Memorandum

To: *Felipe Lofaso, City of Lake Worth*

From: *CDM Smith*

Date: *September 20, 2016*

Subject: *Stormwater Master Plan (SWMP) Capital Improvement Program (CIP) Review and Update – Technical Memorandum*

CDM Smith was retained by the City of Lake Worth (City) to perform a review and update of the City's Stormwater Master Plan (SWMP), which was originally prepared and published by CDM Smith in 2012. Areas of emphasis in this review include comparing the locations of the proposed Capital Improvement Program (CIP) projects to locations of known flooding, developing conceptual projects to address known flooding areas not covered by current CIP projects, updating costs of current and new CIP projects to 2016 dollars, and evaluating the climate resiliency of existing and proposed stormwater infrastructure through modeling of projected sea level rise. This technical memorandum summarizes the results of these efforts and recommendations for update of the SWMP and CIP.

Task 1 – Updated Problem Area Evaluation

The City provided CDM Smith with a copy of its Stormwater Atlas (provided in **Attachment A**) with 18 known flooding locations identified. CDM Smith compared these locations to the locations of the 2012 SWMP CIP projects to determine where flooding would be directly or indirectly alleviated by the proposed projects. A detailed summary of these findings are included in **Table A-1** (Attachment A). The City provided additional feedback as shown in the table which would be used subsequently in Task 2 for developing new conceptual projects. The Task 1 evaluation found the following:

- Of the 18 identified flooding areas, projects from the 2012 SWMP are expected to directly or indirectly address 13 of them.
- Five flooding areas were identified that were not addressed by the 2012 SWMP:
  - Wellesley Drive and Federal Highway;
  - 16th Avenue North east of Lakeside Drive;
  - North Golfview Road between 7th Avenue North and 8th Avenue North;

- South Lakeside Drive south of 14th Avenue South; and
- 17th Avenue South east of Lakeside Drive.

Task 2 – Review and Update SWMP CIP

Based on the findings of Task 1, CDM Smith updated elements of the 2012 SWMP to address the new flooding areas and update the original conceptual cost estimates from June 2012 to July 2016 dollars. In order to mitigate flooding in the five identified areas for the 5-year, 24-hour design storm, CDM Smith has proposed two new projects and a modification of a 2012 SWMP project. These projects will also reduce flooding for larger events (e.g., 10-, 25-, and 100-year). The projects are summarized below.

- To mitigate the reported flooding at Wellesley Drive and Federal Highway, it is proposed that the original 2012 Problem Area 1 solution be modified to include approximately 5,000 linear feet of 18-inch exfiltration trench in available City right-of-way on the side streets between Federal Highway and Dixie Highway (**Figure 1**). The trenches are expected to be able to exfiltrate approximately up to 1.5 inches of runoff over the HRVD-FHWY hydrologic unit and as such will assist in alleviating the demand on the undersized FDOT infrastructure along Federal Highway.
- To mitigate the reported flooding at South Lakeside Drive south of 14th Avenue South and 17th Avenue South east of Lakeside Drive, a new project is proposed, designated as Problem Area 16 (**Figure 2**) with several improvements to reduce the demand on existing outfalls, and provide new conveyance options and outfall upgrades. Project components include:
  - Installation of 5,000 linear feet of exfiltration trench in available right-of-way on the west side of the railroad. These areas ultimately discharge to the Lake Worth Lagoon through the 17th Avenue South outfall, so exfiltration on the west side of the railroad should reduce the burden on the outfall. The trenches should be capable of exfiltrating approximately up to 2.3 inches of runoff over the 15AVS-WNGF hydrologic unit.
  - Installation of inlets and approximately 1,300 linear feet of culverts along Lakeside Drive between 14th Avenue South and 17th Avenue South. City input from Task 1 indicated that a lack of local drainage contributes to the issues along Lakeside Drive. This system would be routed to the 15th Avenue South outfall.
  - Rerouting of the existing Palmway drainage system to discharge to the 15th Avenue South outfall to reduce dependence on the 17th Avenue South outfall.
  - Upgrade of the 15th Avenue South outfall from 15-inch pipe to 18 to 36-inch pipe to accommodate the re-routed flows. A nutrient-separating baffle box can be installed upstream of the discharge into Lake Worth Lagoon to satisfy water quality requirements.

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Problem Area 1
Concept Revision

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Figure 1

CDM Smith

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Figure 2

New Problem Area 16
Proposed Conceptual Alternative

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- Installation of tide gates/valves on the 15th Avenue South and 17th Avenue South outfalls to limit tidal influence on the system.

- To mitigate reported flooding of16th Avenue North east of Lakeside Drive and North Golfview Road between 7th Avenue North and 8th Avenue North, a new project is proposed, designated as Problem Area 17 (**Figure 3**) with outfall upgrades to provide positive drainage and limit tidal influences. The improvements include:

  - Installation of a new outfall along 16th Avenue North. The 700 linear feet of 18-inch pipe would provide positive drainage for a small area on the north side of Lake Worth Golf Course that currently lacks drainage infrastructure. A nutrient-separating baffle box can be installed upstream of the discharge point to reduce nutrient loading to Lake Worth Lagoon, and a tide gate/valve can be installed to limit tidal influences in the area.

  - Installation of a tide gate/valve on the 8th Avenue North outfall. City input from Task 1 indicated that this is a low-lying area susceptible to tidal backflow; a tide gate or valve should assist in alleviating any tidally-influenced flooding.

