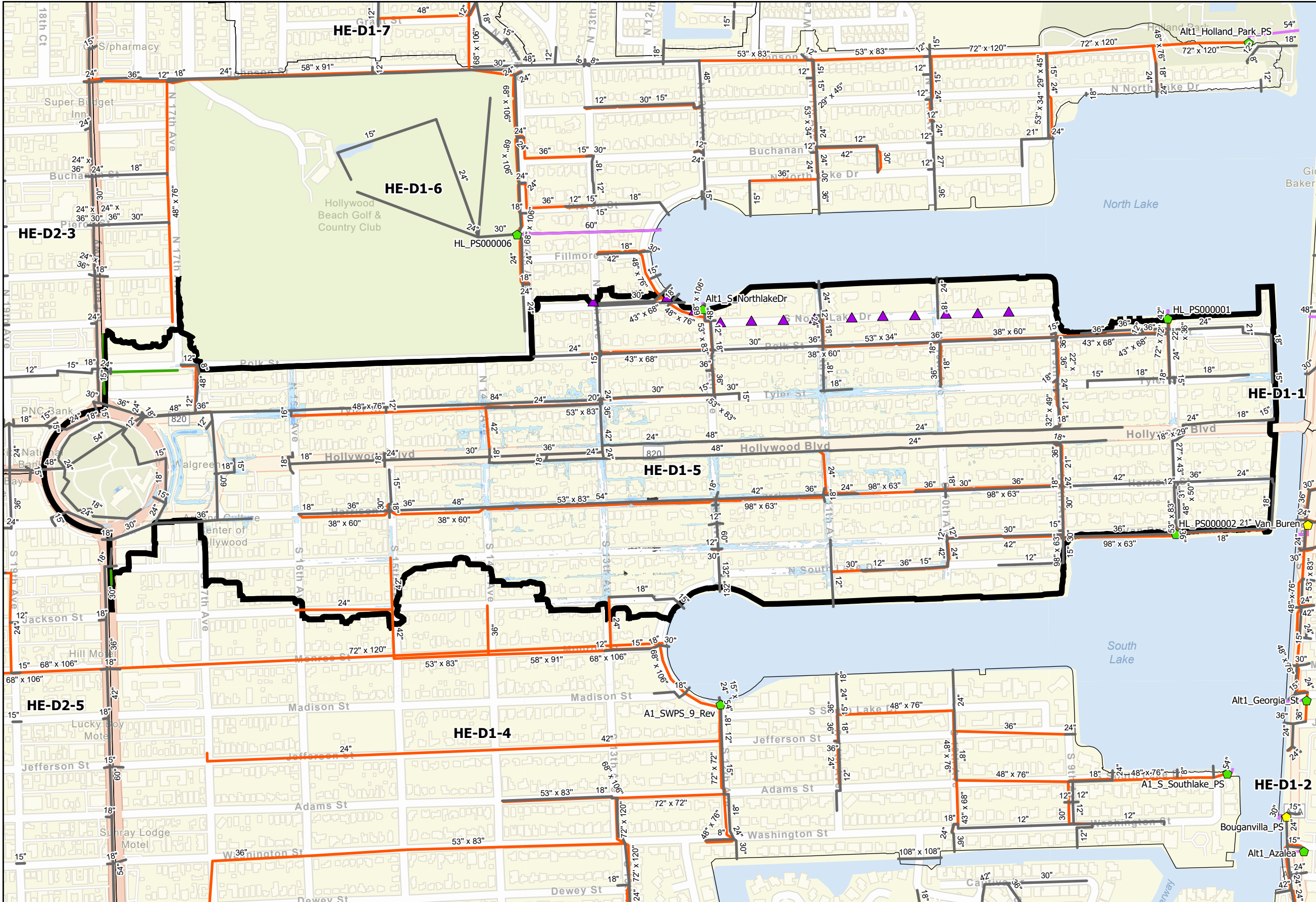
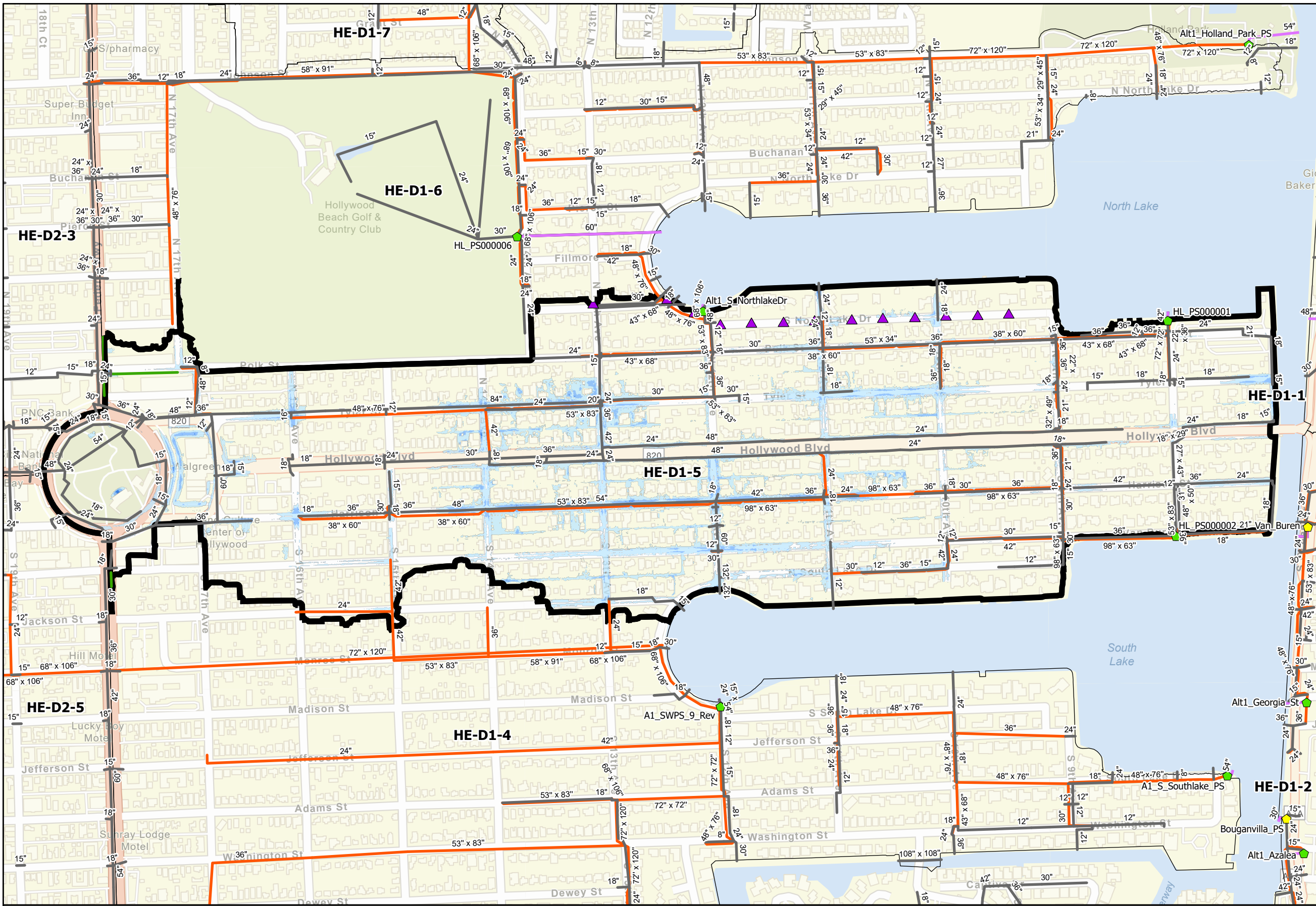




Legend

- Hollywood City Limits
- Focused CIP Area
- Existing SWPS
- Near Term SWPS
- Alt 1 SWPS
- Alt 1 Injection Wells
- Existing Gravity Pipes
- Existing Forcemains
- Alt 1 Exfiltration Pipes
- Alt 1 Gravity Pipes
- Alt 1 Forcemains
- Alt 1 Detention Pond
- 5-Year ALT 1 Storm Flood Feet

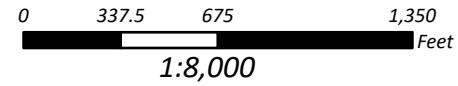
Flood Depth (Feet)
<= 0 ft.
0 - 0.5
0.5 - 1
1 - 1.5
> 1.5 ft.

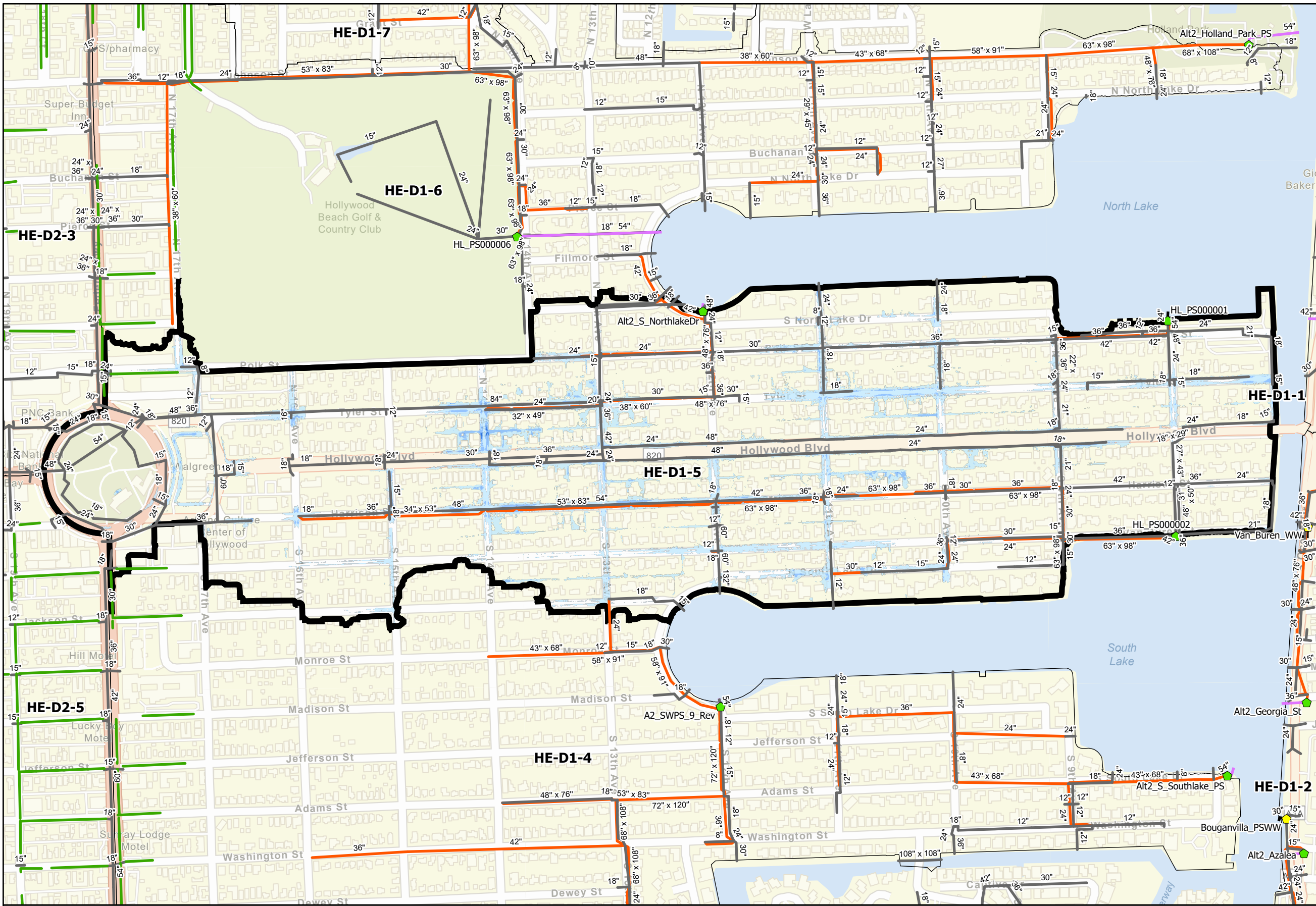


- Legend
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Alt 1 SWPS
 - Alt 1 Injection Wells
 - Existing Gravity Pipes
 - Existing Force mains
 - Alt 1 Exfiltration Pipes
 - Alt 1 Gravity Pipes
 - Alt 1 Force mains
 - Alt 1 Detention Pond
 - 10-Year ALT 1 Storm Flood Feet
 - ≤ 0 ft.
 - 0 - 0.5
 - 0.5 - 1
 - 1 - 1.5
 - > 1.5 ft.

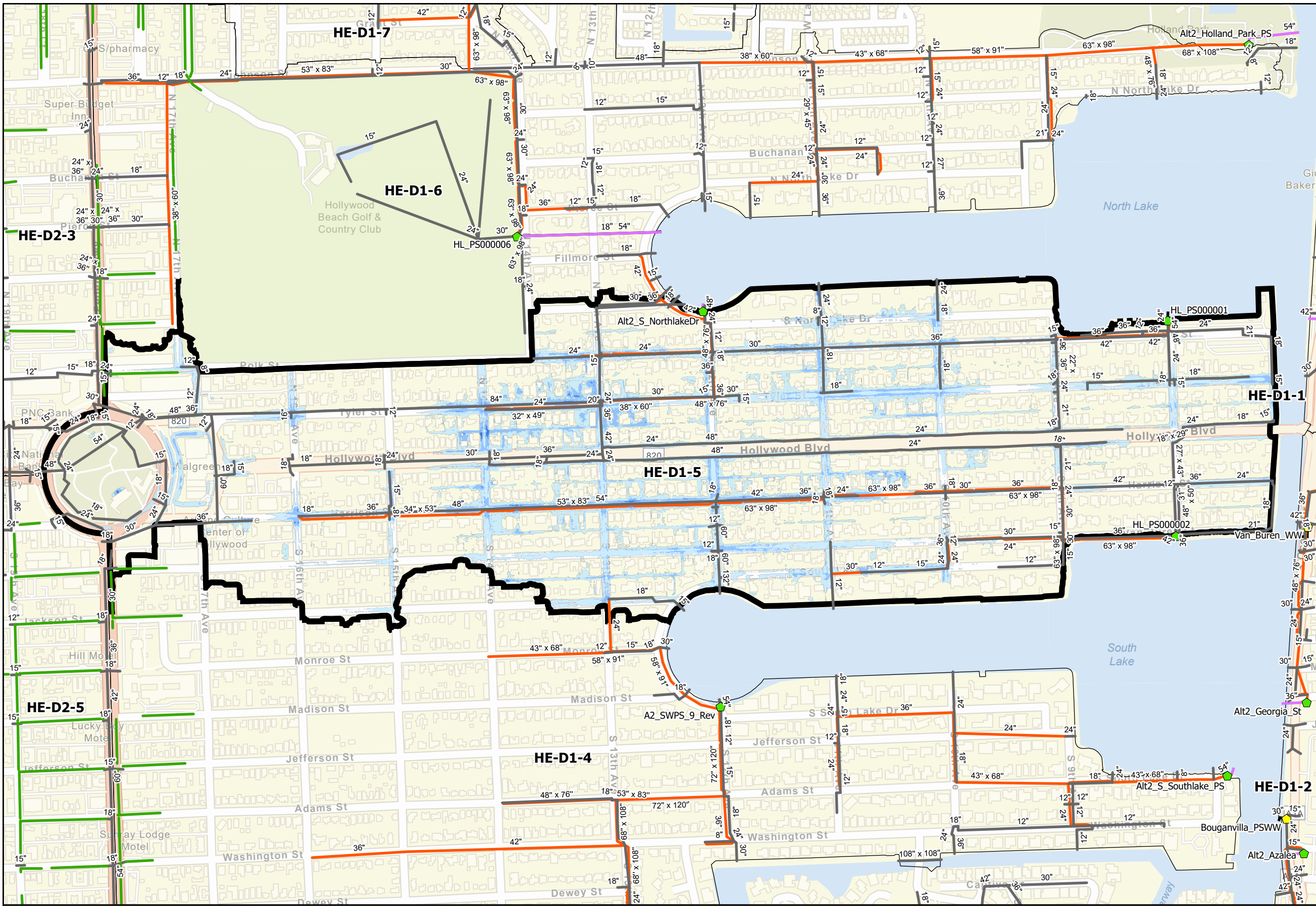


Predicted Flooding Reduction and Proposed ALT 1
CIP for 10-year Design Storm in CIP Area
Hollywood Lakes - Central





- Legend
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Alt 2 SWPS
 - Alt 2 Injection Wells
 - Existing Gravity Pipes
 - Existing Forcemains
 - Alt 2 Exfiltration Pipe
 - Alt 2 Gravity Pipes
 - Alt 2 Forcemains
 - Alt 2 Detention Pond
 - 5-Year ALT 2 Storm Flood Feet
 - <= 0 ft.
 - 0 - 0.5
 - 0.5 - 1
 - 1 - 1.5
 - > 1.5 ft.

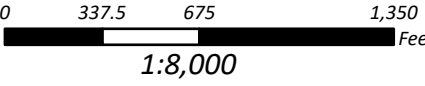


- Legend**
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Alt 2 SWPS
 - Alt 2 Injection Wells
 - Existing Gravity Pipes
 - Existing Forcemains
 - Alt 2 Exfiltration Pipe
 - Alt 2 Gravity Pipes
 - Alt 2 Forcemains
 - Alt 2 Detention Pond
 - 10-Year ALT 2 Storm Flood Feet
 - <= 0 ft.
 - 0 - 0.5
 - 0.5 - 1
 - 1 - 1.5
 - > 1.5 ft.



