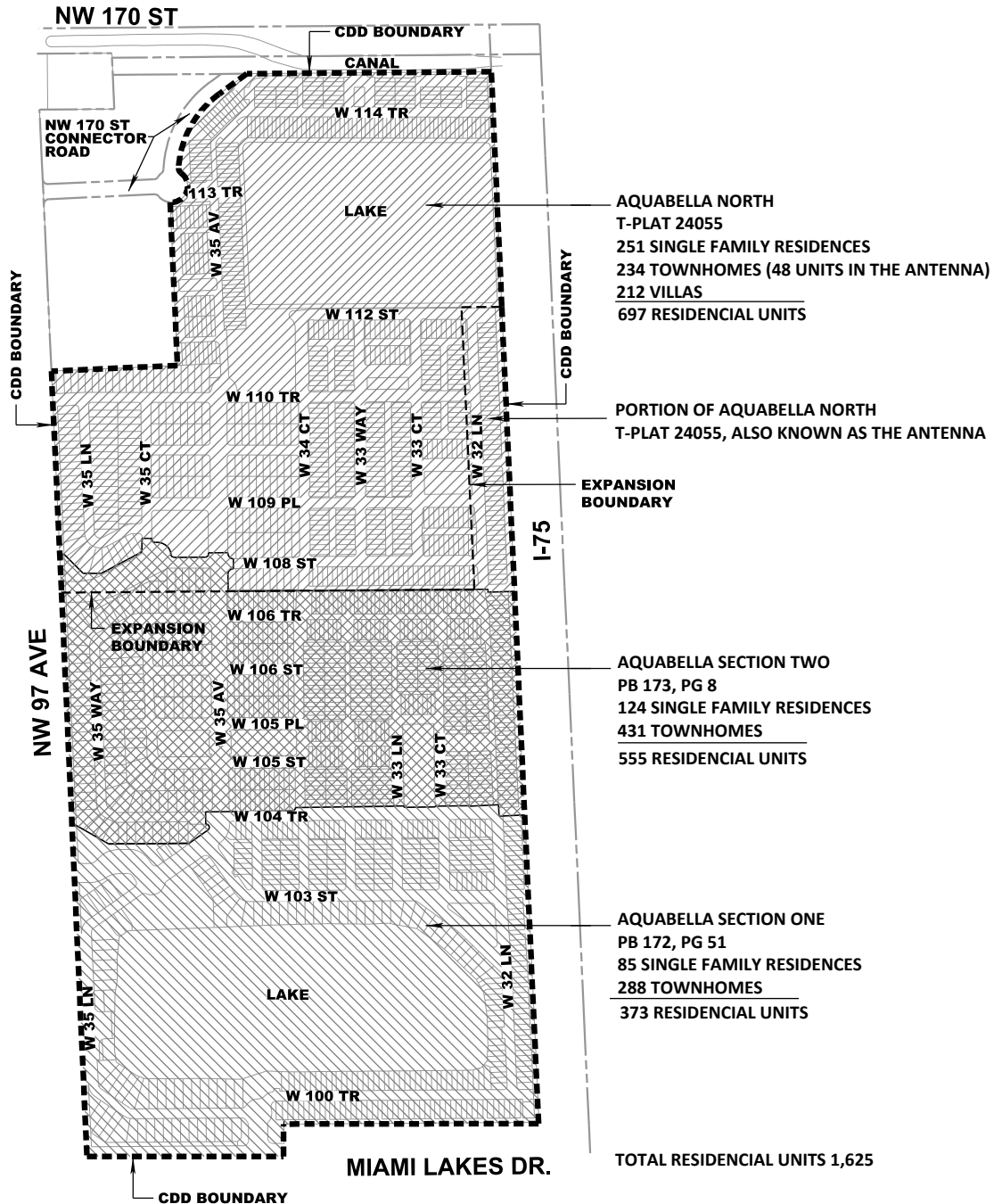
EXHIBIT 1



**ALVAREZ ENGINEERS, INC.**  
**TWO LAKES C.D.D.**  
**EXPANSION AREA BOUNDARY**

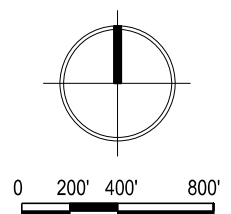
EXHIBIT 2

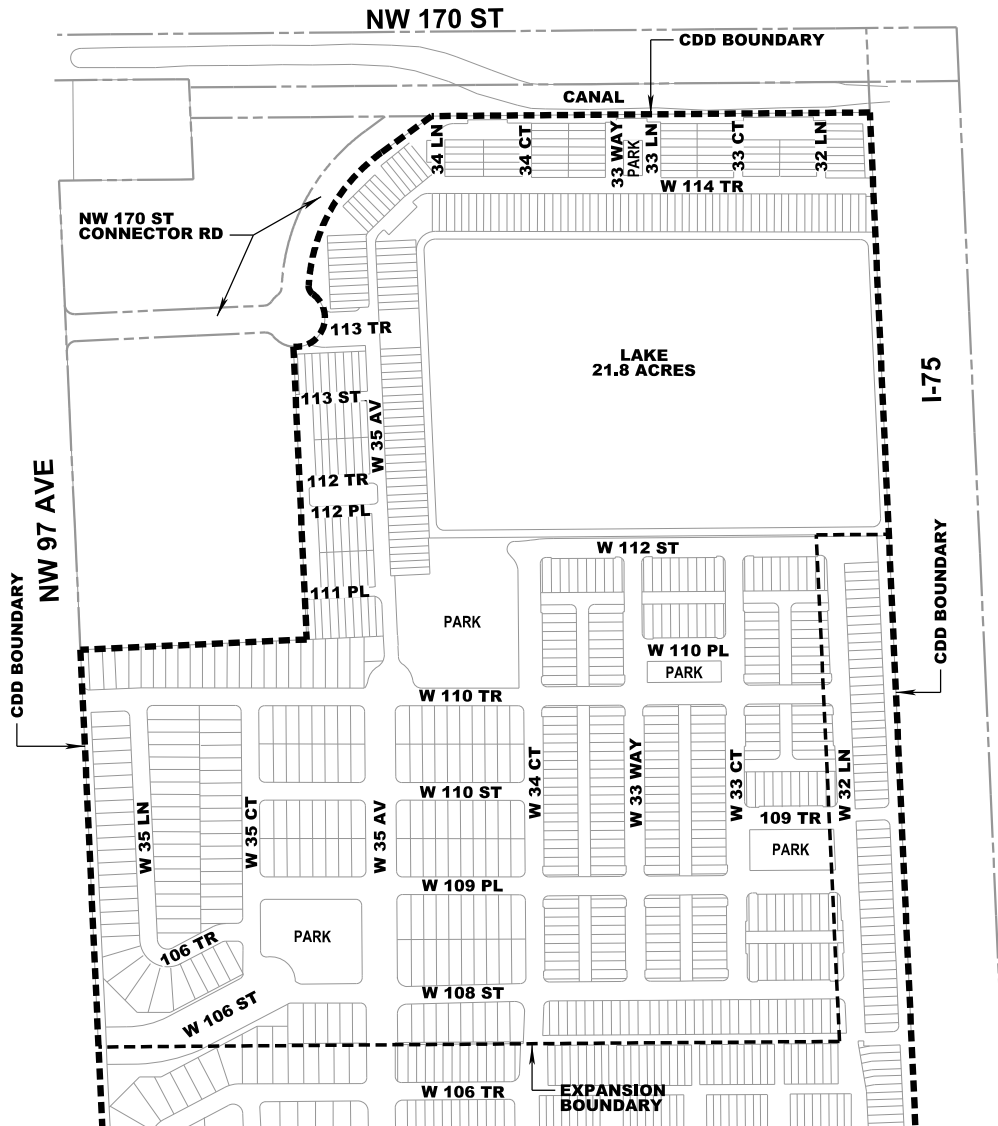




**ALVAREZ ENGINEERS, INC.**  
**TWO LAKES C.D.D.**  
**PLATS IN THE DISTRICT**

EXHIBIT 3

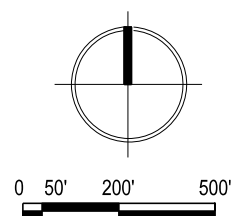




**ALVAREZ ENGINEERS, INC.**

**TWO LAKES C.D.D.  
EXPANSION AREA MAP**

**EXHIBIT 4**



TWO LAKES CDD (91.44-ACRE EXPANSION)			
SUMMARY - ESTIMATE OF CONSTRUCTION COSTS			
Description of Work	Estimated Cost (\$)		
	CDD	Non-CDD	Total
Roadway Improvements (Includes Earthwork, Offsite and Onsite Improvements and Road Impact Fees)	7,495,682	10,224,430	17,720,112
Stormwater Management System (Includes Onsite and Offsite Improvements, Wetland Mitigation Credits and Lake Purchase)	15,595,998	-	15,595,998
Water Distribution System (Includes Onsite and Offsite Improvements and City Connection Charges)	4,633,216	-	4,633,216
Sanitary Sewer System (Includes Onsite and Offsite Improvements and City Connection Charges)	3,839,132	-	3,839,132
Totals	<b>31,564,028</b>	<b>10,224,430</b>	<b>41,788,458</b>

## TWO LAKES CDD (91.44-ACRE EXPANSION)

## ESTIMATE OF CONSTRUCTION COSTS

## CDD AND NON-CDD COST ALLOCATION

Item #	Description of Work	Quantity	Unit	Unit Price (\$/Unit)	Proportion (%)		Estimated Cost (\$)		
					CDD	Non-CDD	CDD	Non-CDD	Total
EARTHWORK (ONSITE)									
1	Clearing & Grubbing (CDD% for Utilities and Drainage)	78	AC	3,500.00	3.00	97.00	8,190.00	264,810.00	273,000.00
2	Silt Fence	11,530	LF	1.10	100.00	-	12,683.00	-	12,683.00
3	Proof Roll Site (CDD% for Utilities and Drainage)	293,115	SY	0.11	3.00	97.00	967.28	31,275.37	32,242.65
4	Demucking Site 2.25' (CDD% for Utillties and Drainage)	230,695	CY	2.00	3.00	97.00	13,841.70	447,548.30	461,390.00
5	Move to Green Areas (CDD% for Utilities and Drainage)	90,575	CY	2.00	3.00	97.00	5,434.50	175,715.50	181,150.00
6	Move to Lake Slopes	63,890	CY	2.00	100.00	-	127,780.00	-	127,780.00
7	Move to Lake	76,230	CY	2.00	100.00	-	152,460.00	-	152,460.00
8	Slope Lake Top of Bank	3,950	LF	5.75	100.00	-	22,712.50	-	22,712.50
9	Excavate & Stockpile (CDD% for Utilities and Drainage)	96,410	CY	3.00	3.00	97.00	8,676.90	280,553.10	289,230.00