Factsheets and conceptual cost estimates for the three projects (i.e., Problem Area 1, Problem Area 16, and Problem Area 17) are provided in **Attachment B**.

Within Task 2, the conceptual capital cost estimates for all of the 2012 SWMP CIP projects were updated from June 2012 to July 2016 dollars. This was accomplished by applying the Engineering News-Record (ENR) Construction Cost Indices (CCI) to the original cost estimates. The updated conceptual capital cost estimates are summarized in **Table 1**. Per the ENR indices, construction costs have risen approximately 12 percent since June 2012; combined with the conceptual cost estimates for the new and revised CIP projects described above, the total cost for implementation of the CIP is estimated at approximately $21.75 million.

Figure 3

New Problem Area 17
Proposed Conceptual Alternative

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Table 1 Summary of Conceptual Capital Improvement Costs

Project ID.	Alternative Location	Capital Cost (June 2012 $)	Capital Cost (July 2016 $)
1 (Original)	North Lakeside Drive, Duke Drive, Notre Dame Drive and Wellesley Drive	$ 1,629,000	$ 1,825,000
1 (Revised)	North Lakeside Drive, Duke Drive, Notre Dame Drive and Wellesley Drive, Federal Highway	$ 2,853,000	$ 3,196,000
2	22nd Avenue North and Park Street	$ 383,000	$ 429,000
3	15th Avenue North and N Dixie Highway	$ 512,000	$ 574,000
4	10th Avenue North to 13th Avenue North, E and F Streets	$ 656,000	$ 735,000
5	3rd Avenue North to 6th Avenue North and North F Street	$ 1,853,000	$ 2,076,000
6	6th Avenue South and South A Street	$ 339,000	$ 380,000
7	2nd Avenue North to 1st Avenue South, South F Street and Dixie Highway	$ 2,663,000	$ 2,983,000
8	Lake Avenue, 1st Avenue South, South M Street, and Golfview Road	$ 2,688,000	$ 3,011,000
9	3rd Avenue South, 5th Avenue South, South Palmway and South Lakeside Drive	$ 3,045,000	$ 3,411,000
10	6th Avenue South and South F Street	$ 204,000	$ 229,000
11	10th Avenue South and South G Street	$ 677,000	$ 759,000
12	10th Avenue South and Dixie Highway	$ 471,000	$ 528,000
13	10th Avenue South and South N Street	$ 471,000	$ 528,000
14	18th Avenue South and South Palmway	$ 101,000	$ 114,000
15	Palmetto Avenue and South Pine Street	$ 152,000	$ 171,000
16 (New)	15th Avenue South, 17th Avenue South, Lakeside Drive, 18th Avenue South	$ 2,118,000	$ 2,373,000
17 (New)	16th Avenue North, 8th Avenue North, North Golfview Road	$ 224,000	$ 251,000
Total Cost (Original SWMP Projects Only):		**$ 15,844,000**	**$ 17,753,000**
Total Cost (With Revised Project 1 and New Projects 16 and 17):		**$ 19,410,000**	**$ 21,748,000**

The assumptions used in developing the conceptual capital costs are as follows:

- Original costs were as of June 2012. Costs were updated using a multiplier equal to the July 2016 ENR Index (10379) divided by the June 2012 ENR Index (9291), or 1.12;
- For consistency, new and revised project conceptual costs were calculated using the June 2012 unit prices and converted to July 2016 dollars using the above multiplier;
- Conceptual master planning level of detail;

- 30-percent contingency;
- 20-percent allowance for survey, engineering, and permitting;
- Materials, labor and equipment are included;
- No rock excavation and limited dewatering;
- No consideration of contaminated soils, hazardous materials or groundwater remediation;
- No potential wetland mitigation;
- No potential replacement or rehabilitation of non-stormwater infrastructure (e.g., water, sewer, reuse, cable, telephone, gas, fiber optic, etc.);
- No property acquisition or easement costs; and
- Total costs are rounded to the next highest $1,000.

Task 3 – Sea Level Rise Evaluation

CDM Smith evaluated the long-term climate resiliency of existing and proposed City stormwater infrastructure by updating the 2012 SWMP models to reflect projected sea level rise in the year 2066. CDM Smith reviewed the guidance provided in *A Unified Sea Level Rise Projection for Southeast Florida* [South Florida Regional Climate Change Compact (SFRCCC), 2011] and applied the US Army Corps of Engineers Modified NRC Type II (Intermediate) equation:

$$E = 0.0017t + 6.25\text{x}10^{-5}t^2$$

Where:

E = sea level rise (meters)

t = time (years)

The SFRCCC guidance uses 2010 as its base year of analysis; therefore, assuming t = 56 years (2066), the projected sea level rise is 0.29 meters, or 0.95 feet.

To simulate the impacts of sea level rise on the City's existing stormwater infrastructure, the projected sea level rise of 0.95 feet was added onto the 2012 SWMP mean high tide value in the Lake Worth Lagoon (0.8 feet NAVD) to yield a new static boundary condition in the Lake Worth Lagoon of 1.75 feet NAVD. The pump curves used to model exfiltration trenches were also modified to account for an associated rise in the groundwater table elevation. Initial stages in the systems discharging to the lagoon were also updated accordingly.