Predicted Flooding Reduction and Proposed ALT 2
CIP for 10-year Design Storm in CIP Area
Hollywood Lakes - Central

City of Hollywood Stormwater Master Plan
HE-D1-5_ALT2-10
2/28/2023



			CONCEPTUAL CAPITAL COST ESTIMATE					Hollywood Lakes Central	
								Alternative 1	
PUMP STATIONS WITH FORCE MAINS									
ITEM #	Master Sheet Index	DIAMETER (INCHES)	DESCRIPTION		TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL
0001	13	24	FM- Force Main Collector		Circular	LF	\$ 167.00	0	\$ -
0002	14	36	FM- Force Main Collector		Circular	LF	\$ 242.00	0	\$ -
0003	15	42	FM- Force Main Collector		Circular	LF	\$ 336.00	0	\$ -
0004	16	48	FM- Force Main Collector		Circular	LF	\$ 612.00	0	\$ -
0005	17	54	FM- Force Main Collector		Circular	LF	\$ 982.00	0	\$ -
0006	18	60	FM- Force Main Collector		Circular	LF	\$ 1,149.00	0	\$ -
0007	19	66	FM- Force Main Collector		Circular	LF	\$ 1,329.00	0	\$ -
0008	20	72	FM- Force Main Collector		Circular	LF	\$ 1,473.00	0	\$ -
0009	225	24	FMO- Force Main Offline		Circular	LF	\$ 353.00	4,500	\$ 1,588,500
0010	11		IWI-Injection Wells-Inline			EA	\$ 65,000.00	0	\$ -
0011	12		IWO-Injection Wells- Offline			EA	\$ 75,000.00	20	\$ 1,500,000
0012	6	PS-Storm Drainage Pump Stations < 166 cfs			I	EA	\$ 2,400,000.00	0	\$ -
0013	7	PS-Storm Drainage Pump Stations < 166-246 cfs			II	EA	\$ 3,500,000.00	0	\$ -
0014	8	PS-Storm Drainage Pump Stations < 246-328 cfs			III	EA	\$ 4,900,000.00	2	\$ 9,800,000
0015	9	PS-Storm Drainage Pump Stations< 328-410 cfs			IV	EA	\$ 6,750,000.00	1	\$ 6,750,000
0016	54	PS-CS22 Storm Drainage Pump Stations 600CFS				EA	\$ 8,000,000.00	0	\$ -
NN SUBTOTAL									\$ 19,638,500
EXFILTRATION WITH GRAVITY MAINS								Hollywood Lakes Central	
ITEM #	Master Sheet Index	DIAMETER (INCHES)	WIDTH(INCHES)	DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL
0020	21	15		GM-Gravity Main Collector	Circular	LF	\$ 40.00	0	\$ -
0021	22	18		GM-Gravity Main Collector	Circular	LF	\$ 45.00	616	\$ 27,707
0023	23	24		GM-Gravity Main Collector	Circular	LF	\$ 48.00	555	\$ 26,654
0024	24	30		GM-Gravity Main Collector	Circular	LF	\$ 52.00	374	\$ 19,464
0026	25	36		GM-Gravity Main Collector	Circular	LF	\$ 80.00	1,371	\$ 109,680
0028	26	42		GM-Gravity Main Collector	Circular	LF	\$ 115.00	1,524	\$ 175,237
0029	27	48		GM-Gravity Main Collector	Circular	LF	\$ 125.00	450	\$ 56,250
0030	28	54		GM-Gravity Main Collector	Circular	LF	\$ 150.00	0	\$ -
0031	29	60		GM-Gravity Main Collector	Circular	LF	\$ 220.00	0	\$ -
0032	30	66		GM-Gravity Main Collector	Circular	LF	\$ 428.00	0	\$ -
0033	31	72		GM-Gravity Main Collector	Circular	LF	\$ 485.00	0	\$ -
0035	32	29	45	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 205.00	0	\$ -
0036	33	32	49	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 215.00	381	\$ 81,894
0037	34	34	53	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 225.00	808	\$ 181,755
0038	35	38	60	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 235.00	2,660	\$ 625,077
0039	36	43	68	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 370.00	1,742	\$ 644,355
0040	37	48	76	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 400.00	1,562	\$ 624,720
0041	38	53	83	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 432.00	3,047	\$ 1,316,261
0042	39	58	91	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 320.00	0	\$ -
0043	40	63	98	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 410.00	4,134	\$ 1,694,776
0044	41	68	106	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 460.00	66	\$ 30,452
0045	42	72	113	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 570.00	0	\$ -
0046	43	82	128	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 650.00	0	\$ -
0048	44	72	120	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	26	\$ 14,763
0072	45	72	72	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	139	\$ 79,458
0049	46	84	120	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 750.00	0	\$ -
0050	47	96	96	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 850.00	0	\$ -
0051	48			GBP-Gravity Backflow Pipe <36"		Ea	\$ 35,000.00	0	\$ -
0052	49			GBP-Gravity Backflow Pipe >36"		Ea	\$ 70,000.00	0	\$ -
0053	5			GW-Gravity Wells		EA	\$ 105,000.00	0	\$ -
0054	4	48		ET-Exfiltration Trench		LF	\$ 250.00	509	\$ 127,250
0056	50			Weir Box CS		EA	\$ 7,500.00	0	\$ -
0057	53			CS-22 Remod		EA	\$ 200,000.00	0	\$ -
0058	55			SW-04 Remod		EA	\$ 150,000.00	0	\$ -
0055				Gravity Structures-Inlets		EA	\$ 30,000.00	175	\$ 5,260,750
0059	56			Ditch Improvement		LF	\$ 50.00	0	\$ -
0091	57			Swale/Ditch Headwall		Ea	\$ 10,000.00	0	\$ -
0090	10			Exfil End Weir		Ea	\$ 5,000.00	0	\$ -
0092	51			Ret/Det Pond		CUY	\$ 355.00	0	\$ -
							#N/A	#VALUE!	#VALUE!
GRAVITY MAIN SUBTOTAL							#N/A	#VALUE!	#VALUE!
0060		Pavement Restoration including Pavement Marking (Full Road)				LF	\$ 270.00	24,463	\$ 6,605,010
CONSTRUCTION COST SUBTOTAL									\$ 37,340,011
GENERAL CONDITIONS								Hollywood Lakes Central	
0061		Mobilization				LS	4%	\$ 37,340,011	\$ 1,493,600
0062		Insurance and General Conditions				LS	2%	\$ 37,340,011	\$ 746,800
0063		Permits/Fees				LS	2%	\$ 37,340,011	\$ 746,800
0064		Maintenance of Traffic				LS	3%	\$ 37,340,011	\$ 1,120,200
0065		Engineering Design & CA Oversight Costs				LS	15%	\$ 37,340,011	\$ 5,601,002
0066		Construction Engineering Inspection Costs				LS	4%	\$ 37,340,011	\$ 1,493,600
0067		OCI Management Cost				LS	15%	\$ 37,340,011	\$ 5,601,002
0068		Project Contingency Costs				LS	30%	\$ 37,340,011	\$ 11,202,003
Land acquisition									
NS SUBTOTAL									\$ 28,005,008
TOTAL									\$ 65,345,028

		CONCEPTUAL CAPITAL COST ESTIMATE						Hollywood Lakes Central			
PUMP STATIONS WITH FORCE MAINS										Alternative 2	
ITEM #	Master Sheet Index	DIAMETER (INCHES)		DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL		
0001	13	24		FM- Force Main Collector	Circular	LF	\$ 167.00	0	\$ -		
0002	14	36		FM- Force Main Collector	Circular	LF	\$ 242.00	0	\$ -		
0003	15	42		FM- Force Main Collector	Circular	LF	\$ 336.00	0	\$ -		
0004	16	48		FM- Force Main Collector	Circular	LF	\$ 612.00	0	\$ -		
0005	17	54		FM- Force Main Collector	Circular	LF	\$ 982.00	0	\$ -		
0006	18	60		FM- Force Main Collector	Circular	LF	\$ 1,149.00	0	\$ -		
0007	19	66		FM- Force Main Collector	Circular	LF	\$ 1,329.00	0	\$ -		
0008	20	72		FM- Force Main Collector	Circular	LF	\$ 1,473.00	0	\$ -		
0009	225	24		FMO- Force Main Offline	Circular	LF	\$ 353.00	0	\$ -		
0010	11			IWI-Injection Wells-Inline		EA	\$ 65,000.00	0	\$ -		
0011	12			IWO-Injection Wells -Offline		EA	\$ 75,000.00	0	\$ -		
0012	6	PS-Storm Drainage Pump Stations < 166 cfs			I	EA	\$ 2,400,000.00	1	\$ 2,400,000		
0013	7	PS-Storm Drainage Pump Stations < 166-246 cfs			II	EA	\$ 3,500,000.00	2	\$ 7,000,000		
0014	8	PS-Storm Drainage Pump Stations < 246-328 cfs			III	EA	\$ 4,900,000.00	0	\$ -		
0015	9	PS-Storm Drainage Pump Stations<= 328-410 cfs			IV	EA	\$ 6,750,000.00	0	\$ -		
0016	54	PS-CS22 Storm Drainage Pump Stations 600CFS				EA	\$ 8,000,000.00	0	\$ -		
IN SUBTOTAL									\$ 9,400,000		
EXFILTRATION WITH GRAVITY MAINS										Hollywood Lakes Central	
ITEM #	Master Sheet Index	DIAMETER (INCHES)		Width(INCHES)	DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL	
0022	22	21			GM-Gravity Main Collector	Circular	LF	\$ 45.00	0	\$ -	
0021	21	18			GM-Gravity Main Collector	Circular	LF	\$ 45.00	47	\$ 2,115	
0023	23	24			GM-Gravity Main Collector	Circular	LF	\$ 48.00	1,881	\$ 90,288	
0024	24	30			GM-Gravity Main Collector	Circular	LF	\$ 52.00	206	\$ 10,712	
0026	25	36			GM-Gravity Main Collector	Circular	LF	\$ 80.00	78	\$ 6,240	
0028	26	42			GM-Gravity Main Collector	Circular	LF	\$ 115.00	1,538	\$ 176,870	
0029	27	48			GM-Gravity Main Collector	Circular	LF	\$ 125.00	30	\$ 3,750	
0030	28	54			GM-Gravity Main Collector	Circular	LF	\$ 150.00	0	\$ -	
0031	29	60			GM-Gravity Main Collector	Circular	LF	\$ 220.00	0	\$ -	
0032	30	66			GM-Gravity Main Collector	Circular	LF	\$ 428.00	0	\$ -	
0033	31	72			GM-Gravity Main Collector	Circular	LF	\$ 485.00	0	\$ -	
0035	32	29	45		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 205.00	71	\$ 14,555	
0036	33	32	49		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 215.00	576	\$ 123,840	
0037	34	34	53		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 225.00	1,547	\$ 348,075	
0038	35	38	60		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 235.00	987	\$ 231,945	
0039	36	43	68		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 370.00	0	\$ -	
0040	37	48	76		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 400.00	369	\$ 147,600	
0041	38	53	83		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 432.00	1,061	\$ 458,352	
0042	39	58	91		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 320.00	0	\$ -	
0043	40	63	98		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 410.00	4,134	\$ 1,694,940	
0044	41	68	106		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 460.00	62	\$ 28,520	
0045	42	72	113		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 570.00	0	\$ -	
0046	43	82	128		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 650.00	0	\$ -	
0048	44	72	120		GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -	
0072	45	72	72		GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -	
0049	46	72	96		GM-Gravity Main Collector	Rectangle Closed	LF	\$ 750.00	0	\$ -	
0050	47	96	96		GM-Gravity Main Collector	Rectangle Closed	LF	\$ 850.00	0	\$ -	
0051	48				GBP-Gravity Backflow Pipe <36"		Ea	\$ 35,000.00	0	\$ -	
0052	49				GBP-Gravity Backflow Pipe >36"		Ea	\$ 70,000.00	0	\$ -	
0053	5				GW-Gravity Wells		EA	\$ 105,000.00	0	\$ -	
0054	4	48				ET-Exfiltration Trench	LF	\$ 250.00	803	\$ 200,750	
0055	50				Weir Box CS		EA	\$ 30,000.00	0	\$ -	
0057	53				CS-22 Remod		EA	\$ 525,000.00	0	\$ -	
0058	55				SW-04 Remod		EA	\$ 150,000.00	0	\$ -	
0056					Gravity Structures-Inlets		EA	\$ 7,500.00	112	\$ 836,875	
0059	56				Ditch Improvement		LF	\$ 50.00	0	\$ -	
0091	57				Swale/Ditch Headwall		Ea	\$ 10,000.00	0	\$ -	
0090	10				Exfil End Weir		Ea	\$ 5,000.00	0	\$ -	
0092	51				Ret/Det Pond		CUY	\$ 355.00	0	\$ -	
								#N/A	#VALUE!	#VALUE!	
								#N/A	#VALUE!	#VALUE!	
								#N/A	#VALUE!	#VALUE!	
GRAVITY MAIN SUBTOTAL										\$ 4,375,427	
0060		Pavement Restoration including Pavement Marking (Full Road)				LF	\$ 270.00	13,390	\$ 3,615,300		
CONSTRUCTION COST SUBTOTAL									\$ 17,390,727		
GENERAL CONDITIONS										Hollywood Lakes Central	
0061		Mobilization				LS	4%	\$ 17,390,727	\$ 695,629		
0062		Insurance and General Conditions				LS	2%	\$ 17,390,727	\$ 347,815		
0063		Permits/Fees				LS	2%	\$ 17,390,727	\$ 347,815		
0064		Maintenance of Traffic				LS	3%	\$ 17,390,727	\$ 521,722		
0065		Engineering Design & CA Oversight Costs				LS	15%	\$ 17,390,727	\$ 2,608,609		
0066		Construction Engineering Inspection Costs				LS	4%	\$ 17,390,727	\$ 695,629		
0067		OCI Management Cost				LS	15%	\$ 17,390,727	\$ 2,608,609		
0068		Project Contingency Costs				LS	30%	\$ 17,390,727	\$ 5,217,218		
NS SUBTOTAL									\$ 13,043,445		
TOTAL									\$ 30,433,772		

3.2.4.6 CIP Area HE-D1-6 (Hollywood Lakes – North Lake)

Root Causes of Flooding

This CIP area is characterized residential land use and golf course. There is higher ground to the west and low area elsewhere in the basin. The existing gravity system and SW 06 SWPS is not sufficient and undersized for the desired LOS and deep flooding occurs. Due to the low elevation, the gravity multiple outfalls do not work at high tide. The Hollywood Beach GC currently acts as detention storage for the neighborhoods during larger storms.

Alternative 1

Proposed CIP:

- Two new (or upgraded existing) SWPSs for the service area:
 1. Existing SW06, located at the east side of the Hollywood Beach Gold Course, existing pump station capacity is approximately 16.5 cfs and is to be upgraded with an additional 175 cfs to a Type II 192 cfs total SWPS discharging via 950 l.f. of 60-inch equivalent FM into North Lake.
 2. New HollandPk SWPS, Type IV 355 cfs pumping directly into the ICW via 500 l.f. of twin 54-inch FMs located in the City R/O/W in Holland Park.
- New gravity collection systems and inlets in neighborhoods to the new SWPS.
- New 11,525 l.f. of exfiltration systems in neighborhoods.
- Two gravity stormwater wells (assumed 1 cfs per foot head for 24-inch well, 250 ft spacing).
- Low roadway raising improvements in service area to remove dips resulting in flooding.

Summary of Locations Not Meeting ALT 1 LOS:

1. Structures Flooded pre-14, seawall-276, post-3
2. Roadway raising is required at Grant St and N 14th Ave and N 14 Ct for approximately 400 l.f. and on the cross streets.

Summary of Offsite Issues Affecting CIP Area:

1. None.

Alternative 2

Proposed CIP:

- Two new (or upgraded) SWPSs for the service area:
 1. Existing SW06 pump station, located at the east side of the Hollywood Beach Golf Course, existing capacity is approximately 16.5 cfs and is to be upgraded with an additional 125 cfs to a Type I 142 cfs total SWPS discharging via 950 l.f. of 54-inch equivalent FM into North Lake.

2. New HollandPk SWPS, Type I 125 cfs pumping directly into the ICW via 500 l.f. of 54-inch FMs located in the City R/O/W in Holland Park.

- New gravity collection systems and inlets in neighborhoods to the new SWPS.
- New 11,525 l.f. of exfiltration systems in neighborhoods.
- Two gravity stormwater wells (assumed 1 cfs per foot head for 24-inch well, 250 ft spacing).
- Low roadway raising improvements in service area to remove dips resulting in flooding.

Summary of Locations Not Meeting ALT 2 LOS:

1. Structures Flooded pre-14, seawall-276, post-20
2. Roadway raising is required at Grant St and N 14th Ave and N 14 Ct for approximately 400 l.f. and on the cross streets.