10	Load, Haul & Place (CDD% for Utilities and Drainage)	96,410	CY	2.00	3.00	97.00	5,784.60	187,035.40	192,820.00
11	Fill Placing Only - No Import - Mat By Others To A +6.50 NGVD	1,453,610	TN	1.85	-	100.00	-	2,689,178.50	2,689,178.50
12	Import Fill (Sand)	160,130	TN	8.03	-	100.00	-	1,285,843.90	1,285,843.90
13	Miscellaneous Landscape Grading	1,161,225	SF	0.05	-	100.00	-	58,061.25	58,061.25
14	Laser Grade Building Pad @ 12" Below FFE	1,271,100	SF	0.05	-	100.00	-	63,555.00	63,555.00
15	Survey (CDD% or Utillties and Drainage)	1	LS	120,850.00	3.00	97.00	3,625.50	117,224.50	120,850.00
Sub-total Earthwork Onsite							362,155.98	5,600,800.82	5,962,956.80
EARTHWORK 170 STREET CONNECTOR (OFFSITE)									
1	Remove Existing Trees	2	AC	2,240.00	100.00	-	4,480.00	-	4,480.00
2	Proof Roll Site	7,580	SY	0.11	100.00	-	833.80	-	833.80
3	Washed Rock Entrance	1	EA	2,550.00	100.00	-	2,550.00	-	2,550.00
4	Demucking Site 2.5'	7,915	CY	1.05	100.00	-	8,310.75	-	8,310.75
5	Move to Green Areas Onsite	7,915	CY	2.00	100.00	-	15,830.00	-	15,830.00
6	Import Fill (No Spec - Sand)	32,630	TN	9.00	100.00	-	293,670.00	-	293,670.00
7	Miscellaneous Landscape Grading	17,235	SF	0.05	100.00	-	861.75	-	861.75
8	Survey	1	LS	2,440.00	100.00	-	2,440.00	-	2,440.00
Sub-total Earthwork 170 ST Connector (Offsite)							328,976.30	-	328,976.30
DEMOLITION 97 AVENUE TURN LANE (OFFSITE)									
1	Curb Removal	315	LF	4.00	100.00	-	1,260.00	-	1,260.00
2	Sawcut Existing	1	LS	500.00	100.00	-	500.00	-	500.00
3	MOT & Traffic Control	1	LS	855.00	100.00	-	855.00	-	855.00
Sub-total Demolition 97 Avenue Turn Land (Offsite)							2,615.00	-	2,615.00
EARTHWORK 97 AVENUE TURN LANE (OFFSITE)									
1	Proof Roll Site	375	SY	0.11	100.00	-	41.25	-	41.25
2	Demuck Site 2.5'	310	CY	1.05	100.00	-	325.50	-	325.50
3	Move to Green Areas Onsite	310	CY	2.00	100.00	-	620.00	-	620.00
4	Import Fill (No Spec - Sand)	590	TN	9.00	100.00	-	5,310.00	-	5,310.00
5	MOT & Traffic Control	1	LS	800.00	100.00	-	800.00	-	800.00
6	Survey	1	LS	855.00	100.00	-	855.00	-	855.00
Sub-total Earthwork 97 Avenue Turn Lane (Offsite)							7,951.75	-	7,951.75
Total Earthwork (Onsite and Offsite)							701,699.03	5,600,800.82	6,302,499.85