Per the project scope, CDM Smith evaluated the sea level rise impacts for the 100-year, 72-hour design storm. Model results are presented in **Table C-1** of **Attachment C**. As shown in the model

results, the projected sea level rise is not expected to have a significant impact on flood stages for this design storm. A total of six nodes, five of which are near the Lake Worth Lagoon, were identified that showed an increase in the 100-year flood stage, ranging from 0.1 up to 0.8 feet. Only one new 100-year level-of-service (LOS) deficiency was identified for the 100-year event at 18th Avenue North and R Street, which will be addressed in the revised Problem Area 1 CIP project.

However, as per City decision in the SWMP it should be noted that the CIP projects were not intended to address a 100-year event. In the 2012 SWMP, the 5-year, 24-hour design storm was used for the basis of the alternatives analysis. As such, an additional model run was performed with the sea level rise modification against the 5-year proposed conditions model from the 2012 SWMP to provide an evaluation of the performance of the CIP projects under future conditions and under the design event for which the projects were intended to provide LOS.

Results for the 5-year simulation are provided in **Table C-2** (Attachment C). This simulation demonstrates that the effects of sea level rise are more pronounced for smaller events. Increases in the 5-year flood stage were observed in 67 nodes throughout the City, and nine locations were identified as no longer meeting their design 5-year LOS under future conditions. These include:

- Duke Drive and Georgia Lane (Revised Problem Area 1);
- 15th Avenue North west of Dixie Highway (2012 SWMP Problem Area 2);
- 12th Avenue North and D Street (2012 SWMP Problem Area 4);
- 3rd Avenue North and F Street (2012 SWMP Problem Area 5);
- 1st Avenue South and F Street (2012 SWMP Problem Area 7);
- Golfview Road and Lakeside Drive, north of Lake Avenue (2012 SWMP Problem Area 8);
- 17th Avenue South east of Lakeside Drive (New Problem Area 16); and
- Lakeside Drive South of 18th Avenue North (not an existing problem area).

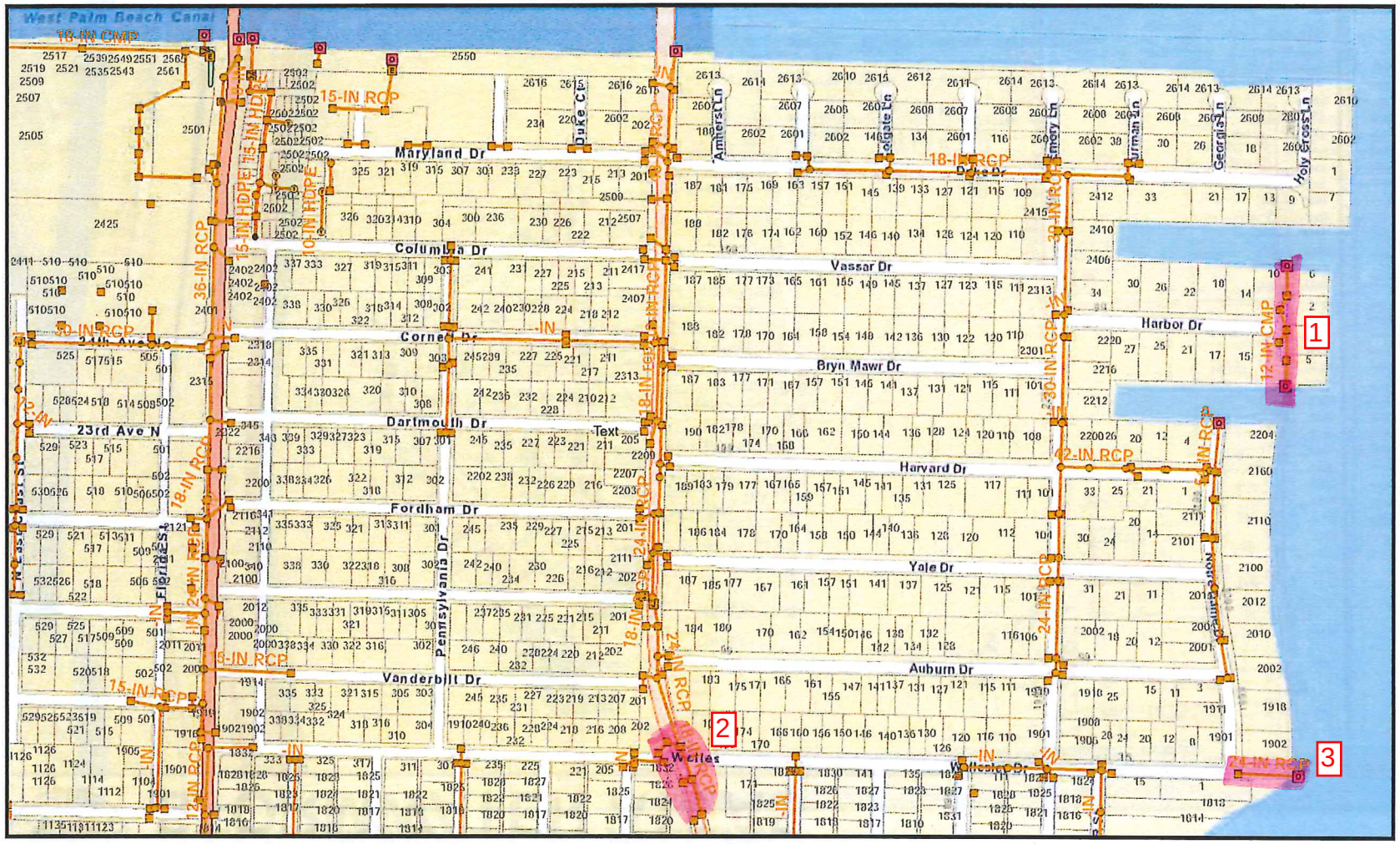
The City should consider further analysis beyond the scope of this SWMP update to evaluate projects that would offset the predicted increased flooding due to sea level rise. Additional exfiltration in Problem Areas 2, 4, 5, and 7 should be able to provide the additional 0.1 to 0.3 feet of flood stage decrease necessary to meet the 5-year LOS in 2066. Opportunities to maximize underground storage opportunities in Bryant Park and surface storage on the south end of Lake Worth Golf Course should be explored to minimize flooding in Problem Area 8.