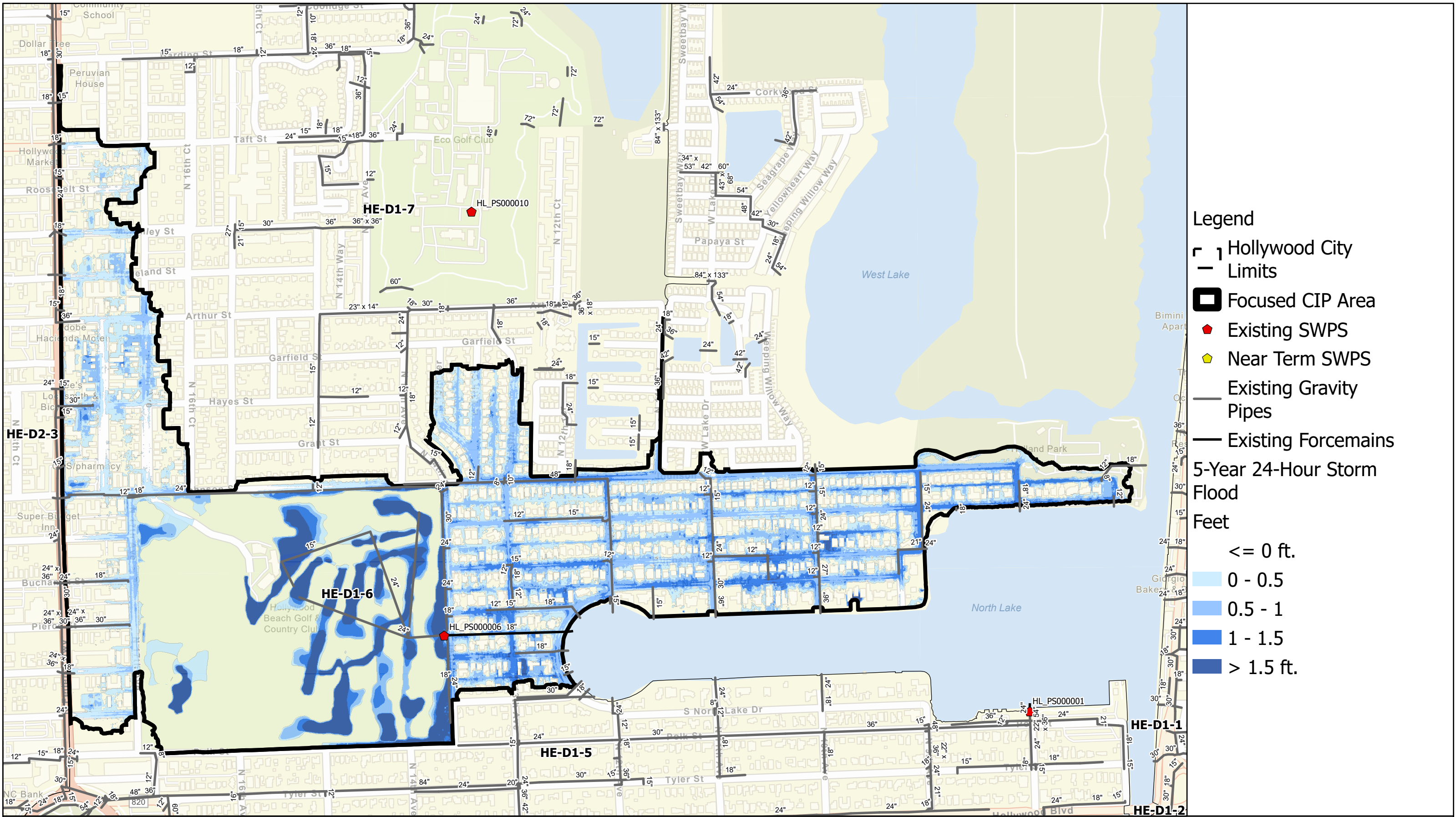
Summary of Offsite Issues Affecting CIP Area:

1. None.

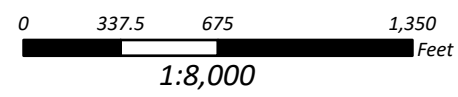
HE-D1-6 Pre-Post CIP Flood Inundation Maps

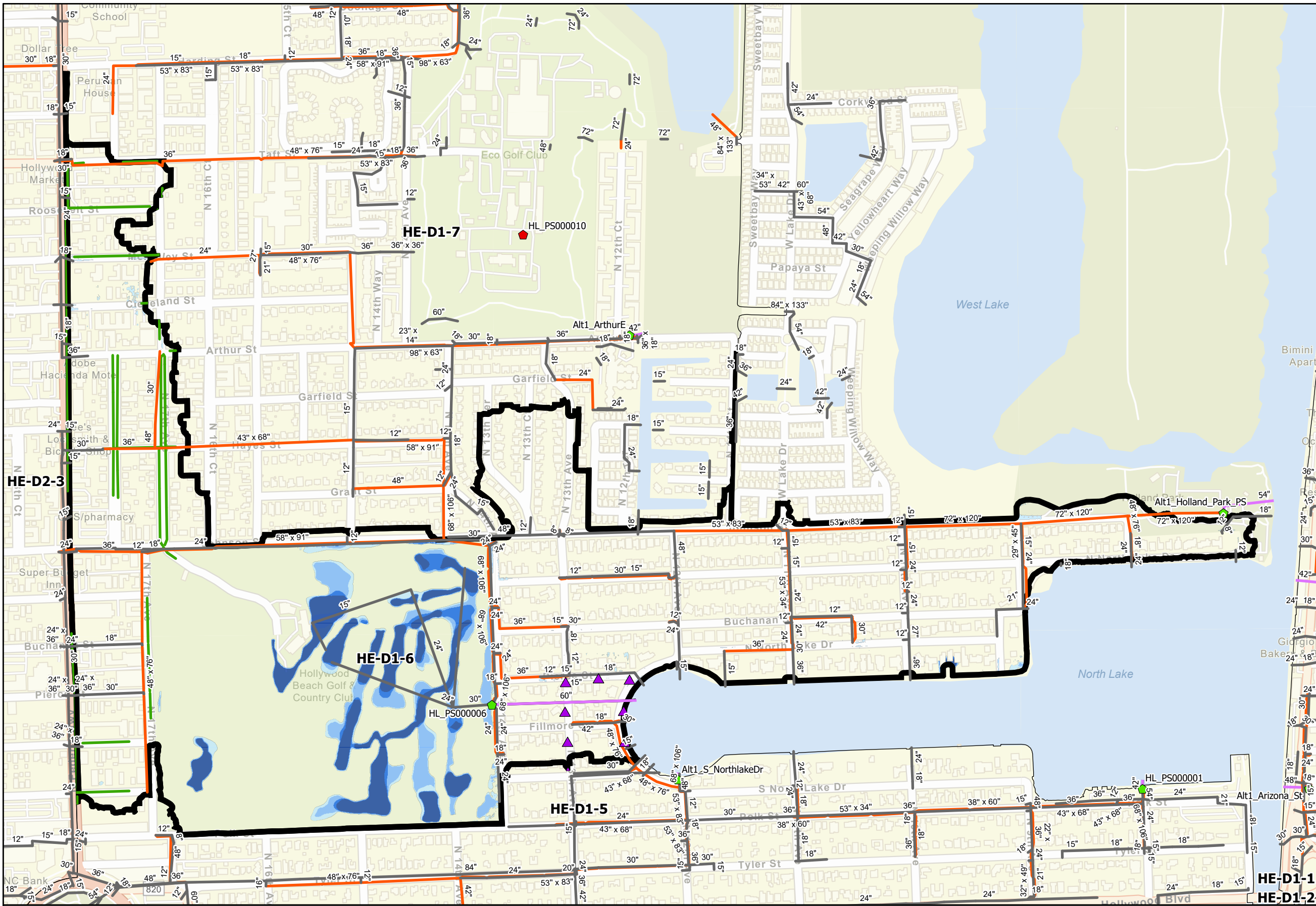
The following figures provide the predicted existing conditions flooding for the 5- and 10-year storm in the CIP Area and the predicted flood reduction for these storms under the Alternatives 1 and 2 CIP:

- **Figure HE-D1-6-EC_5 - Current Conditions Flooding in CIP Area 5-year Design Storm**
- **Figure HE-D1-6-EC_10 - Current Conditions Flooding in CIP Area 10-year Design Storm**
- **Figure HE-D1-6-CIP_ALT1_5 - Predicted Flooding Reduction and Proposed ALT1 CIP for 5-year Design Storm**
- **Figure HE-D1-6-CIP_ALT1_10 - Predicted Flooding Reduction and Proposed ALT1 CIP for 10-year Design Storm**
- **Figure HE-D1-6-CIP_ALT2_5 - Predicted Flooding Reduction and Proposed ALT2 CIP for 5-year Design Storm**
- **Figure HE-D1-6-CIP_ALT2_10 - Predicted Flooding Reduction and Proposed ALT2 CIP for 10-year Design Storm**
- **Table HE-D1-6_ALT1 - Planning Budget for Alternative 1 Proposed CIP**
- **Table HE-D1-6_ALT2 - Planning Budget for Alternative 2 Proposed CIP**



Current Conditions Flooding in CIP Area
Hollywood Lakes - North Lake
5-year Design Storm

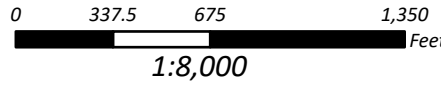


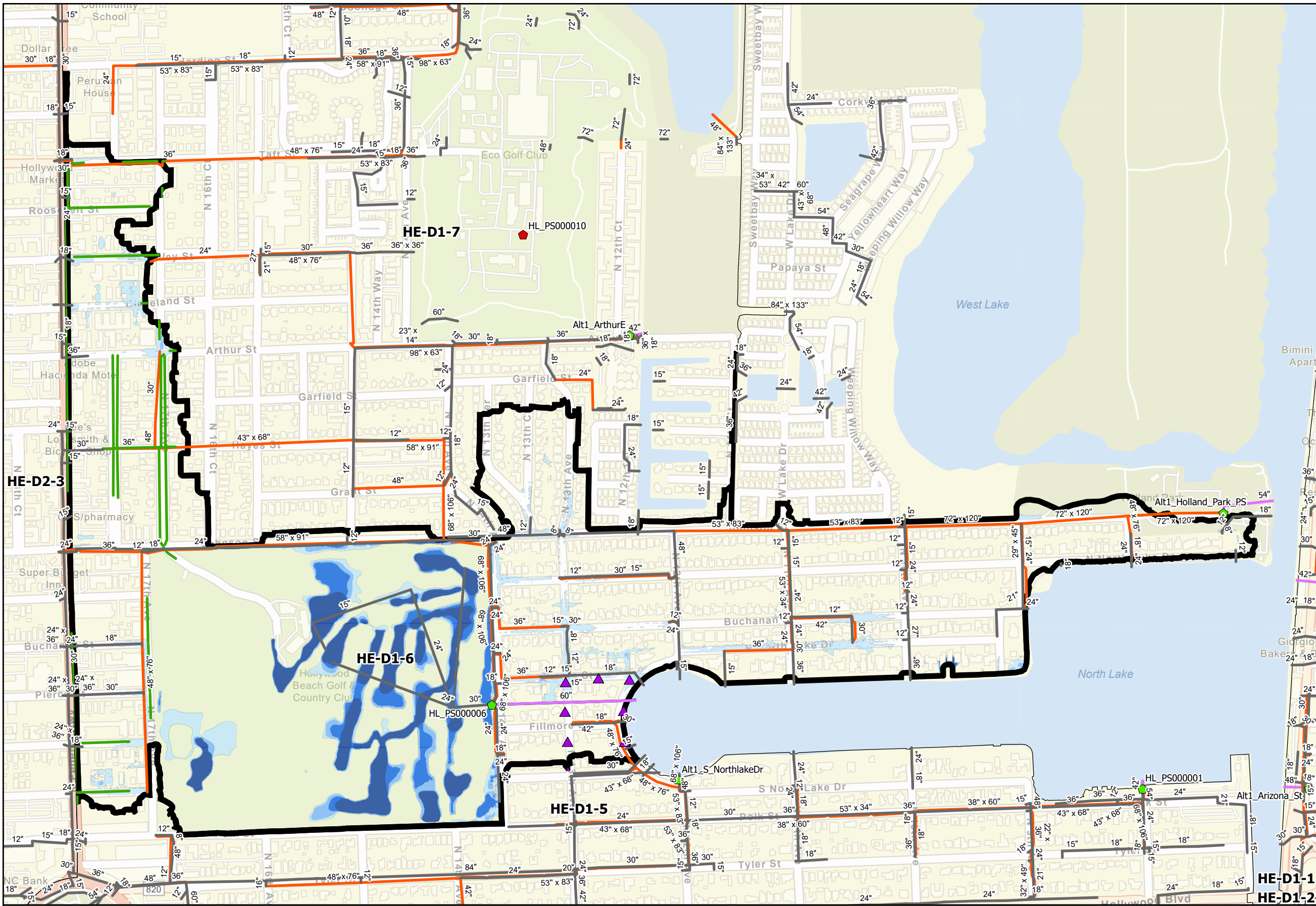


- Legend
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Alt 1 SWPS
 - Alt 1 Injection Wells
 - Existing Gravity Pipes
 - Existing Forcemains
 - Alt 1 Exfiltration Pipes
 - Alt 1 Gravity Pipes
 - Alt 1 Forcemains
 - Alt 1 Detention Pond
 - 5-Year ALT 1 Storm Flood Feet
- | |
|-----------|
| <= 0 ft. |
| 0 - 0.5 |
| 0.5 - 1 |
| 1 - 1.5 |
| > 1.5 ft. |



Predicted Flooding Reduction and Proposed ALT 1
CIP for 5-year Design Storm in CIP Area
Hollywood Lakes - North Lake

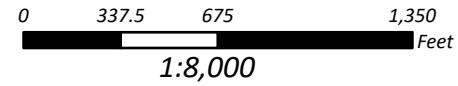


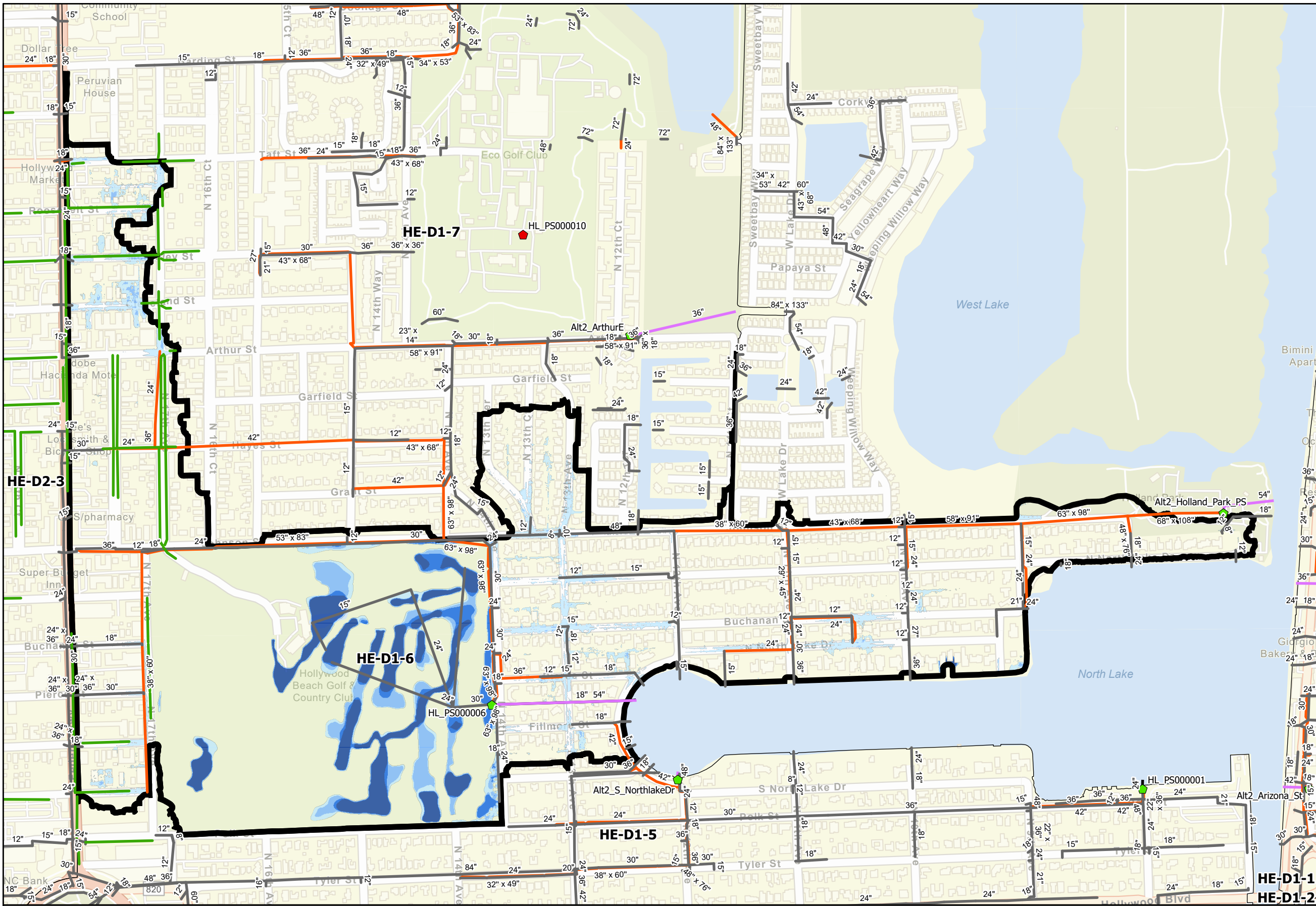


- Legend
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Alt 1 SWPS
 - Alt 1 Injection Wells
 - Existing Gravity Pipes
 - Existing Forcemains
 - Alt 1 Exfiltration Pipes
 - Alt 1 Gravity Pipes
 - Alt 1 Forcemains
 - Alt 1 Detention Pond
 - 10-Year ALT 1 Storm Flood Feet
- | |
|-----------|
| <= 0 ft. |
| 0 - 0.5 |
| 0.5 - 1 |
| 1 - 1.5 |
| > 1.5 ft. |



Predicted Flooding Reduction and Proposed ALT 1 CIP for 10-year Design Storm in CIP Area Hollywood Lakes - North Lake

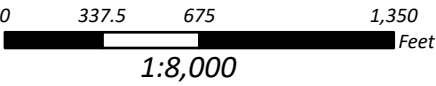


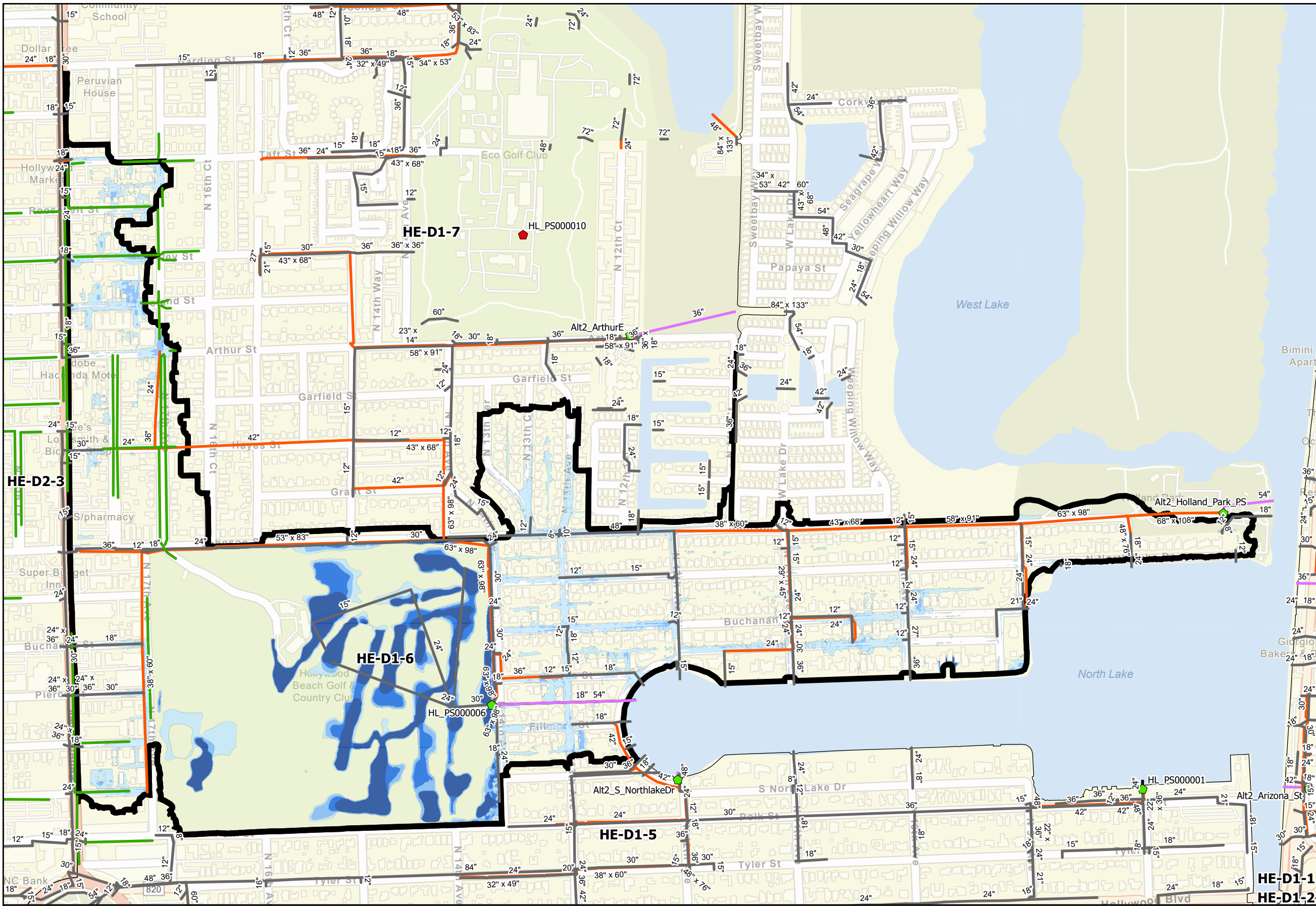


- Legend
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Alt 2 SWPS
 - Alt 2 Injection Wells
 - Existing Gravity Pipes
 - Existing Forcemains
 - Alt 2 Exfiltration Pipe
 - Alt 2 Gravity Pipes
 - Alt 2 Forcemains
 - Alt 2 Detention Pond
 - 5-Year ALT 2 Storm Flood Feet
- | |
|-----------|
| <= 0 ft. |
| 0 - 0.5 |
| 0.5 - 1 |
| 1 - 1.5 |
| > 1.5 ft. |