## ROADWAY IMPROVEMENTS

Item #	Description of Work	Quantity	Unit	Unit Price (\$/Unit)	Proportion (%)		Estimated Cost (\$)		
					CDD	Non-CDD	CDD	Non-CDD	Total
PAVEMENT ASPHALT (ONSITE)									
1	12" Compacted Subgrade (CDD Entry to Guardhouse at 113 Ter)	92,065	SY	1.03	0.70	99.30	663.79	94,163.16	94,826.95
2	8" Rock Base (CDD Entry to Guardhouse)	87,270	SY	8.00	0.70	99.30	4,887.12	693,272.88	698,160.00
3	3/4" Type S-III Asphalt (1st Lift) (CDD Entry to Guardhouse)	82,720	SY	5.31	0.70	99.30	3,074.70	436,168.50	439,243.20
4	3/4" Type S-III Asphalt (2nd Lift) (CDD Entry to Guardhouse)	82,720	SY	5.31	0.70	99.30	3,074.70	436,168.50	439,243.20
5	Su+A30:J33rvey & As-Built (CDD Entry to Guardhouse)	1	LS	55,850.00	0.70	99.30	390.95	55,459.05	55,850.00
Sub-total Pavement (Onsite)							12,091.26	1,715,232.09	1,727,323.35
PAVEMENT ASPHALT 170 STREET CONNECTOR (OFFSITE)									
1	12" Compacted Subgrade	10,210	SY	1.03	100.00	-	10,516.30	-	10,516.30
2	4" Curb Base	1,675	SY	4.00	100.00	-	6,700.00	-	6,700.00
3	8" Rock Base	8,000	SY	8.00	100.00	-	64,000.00	-	64,000.00
4	2" Type SP-9.5 Asphalt (1st Lift)	7,580	SY	12.50	100.00	-	94,750.00	-	94,750.00
5	1" Type SP-9.5 Asphalt (2nd Lift)	7,580	SY	6.25	100.00	-	47,375.00	-	47,375.00
6	Survey	1	LS	3,580.00	100.00	-	3,580.00	-	3,580.00
Sub-total Pavement Asphalt 170 Street Connector (Offsite)							226,921.30	-	226,921.30
PAVEMENT ASPHALT 97 AVENUE TURN LANE (OFFSITE)									
1	12" Compacted Subgrade	480	SY	1.03	100.00	-	494.40	-	494.40
2	4" Curb Base	60	SY	4.00	100.00	-	240.00	-	240.00
3	8" Rock Base	395	SY	8.00	100.00	-	3,160.00	-	3,160.00
4	1" Type S-III Asphalt (1st Lift)	375	SY	6.25	100.00	-	2,343.75	-	2,343.75
5	1" Type S-III Asphalt (2nd Lift)	375	SY	6.25	100.00	-	2,343.75	-	2,343.75
6	MOT & Traffic Control	1	LS	800.00	100.00	-	800.00	-	800.00
7	Survey	1	LS	1,250.00	100.00	-	1,250.00	-	1,250.00
Sub-total Pavement 97 Avenue Turn Lane (Offsite)							10,631.90	-	10,631.90
PAVEMENT VEHICULAR PAVERS (OFFSITE AND ONSITE)									
1	12" Compacted Subgrade	1,345	SY	1.03	50.00	50.00	692.68	692.68	1,385.35
2	8" Rock Base	1,275	SY	8.00	50.00	50.00	5,100.00	5,100.00	10,200.00
3	Survey	1	LS	1,655.00	50.00	50.00	827.50	827.50	1,655.00
Sub-total Pavement Vehicular Pavers (Offsite and Onsite)							6,620.18	6,620.18	13,240.35
BRIDGE 170 STREET CONNECTOR OFFSITE @ EXISTING CANAL (OFFSITE)									
1	Bridge	1	LS	1,100,000.00	100.00	-	1,100,000.00	-	1,100,000.00
2	Survey	1	LS	5,860.00	100.00	-	5,860.00	-	5,860.00
Sub-total Bridge 170 Street Connector Offsite @ Existing Canal (Offsite)							1,105,860.00	-	1,105,860.00
GUARDRAIL (ONSITE)									
1	Guardrail (straight)	2,680	EA	32.40	-	100.00	-	86,832.00	86,832.00
2	Round Buffer End Sections	14	LF	250.00	-	100.00	-	3,500.00	3,500.00
3	Survey	1	LS	1,655.00	-	100.00	-	1,655.00	1,655.00
Sub-total Guardrail (Onsite)							-	91,987.00	91,987.00
CONCRETE (ONSITE)									
1	2' Valley Gutter	33,305	LF	11.50	-	100.00	-	383,007.50	383,007.50
2	2' Type "F" Curb & Gutter	2,210	LF	11.50	0.50	99.50	127.08	25,287.93	25,415.00
3	Type "B" Mountable Curb	405	LF	11.50	-	100.00	-	4,657.50	4,657.50
4	6" x 12" Type "D" Curb	23,030	LF	8.00	-	100.00	-	184,240.00	184,240.00
5	12" x 12" Paver Bands w/ No Reinforcement	9,295	LF	11.50	50.00	50.00	53,446.25	53,446.25	106,892.50
6	Survey	1	LS	20,850.00	-	100.00	-	20,850.00	20,850.00
Sub-total Concrete (Onsite)							53,573.33	671,489.18	725,062.50

Table 3 of 12



CONCRETE 170 STREET CONNECTOR (SIDEWALK NOT INCLUDED) (OFFSITE)									
1	2' Type "F" Curb & Gutter	6,020	LF	11.50	100.00	-	69,230.00	-	69,230.00
2	Survey	1	LS	2,440.00	100.00	-	2,440.00	-	2,440.00
Sub-total Concrete 170 Street Connector (Offsite)							71,670.00	-	71,670.00
CONCRETE 97 AVENUE TURN LANE (SIDEWALK NOT INCLUDED) (OFFSITE)									
1	2' Type "F" Curb & Gutter	210	LF	11.50	100.00	-	2,415.00	-	2,415.00
2	MOT & Traffic Control	1	LS	800.00	100.00	-	800.00	-	800.00
3	Survey	1	LS	855.00	100.00	-	855.00	-	855.00
Sub-total Concrete 97 Avenue (Offsite)							4,070.00	-	4,070.00
SIGNS & MARKINGS (ONSITE)									
1	R1-1 (Stop)	6	EA	187.00	15.00	85.00	168.30	953.70	1,122.00
2	R1-1 w/ (2) D3-1	43	EA	245.00	15.00	85.00	1,580.25	8,954.75	10,535.00
3	R1-1 w/ (2) D3-1 & R1-3	4	EA	310.00	15.00	85.00	186.00	1,054.00	1,240.00
4	R1-1 w/ (2) D3-1 & R3-5R	1	EA	310.00	15.00	85.00	46.50	263.50	310.00
5	R1-1 w/ R5-1	1	EA	245.00	15.00	85.00	36.75	208.25	245.00
6	R1-2	4	EA	187.00	15.00	85.00	112.20	635.80	748.00
7	R2-1	21	EA	187.00	15.00	85.00	589.05	3,337.95	3,927.00
8	R4-7	2	EA	187.00	15.00	85.00	56.10	317.90	374.00
9	R5-1	2	EA	187.00	15.00	85.00	56.10	317.90	374.00
10	R6-4	4	EA	187.00	15.00	85.00	112.20	635.80	748.00
11	D1-1	4	EA	187.00	15.00	85.00	112.20	635.80	748.00
12	W2-6 w/ W16-9P	4	EA	245.00	15.00	85.00	147.00	833.00	980.00
13	W11-2 w/ W16-7P	6	EA	245.00	15.00	85.00	220.50	1,249.50	1,470.00
14	W1-1AL	3	EA	187.00	15.00	85.00	84.15	476.85	561.00
15	W1-1AR	3	EA	187.00	15.00	85.00	84.15	476.85	561.00
16	W1-7	20	EA	187.00	15.00	85.00	561.00	3,179.00	3,740.00
17	W9-7R	1	EA	187.00	15.00	85.00	28.05	158.95	187.00
18	W14-1	1	EA	187.00	15.00	85.00	28.05	158.95	187.00
19	OM-1 w/ Red Reflectors	3	EA	187.00	15.00	85.00	84.15	476.85	561.00
20	6" White 2' - 4' Skip (P)	2,045	LF	1.10	15.00	85.00	337.43	1,912.08	2,249.50
21	6" Yellow 2' - 4' Skip (P)	2,800	LF	0.70	15.00	85.00	294.00	1,666.00	1,960.00
22	6" Yellow (P)	255	LF	0.70	15.00	85.00	26.78	151.73	178.50
23	8" White (P)	60	LF	1.00	15.00	85.00	9.00	51.00	60.00
24	12" White (P)	4,760	LF	1.45	15.00	85.00	1,035.30	5,866.70	6,902.00
25	18" White (P)	255	LF	2.05	15.00	85.00	78.41	444.34	522.75
26	18" Yellow (P)	115	LF	2.05	15.00	85.00	35.36	200.39	235.75
27	24" White (P)	980	LF	2.20	15.00	85.00	323.40	1,832.60	2,156.00
28	6" White 2' - 4' Skip (P)	665	LF	0.70	15.00	85.00	69.83	395.68	465.50
29	6" Yellow 2' - 4' Skip (P)	555	LF	0.70	15.00	85.00	58.28	330.23	388.50
30	6" Double Yellow (T)	2,045	LF	1.56	15.00	85.00	478.53	2,711.67	3,190.20
31	6" White (T)	2,800	LF	1.05	15.00	85.00	441.00	2,499.00	2,940.00
32	6" Yellow (T)	255	LF	1.05	15.00	85.00	40.16	227.59	267.75
33	8" White (T)	60	LF	1.80	15.00	85.00	16.20	91.80	108.00
34	12" White (T)	4,760	LF	2.05	15.00	85.00	1,463.70	8,294.30	9,758.00
35	18" White (T)	255	LF	2.05	15.00	85.00	78.41	444.34	522.75
36	18" Yellow (T)	115	LF	2.05	15.00	85.00	35.36	200.39	235.75
37	24" White (T)	980	LF	3.40	15.00	85.00	499.80	2,832.20	3,332.00
38	6" White 2' - 4' Skip (T)	665	LF	1.05	15.00	85.00	104.74	593.51	698.25
39	6" Yellow 2' - 4' Skip (T)	555	LF	1.05	15.00	85.00	87.41	495.34	582.75
40	White Directional Arrow (T)	1	EA	64.85	15.00	85.00	9.73	55.12	64.85