Attachment A

City of Lake Worth Stormwater Master Plan
CIP Review and Update
Table A-1 - Updated Problem Area Data Evaluation

Problem Area	Location	Addressed in 2012 SWMP? (Y/N)	2012 SWMP Problem Area ID	Comments (CDM Smith)	Comments (City of Lake Worth)
1	Harbor Drive - East End	Y	1	Node HARB-DRVE showed flooding below LOS criterion for the 10-year event, but dry with two feet of freeboard for 5-year event. Improvements for SWMP Problem Area 1 may reduce overflows from Lakeside Drive, but this outfall was not specifically addressed.	
2	Wellsley Drive and Federal Highway	N	N/A	This intersection was not modeled. Harvard and Federal downstream has 5-yr LOS. No improvements were proposed along Federal. Add exfiltration up the hill and at the location?	FDOT's system surcharges due to being a constricted system with 18" and 24" piping. Adding exfiltration could help alleviate minor flooding. 8" +/- when it floods on Federal Highway
3	Wellsley Drive and Notre Dame Drive	Y	1	Directly addressed in SWMP in Problem Area 1 improvements with outfall upgrade and baffle box.	
4	16th Avenue North east of Lakeside Drive (north side of golf course)	N	N/A	Node 16AVN-OUT shows flooding below LOS criterion for 5-year event, does not meet 10-year LOS or above. No improvements proposed in this area. Could this be a maintenance or tailwater issue? Add exfiltration up the hill, and/or convey to more storage in the golf course?	Tidal inflow and king tide issue. The ground elevations at the intracoastal could be elevated and the addition of piping and an outfall could assist with tidal events. The golf course itself floods so would prefer not to convey more water to the course.
5	North Golfview Road between 11th Ave N and 12th Ave N	Y	4	Golfview Road local drainage not included in SWMP model. Atlas indicates this area drains to 13th Avenue N outfall, the capacity of which is addressed with upstream exfiltration trenches; lower tailwater in outfall should improve LOS.	
6	North Golfview Road between 9th Ave N and 10th Ave N	Y	4	Golfview Road local drainage not included in SWMP model. Both 9th and 10th Avenue outfalls show flooding at Lakeside Drive below the LOS criterion for the 5-year event and do not meet LOS for 10-year or larger event. Upstream exfiltration trenches may lower tailwater in 10th Avenue N outfall.	
7	North Golfview Road between 7th Ave N and 8th Ave N	N	N/A	Golfview Road local drainage not included in SWMP model. 8th Avenue outfall shows no flooding at Lakeside Drive for the 5-year event and 1.2 feet of flooding for 10-year event. No improvements were proposed for this outfall. Add exfiltration up the hill, and/or convey to more storage in the golf course?	Tidal inflow/king tide issues. Low lying area. Outfalls could receive check valves and backflow prevention devices.
8	North Lakeside Drive between 3rd Ave N and 4th Ave N	Y	5	Lakeside Drive local drainage not included in SWMP model. 4th Avenue outfall shows no flooding at Lakeside Drive for the 5-year event and 0.8 feet of flooding for 10-year event. Upstream exfiltration trenches may lower tailwater in 4th Avenue N outfall.	
9	2nd Avenue North between Lakeside Drive and Golfview Road	Y	7	Exfiltration trenches recommended upstream around 2nd Avenue N and M Street to directly address flooding in this area.	
10	Lucerne Avenue and Federal Highway	Y	7	Local drainage at this intersection not explicitly modeled, but appears to drain north to 2nd Ave N outfall which is addressed by the exfiltration trenches proposed above.	
11	Lucerne Avenue east of Golfview Road	Y	8	Directly addressed in SWMP in Problem Area 8 improvements, specifically proposed storage on south side of golf course.	
12	Lake Avenue east of Golfview Road	Y	8	Directly addressed in SWMP in Problem Area 8 improvements, specifically proposed storage on south side of golf course.	
13	1st Avenue South east of Golfview Road	Y	8	Directly addressed in SWMP in Problem Area 8 improvements, specifically proposed underground storage on north side of Bryant Park.	
14	Golfview Road between 1st Ave S and 2nd Ave S; Bryant Park	Y	9	Directly addressed in SWMP in Problem Area 9 improvements, specifically proposed underground storage on south side of Bryant Park.	
15	South Federal Highway between 9th Ave S and 10th Ave S	Y	13	Exfiltration trenches recommended at 10th Ave S and S N Street will decrease tailwater in 10th Ave S outfall and should improve local drainage.	
16	South Lakeside Drive south of 14th Ave S	N	N/A	Area drainage not explicitly modeled. Closest node at 15th Ave S and Lakeside not deemed a problem area and meets 10-year LOS. No improvements proposed in area. Could this be a maintenance or tailwater issue? Add exfiltration up the hill?	Lack of piped system. Small exfiltration system exists but due to high groundwater level is full most of the time. Adding new piping and structures along S. Lakeside and outfall 15th Avenue S (upgrade that system and outfall also)
17	17th Avenue South east of Lakeside Drive	N	N/A	Area noted in SWMP as a historical flooding area; however, model results indicates the 17th Ave S outfall meets a 5-year LOS with flooding above the low rim elevation but below the LOS criterion of 0.5 ft. No improvements were proposed in this area. Could this be a maintenance or tailwater issue? Add exfiltration up the hill?	Tidal inflows/king tides. Backflow prevention, redirect runoff down S Palmway and to 15th Ave S (upgrade that system also). May need to address via pump station that is also tied to 18th Ave S issues.
18	18th Avenue South east of Lakeside Drive	Y	14	Directly addressed in SWMP in Problem Area 14 improvements which include storage and outfall improvements.	Significant tidal issues. City does not own property at intracoastal. Pump station may be only option given location and proximity to sewer lift station and limited options for other improvements.