Predicted Flooding Reduction and Proposed ALT 2
CIP for 5-year Design Storm in CIP Area
Hollywood Lakes - North Lake

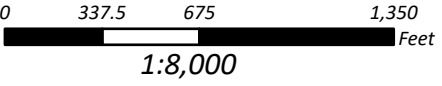




- Legend
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Alt 2 SWPS
 - Alt 2 Injection Wells
 - Existing Gravity Pipes
 - Existing Forcemains
 - Alt 2 Exfiltration Pipe
 - Alt 2 Gravity Pipes
 - Alt 2 Forcemains
 - Alt 2 Detention Pond
 - 10-Year ALT 2 Storm Flood Feet
- | |
|-----------|
| <= 0 ft. |
| 0 - 0.5 |
| 0.5 - 1 |
| 1 - 1.5 |
| > 1.5 ft. |



Predicted Flooding Reduction and Proposed ALT 2
CIP for 10-year Design Storm in CIP Area
Hollywood Lakes - North Lake



				CONCEPTUAL CAPITAL COST ESTIMATE				Hollywood Lakes Northlake	
								Alternative 1	
PUMP STATIONS WITH FORCE MAINS									
ITEM #	Master Sheet Index	DIAMETER (INCHES)	DESCRIPTION		TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL
0001	13	24	FM- Force Main Collector		Circular	LF	\$ 167.00	0	\$ -
0002	14	36	FM- Force Main Collector		Circular	LF	\$ 242.00	0	\$ -
0003	15	42	FM- Force Main Collector		Circular	LF	\$ 336.00	0	\$ -
0004	16	48	FM- Force Main Collector		Circular	LF	\$ 612.00	0	\$ -
0005	17	54	FM- Force Main Collector		Circular	LF	\$ 982.00	900	\$ 883,800
0006	18	60	FM- Force Main Collector		Circular	LF	\$ 1,149.00	950	\$ 1,091,550
0007	19	66	FM- Force Main Collector		Circular	LF	\$ 1,329.00	0	\$ -
0008	20	72	FM- Force Main Collector		Circular	LF	\$ 1,473.00	0	\$ -
0009	225	24	FMO- Force Main Offline		Circular	LF	\$ 353.00	0	\$ -
0010	11		IWI-Injection Wells-Inline			EA	\$ 65,000.00	0	\$ -
0011	12		IWO-Injection Wells- Offline			EA	\$ 75,000.00	0	\$ -
0012	6	PS-Storm Drainage Pump Stations < 166 cfs			I	EA	\$ 2,400,000.00	0	\$ -
0013	7	PS-Storm Drainage Pump Stations < 166-246 cfs			II	EA	\$ 3,500,000.00	1	\$ 3,500,000
0014	8	PS-Storm Drainage Pump Stations < 246-328 cfs			III	EA	\$ 4,900,000.00	0	\$ -
0015	9	PS-Storm Drainage Pump Stations< 328-410 cfs			IV	EA	\$ 6,750,000.00	1	\$ 6,750,000
0016	54	PS-CS22 Storm Drainage Pump Stations 600CFS				EA	\$ 8,000,000.00	0	\$ -
NN SUBTOTAL									\$ 12,225,350
EXFILTRATION WITH GRAVITY MAINS								Hollywood Lakes Northlake	
ITEM #	Master Sheet Index	DIAMETER (INCHES)	WIDTH(INCHES)	DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL
0020	21	15		GM-Gravity Main Collector	Circular	LF	\$ 40.00	7	\$ 288
0021	22	18		GM-Gravity Main Collector	Circular	LF	\$ 45.00	0	\$ -
0023	23	24		GM-Gravity Main Collector	Circular	LF	\$ 48.00	1,245	\$ 59,750
0024	24	30		GM-Gravity Main Collector	Circular	LF	\$ 52.00	1,574	\$ 81,869
0026	25	36		GM-Gravity Main Collector	Circular	LF	\$ 80.00	2,533	\$ 202,672
0028	26	42		GM-Gravity Main Collector	Circular	LF	\$ 115.00	414	\$ 47,610
0029	27	48		GM-Gravity Main Collector	Circular	LF	\$ 125.00	2,173	\$ 271,638
0030	28	54		GM-Gravity Main Collector	Circular	LF	\$ 150.00	0	\$ -
0031	29	60		GM-Gravity Main Collector	Circular	LF	\$ 220.00	0	\$ -
0032	30	66		GM-Gravity Main Collector	Circular	LF	\$ 428.00	0	\$ -
0033	31	72		GM-Gravity Main Collector	Circular	LF	\$ 485.00	0	\$ -
0035	32	29	45	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 205.00	584	\$ 119,782
0036	33	32	49	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 215.00	0	\$ -
0037	34	34	53	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 225.00	596	\$ 134,168
0038	35	38	60	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 235.00	0	\$ -
0039	36	43	68	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 370.00	1,839	\$ 680,541
0040	37	48	76	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 400.00	1,786	\$ 714,400
0041	38	53	83	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 432.00	1,547	\$ 668,218
0042	39	58	91	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 320.00	3,090	\$ 988,928
0043	40	63	98	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 410.00	40	\$ 16,236
0044	41	68	106	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 460.00	1,836	\$ 844,560
0045	42	72	113	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 570.00	0	\$ -
0046	43	82	128	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 650.00	0	\$ -
0048	44	72	120	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	2,195	\$ 1,251,207
0072	45	72	72	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -
0049	46	84	120	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 750.00	0	\$ -
0050	47	96	96	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 850.00	0	\$ -
0051	48			GBP-Gravity Backflow Pipe <36"		Ea	\$ 35,000.00	0	\$ -
0052	49			GBP-Gravity Backflow Pipe >36"		Ea	\$ 70,000.00	0	\$ -

		CONCEPTUAL CAPITAL COST ESTIMATE						Hollywood Lakes Central	
								Alternative 2	
PUMP STATIONS WITH FORCE MAINS									
ITEM #	Master Sheet Index	DIAMETER (INCHES)		DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL
0001	13	24		FM- Force Main Collector	Circular	LF	\$ 167.00	0	\$ -
0002	14	36		FM- Force Main Collector	Circular	LF	\$ 242.00	0	\$ -
0003	15	42		FM- Force Main Collector	Circular	LF	\$ 336.00	0	\$ -
0004	16	48		FM- Force Main Collector	Circular	LF	\$ 612.00	0	\$ -
0005	17	54		FM- Force Main Collector	Circular	LF	\$ 982.00	1,400	\$ 1,374,800
0006	18	60		FM- Force Main Collector	Circular	LF	\$ 1,149.00	0	\$ -
0007	19	66		FM- Force Main Collector	Circular	LF	\$ 1,329.00	0	\$ -
0008	20	72		FM- Force Main Collector	Circular	LF	\$ 1,473.00	0	\$ -
0009	225	24		FMO- Force Main Offline	Circular	LF	\$ 353.00	0	\$ -
0010	11			IWI-Injection Wells-Inline		EA	\$ 65,000.00	0	\$ -
0011	12			IWO-Injection Wells -Offline		EA	\$ 75,000.00	0	\$ -
0012	6	PS-Storm Drainage Pump Stations < 166 cfs			I	EA	\$ 2,400,000.00	1	\$ 2,400,000
0013	7	PS-Storm Drainage Pump Stations < 166-246 cfs			II	EA	\$ 3,500,000.00	0	\$ -
0014	8	PS-Storm Drainage Pump Stations < 246-328 cfs			III	EA	\$ 4,900,000.00	0	\$ -
0015	9	PS-Storm Drainage Pump Stations< 328-410 cfs			IV	EA	\$ 6,750,000.00	0	\$ -
0016	54	PS-CS22 Storm Drainage Pump Stations 600CFS				EA	\$ 8,000,000.00	0	\$ -
IN SUBTOTAL									\$ 3,774,800
EXFILTRATION WITH GRAVITY MAINS								Hollywood Lakes Central	
ITEM #	Master Sheet Index	DIAMETER (INCHES)	Width(INCHES)	DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL
0022	22	21		GM-Gravity Main Collector	Circular	LF	\$ 45.00	0	\$ -
0021	21	18		GM-Gravity Main Collector	Circular	LF	\$ 45.00	0	\$ -
0023	23	24		GM-Gravity Main Collector	Circular	LF	\$ 48.00	3,192	\$ 153,216
0024	24	30		GM-Gravity Main Collector	Circular	LF	\$ 52.00	0	\$ -
0026	25	36		GM-Gravity Main Collector	Circular	LF	\$ 80.00	2,585	\$ 206,800
0028	26	42		GM-Gravity Main Collector	Circular	LF	\$ 115.00	2,017	\$ 231,955
0029	27	48		GM-Gravity Main Collector	Circular	LF	\$ 125.00	0	\$ -
0030	28	54		GM-Gravity Main Collector	Circular	LF	\$ 150.00	0	\$ -
0031	29	60		GM-Gravity Main Collector	Circular	LF	\$ 220.00	0	\$ -
0032	30	66		GM-Gravity Main Collector	Circular	LF	\$ 428.00	0	\$ -
0033	31	72		GM-Gravity Main Collector	Circular	LF	\$ 485.00	0	\$ -
0035	32	29	45	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 205.00	597	\$ 122,385
0036	33	32	49	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 215.00	0	\$ -
0037	34	34	53	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 225.00	0	\$ -
0038	35	38	60	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 235.00	2,451	\$ 575,985
0039	36	43	68	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 370.00	1,765	\$ 653,050
0040	37	48	76	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 400.00	121	\$ 48,400
0041	38	53	83	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 432.00	2,125	\$ 918,000
0042	39	58	91	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 320.00	801	\$ 256,320
0043	40	63	98	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 410.00	2,571	\$ 1,054,110
0044	41	68	106	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 460.00	660	\$ 303,600
0045	42	72	113	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 570.00	0	\$ -
0046	43	82	128	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 650.00	0	\$ -
0048	44	72	120	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -
0072	45	72	72	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -
0049	46	72	96	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 750.00	0	\$ -
0050	47	96	96	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 850.00	0	\$ -
0051	48	GBP-Gravity Backflow Pipe <36"				Ea	\$ 35,000.00	0	\$ -
0052	49	GBP-Gravity Backflow Pipe >36"				Ea	\$ 70,000.00	0	\$ -
0053	5	GW-Gravity Wells				EA	\$ 105,000.00	2	\$ 210,000
0054	4	48		ET-Exfiltration Trench		LF	\$ 250.00	11,526	\$ 2,881,500
0055	50	Weir Box CS				EA	\$ 30,000.00	0	\$ -
0057	53	CS-22 Remod				EA	\$ 525,000.00	0	\$ -
0058	55	SW-04 Remod				EA	\$ 150,000.00	0	\$ -
0056		Gravity Structures-Inlets				EA	\$ 7,500.00	256	\$ 1,921,688
0059	56	Ditch Improvement				LF	\$ 50.00	0	\$ -
0091	57	Swale/Ditch Headwall				Ea	\$ 10,000.00	0	\$ -
0090	10	Exfil End Weir				Ea	\$ 5,000.00	0	\$ -
0092	51	Ret/Det Pond				CUY	\$ 355.00	0	\$ -
							#N/A	#VALUE!	#VALUE!
							#N/A	#VALUE!	#VALUE!
							#N/A	#VALUE!	#VALUE!
GRAVITY MAIN SUBTOTAL									\$ 9,537,009
0060		Pavement Restoration including Pavement Marking (Full Road)				LF	\$ 270.00	31,811	\$ 8,588,970
CONSTRUCTION COST SUBTOTAL									\$ 21,900,779
GENERAL CONDITIONS								Hollywood Lakes Central	
0061		Mobilization				LS	4%	\$ 21,900,779	\$ 876,031
0062		Insurance and General Conditions				LS	2%	\$ 21,900,779	\$ 438,016
0063		Permits/Fees				LS	2%	\$ 21,900,779	\$ 438,016
0064		Maintenance of Traffic				LS	3%	\$ 21,900,779	\$ 657,023
0065		Engineering Design & CA Oversight Costs				LS	15%	\$ 21,900,779	\$ 3,285,117
0066		Construction Engineering Inspection Costs				LS	4%	\$ 21,900,779	\$ 876,031
0067		OCI Management Cost				LS	15%	\$ 21,900,779	\$ 3,285,117
0068		Project Contingency Costs				LS	30%	\$ 21,900,779	\$ 6,570,234
NS SUBTOTAL									\$ 16,425,584
TOTAL									\$ 38,326,362

3.2.4.7 CIP Area HE-D1-7 (Hollywood Lakes – North)

Root Causes of Flooding

This CIP area is characterized residential land, park, commercial, industrial, and golf course use. There is higher ground to the west and low area elsewhere in the basin. The area is served by a gravity system which are undersized for the desired LOS and deep flooding occurs. A temporary pump is sometimes used at Arthur Street and at Sheridan and 14th Ave with little impact. Due to the low elevation, the gravity multiple outfalls do not work at high tide and there is tidal inflow into the area.

Alternative 1

Proposed CIP:

- Two new SWPSs for the service area:
 1. New Arthur Street SWPS Type I at 90 cfs total capacity which can be installed underground at the location of the City's current temporary pump configuration in the roadway swale on the north side of the road at the City's existing discharge FM header connection with two options for discharge:
 - i. Continue discharge into the mitigated wetland area (the City has confirmed that it is permissible to discharge here) with an equivalent 100 l.f. of 42- or 48-inch FM with energy dissipation, sheet flowing into the ditch on the eastern perimeter of the wetland, and directing flow north in the ditch with a weir at 5 ft NAVD (preventing tidal backflow), and a new 100 l.f. 42-inch culvert connection to the Westlake Park lake at the north end of the ditch.
 - ii. Discharge a portion of the flow in to the wetland and a portion of the flow directly into the drainage ditch on the east side of the mitigation wetland via an equivalent 48-inch FM along Arthur St discharging east into the ICW, with a berm at 5 ft NAVD to prevent tidal backflow at the FM headwall.
 2. New EcoGC SWPS, Type III at 290 cfs total capacity located in the unused NW corner of the Hole 2 Fairway in the Eco Golf Course property near Scott Street and N 14th Ave. and pumping into 6 IWs at approximately 4 cfs each off of 2,850 l.f. of twin 48-inch FMs to a new detention area. Alternatively, the new EcoGS SWPS can pump directly into the County-owned Westlake Park lake or Kayak lake where there is currently additional storage volume available using additional FM and a new culvert and BFP installed between the lake and the existing ditch under Westlake Drive south of the Kayak launch connecting the lake to the ICW.
 3. New stormwater detention area with a 24-inch pipe, low-flow orifice bleeder and BFP, or structure box at the bottom elevation area with low-flow orifice bleeder, at an existing, unused 3.4 acre Broward County-owned low land area within Westlake Park, with a bottom EL 2 NAVD and bermed up to EL 8 NAVD, with a 25-ft wide spillway channel bottom EL 5.5 NAVD into the existing wetland.

- The natural ridge along W Lake Park Drive will need to be bermed up approximately 2 ft to maintain EL 5 ft NAVD to prevent tidal flooding from entering the service area and meet the County's seawall ordinance armoring.
- A new weir structure and orifice with a BFP at the City owned wetland at Arthur and N 11th Ct to prevent tidal flooding from entering the service area and meet the City's seawall ordinance armoring.
- A new BFP installed in the 72-inch pipe under West Lake Park Drive to prevent tidal flooding from entering the service area and meet the seawall ordinance armoring.
- New gravity collection systems and inlets in neighborhoods to the new SWPS.
- New 1,551 l.f. of exfiltration systems in neighborhoods.
- Low roadway raising improvements in service area to remove dips resulting in flooding.

Summary of Locations Not Meeting ALT 1 LOS:

1. Structures Flooded pre-75, post seawall improvements-159, post-0

Summary of Offsite Issues Affecting CIP Area:

1. Sheridan Rd FDOT system is flowing into the neighborhoods to the south in the larger storms from the road and off of approximately 60 acres of Dania Beach at approximately 35-40 cfs.

Alternative 2

Proposed CIP:

- Two new SWPS for the service area:
 1. New Arthur Street SWPS Type I at a capacity of 55 cfs total SWPS which can be installed underground at the location of the City's temporary pump configuration in the swale on the north side of the road at the existing FM header installed by the City, discharging into the mitigated wetland area, with a parallel additional 100 l.f. of 36-inch FM with two options for discharge:
 - i. Continue discharge into the mitigated wetland area (the City has confirmed that it is permissible to discharge here) with an equivalent 100 l.f. of 36-inch FM with energy dissipation, sheet flowing into the ditch on the eastern perimeter of the wetland, and directing flow north in the ditch with a weir at 5 ft NAVD (preventing tidal backflow), and a new 100 l.f. 36-inch culvert connection to the Westlake Park lake at the north end of the ditch.
 - ii. Discharge a portion of the flow into the wetland and a portion of the flow directly into the drainage ditch on the east side of the mitigation wetland via an equivalent 48-inch FM along Arthur St discharging east into the ICW, with a berm at 5 ft NAVD to prevent tidal backflow at the FM headwall.
 2. New EcoGC SWPS, Type I at a capacity of 50 cfs located in the unused NW corner of the Hole 2 fairway in the Eco Golf Course property near Scott Street and N 14th Ave. and

pumping into 4-6 IWs at approximately 4 cfs each off of 1,900 l.f. of 42-inch FM to the Kayak Launch Pond in Broward County Westlake Park.