Table 4 of 12

41	Yield Triangle Arrow (T)	25	EA	125.00	15.00	85.00	468.75	2,656.25	3,125.00
42	Double Parking Stall (P)	746	EA	6.00	15.00	85.00	671.40	3,804.60	4,476.00
43	Parallel Parking Stall (P)	266	EA	5.00	15.00	85.00	199.50	1,130.50	1,330.00
44	Handicap Stall w/ Sign & Logo (P)	4	EA	265.00	15.00	85.00	159.00	901.00	1,060.00
45	Handicap Walkway (P)	4	EA	68.50	15.00	85.00	41.10	232.90	274.00
46	Pavement Message "ONLY" (P)	1	EA	100.00	15.00	85.00	15.00	85.00	100.00
47	Pavement Message "STOP" (P)	2	EA	100.00	15.00	85.00	30.00	170.00	200.00
48	Concrete Wheelstops (no paint)	750	EA	30.00	15.00	85.00	3,375.00	19,125.00	22,500.00
49	RPMs Colorless I Red	16	EA	5.67	15.00	85.00	13.61	77.11	90.72
50	RPMs Amber/ Amber	202	EA	5.67	15.00	85.00	171.80	973.54	1,145.34
51	RPMs Blue	55	EA	5.67	15.00	85.00	46.78	265.07	311.85
52	Survey	1	LS	9,850.00	15.00	85.00	1,477.50	8,372.50	9,850.00
<b>Sub-total Signs &amp; Markings (Onsite)</b>							<b>16,484.96</b>	<b>93,414.75</b>	<b>109,899.71</b>
<b>SIGNS &amp; MARKINGS 170 STREET CONNECTOR (OFFSITE)</b>									
1	R1-1 (Stop)	1	EA	187.00	100.00	-	187.00	-	187.00
2	R1-2	5	EA	187.00	100.00	-	935.00	-	935.00
3	R2-1	10	EA	187.00	100.00	-	1,870.00	-	1,870.00
4	R9-v1	2	EA	187.00	100.00	-	374.00	-	374.00
5	6" Double Yellow (P)	620	LF	1.10	100.00	-	682.00	-	682.00
6	6" White (P)	3,900	LF	0.70	100.00	-	2,730.00	-	2,730.00
7	6" Yellow (P)	2,500	LF	0.70	100.00	-	1,750.00	-	1,750.00
8	18" Yellow (P)	100	LF	2.00	100.00	-	200.00	-	200.00
9	6" Double Yellow (T)	620	LF	1.56	100.00	-	967.20	-	967.20
10	6" White (T)	3,900	LF	1.05	100.00	-	4,095.00	-	4,095.00
11	6" Yellow (T)	2,500	LF	1.05	100.00	-	2,625.00	-	2,625.00
12	18" Yellow (T)	100	LF	3.00	100.00	-	300.00	-	300.00
13	White Directional Arrow (T)	6	EA	64.85	100.00	-	389.10	-	389.10
14	Double White Directional Arrow (T)	5	EA	120.00	100.00	-	600.00	-	600.00
15	RPMs Blue	3	LF	5.67	100.00	-	17.01	-	17.01
16	Survey	1	LS	2,440.00	100.00	-	2,440.00	-	2,440.00
<b>Sub-total Signs &amp; Markings 170 Street Connector (Offsite)</b>							<b>20,161.31</b>	<b>-</b>	<b>20,161.31</b>
<b>SIGNS &amp; MARKINGS 97 AVENUE TURN LANE (OFFSITE)</b>									
1	6" White (P)	260	LF	0.70	100.00	-	182.00	-	182.00
2	6" White 2' - 4' Skip (P)	50	LF	1.10	100.00	-	55.00	-	55.00
3	6" White (T)	260	LF	1.05	100.00	-	273.00	-	273.00
4	6" White 2' - 4' Skip (T)	50	LF	1.56	100.00	-	78.00	-	78.00
13	White Directional Arrow (T)	3	EA	6,485.00	100.00	-	19,455.00	-	19,455.00
14	MOT & Traffic Control	1	LS	800.00	100.00	-	800.00	-	800.00
16	Survey	1	LS	855.00	100.00	-	855.00	-	855.00
<b>Sub-total Signs &amp; Markings 97 Avenue Turn Lane (Offsite)</b>							<b>21,698.00</b>	<b>-</b>	<b>21,698.00</b>
<b>Total Roadway Improvements (Onsite and Offsite)</b>							<b>1,549,782.23</b>	<b>2,578,743.19</b>	<b>4,128,525.42</b>