CITY OF LAKE WORTH STORMWATER ATLAS



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STORM STRUCTURES

TYPE

- CATCH BASIN/INLET
- CLEANOUT
- CONTROL STRUCTURE
- END
- OUTFALL
- JUNCTION BOX
- JUNCTION POINT
- MANHOLE
- POLLUTION CONTROL STRUCT
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- YARD DRRAIN
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- STORM GRAVITY MAIN PIPES
- STORM PRESSURE _MAIN PIPES
- STORM CASINGS
- STORM DRAINFIELDS
- STORM DRY RETENTION
- STORM WET RETENTION

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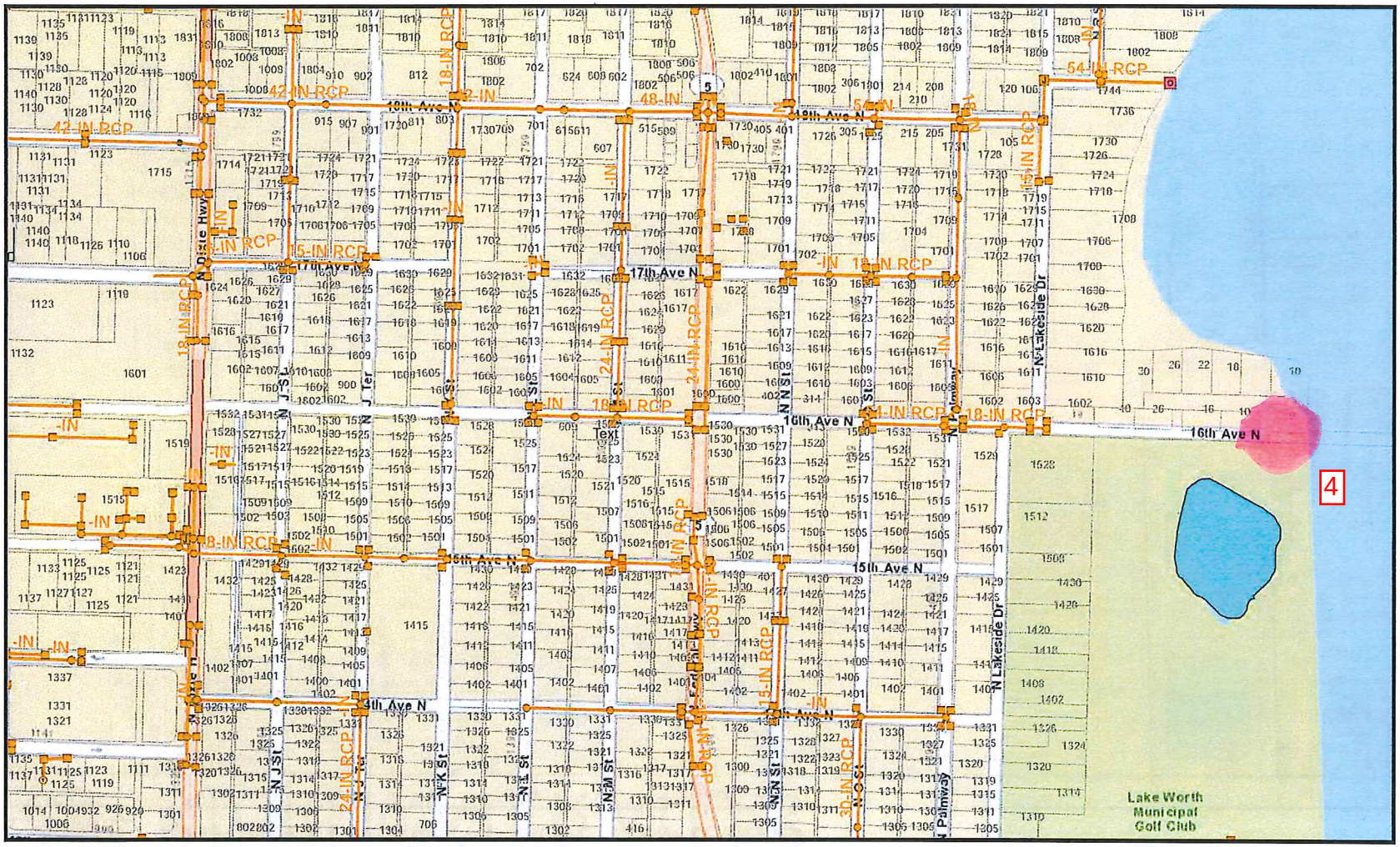