- The natural ridge along W Lake Park Drive will need to be bermed up approximately 2 ft to maintain EL 5 ft NAVD to prevent tidal flooding from entering the service area and meet the County's seawall ordinance armoring.
- A new weir structure and orifice with a BFP at the City owned wetland at Arthur and N 11th Ct to prevent tidal flooding from entering the service area and meet the City's seawall ordinance armoring.
- A new BFP installed in the 72-inch pipe under West Lake Park Drive to prevent tidal flooding from entering the service area and meet the seawall ordinance armoring.
- New gravity collection systems and inlets in neighborhoods to the new SWPSs.
- New 1,551 l.f. of exfiltration systems in neighborhoods.
- Low roadway raising improvements in service area to remove dips resulting in flooding.

Summary of Locations Not Meeting ALT 2 LOS:

1. Structures Flooded pre-75, post seawall improvements-159, post-31

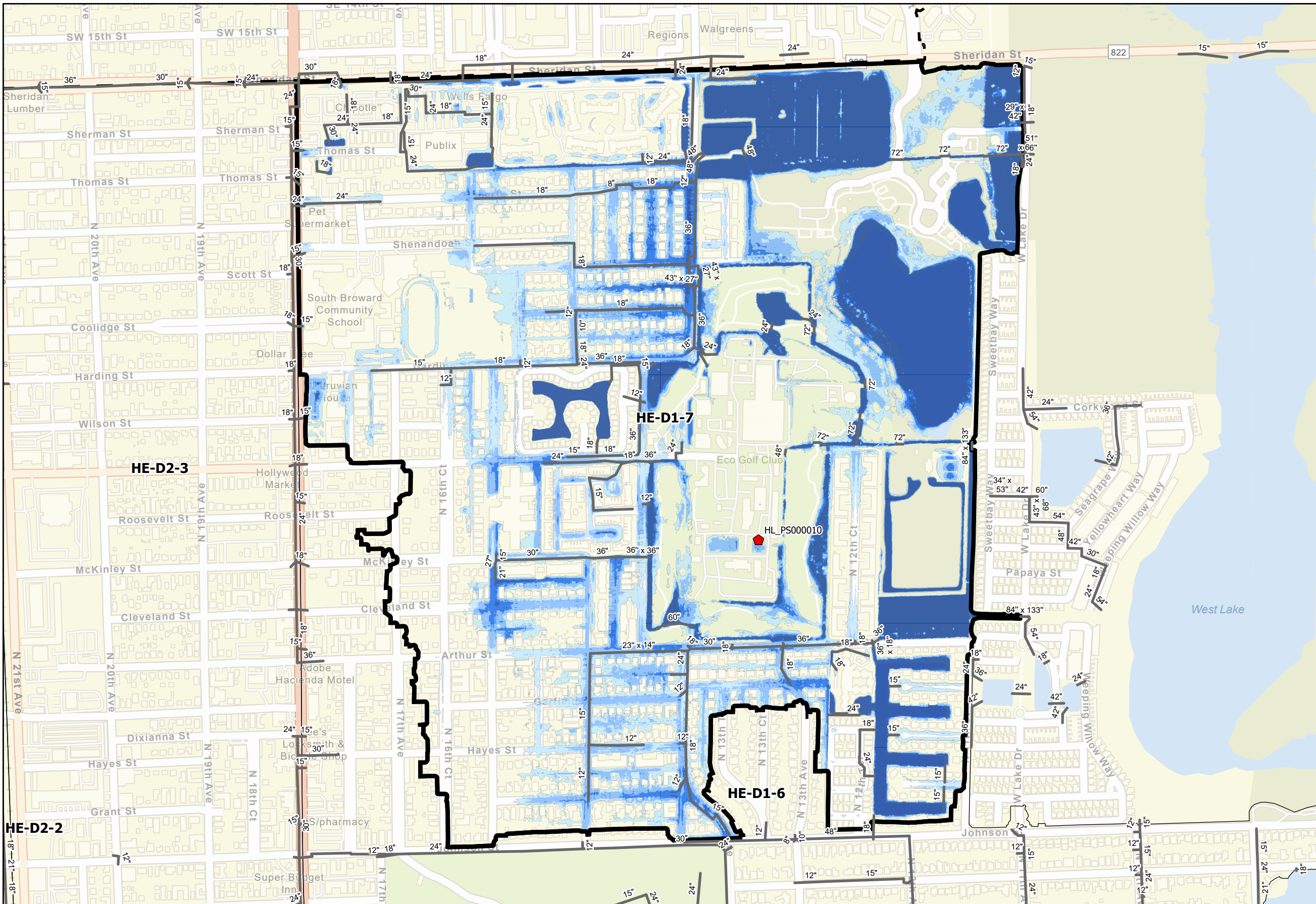
Summary of Offsite Issues Affecting CIP Area:

1. Sheridan Rd FDOT system is flowing into the neighborhoods to the south in the larger storms from the road and off of approximately 60 acres of Dania Beach at approximately 35-40 cfs.

HE-D1-7 Pre-Post CIP Flood Inundation Maps

The following figures provide the predicted existing conditions flooding for the 5- and 10-year storm in the CIP Area and the predicted flood reduction for these storms under the Alternatives 1 and 2 CIP:

- **Figure HE-D1-7-EC_5 - Current Conditions Flooding in CIP Area 5-year Design Storm**
- **Figure HE-D1-7-EC_10 - Current Conditions Flooding in CIP Area 10-year Design Storm**
- **Figure HE-D1-7-CIP_ALT1_5 - Predicted Flooding Reduction and Proposed ALT1 CIP for 5-year Design Storm**
- **Figure HE-D1-7-CIP_ALT1_10 - Predicted Flooding Reduction and Proposed ALT1 CIP for 10-year Design Storm**
- **Figure HE-D1-7-CIP_ALT2_5 - Predicted Flooding Reduction and Proposed ALT2 CIP for 5-year Design Storm**
- **Figure HE-D1-7-CIP_ALT2_10 - Predicted Flooding Reduction and Proposed ALT2 CIP for 10-year Design Storm**



Legend

- Hollywood City Limits
- Focused CIP Area
- Existing SWPS
- Near Term SWPS
- Existing Gravity Pipes
- Existing Forcemains

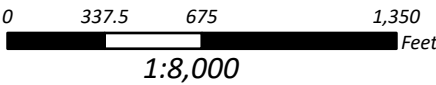
5-Year 24-Hour Storm Flood Feet

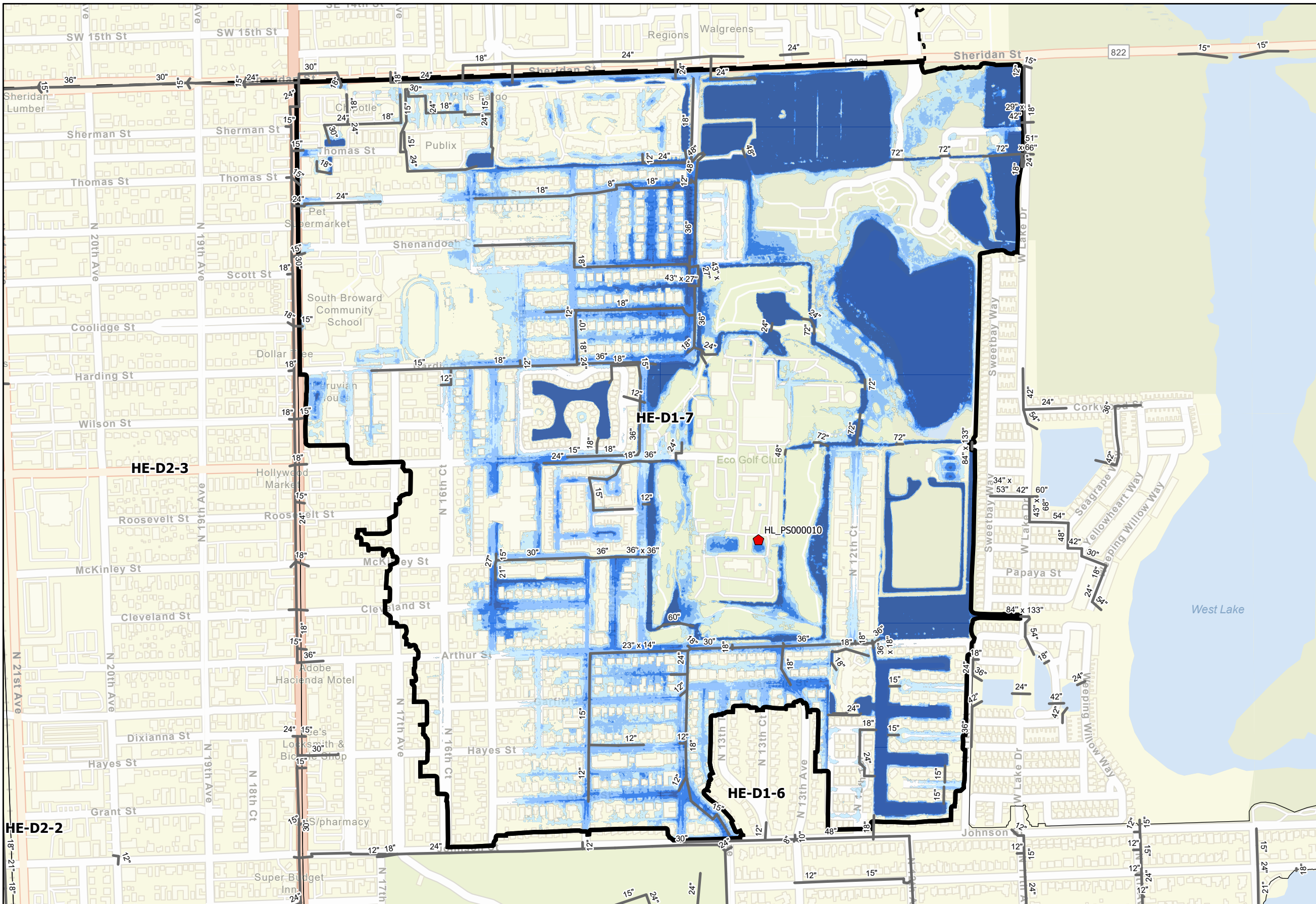
<= 0 ft.
0 - 0.5
0.5 - 1
1 - 1.5
> 1.5 ft.



Current Conditions Flooding in CIP Area
Hollywood Lakes North
5-year Design Storm

City of Hollywood Stormwater Master Plan
HE-D1-7_EC-5
2/28/2023





Legend

- Hollywood City Limits
- Focused CIP Area
- Existing SWPS
- Near Term SWPS
- Existing Gravity Pipes
- Existing Forcemains

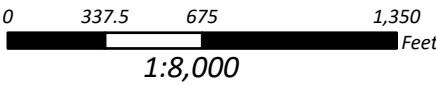
10-Year 72-Hour Storm Flood Feet

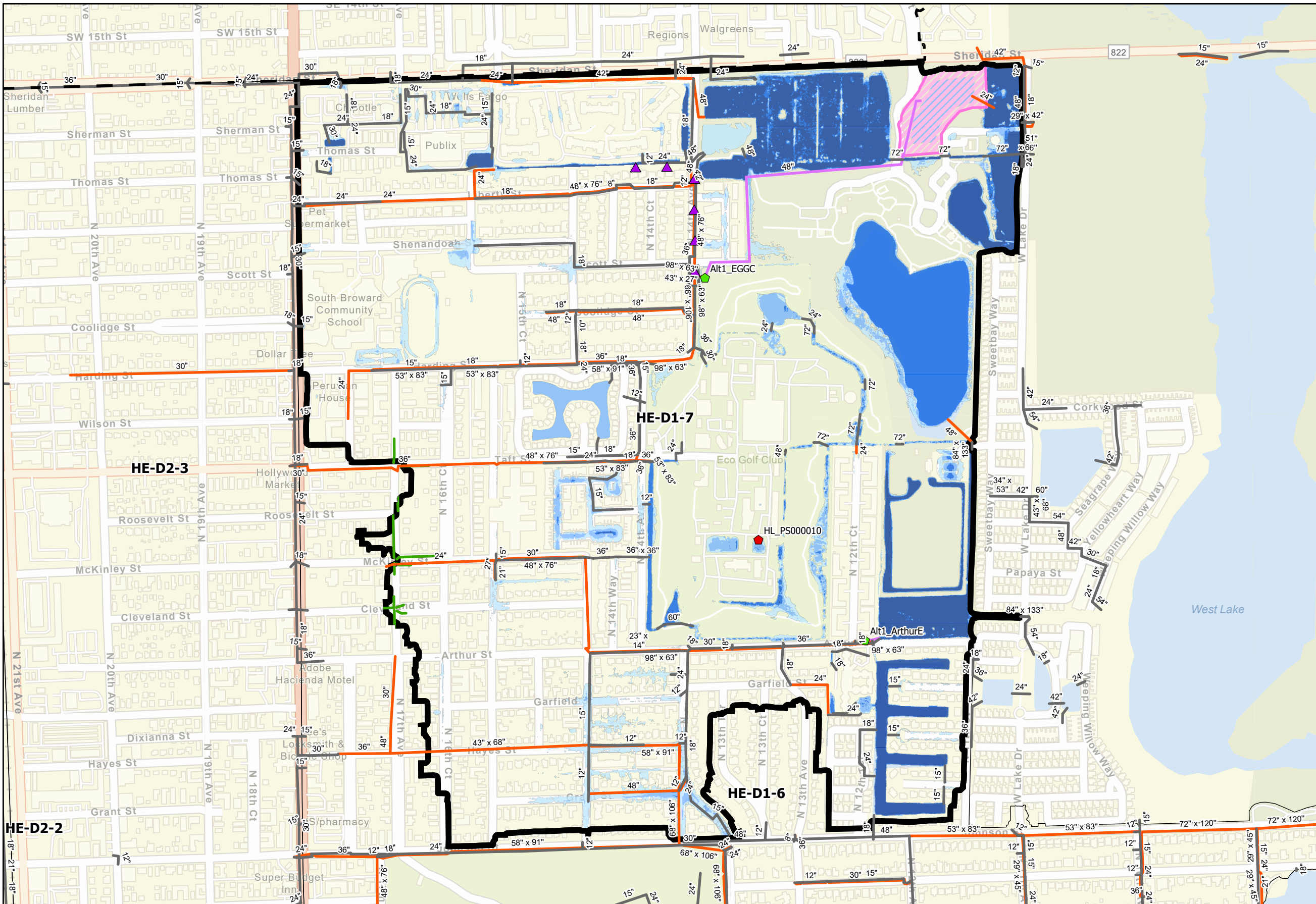
	<= 0 ft.
	0 - 0.5
	0.5 - 1
	1 - 1.5
	> 1.5 ft.



Current Conditions Flooding in CIP Area
Hollywood Lakes North
10-year Design Storm

City of Hollywood Stormwater Master Plan
HE-D1-7_EC-10
2/28/2023





- Legend
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Alt 1 SWPS
 - Alt 1 Injection Wells
 - Existing Gravity Pipes
 - Existing Forcemains
 - Alt 1 Exfiltration Pipes
 - Alt 1 Gravity Pipes
 - Alt 1 Forcemains
 - Alt 1 Detention Pond

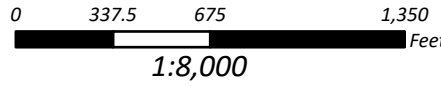
5-Year ALT 1 Storm Flood Feet

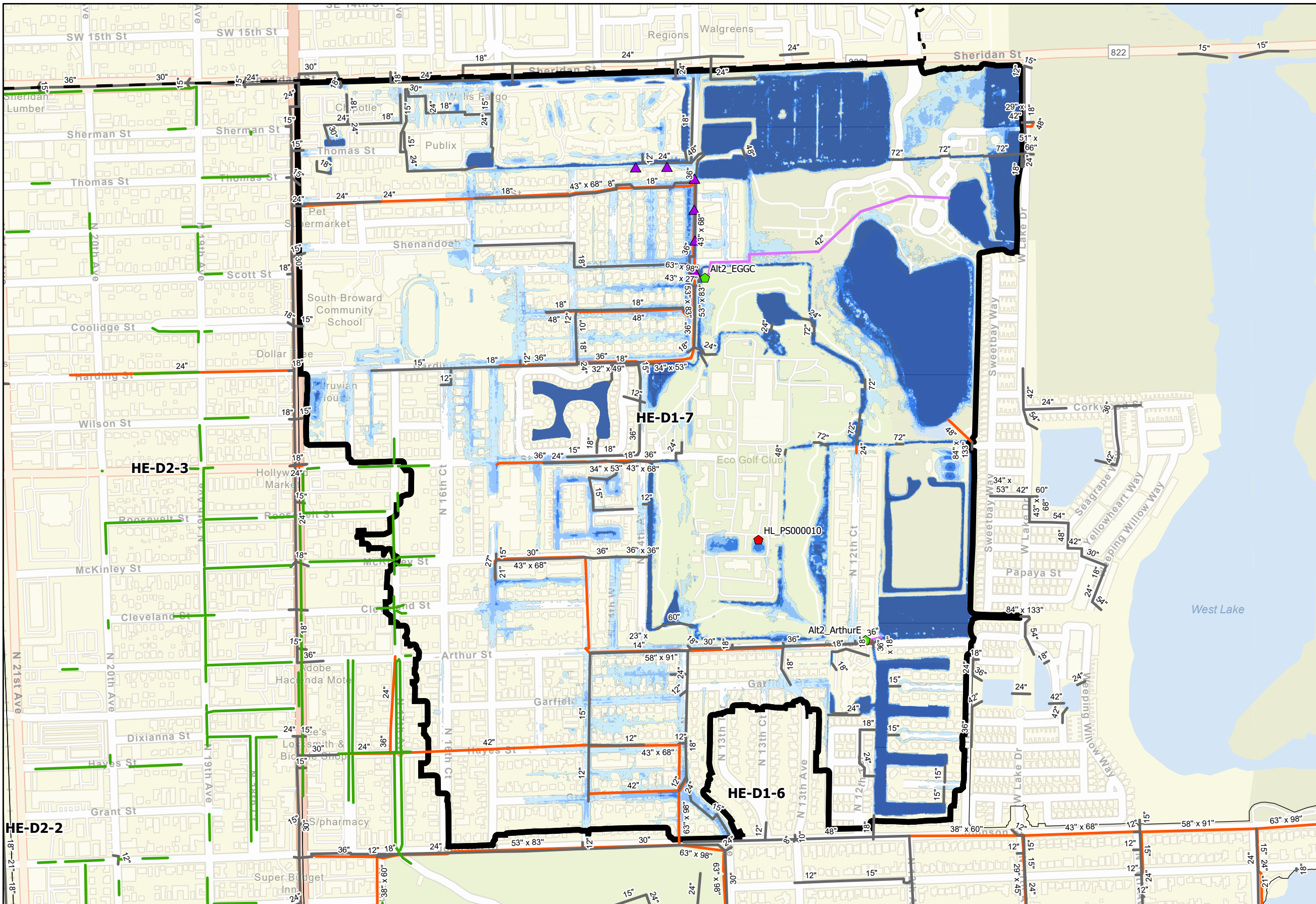
- <= 0 ft.
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- > 1.5 ft.