## STORMWATER MANAGEMENT

Item #	Description of Work	Quantity	Unit	Unit Price (\$/Unit)	Proportion (%)		Estimated Cost (\$)			
					CDD	Non-CDD	CDD	Non-CDD	Total	
STORM DRAIN (ONSITE)										
1	18" French Drain w/ P-HDPE (3' x 15' Trench)	9,060	LF	85.00	100.00	-	770,100.00	-	770,100.00	
2	24" French Drain w/ P-HDPE (4' x 15' Trench)	1,530	LF	125.00	100.00	-	191,250.00	-	191,250.00	
3	36" HDPE	370	LF	68.00	100.00	-	25,160.00	-	25,160.00	
4	30" HDPE	290	LF	60.00	100.00	-	17,400.00	-	17,400.00	
5	24" HDPE	1,645	LF	37.50	100.00	-	61,687.50	-	61,687.50	
6	18" HDPE	10,065	LF	33.20	100.00	-	334,158.00	-	334,158.00	
7	15" HDPE	1,135	LF	27.50	100.00	-	31,212.50	-	31,212.50	
8	Valley Inlet 42" x 42"w/ USF 5112-6143 Large F & C: \$	89	EA	2,750.00	100.00	-	244,750.00	-	244,750.00	
9	Valley Inlet 42" Dia.wt USF 5112-6143 Large F & G	1	EA	2,800.00	100.00	-	2,800.00	-	2,800.00	
10	Valley Inlet 48" x 48"w/ USF 5112-6143 Large F & C:	1	EA	2,850.00	100.00	-	2,850.00	-	2,850.00	
11	Valley Inlet 60" x 42" w/ USF 5112-6143 Large F & C	46	EA	4,050.00	100.00	-	186,300.00	-	186,300.00	
12	Valley Inlet 60" x 48" w/ USF 5112-6143 Large F & C	15	EA	4,050.00	100.00	-	60,750.00	-	60,750.00	
13	Curb Inlet 42" x 42" w/ USF 5130-6168 Hooded	3	EA	2,250.00	100.00	-	6,750.00	-	6,750.00	
14	Catch Basin 42" x 42" w/ USF 4700 Hinged F & G	3	EA	2,200.00	100.00	-	6,600.00	-	6,600.00	
15	Catch Basin 42" Dia. w/ USF 4700 Hinged F & G	36	EA	2,200.00	100.00	-	79,200.00	-	79,200.00	
16	Catch Basin 48" x 48" w/ USF 4700 Hinged F & G	1	EA	2,300.00	100.00	-	2,300.00	-	2,300.00	
17	Catch Basin 48" Dia. w/ USF 4700 Hinged F & G	2	EA	2,300.00	100.00	-	4,600.00	-	4,600.00	
18	Catch Basin 60" Dia. w/ USF 4700 Hinged F & G	4	EA	4,000.00	100.00	-	16,000.00	-	16,000.00	
19	Catch Basin 48" x 48" w/ P-6 Inlet & Throat	2	EA	3,650.00	100.00	-	7,300.00	-	7,300.00	
20	Storm Manhole 42" Dia. w/ USF 420-C	2	EA	1,800.00	100.00	-	3,600.00	-	3,600.00	
21	Storm Manhole 48" Dia. w/ USF 420-C	38	EA	2,200.00	100.00	-	83,600.00	-	83,600.00	
22	Storm Manhole 60" Dia. w/ USF 420-C	13	EA	2,780.00	100.00	-	36,140.00	-	36,140.00	
23	Storm Manhole 72" Dia. w/ USF 420-C	2	EA	4,050.00	100.00	-	8,100.00	-	8,100.00	
24	Control Structure 48" x 72" w/ (2) USF 31 QA	6	EA	6,550.00	100.00	-	39,300.00	-	39,300.00	
25	18" ADS Yard Drain w/ H-10 Grate	20	EA	1,850.00	100.00	-	37,000.00	-	37,000.00	
26	15" x 6" Wye HDPE	11	EA	400.00	100.00	-	4,400.00	-	4,400.00	
27	15" 45° Bend HDPE	3	EA	300.00	100.00	-	900.00	-	900.00	
28	6" Cleanout Ass'y. HDPE	11	EA	450.00	100.00	-	4,950.00	-	4,950.00	
29	USF Cast Iron Box	11	EA	380.00	100.00	-	4,180.00	-	4,180.00	
30	PRB's for 24" FD (CMP) Per Structure Table On C-19 thru C-23	14	EA	300.00	100.00	-	4,200.00	-	4,200.00	
31	PRB's for 18" FD (CMP) Per Structure Table On C-19 thru C-23	152	EA	250.00	100.00	-	38,000.00	-	38,000.00	
32	PRB's for 24" Outfall (CMP)	4	EA	300.00	100.00	-	1,200.00	-	1,200.00	
33	PR B's for 30" Outfall (CMP)	1	EA	650.00	100.00	-	650.00	-	650.00	
34	PR B's for 36" Outfall (CMP)	1	EA	950.00	100.00	-	950.00	-	950.00	
35	36" Endcap HDPE	1	EA	500.00	100.00	-	500.00	-	500.00	
36	30" Endcap HDPE	1	EA	375.00	100.00	-	375.00	-	375.00	
37	18" Endcap HDPE	11	EA	150.00	100.00	-	1,650.00	-	1,650.00	
38	Concrete Endwall for 24" HDPE Outfall	4	EA	3,200.00	100.00	-	12,800.00	-	12,800.00	
39	Concrete Endwall for 30" HDPE Outfall	1	EA	4,000.00	100.00	-	4,000.00	-	4,000.00	
40	Concrete Endwall for 36" HDPE Outfall	1	EA	4,400.00	100.00	-	4,400.00	-	4,400.00	
41	Trench Box & Pumping	1	EA	25,000.00	100.00	-	25,000.00	-	25,000.00	
42	Filter Fabric in Grates	223	EA	25.00	100.00	-	5,575.00	-	5,575.00	
43	Vacuum Structures at Community Completion	284	EA	125.00	100.00	-	35,500.00	-	35,500.00	
44	Survey & As-Builts	1	LS	36,200.00	100.00	-	36,200.00	-	36,200.00	
Sub-total Storm Drain (Onsite)							2,444,338.00	-	2,444,338.00	

Table 6 of 12

**STORM DRAIN: CULVERT (OFFSITE)**

1	8' Round Aluminum Culvert Pip	90	LF	650.00	100.00	-	58,500.00	-	58,500.00
2	Bands	1	LS	3,000.00	100.00	-	3,000.00	-	3,000.00
3	8' Plug	2	EA	5,000.00	100.00	-	10,000.00	-	10,000.00
4	Bedding Material	335	TN	18.50	100.00	-	6,197.50	-	6,197.50
5	Crane	2	DY	4,500.00	100.00	-	9,000.00	-	9,000.00
6	Survey & As Built	1	LS	3,500.00	100.00	-	3,500.00	-	3,500.00
<b>Sub-total Storm Drain: Culvert (Offsite)</b>							<b>90,197.50</b>	<b>-</b>	<b>90,197.50</b>

**STORM DRAIN 170 STREET CONNECTOR (OFFSITE)**

1	24" French Drain w/ P-HDPE (4' x 15' Trench)	1,000	LF	125.00	100.00	-	125,000.00	-	125,000.00
2	24" HDPE	120	LF	37.50	100.00	-	4,500.00	-	4,500.00
3	18" HDPE	1,185	LF	33.20	100.00	-	39,342.00	-	39,342.00
4	Catch Basin 48" x 48" w/ P-5 Inlet & Throat	4	EA	3,220.00	100.00	-	12,880.00	-	12,880.00
5	Catch Basin 48" x 48" w/ P-6 Inlet & Throat	4	EA	3,550.00	100.00	-	14,200.00	-	14,200.00
6	Catch Basin 60" x 60" w/ P-6 Inlet & Throat	12	EA	4,680.00	100.00	-	56,160.00	-	56,160.00
7	PR B's for 24" FD (CMP)	20	EA	350.00	100.00	-	7,000.00	-	7,000.00
8	Filter Fabric in Grates	16	EA	25.00	100.00	-	400.00	-	400.00
9	Vacuum Structures at Final	16	EA	125.00	100.00	-	2,000.00	-	2,000.00
10	Survey & As Built	1	LS	2,440.00	100.00	-	2,440.00	-	2,440.00
<b>Sub-total Storm Drain 170 Street Connector (Offsite)</b>							<b>263,922.00</b>	<b>-</b>	<b>263,922.00</b>