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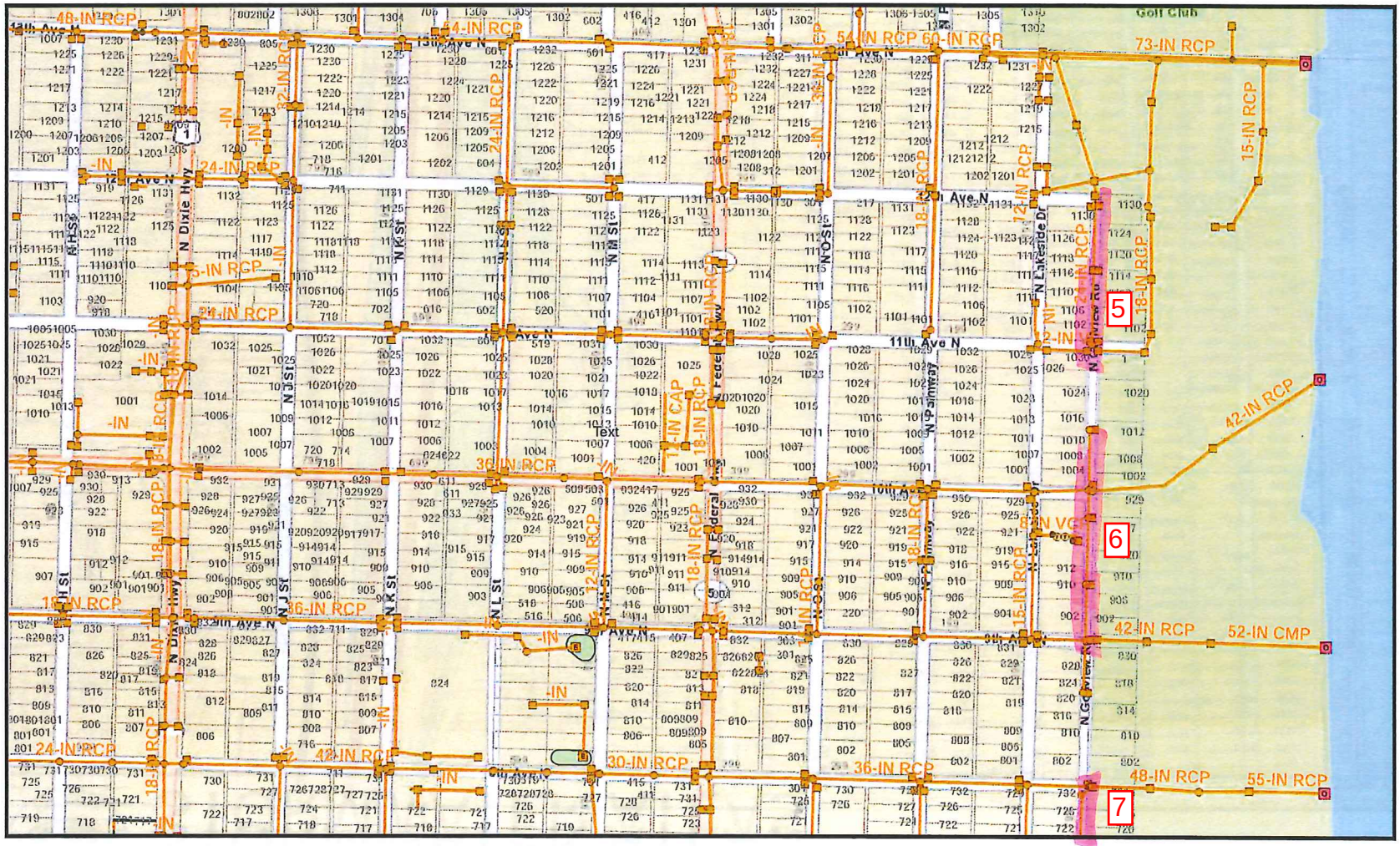