Predicted Flooding Reduction and Proposed ALT 1
CIP for 5-year Design Storm in CIP Area
Hollywood Lakes North

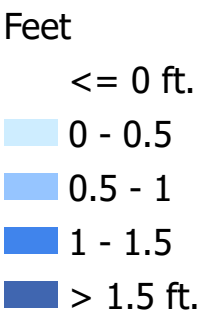
City of Hollywood Stormwater Master Plan
HE-D1-7_ALT1-5
2/28/2023





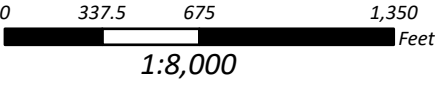
- Legend
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Alt 2 SWPS
 - Alt 2 Injection Wells
 - Existing Gravity Pipes
 - Existing Forcemains
 - Alt 2 Exfiltration Pipe
 - Alt 2 Gravity Pipes
 - Alt 2 Forcemains
 - Alt 2 Detention Pond

10-Year ALT 2 Storm Flood



Predicted Flooding Reduction and Proposed ALT 2
CIP for 10-year Design Storm in CIP Area
Hollywood Lakes North

City of Hollywood Stormwater Master Plan
HE-D1-7_ALT2-10
2/28/2023



			CONCEPTUAL CAPITAL COST ESTIMATE					Hollywood Lakes North		
Alternative 1										
PUMP STATIONS WITH FORCE MAINS										
ITEM #	Master Sheet Index	DIAMETER (INCHES)	DESCRIPTION		TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL	
0001	13	24	FM- Force Main Collector		Circular	LF	\$ 167.00	0	\$ -	
0002	14	36	FM- Force Main Collector		Circular	LF	\$ 242.00	0	\$ -	
0003	15	42	FM- Force Main Collector		Circular	LF	\$ 336.00	100	\$ 33,600	
0004	16	48	FM- Force Main Collector		Circular	LF	\$ 612.00	5,700	\$ 3,488,400	
0005	17	54	FM- Force Main Collector		Circular	LF	\$ 982.00	0	\$ -	
0006	18	60	FM- Force Main Collector		Circular	LF	\$ 1,149.00	0	\$ -	
0007	19	66	FM- Force Main Collector		Circular	LF	\$ 1,329.00	0	\$ -	
0008	20	72	FM- Force Main Collector		Circular	LF	\$ 1,473.00	0	\$ -	
0009	225	24	FMO- Force Main Offline		Circular	LF	\$ 353.00	0	\$ -	
0010	11		IWI-Injection Wells-Inline			EA	\$ 65,000.00	0	\$ -	
0011	12		IWO-Injection Wells- Offline			EA	\$ 75,000.00	0	\$ -	
0012	6	PS-Storm Drainage Pump Stations < 166 cfs			I	EA	\$ 2,400,000.00	1	\$ 2,400,000	
0013	7	PS-Storm Drainage Pump Stations < 166-246 cfs			II	EA	\$ 3,500,000.00	0	\$ -	
0014	8	PS-Storm Drainage Pump Stations < 246-328 cfs			III	EA	\$ 4,900,000.00	1	\$ 4,900,000	
0015	9	PS-Storm Drainage Pump Stations< 328-410 cfs			IV	EA	\$ 6,750,000.00	0	\$ -	
0016	54	PS-CS22 Storm Drainage Pump Stations 600CFS				EA	\$ 8,000,000.00	0	\$ -	
NN SUBTOTAL								\$	10,822,000	
EXFILTRATION WITH GRAVITY MAINS									Hollywood Lakes North	
ITEM #	Master Sheet Index	DIAMETER (INCHES)	WIDTH(INCHES)	DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL	
0020	21	15		GM-Gravity Main Collector	Circular	LF	\$ 40.00	0	\$ -	
0021	22	18		GM-Gravity Main Collector	Circular	LF	\$ 45.00	0	\$ -	
0023	23	24		GM-Gravity Main Collector	Circular	LF	\$ 48.00	3,966	\$ 190,354	
0024	24	30		GM-Gravity Main Collector	Circular	LF	\$ 52.00	123	\$ 6,375	
0026	25	36		GM-Gravity Main Collector	Circular	LF	\$ 80.00	1,442	\$ 115,384	
0028	26	42		GM-Gravity Main Collector	Circular	LF	\$ 115.00	2,226	\$ 256,013	
0029	27	48		GM-Gravity Main Collector	Circular	LF	\$ 125.00	1,957	\$ 244,650	
0030	28	54		GM-Gravity Main Collector	Circular	LF	\$ 150.00	0	\$ -	
0031	29	60		GM-Gravity Main Collector	Circular	LF	\$ 220.00	0	\$ -	
0032	30	66		GM-Gravity Main Collector	Circular	LF	\$ 428.00	0	\$ -	
0033	31	72		GM-Gravity Main Collector	Circular	LF	\$ 485.00	0	\$ -	
0035	32	29	45	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 205.00	0	\$ -	
0036	33	32	49	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 215.00	0	\$ -	
0037	34	34	53	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 225.00	0	\$ -	
0038	35	38	60	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 235.00	0	\$ -	
0039	36	43	68	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 370.00	0	\$ -	
0040	37	48	76	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 400.00	3,438	\$ 1,375,040	
0041	38	53	83	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 432.00	1,844	\$ 796,781	
0042	39	58	91	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 320.00	650	\$ 208,000	
0043	40	63	98	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 410.00	3,416	\$ 1,400,396	
0044	41	68	106	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 460.00	71	\$ 32,522	
0045	42	72	113	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 570.00	0	\$ -	
0046	43	82	128	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 650.00	0	\$ -	
0048	44	72	120	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -	
0072	45	72	72	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -	
0049	46	84	120	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 750.00	0	\$ -	
0050	47	96	96	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 850.00	0	\$ -	
0051	48			GBP-Gravity Backflow Pipe <36"		Ea	\$ 35,000.00	0	\$ -	
0052	49			GBP-Gravity Backflow Pipe >36"		Ea	\$ 70,000.00	2	\$ 140,000	
0053	5			GW-Gravity Wells		EA	\$ 105,000.00	0	\$ -	
0054	4	48		ET-Exfiltration Trench		LF	\$ 250.00	1,551	\$ 387,750	
0056	50			Weir Box CS		EA	\$ 7,500.00	0	\$ -	
0057	53			CS-22 Remod		EA	\$ 200,000.00	0	\$ -	
0058	55			SW-04 Remod		EA	\$ 150,000.00	0	\$ -	
0055				Gravity Structures-Inlets		EA	\$ 30,000.00	184	\$ 5,518,825	
0059	56			Ditch Improvement		LF	\$ 50.00	0	\$ -	
0091	57			Swale/Ditch Headwall		Ea	\$ 10,000.00	0	\$ -	
0090	10			Exfil End Weir		Ea	\$ 5,000.00	0	\$ -	
0092	51			Ret/Det Pond		CUY	\$ 355.00	4	\$ 1,243	
							#N/A	#VALUE!	#VALUE!	
GRAVITY MAIN SUBTOTAL							#N/A	#VALUE!	#VALUE!	
							#N/A		\$ 10,672,090	
0060		Pavement Restoration including Pavement Marking (Full Road)				LF	\$ 270.00	26,484	\$ 7,150,680	
CONSTRUCTION COST SUBTOTAL								\$	28,644,770	
GENERAL CONDITIONS									Hollywood Lakes North	
0061		Mobilization				LS	4%	\$ 28,644,770	\$ 1,145,791	
0062		Insurance and General Conditions				LS	2%	\$ 28,644,770	\$ 572,895	
0063		Permits/Fees				LS	2%	\$ 28,644,770	\$ 572,895	
0064		Maintenance of Traffic				LS	3%	\$ 28,644,770	\$ 859,343	
0065		Engineering Design & CA Oversight Costs				LS	15%	\$ 28,644,770	\$ 4,296,715	
0066		Construction Engineering Inspection Costs				LS	4%	\$ 28,644,770	\$ 1,145,791	
0067		OCI Management Cost				LS	15%	\$ 28,644,770	\$ 4,296,715	
0068		Project Contingency Costs				LS	30%	\$ 28,644,770	\$ 8,593,431	
Land acquisition										
NS SUBTOTAL								\$	21,483,577	
TOTAL								\$	50,128,347	

		CONCEPTUAL CAPITAL COST ESTIMATE						Hollywood Lakes North		
								Alternative 2		
PUMP STATIONS WITH FORCE MAINS										
ITEM #	Master Sheet Index	DIAMETER (INCHES)			DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL
0001	13	24			FM- Force Main Collector	Circular	LF	\$ 167.00	0	\$ -
0002	14	36			FM- Force Main Collector	Circular	LF	\$ 242.00	100	\$ 24,200
0003	15	42			FM- Force Main Collector	Circular	LF	\$ 336.00	1,900	\$ 638,400
0004	16	48			FM- Force Main Collector	Circular	LF	\$ 612.00	0	\$ -
0005	17	54			FM- Force Main Collector	Circular	LF	\$ 982.00	0	\$ -
0006	18	60			FM- Force Main Collector	Circular	LF	\$ 1,149.00	0	\$ -
0007	19	66			FM- Force Main Collector	Circular	LF	\$ 1,329.00	0	\$ -
0008	20	72			FM- Force Main Collector	Circular	LF	\$ 1,473.00	0	\$ -
0009	225	24			FMO- Force Main Offline	Circular	LF	\$ 353.00	0	\$ -
0010	11				IWI-Injection Wells-Inline		EA	\$ 65,000.00	0	\$ -
0011	12				IWO-Injection Wells -Offline		EA	\$ 75,000.00	0	\$ -
0012	6	PS-Storm Drainage Pump Stations < 166 cfs			I	EA	\$ 2,400,000.00	2	\$ 4,800,000	
0013	7	PS-Storm Drainage Pump Stations < 166-246 cfs			II	EA	\$ 3,500,000.00	0	\$ -	
0014	8	PS-Storm Drainage Pump Stations < 246-328 cfs			III	EA	\$ 4,900,000.00	0	\$ -	
0015	9	PS-Storm Drainage Pump Stations< 328-410 cfs			IV	EA	\$ 6,750,000.00	0	\$ -	
0016	54	PS-CS22 Storm Drainage Pump Stations 600CFS				EA	\$ 8,000,000.00	0	\$ -	
IN SUBTOTAL									\$ 5,462,600	
EXFILTRATION WITH GRAVITY MAINS								Hollywood Lakes North		
ITEM #	Master Sheet Index	DIAMETER (INCHES)	Width(INCHES)	DESCRIPTION		TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL
0022	22	21		GM-Gravity Main Collector		Circular	LF	\$ 45.00	0	\$ -
0021	21	18		GM-Gravity Main Collector		Circular	LF	\$ 45.00	0	\$ -
0023	23	24		GM-Gravity Main Collector		Circular	LF	\$ 48.00	1,369	\$ 65,712
0024	24	30		GM-Gravity Main Collector		Circular	LF	\$ 52.00	0	\$ -
0026	25	36		GM-Gravity Main Collector		Circular	LF	\$ 80.00	1,185	\$ 94,800
0028	26	42		GM-Gravity Main Collector		Circular	LF	\$ 115.00	0	\$ -
0029	27	48		GM-Gravity Main Collector		Circular	LF	\$ 125.00	1,400	\$ 175,000
0030	28	54		GM-Gravity Main Collector		Circular	LF	\$ 150.00	0	\$ -
0031	29	60		GM-Gravity Main Collector		Circular	LF	\$ 220.00	0	\$ -
0032	30	66		GM-Gravity Main Collector		Circular	LF	\$ 428.00	0	\$ -
0033	31	72		GM-Gravity Main Collector		Circular	LF	\$ 485.00	0	\$ -
0035	32	29	45	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 205.00	0	\$ -
0036	33	32	49	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 215.00	425	\$ 91,375
0037	34	34	53	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 225.00	3,782	\$ 850,950
0038	35	38	60	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 235.00	225	\$ 52,875
0039	36	43	68	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 370.00	3,027	\$ 1,119,990
0040	37	48	76	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 400.00	0	\$ -
0041	38	53	83	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 432.00	271	\$ 117,072
0042	39	58	91	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 320.00	2,691	\$ 861,120
0043	40	63	98	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 410.00	74	\$ 30,340
0044	41	68	106	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 460.00	0	\$ -
0045	42	72	113	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 570.00	0	\$ -
0046	43	82	128	GM-Gravity Main Collector		Horizontal Ellipse	LF	\$ 650.00	0	\$ -
0048	44	72	120	GM-Gravity Main Collector		Rectangle Closed	LF	\$ 570.00	0	\$ -
0072	45	72	72	GM-Gravity Main Collector		Rectangle Closed	LF	\$ 570.00	0	\$ -
0049	46	72	96	GM-Gravity Main Collector		Rectangle Closed	LF	\$ 750.00	0	\$ -
0050	47	96	96	GM-Gravity Main Collector		Rectangle Closed	LF	\$ 850.00	0	\$ -
0051	48	GBP-Gravity Backflow Pipe <36"				Ea	\$ 35,000.00	0	\$ -	
0052	49	GBP-Gravity Backflow Pipe >36"				Ea	\$ 70,000.00	2	\$ 140,000	
0053	5	GW-Gravity Wells				EA	\$ 105,000.00	0	\$ -	
0054	4	48	ET-Exfiltration Trench			LF	\$ 250.00	1,551	\$ 387,750	
0055	50	Weir Box CS				EA	\$ 30,000.00	0	\$ -	
0057	53	CS-22 Remod				EA	\$ 525,000.00	0	\$ -	
0058	55	SW-04 Remod				EA	\$ 150,000.00	0	\$ -	
0056		Gravity Structures-Inlets				EA	\$ 7,500.00	137	\$ 1,030,000	
0059	56	Ditch Improvement				LF	\$ 50.00	0	\$ -	
0091	57	Swale/Ditch Headwall				Ea	\$ 10,000.00	0	\$ -	
0090	10	Exfil End Weir				Ea	\$ 5,000.00	0	\$ -	
0092	51	Ret/Det Pond				CUY	\$ 355.00	0	\$ -	
							#N/A	#VALUE!	#VALUE!	
							#N/A	#VALUE!	#VALUE!	
							#N/A	#VALUE!	#VALUE!	
GRAVITY MAIN SUBTOTAL								\$ 5,016,984		
0060		Pavement Restoration including Pavement Marking (Full Road)					LF	\$ 270.00	18,000	\$ 4,860,000
CONSTRUCTION COST SUBTOTAL									\$ 15,339,584	
GENERAL CONDITIONS								Hollywood Lakes North		
0061		Mobilization				LS	4%	\$ 15,339,584	\$ 613,583	
0062		Insurance and General Conditions				LS	2%	\$ 15,339,584	\$ 306,792	
0063		Permits/Fees				LS	2%	\$ 15,339,584	\$ 306,792	
0064		Maintenance of Traffic				LS	3%	\$ 15,339,584	\$ 460,188	
0065		Engineering Design & CA Oversight Costs				LS	15%	\$ 15,339,584	\$ 2,300,938	
0066		Construction Engineering Inspection Costs				LS	4%	\$ 15,339,584	\$ 613,583	
0067		OCI Management Cost				LS	15%	\$ 15,339,584	\$ 2,300,938	
0068		Project Contingency Costs				LS	30%	\$ 15,339,584	\$ 4,601,875	
NS SUBTOTAL									\$ 11,504,688	
TOTAL									\$ 26,844,272	

- **Table HE-D1-7_ALT1 – Planning Budget for Alternative 1 Proposed CIP**
- **Table HE-D1-7_ALT2 – Planning Budget for Alternative 2 Proposed CIP**

3.2.4.8 CIP Area HE-D2-2 (North Central - East)

Root Causes of Flooding

This CIP area is characterized commercial and residential land use. The basin is on a higher ridge and area is served by exfiltration systems. There is minor flooding in the area.

Alternative 1

Proposed CIP:

- New gravity collection systems and inlets in neighborhoods connecting to existing piping on Dixie Hwy.
- New 7,641 l.f. of exfiltration systems in neighborhoods.

Summary of Locations Not Meeting ALT 1 LOS:

1. Structures Flooded pre-5, post-0

Summary of Offsite Issues Affecting CIP Area:

1. None.

Alternative 2

Proposed CIP:

- New gravity collection systems and inlets in neighborhoods connecting to existing piping on Dixie Hwy.
- New 3,709 l.f. of exfiltration systems in neighborhoods.