**STORM DRAIN 97 AVENUE TURN LANE (OFFSITE)**

1	24" French Drain w/ P-HDPE (4' x 15' Trench)	50	LF	125.00	100.00	-	6,250.00	-	6,250.00
2	24" HDPE	10	LF	37.50	100.00	-	375.00	-	375.00
3	Catch Basin 48" x 48" w/ P-5 Inlet & Throat	1	EA	3,220.00	100.00	-	3,220.00	-	3,220.00
4	Catch Basin 48" x 48" w/ P-6 Inlet & Throat	1	EA	3,550.00	100.00	-	3,550.00	-	3,550.00
5	PR B's for 24" FD (CMP)	2	EA	350.00	100.00	-	700.00	-	700.00
6	Filter Fabric in Grates	2	EA	25.00	100.00	-	50.00	-	50.00
7	Vacuum Structures at Final	2	EA	125.00	100.00	-	250.00	-	250.00
8	MOT & Traffic Control	1	LS	800.00	100.00	-	800.00	-	800.00
9	Survey & As Built	1	LS	707.04	100.00	-	707.04	-	707.04
<b>Sub-total Storm Drain 97 Avenue Trun Lane (Offsite)</b>							<b>15,902.04</b>	<b>-</b>	<b>15,902.04</b>
<b>Total Stormwater Management System (Offsite and Onsite)</b>							<b>2,814,359.54</b>	<b>-</b>	<b>2,814,359.54</b>

## WATER DISTRIBUTION SYSTEM

Item #	Description of Work	Quantity	Unit	Unit Price (\$/Unit)	Proportion (%)		Estimated Cost (\$)		
					CDD	Non-CDD	CDD	Non-CDD	Total
WATER DISTRIBUTION SYSTEM (ONSITE)									
1	12" DIP	1,855	LF	52.00	100.00	-	96,460.00	-	96,460.00
2	8" DIP	16,000	LF	34.00	100.00	-	544,000.00	-	544,000.00
3	6" DIP	630	LF	26.00	100.00	-	16,380.00	-	16,380.00
4	4" DIP	30	LF	27.30	100.00	-	819.00	-	819.00
5	Copper Service Pipe	10,630	LF	10.50	100.00	-	111,615.00	-	111,615.00
6	Pipe Bedding for Water	4,205	EA	18.50	100.00	-	77,792.50	-	77,792.50
7	Blueline Paint Water Main	18,515	EA	0.37	100.00	-	6,850.55	-	6,850.55
8	Fire Hydrant w/ Mega Lug Fire Hydrant Extensions Not Included	55	EA	2,850.00	100.00	-	156,750.00	-	156,750.00
9	3/4" Threaded Rod for Hydrant Restraints	55	EA	150.00	100.00	-	8,250.00	-	8,250.00
10	3/4" Threaded Rod for Vertical Offsets	98	EA	150.00	100.00	-	14,700.00	-	14,700.00
11	12" Gate Valve & Box w/ Mega Lug	7	EA	2,400.00	100.00	-	16,800.00	-	16,800.00
12	8" Gate Valve & Box w/ Mega Lug	57	EA	1,300.00	100.00	-	74,100.00	-	74,100.00
13	6" Gate Valve & Box w/ Mega Lug	55	EA	900.00	100.00	-	49,500.00	-	49,500.00
14	4" Gate Valve & Box w/ Mega Lug	1	EA	676.00	100.00	-	676.00	-	676.00
15	8" x 8" Cross w/ Mega Lug	2	EA	650.00	100.00	-	1,300.00	-	1,300.00
16	12" x 12" Tee w/ Mega Lug	1	EA	1,085.00	100.00	-	1,085.00	-	1,085.00
17	12" x 8" Tee w/ Mega Lug	6	EA	780.00	100.00	-	4,680.00	-	4,680.00
18	12" x 6" Tee w/ Mega Lug	7	EA	700.00	100.00	-	4,900.00	-	4,900.00
19	8" x 8" Tee w/ Mega Lug	27	EA	640.00	100.00	-	17,280.00	-	17,280.00
20	12" x 12" Tee w/ Mega Lug	48	EA	550.00	100.00	-	26,400.00	-	26,400.00
21	12" x 8" Tee w/ Mega Lug	3	EA	400.00	100.00	-	1,200.00	-	1,200.00
22	12" x 6" Tee w/ Mega Lug	1	EA	650.00	100.00	-	650.00	-	650.00
23	8" x 8" Tee w/ Mega Lug	20	EA	625.00	100.00	-	12,500.00	-	12,500.00
24	8" x 6" Tee w/ Mega Lug	5	EA	600.00	100.00	-	3,000.00	-	3,000.00
25	12" x 8" Reducer w/ Mega Lug	5	EA	350.00	100.00	-	1,750.00	-	1,750.00
26	12" 90 Bend w/ Mega Lug	42	EA	325.00	100.00	-	13,650.00	-	13,650.00
27	12" 45 Bend w/ Mega Lug	32	EA	325.00	100.00	-	10,400.00	-	10,400.00
28	12" 22 Bend w/ Mega Lug	56	EA	250.00	100.00	-	14,000.00	-	14,000.00
29	8" 90 Bend w/ Mega Lug	2	EA	350.00	100.00	-	700.00	-	700.00
30	8" 45 Bend w/ Mega Lug	6	EA	225.00	100.00	-	1,350.00	-	1,350.00
31	8" 22 Bend w/ Mega Lug	8	EA	1,150.00	100.00	-	9,200.00	-	9,200.00
32	8" Saddle w/ 2" Corp.	375	EA	480.00	100.00	-	180,000.00	-	180,000.00
33	2" Water Service (domestic or irrigation) Meter Box Not Included	1	EA	2,750.00	100.00	-	2,750.00	-	2,750.00
34	1" Double Water Service Meter Box Not Included	326	EA	815.00	100.00	-	265,690.00	-	265,690.00
35	1" Single Water Service Meter Box Not Included	47	EA	815.00	100.00	-	38,305.00	-	38,305.00
36	Wood Stakes	701	EA	10.00	100.00	-	7,010.00	-	7,010.00
37	12" Pipe Joint Restraint	92	EA	250.00	100.00	-	23,000.00	-	23,000.00
38	8" Pipe Joint Restraint	800	EA	150.00	100.00	-	120,000.00	-	120,000.00
39	6" Pipe Joint Restraint	32	EA	110.00	100.00	-	3,520.00	-	3,520.00
40	4" Pipe Joint Restraint	1	EA	100.00	100.00	-	100.00	-	100.00
41	16" x 8" Tapping Sleeve & Valve	1	EA	16,550.00	100.00	-	16,550.00	-	16,550.00
42	12" Fill & Flush Connection	1	EA	1,500.00	100.00	-	1,500.00	-	1,500.00
43	8" Fill & Flush Connection	6	EA	1,500.00	100.00	-	9,000.00	-	9,000.00
44	Air Release Valve Ass'y. (manual)	27	EA	1,200.00	100.00	-	32,400.00	-	32,400.00
45	Backflow Certification	2	EA	600.00	100.00	-	1,200.00	-	1,200.00
46	Remove Existing Plug & Connect	3	EA	750.00	100.00	-	2,250.00	-	2,250.00