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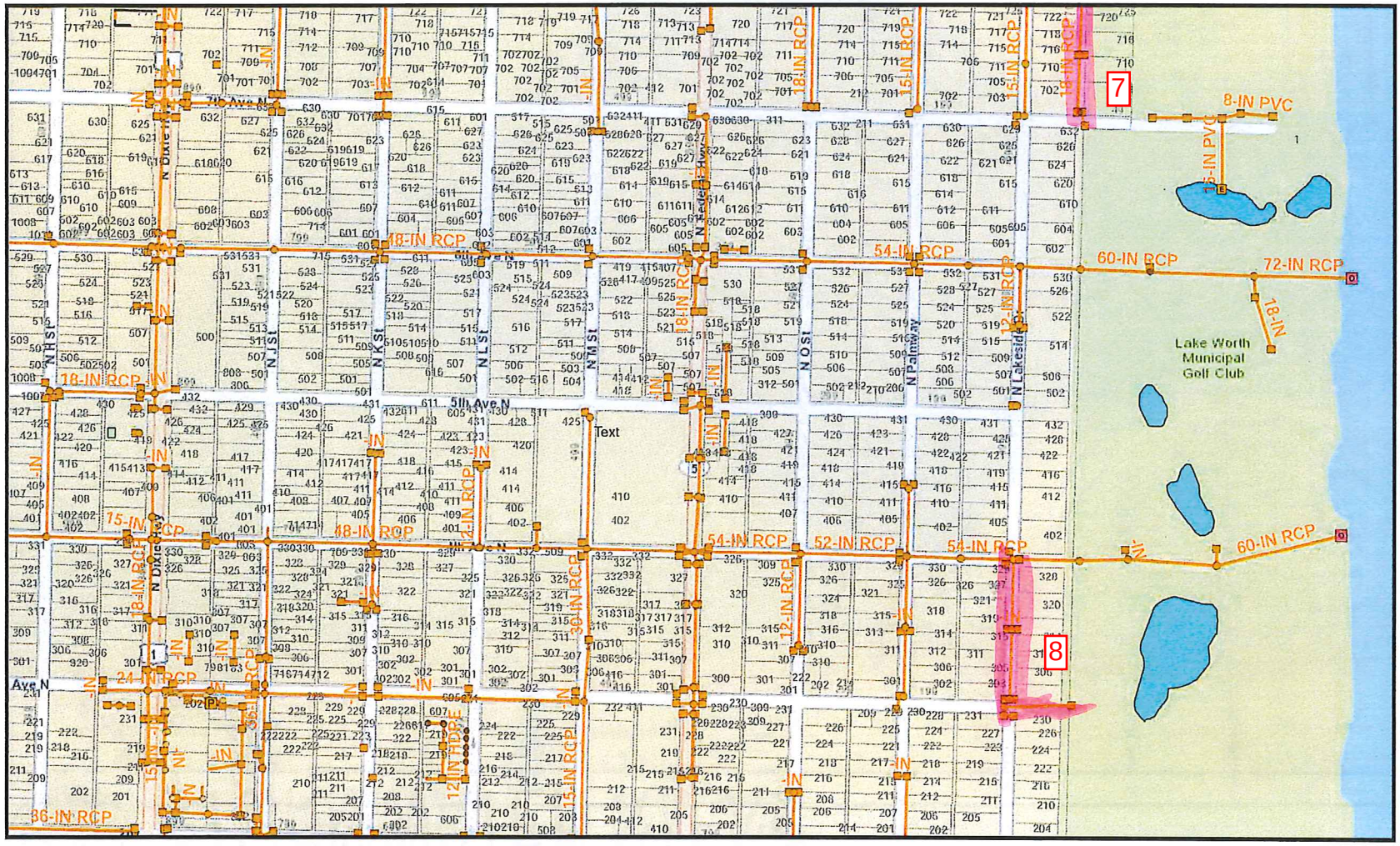

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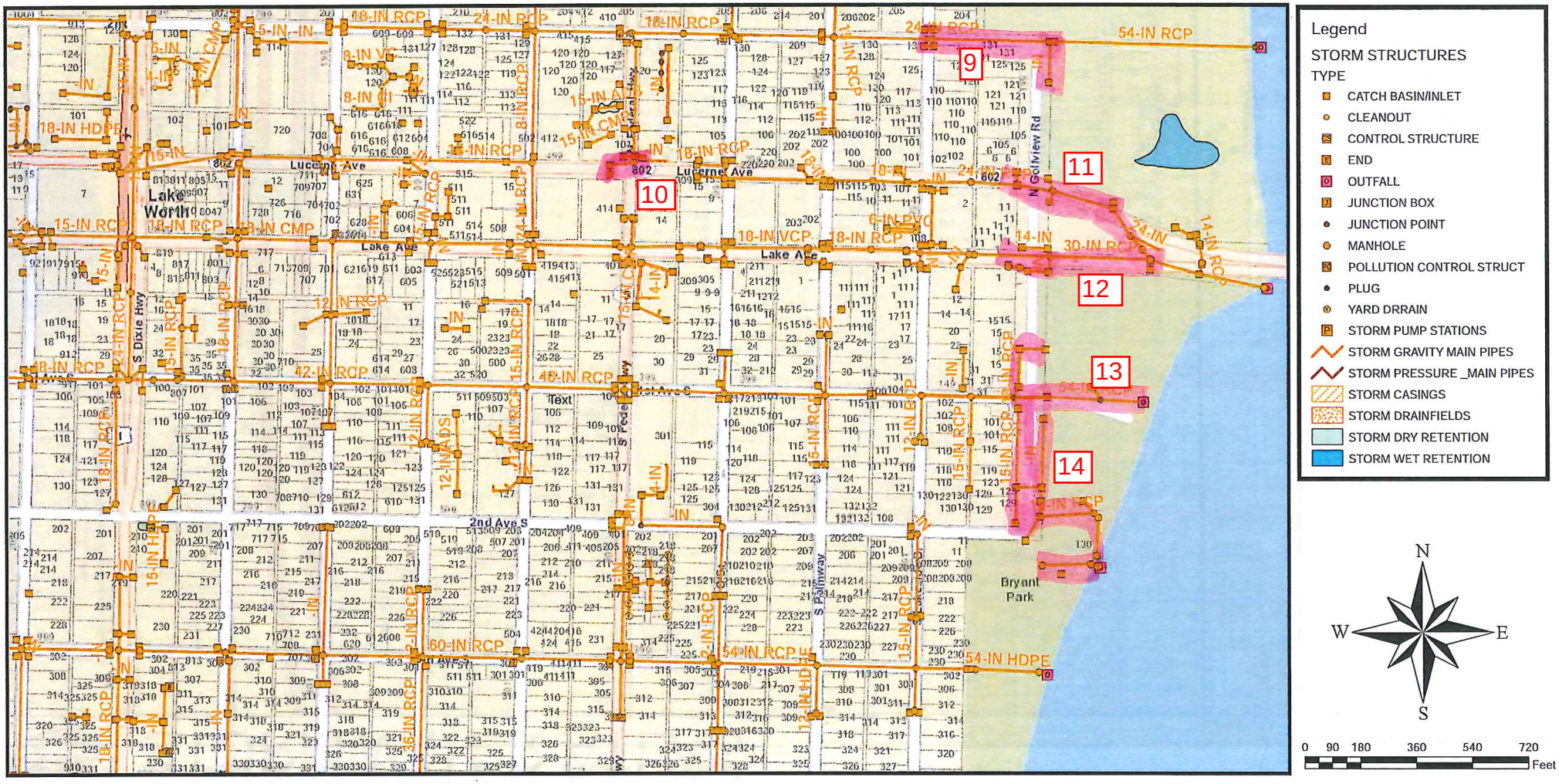