Summary of Locations Not Meeting ALT 2 LOS:

1. Structures Flooded pre-5, post-3

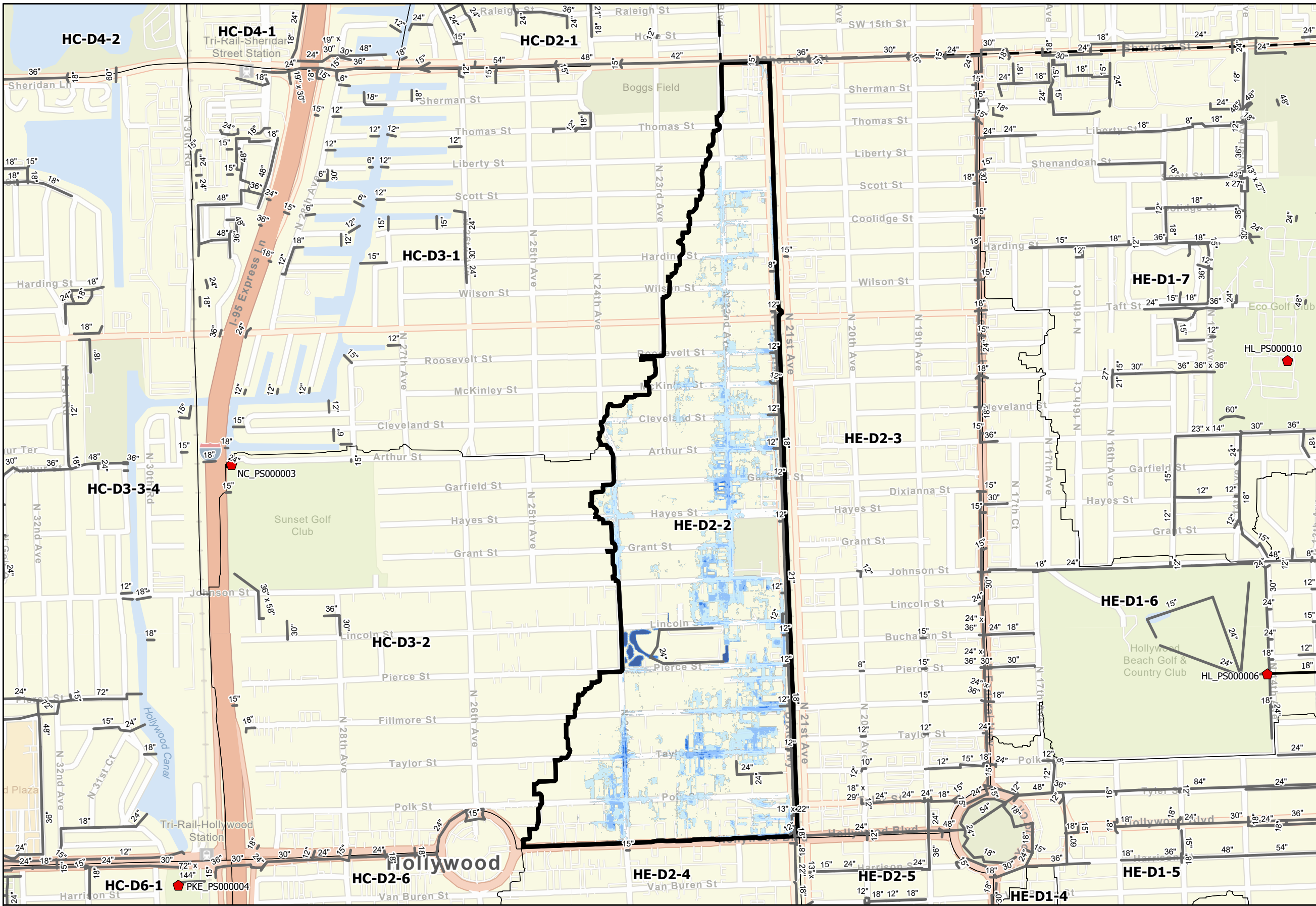
Summary of Offsite Issues Affecting CIP Area:

1. None.

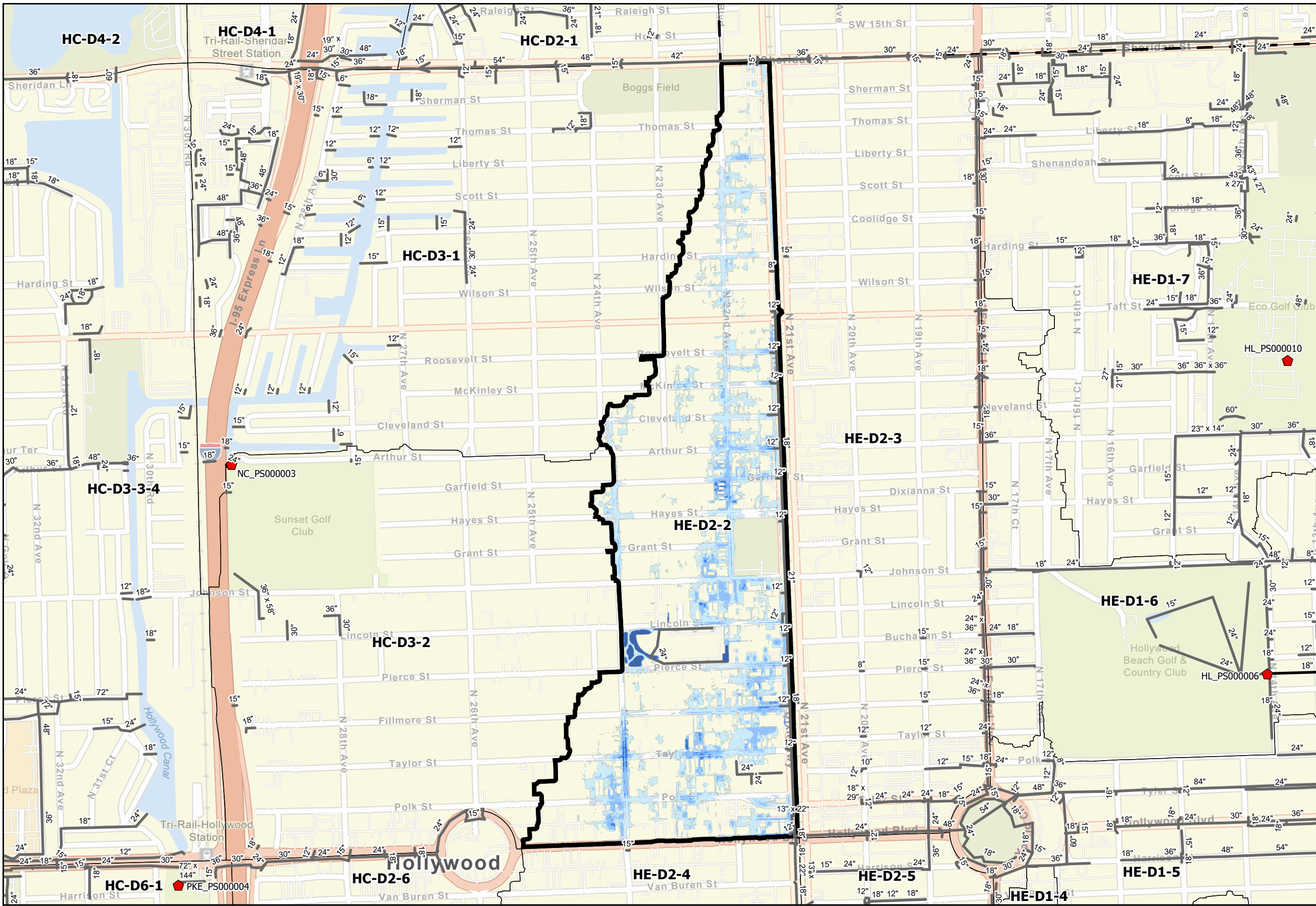
HE-D2-2 Pre-Post CIP Flood Inundation Maps

The following figures provide the predicted existing conditions flooding for the 5- and 10-year storm in the CIP Area and the predicted flood reduction for these storms under the Alternatives 1 and 2 CIP:

- **Figure HE-D2-2-EC_5 - Current Conditions Flooding in CIP Area 5-year Design Storm**
- **Figure HE-D2-2-EC_10 - Current Conditions Flooding in CIP Area 10-year Design Storm**
- **Figure HE-D2-2-CIP_ALT1_5 - Predicted Flooding Reduction and Proposed ALT1 CIP for 5-year Design Storm**



- Legend
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Existing Gravity Pipes
 - Existing Forcemains
 - 5-Year 24-Hour Storm Flood Feet
 - <= 0 ft.
 - 0 - 0.5
 - 0.5 - 1
 - 1 - 1.5
 - > 1.5 ft.



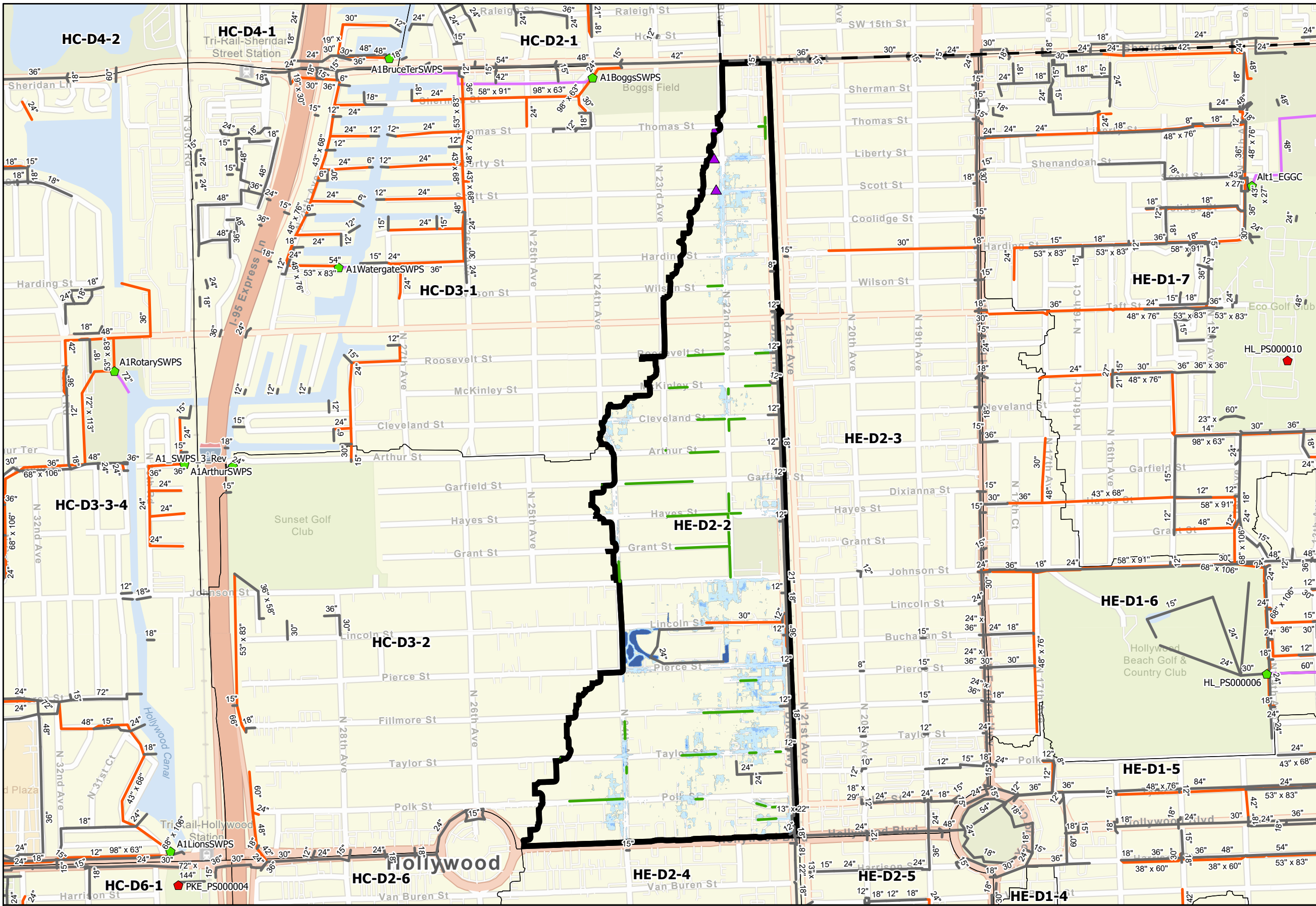
Legend

- Hollywood City Limits
- Focused CIP Area
- Existing SWPS
- Near Term SWPS
- Existing Gravity Pipes
- Existing Forcemains

10-Year 72-Hour Storm Flood Feet

- <= 0 ft.
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- > 1.5 ft.

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Legend

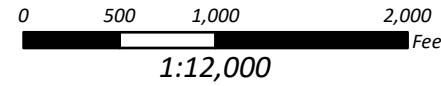
- Hollywood City Limits
- Focused CIP Area
- Existing SWPS
- Near Term SWPS
- Alt 1 SWPS
- Alt 1 Injection Wells
- Existing Gravity Pipes
- Existing Forcemains
- Alt 1 Exfiltration Pipes
- Alt 1 Gravity Pipes
- Alt 1 Forcemains
- Alt 1 Detention Pond

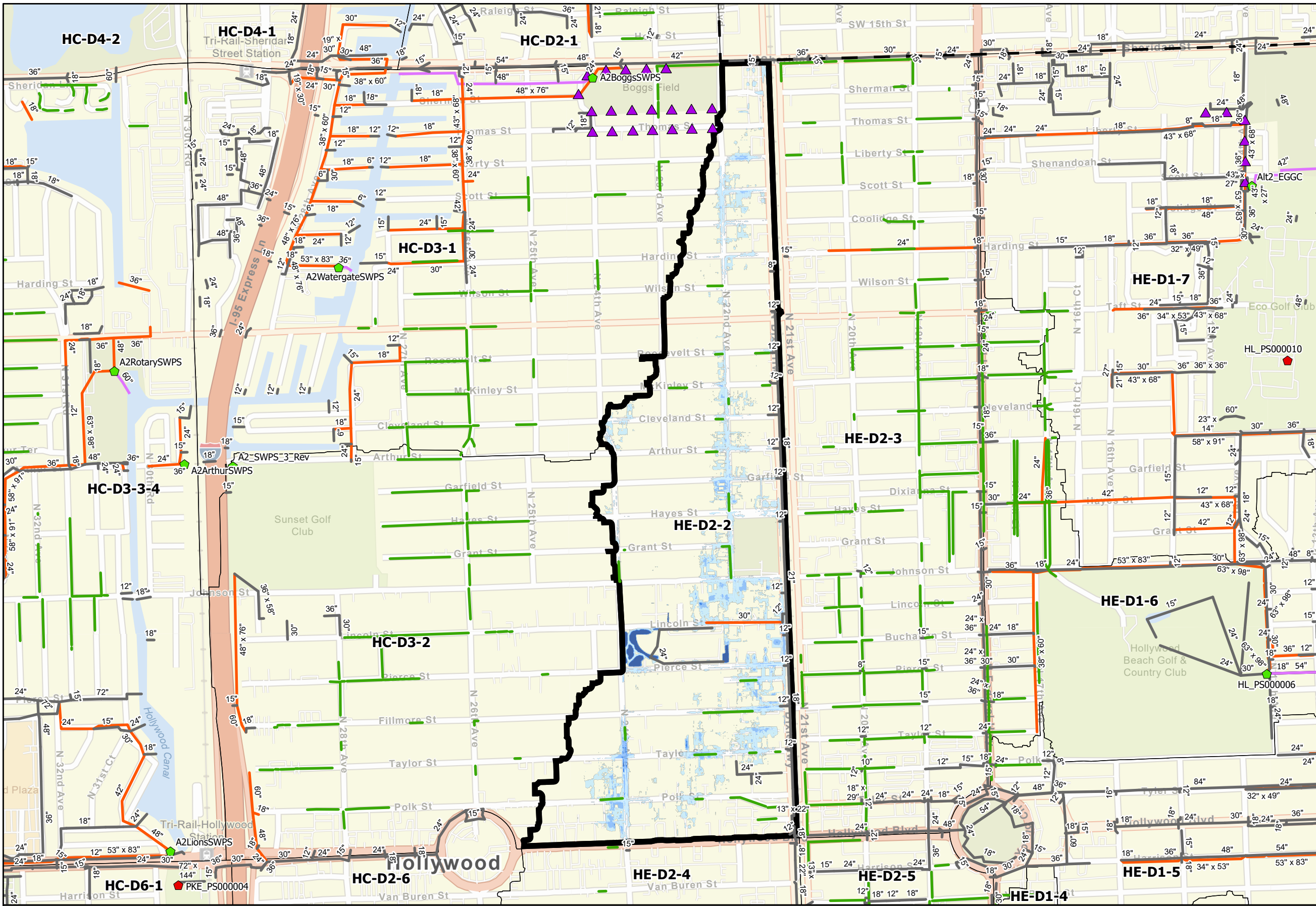
10-Year ALT 1 Storm Flood Feet

- <= 0 ft.
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- > 1.5 ft.



Predicted Flooding Reduction and Proposed ALT 1 CIP for 10-year Design Storm in CIP Area North Central - East





- Legend**
- Hollywood City Limits
 - Focused CIP Area
 - Existing SWPS
 - Near Term SWPS
 - Alt 2 SWPS
 - Alt 2 Injection Wells
 - Existing Gravity Pipes
 - Existing Forcemains
 - Alt 2 Exfiltration Pipe
 - Alt 2 Gravity Pipes
 - Alt 2 Forcemains
 - Alt 2 Detention Pond
 - 10-Year ALT 2 Storm Flood Feet
 - <= 0 ft.
 - 0 - 0.5
 - 0.5 - 1
 - 1 - 1.5
 - > 1.5 ft.