Table 8 of 12

47	HRS & Sample Points	1	LS	2,400.00	100.00	-	2,400.00	-	2,400.00
48	Sawcut Existing	1	LS	500.00	100.00	-	500.00	-	500.00
49	Steel Plate Rental	1	LS	1,800.00	100.00	-	1,800.00	-	1,800.00
50	MOT & Traffic Control	1	LS	2,000.00	100.00	-	2,000.00	-	2,000.00
51	Survey	1	LS	26,500.00	100.00	-	26,500.00	-	26,500.00
<b>Sub-total Water Distribution System (Onsite)</b>							<b>2,035,213.05</b>	<b>-</b>	<b>2,035,213.05</b>
<b>WATER 170 STREET CONNECTOR (OFFSITE)</b>									
1	12" DIP	1,045	LF	52.00	100.00	-	54,340.00	-	54,340.00
2	6" DIP	75	LF	26.00	100.00	-	1,950.00	-	1,950.00
3	Blueline Paint Water Main	1,120	LF	0.37	100.00	-	414.40	-	414.40
4	Fire Hydrant w/ Mega Lug	3	EA	2,750.00	100.00	-	8,250.00	-	8,250.00
5	3/4" Threaded Rod for Hydrant Restraints	3	EA	150.00	100.00	-	450.00	-	450.00
6	12" Gate Valve & Box w/ Mega Lug	2	EA	2,150.00	100.00	-	4,300.00	-	4,300.00
7	6" Gate Valve & Box w/ Mega Lug	3	EA	750.00	100.00	-	2,250.00	-	2,250.00
8	12" x 12" Tee w/ Mega Lug	1	EA	1,085.00	100.00	-	1,085.00	-	1,085.00
9	12" x 6" Tee w/ Mega Lug	3	EA	700.00	100.00	-	2,100.00	-	2,100.00
10	12" 45 Bend w/ Mega Lug	4	EA	470.00	100.00	-	1,880.00	-	1,880.00
11	12" Cap Tap 2" w/ Mega Lug	1	EA	250.00	100.00	-	250.00	-	250.00
12	2" FVO Assy.	1	EA	850.00	100.00	-	850.00	-	850.00
13	12" Pipe Joint Restraint	52	EA	250.00	100.00	-	13,000.00	-	13,000.00
14	6" Pipe Joint Restraint	3	EA	110.00	100.00	-	330.00	-	330.00
15	16" x 12" Tapping Sleeve & Valve	1	EA	18,550.00	100.00	-	18,550.00	-	18,550.00
16	12" Fill & Flush Connection	1	EA	1,500.00	100.00	-	1,500.00	-	1,500.00
17	HRS & Sample Points	1	LS	1,800.00	100.00	-	1,800.00	-	1,800.00
18	Sawcut Existing	1	LS	500.00	100.00	-	500.00	-	500.00
19	Steel Plate Rental	1	LS	1,800.00	100.00	-	1,800.00	-	1,800.00
20	Base & Subgrade Restoration w/ CLR	1	LS	2,600.00	100.00	-	2,600.00	-	2,600.00
21	Pavement Restoration	1	LS	2,600.00	100.00	-	2,600.00	-	2,600.00
22	Pavement Marking Restoration	1	LS	1,500.00	100.00	-	1,500.00	-	1,500.00
23	MOT & Traffic Control	1	LS	2,000.00	100.00	-	2,000.00	-	2,000.00
24	Survey	1	LS	2,440.00	100.00	-	2,440.00	-	2,440.00
<b>Sub-total Water 170 Street Connector (Offsite)</b>							<b>126,739.40</b>	<b>-</b>	<b>126,739.40</b>
<b>Total Water Distribution System</b>							<b>2,161,952.45</b>	<b>-</b>	<b>2,161,952.45</b>

**SANITARY SEWER SYSTEM**

Item #	Description of Work	Quantity	Unit	Unit Price (\$/Unit)	Proportion (%)		Estimated Cost (\$)		
					CDD	Non-CDD	CDD	Non-CDD	Total
SANITARY SEWER GRAVITY SYSTEM (ONSITE)									
1	6" DIP Epoxy Coated	2830	LF	44.00	100.00	-	124,520.00	-	124,520.00
2	6" PVC C-900	20,245	LF	14.86	100.00	-	300,840.70	-	300,840.70
3	8" PVC C-900 0/6	3,805	LF	30.25	100.00	-	115,101.25	-	115,101.25
4	8" PVC C-900 6/8	6,138	LF	30.25	100.00	-	185,674.50	-	185,674.50
5	8" PVC C-900 8/10	3,452	LF	32.49	100.00	-	112,155.48	-	112,155.48
6	8" PVC C-900 10/12	1,953	LF	41.55	100.00	-	81,147.15	-	81,147.15
7	8" PVC C-900 12/14	737	LF	58.48	100.00	-	43,099.76	-	43,099.76
8	8" DIP Epoxy Coated 12/14	86	LF	81.80	100.00	-	7,034.80	-	7,034.80
9	10" PVC C-900 12/14	155	LF	105.50	100.00	-	16,352.50	-	16,352.50
10	8" DIP Epoxy Coated 14/16	259	LF	98.00	100.00	-	25,382.00	-	25,382.00
11	10" DIP Epoxy Coated 14/16	40	LF	138.05	100.00	-	5,522.00	-	5,522.00
12	Manhole 0/6	25	EA	2,500.00	100.00	-	62,500.00	-	62,500.00
13	Manhole 6/8	23	EA	2,750.00	100.00	-	63,250.00	-	63,250.00
14	Manhole 8/10	14	EA	3,000.00	100.00	-	42,000.00	-	42,000.00
15	Manhole 10/12	7	EA	3,250.00	100.00	-	22,750.00	-	22,750.00
16	Manhole 12/14	7	EA	3,850.00	100.00	-	26,950.00	-	26,950.00
17	Manhole 14/16	2	EA	4,350.00	100.00	-	8,700.00	-	8,700.00
18	Shrink Wrap/ PPC	78	EA	600.00	100.00	-	46,800.00	-	46,800.00
19	6" Coupling PVC C-900	40	EA	90.00	100.00	-	3,600.00	-	3,600.00
20	8" Coupling PVC C-900	150	EA	115.00	100.00	-	17,250.00	-	17,250.00
21	10" Coupling PVC C-900	8	EA	250.00	100.00	-	2,000.00	-	2,000.00
22	6" Manhole Adaptor PVC C-900	40	EA	110.00	100.00	-	4,400.00	-	4,400.00
23	8" Manhole Adaptor PVC C-900	150	EA	150.00	100.00	-	22,500.00	-	22,500.00
24	10" Manhole Adaptor PVC C-900	8	EA	280.00	100.00	-	2,240.00	-	2,240.00
25	8" x 6" Wye PVC C-900	653	EA	235.00	100.00	-	153,455.00	-	153,455.00
26	8" x 6" Wye DIP	7	EA	800.00	100.00	-	5,600.00	-	5,600.00
27	6" 45° Bend PVC C-900	1,750	EA	95.71	100.00	-	167,492.50	-	167,492.50
28	8" Cap PVC C-900	2	EA	110.00	100.00	-	220.00	-	220.00
29	6" Cap PVC C-900 Cleanout Assembly Not Included	700	EA	75.00	100.00	-	52,500.00	-	52,500.00
30	Rainstoppers	78	EA	55.00	100.00	-	4,290.00	-	4,290.00
31	Drop Connections	23	EA	1,500.00	100.00	-	34,500.00	-	34,500.00
32	Wood Stakes	700	EA	10.00	100.00	-	7,000.00	-	7,000.00
33	Trench Box	1	LS	25,000.00	100.00	-	25,000.00	-	25,000.00
34	Clean & TV Sanitary Sewer (1 time only)	16,625	LF	1.50	100.00	-	24,937.50	-	24,937.50
35	Survey & As-Builts	1	LS	25,800.00	100.00	-	25,800.00	-	25,800.00
Sub-total Sanitary Sewer Gravity System (Onsite)							1,842,565.14	-	1,842,565.14
SANITARY SEWER 170 STREET CONNECTOR (OFFSITE)									
1	8" PVC C-900 0/6	500	LF	30.25	100.00	-	15,125.00	-	15,125.00
2	8" PVC C-900 6/8	305	LF	30.25	100.00	-	9,226.25	-	9,226.25
3	8" PVC C-900 8/10	195	LF	32.49	100.00	-	6,335.55	-	6,335.55
4	Manhole 0/6	3	EA	2,500.00	100.00	-	7,500.00	-	7,500.00
5	Manhole 6/8	2	EA	2,750.00	100.00	-	5,500.00	-	5,500.00
6	Manhole 8/10	1	EA	3,000.00	100.00	-	3,000.00	-	3,000.00
7	8" Coupling PVC C-900	12	EA	150.00	100.00	-	1,800.00	-	1,800.00
8	8" Manhole Adaptor PVC C-900	12	EA	150.00	100.00	-	1,800.00	-	1,800.00
9	Rainstoppers	6	EA	55.00	100.00	-	330.00	-	330.00