			CONCEPTUAL CAPITAL COST ESTIMATE					North Central East	
Alternative 1									
PUMP STATIONS WITH FORCE MAINS									
ITEM #	Master Sheet Index	DIAMETER (INCHES)		DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL
0001	13	24		FM- Force Main Collector	Circular	LF	\$ 167.00	0	\$ -
0002	14	36		FM- Force Main Collector	Circular	LF	\$ 242.00	0	\$ -
0003	15	42		FM- Force Main Collector	Circular	LF	\$ 336.00	0	\$ -
0004	16	48		FM- Force Main Collector	Circular	LF	\$ 612.00	0	\$ -
0005	17	54		FM- Force Main Collector	Circular	LF	\$ 982.00	0	\$ -
0006	18	60		FM- Force Main Collector	Circular	LF	\$ 1,149.00	0	\$ -
0007	19	66		FM- Force Main Collector	Circular	LF	\$ 1,329.00	0	\$ -
0008	20	72		FM- Force Main Collector	Circular	LF	\$ 1,473.00	0	\$ -
0009	225	24		FMO- Force Main Offline	Circular	LF	\$ 353.00	0	\$ -
0010	11			IWI-Injection Wells-Inline		EA	\$ 65,000.00	0	\$ -
0011	12			IWO-Injection Wells -Offline		EA	\$ 75,000.00	0	\$ -
0012	6	PS-Storm Drainage Pump Stations < 166 cfs			I	EA	\$ 2,400,000.00	0	\$ -
0013	7	PS-Storm Drainage Pump Stations < 166-246 cfs			II	EA	\$ 3,500,000.00	0	\$ -
0014	8	PS-Storm Drainage Pump Stations < 246-328 cfs			III	EA	\$ 4,900,000.00	0	\$ -
0015	9	PS-Storm Drainage Pump Stations< 328-410 cfs			IV	EA	\$ 6,750,000.00	0	\$ -
0016	54	PS-CS22 Storm Drainage Pump Stations 600CFS				EA	\$ 8,000,000.00	0	\$ -
NN SUBTOTAL									\$ -
EXFILTRATION WITH GRAVITY MAINS									North Central East
ITEM #	Master Sheet Index	DIAMETER (INCHES)	Width(INCHES)	DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL
0020	21	15		GM-Gravity Main Collector	Circular	LF	\$ 40.00	0	\$ -
0021	22	18		GM-Gravity Main Collector	Circular	LF	\$ 45.00	0	\$ -
0023	23	24		GM-Gravity Main Collector	Circular	LF	\$ 48.00	0	\$ -
0024	24	30		GM-Gravity Main Collector	Circular	LF	\$ 52.00	790	\$ 41,080
0026	25	36		GM-Gravity Main Collector	Circular	LF	\$ 80.00	497	\$ 39,728
0028	26	42		GM-Gravity Main Collector	Circular	LF	\$ 115.00	0	\$ -
0029	27	48		GM-Gravity Main Collector	Circular	LF	\$ 125.00	0	\$ -
0030	28	54		GM-Gravity Main Collector	Circular	LF	\$ 150.00	0	\$ -
0031	29	60		GM-Gravity Main Collector	Circular	LF	\$ 220.00	0	\$ -
0032	30	66		GM-Gravity Main Collector	Circular	LF	\$ 428.00	0	\$ -
0033	31	72		GM-Gravity Main Collector	Circular	LF	\$ 485.00	0	\$ -
0035	32	29	45	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 205.00	0	\$ -
0036	33	32	49	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 215.00	0	\$ -
0037	34	34	53	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 225.00	0	\$ -
0038	35	38	60	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 235.00	0	\$ -
0039	36	43	68	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 370.00	0	\$ -
0040	37	48	76	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 400.00	0	\$ -
0041	38	53	83	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 432.00	0	\$ -
0042	39	58	91	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 320.00	0	\$ -
0043	40	63	98	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 410.00	0	\$ -
0044	41	68	106	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 460.00	0	\$ -
0045	42	72	113	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 570.00	0	\$ -
0046	43	82	128	GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 650.00	0	\$ -
0048	44	72	120	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -
0072	45	72	72	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -
0049	46	84	120	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 750.00	0	\$ -
0050	47	96	96	GM-Gravity Main Collector	Rectangle Closed	LF	\$ 850.00	0	\$ -
0051	48	GBP-Gravity Backflow Pipe <36"			Ea	\$ 35,000.00	0	\$ -	
0052	49	GBP-Gravity Backflow Pipe >36"			Ea	\$ 70,000.00	0	\$ -	
0053	5	GW-Gravity Wells			EA	\$ 105,000.00	0	\$ -	
0054	4	48	ET-Exfiltration Trench			LF	\$ 250.00	7,641	\$ 1,910,250
0056	50	Weir Box CS			EA	\$ 7,500.00	0	\$ -	
0057	53	CS-22 Remod			EA	\$ 200,000.00	0	\$ -	
0058	55	SW-04 Remod			EA	\$ 150,000.00	0	\$ -	
0055		Gravity Structures-Inlets			EA	\$ 30,000.00	74	\$ 2,231,900	
0059	56	Ditch Improvement			LF	\$ 50.00	0	\$ -	
0091	57	Swale/Ditch Headwall			Ea	\$ 10,000.00	0	\$ -	
0090	10	Exfil_End Weir			Ea	\$ 5,000.00	0	\$ -	
0092	51	Ret/Det Pond			CUY	\$ 355.00	0	\$ -	
						#N/A	#VALUE!	#VALUE!	
						#N/A	#VALUE!	#VALUE!	
GRAVITY MAIN SUBTOTAL						#N/A		\$ 4,222,958	
0060		Pavement Restoration including Pavement Marking (Full Road)				LF	\$ 270.00	8,928	\$ 2,410,560
CONSTRUCTION COST SUBTOTAL								\$ 6,633,518	
GENERAL CONDITIONS								North Central East	
0061		Mobilization			LS	4%	\$ 6,633,518	\$ 265,341	
0062		Insurance and General Conditions			LS	2%	\$ 6,633,518	\$ 132,670	
0063		Permits/Fees			LS	2%	\$ 6,633,518	\$ 132,670	
0064		Maintenance of Traffic			LS	3%	\$ 6,633,518	\$ 199,006	
0065		Engineering Design & CA Oversight Costs			LS	15%	\$ 6,633,518	\$ 995,028	
0066		Construction Engineering Inspection Costs			LS	4%	\$ 6,633,518	\$ 265,341	
0067		OCI Management Cost			LS	15%	\$ 6,633,518	\$ 995,028	
0068		Project Contingency Costs			LS	30%	\$ 6,633,518	\$ 1,990,055	
Land acquisition									
NS SUBTOTAL								\$ 4,975,139	
TOTAL								\$ 11,608,657	

		CONCEPTUAL CAPITAL COST ESTIMATE							North Central East		
PUMP STATIONS WITH FORCE MAINS										Alternative 2	
ITEM #	Master Sheet Index	DIAMETER (INCHES)			DESCRIPTION	TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL	
0001	13	24			FM- Force Main Collector	Circular	LF	\$ 167.00	0	\$ -	
0002	14	36			FM- Force Main Collector	Circular	LF	\$ 242.00	0	\$ -	
0003	15	42			FM- Force Main Collector	Circular	LF	\$ 336.00	0	\$ -	
0004	16	48			FM- Force Main Collector	Circular	LF	\$ 612.00	0	\$ -	
0005	17	54			FM- Force Main Collector	Circular	LF	\$ 982.00	0	\$ -	
0006	18	60			FM- Force Main Collector	Circular	LF	\$ 1,149.00	0	\$ -	
0007	19	66			FM- Force Main Collector	Circular	LF	\$ 1,329.00	0	\$ -	
0008	20	72			FM- Force Main Collector	Circular	LF	\$ 1,473.00	0	\$ -	
0009	225	24			FMO- Force Main Offline	Circular	LF	\$ 353.00	0	\$ -	
0010	11				IWI-Injection Wells-Inline		EA	\$ 65,000.00	0	\$ -	
0011	12				IWO-Injection Wells -Offline		EA	\$ 75,000.00	0	\$ -	
0012	6	PS-Storm Drainage Pump Stations < 166 cfs			I	EA	\$ 2,400,000.00	0	\$ -		
0013	7	PS-Storm Drainage Pump Stations < 166-246 cfs			II	EA	\$ 3,500,000.00	0	\$ -		
0014	8	PS-Storm Drainage Pump Stations < 246-328 cfs			III	EA	\$ 4,900,000.00	0	\$ -		
0015	9	PS-Storm Drainage Pump Stations< 328-410 cfs			IV	EA	\$ 6,750,000.00	0	\$ -		
0016	54	PS-CS22 Storm Drainage Pump Stations 600CFS				EA	\$ 8,000,000.00	0	\$ -		
IN SUBTOTAL										\$ -	
EXFILTRATION WITH GRAVITY MAINS										North Central East	
ITEM #	Master Sheet Index	DIAMETER (INCHES)	Width(INCHES)	DESCRIPTION		TYPE	UNIT	UNIT COST	QUANTITIES	SUBTOTAL	
0022	22	21			GM-Gravity Main Collector	Circular	LF	\$ 45.00	0	\$ -	
0021	21	18			GM-Gravity Main Collector	Circular	LF	\$ 45.00	0	\$ -	
0023	23	24			GM-Gravity Main Collector	Circular	LF	\$ 48.00	0	\$ -	
0024	24	30			GM-Gravity Main Collector	Circular	LF	\$ 52.00	790	\$ 41,080	
0026	25	36			GM-Gravity Main Collector	Circular	LF	\$ 80.00	0	\$ -	
0028	26	42			GM-Gravity Main Collector	Circular	LF	\$ 115.00	0	\$ -	
0029	27	48			GM-Gravity Main Collector	Circular	LF	\$ 125.00	0	\$ -	
0030	28	54			GM-Gravity Main Collector	Circular	LF	\$ 150.00	0	\$ -	
0031	29	60			GM-Gravity Main Collector	Circular	LF	\$ 220.00	0	\$ -	
0032	30	66			GM-Gravity Main Collector	Circular	LF	\$ 428.00	0	\$ -	
0033	31	72			GM-Gravity Main Collector	Circular	LF	\$ 485.00	0	\$ -	
0035	32	29	45		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 205.00	0	\$ -	
0036	33	32	49		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 215.00	0	\$ -	
0037	34	34	53		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 225.00	0	\$ -	
0038	35	38	60		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 235.00	0	\$ -	
0039	36	43	68		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 370.00	0	\$ -	
0040	37	48	76		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 400.00	0	\$ -	
0041	38	53	83		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 432.00	0	\$ -	
0042	39	58	91		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 320.00	0	\$ -	
0043	40	63	98		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 410.00	0	\$ -	
0044	41	68	106		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 460.00	0	\$ -	
0045	42	72	113		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 570.00	0	\$ -	
0046	43	82	128		GM-Gravity Main Collector	Horizontal Ellipse	LF	\$ 650.00	0	\$ -	
0048	44	72	120		GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -	
0072	45	72	72		GM-Gravity Main Collector	Rectangle Closed	LF	\$ 570.00	0	\$ -	
0049	46	72	96		GM-Gravity Main Collector	Rectangle Closed	LF	\$ 750.00	0	\$ -	
0050	47	96	96		GM-Gravity Main Collector	Rectangle Closed	LF	\$ 850.00	0	\$ -	
0051	48				GBP-Gravity Backflow Pipe <36"	Ea	\$ 35,000.00	0	\$ -		
0052	49				GBP-Gravity Backflow Pipe >36"	Ea	\$ 70,000.00	0	\$ -		
0053	5				GW-Gravity Wells	EA	\$ 105,000.00	0	\$ -		
0054	4	48			ET-Exfiltration Trench	LF	\$ 250.00	3,709	\$ 927,250		
0055	50				Weir Box CS	EA	\$ 30,000.00	0	\$ -		
0057	53				CS-22 Remod	EA	\$ 525,000.00	0	\$ -		
0058	55				SW-04 Remod	EA	\$ 150,000.00	0	\$ -		
0056					Gravity Structures-Inlets	EA	\$ 7,500.00	37	\$ 281,188		
0059	56				Ditch Improvement	LF	\$ 50.00	0	\$ -		
0091	57				Swale/Ditch Headwall	Ea	\$ 10,000.00	0	\$ -		
0090	10				Exfil End Weir	Ea	\$ 5,000.00	0	\$ -		
0092	51				Ret/Det Pond	CUY	\$ 355.00	0	\$ -		
							#N/A	#VALUE!	#VALUE!		
							#N/A	#VALUE!	#VALUE!		
							#N/A	#VALUE!	#VALUE!		
GRAVITY MAIN SUBTOTAL									\$ 1,249,518		
0060		Pavement Restoration including Pavement Marking (Full Road)					LF	\$ 270.00	4,499	\$ 1,214,730	
CONSTRUCTION COST SUBTOTAL										\$ 2,464,248	
GENERAL CONDITIONS									North Central East		
0061		Mobilization					LS	4%	\$ 2,464,248	\$ 98,570	
0062		Insurance and General Conditions					LS	2%	\$ 2,464,248	\$ 49,285	
0063		Permits/Fees					LS	2%	\$ 2,464,248	\$ 49,285	
0064		Maintenance of Traffic					LS	3%	\$ 2,464,248	\$ 73,927	
0065		Engineering Design & CA Oversight Costs					LS	15%	\$ 2,464,248	\$ 369,637	
0066		Construction Engineering Inspection Costs					LS	4%	\$ 2,464,248	\$ 98,570	
0067		OCI Management Cost					LS	15%	\$ 2,464,248	\$ 369,637	
0068		Project Contingency Costs					LS	30%	\$ 2,464,248	\$ 739,274	
NS SUBTOTAL										\$ 1,848,186	
TOTAL										\$ 4,312,433	

- **Figure HE-D2-2-CIP_ALT1_10 - Predicted Flooding Reduction and Proposed ALT1 CIP for 10-year Design Storm**
- **Figure HE-D2-2-CIP_ALT2_5 - Predicted Flooding Reduction and Proposed ALT2 CIP for 5-year Design Storm**
- **Figure HE-D2-2-CIP_ALT2_10 - Predicted Flooding Reduction and Proposed ALT2 CIP for 10-year Design Storm**
- **Table HE-D2-2_ALT1 – Planning Budget for Alternative 1 Proposed CIP**
- **Table HE-D2-2_ALT2 – Planning Budget for Alternative 2 Proposed CIP**

3.2.4.9 CIP Area HE-D2-3 (Royal Poinciana)

Root Causes of Flooding

This CIP area is characterized commercial and residential land use. The basin is on a higher ridge and area is served by exfiltration systems. There is minor flooding in the area, however, the extensive CIP proposed is to prevent the runoff from this area sheet flowing east into other areas and exacerbating the flooding in those areas.

Alternative 1

Proposed CIP:

- New gravity collection systems and inlets in neighborhoods connecting to the system along US-1 and under US-1 to both the EcoGC system and the SW06 SWPS.
- New 43,845 l.f. of exfiltration systems in neighborhoods.
- 102 new gravity stormwater wells (assumed 1 cfs per foot head for 24-inch well, 250 ft spacing).

Summary of Locations Not Meeting ALT 1 LOS:

1. Structures Flooded pre-3, post-0

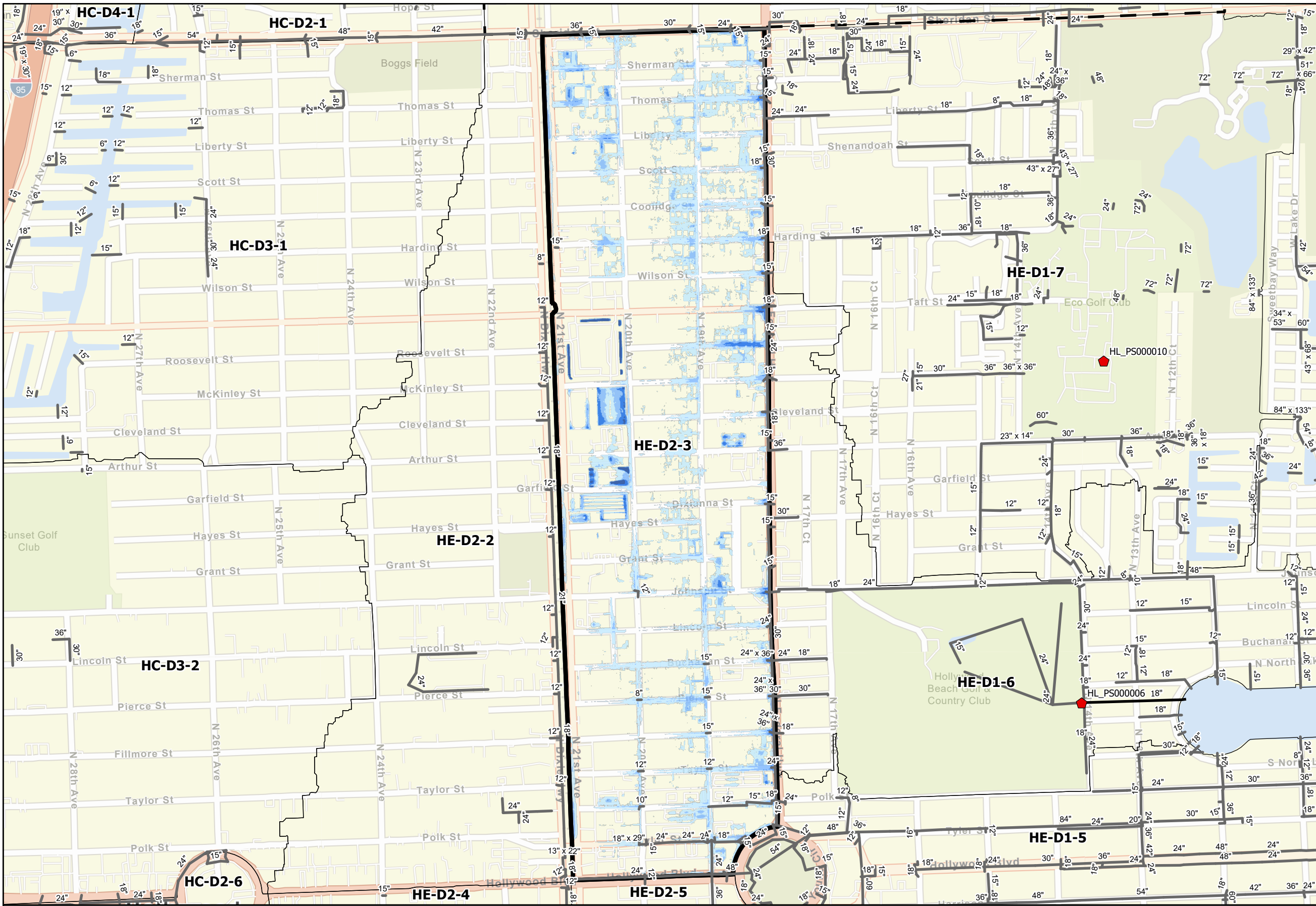
Summary of Offsite Issues Affecting CIP Area:

1. None.

Alternative 2

Proposed CIP:

- New gravity collection systems and inlets in neighborhoods connecting to the system along US-1, and under US-1 to both the EcoGC system and the SW06 SWPS.
- New 24,490 l.f. of exfiltration systems in neighborhoods.
- 49 new gravity stormwater wells (assumed 1 cfs per foot head for 24-inch well, 250 ft spacing).

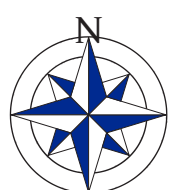


Legend

- Hollywood City Limits
- Focused CIP Area
- Existing SWPS
- Near Term SWPS
- Existing Gravity Pipes
- Existing Forcemains

5-Year 24-Hour Storm Flood Feet

- ≤ 0 ft.
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- > 1.5 ft.



Current Conditions Flooding in CIP Area
Royal Poinciana
5-year Design Storm

City of Hollywood Stormwater Master Plan
HE-D2-3_EC-5
2/28/2023