10	Drop Connections	1	EA	1,500.00	100.00	-	1,500.00	-	1,500.00
11	Trench Box	1	LS	2,400.00	100.00	-	2,400.00	-	2,400.00
12	Clean & TV Sanitary Sewer (1 time only)	1,000	LF	1.50	100.00	-	1,500.00	-	1,500.00
13	Survey & As-Builts	1	LS	1,655.00	100.00	-	1,655.00	-	1,655.00
<b>Sub-total Sanitary Sewer 170 Street Connector (Offsite)</b>							<b>57,671.80</b>	<b>-</b>	<b>57,671.80</b>
<b>FORCE MAIN</b>									
1	6" DIP Epoxy	120	LF	49.50	100.00	-	5,940.00	-	5,940.00
2	8" DIP Epoxy	830	LF	65.00	100.00	-	53,950.00	-	53,950.00
3	Paint for Forcemain Pipe	950	LF	0.37	100.00	-	351.50	-	351.50
4	6" Check Valve w/ Mega Lug	2	EA	1,100.00	100.00	-	2,200.00	-	2,200.00
5	8" Check Valve w/ Manhole 60" Dia.	1	EA	8,980.00	100.00	-	8,980.00	-	8,980.00
6	8" Plug Valve w/ Box w/ Mega Lug	1	EA	1,650.00	100.00	-	1,650.00	-	1,650.00
10	8" 90° Bend w/ Mega Lug	3	EA	510.00	100.00	-	1,530.00	-	1,530.00
11	8" 45° Bend w/ Mega Lug	4	EA	510.00	100.00	-	2,040.00	-	2,040.00
12	8" 22° Bend w/ Mega Lug	8	EA	510.00	100.00	-	4,080.00	-	4,080.00
13	6" 90° Bend w/ Mega Lug	1	EA	300.00	100.00	-	300.00	-	300.00
14	24" x 8" Tapping Sleeve & Valve	1	EA	18,000.00	100.00	-	18,000.00	-	18,000.00
15	6" x 6" Tee w/ Mega Lug	1	EA	490.00	100.00	-	490.00	-	490.00
16	8" x 6" Reducer w/ Mega Lug	1	EA	650.00	100.00	-	650.00	-	650.00
17	2" ARV Assembly (Automatic)	4	EA	3,500.00	100.00	-	14,000.00	-	14,000.00
18	8" Pipe Joint Restraint	42	EA	150.00	100.00	-	6,300.00	-	6,300.00
19	6" Pipe Joint Restraint	6	EA	110.00	100.00	-	660.00	-	660.00
20	Flush Test	1	LS	1,500.00	100.00	-	1,500.00	-	1,500.00
21	Steel Plate Rental	1	LS	1,800.00	100.00	-	1,800.00	-	1,800.00
22	Sawcut Existing	1	LS	500.00	100.00	-	500.00	-	500.00
23	Curb Restoration	1	LS	1,600.00	100.00	-	1,600.00	-	1,600.00
24	Pavement Restoration	1	LS	3,500.00	100.00	-	3,500.00	-	3,500.00
25	Subgrade & Base Restoration w/ CLR	1	LS	3,500.00	100.00	-	3,500.00	-	3,500.00
26	MOT & Traffic Control	1	LS	2,500.00	100.00	-	2,500.00	-	2,500.00
27	Survey & As-Builts	1	LS	5,500.00	100.00	-	5,500.00	-	5,500.00
<b>Sub-total Force Main</b>							<b>141,521.50</b>	<b>-</b>	<b>141,521.50</b>
<b>LIFT STATION</b>									
1	Lift Station	1	LS	528,000.00	100.00	-	528,000.00	-	528,000.00
<b>Sub-total Lift Station</b>							<b>528,000.00</b>	<b>-</b>	<b>528,000.00</b>
<b>Total Sanitary Sewer System (Onsite and Offsite)</b>							<b>2,569,758.44</b>	<b>-</b>	<b>2,569,758.44</b>
<b>Total Hard Costs Earthwork, Roadway, Stormwater, Water and Sewer</b>							<b>9,797,551.69</b>	<b>8,179,544.01</b>	<b>17,977,095.70</b>



**CONTINGENCY, SOFT COSTS, ROAD IMPACT FEES, WATER/SEWER CONN. CHARGES AND LAND ACQUISITION (OTHER COSTS)**

Item #	Description of Work	Quantity	Unit	Unit Price (\$/Unit)	Proportion (%)		Estimated Cost (\$)		
					CDD	Non-CDD	CDD	Non-CDD	Total
1	Contingency (15% of Sub-Totals Above)	1	%	15.00%	54.50	45.50	1,469,632.75	1,226,931.60	2,696,564.35
2	Soft Costs (10% of Sub-Totals Above)	1	%	10.00%	54.50	45.50	979,755.17	817,954.40	1,797,709.57
3	Wetland Mitigation Credits (94.65 credits from Hole-In-The-Donut)	94.65	EA	12,765.00	100.00	-	1,208,207.25	-	1,208,207.25
4	Road Impact Fees (186 Townhomes)	186	EA	5,793.90	100.00	-	1,077,665.40	-	1,077,665.40
5	Road Impact Fees (212 Villas)	212	EA	5,793.90	100.00	-	1,228,306.80	-	1,228,306.80
6	Road Impact Fees (251 Single Family Residences)	251	EA	9,463.58	100.00	-	2,375,358.58	-	2,375,358.58
7	Hialeh Water Connection Charges Fees (649 Residential Units)	649	EA	2,975.00	100.00	-	1,930,775.00	-	1,930,775.00
8	Hialeah Sewer Connection Charges Fees (649 Residential Units)	649	EA	966.00	100.00	-	626,934.00	-	626,934.00
9	Land Acquisition (Lake Tract Purchase)	21.80	AC	498,616.58	100.00	-	10,869,841.44	-	10,869,841.44
<b>Total Other Costs</b>							<b>21,766,476.39</b>	<b>2,044,886.00</b>	<b>23,811,362.39</b>

<b>Grand Total Project Hard Costs and Other Costs</b>	<b>31,564,028.08</b>	<b>10,224,430.01</b>	<b>41,788,458.09</b>
---	----------------------	----------------------	----------------------