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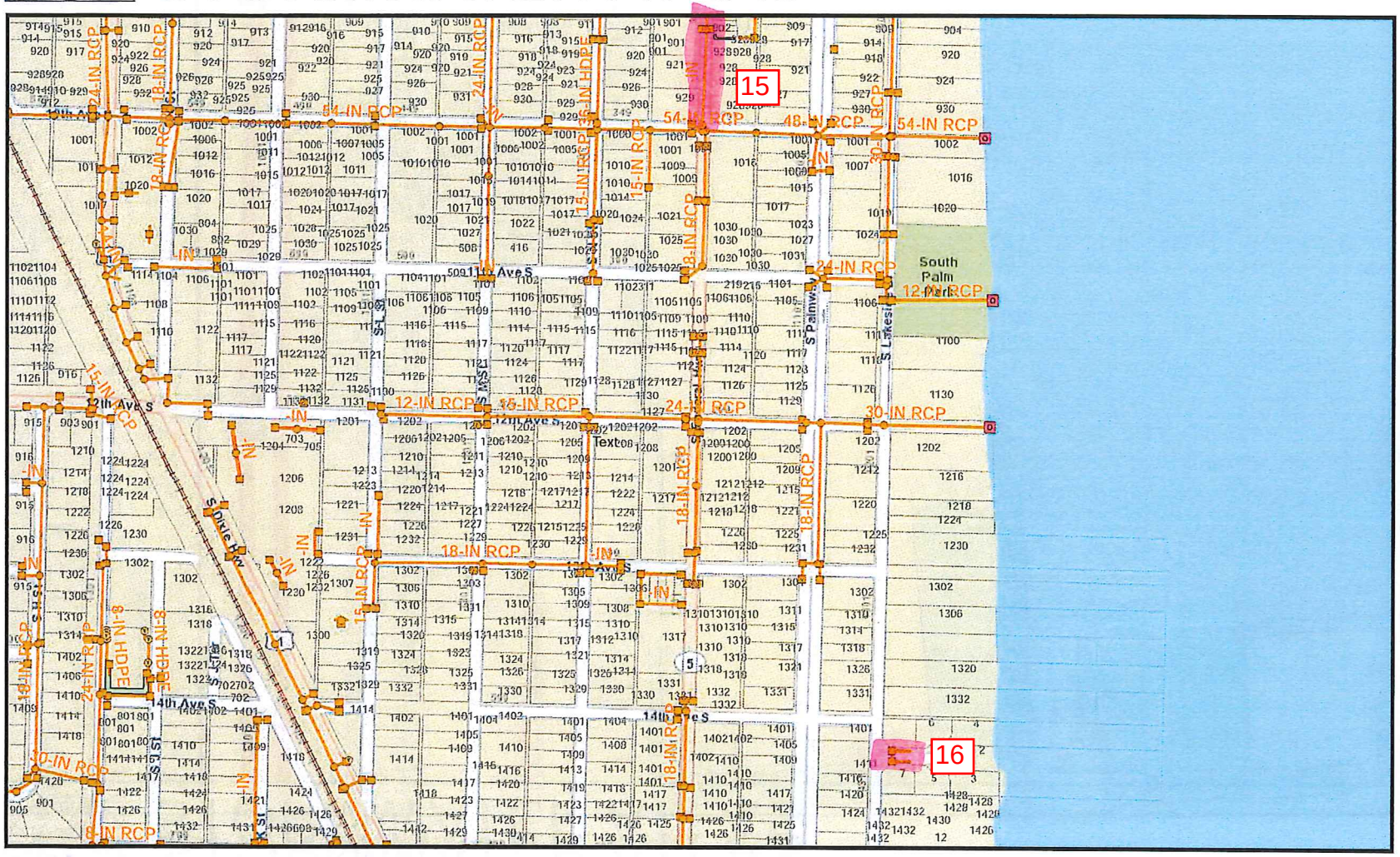

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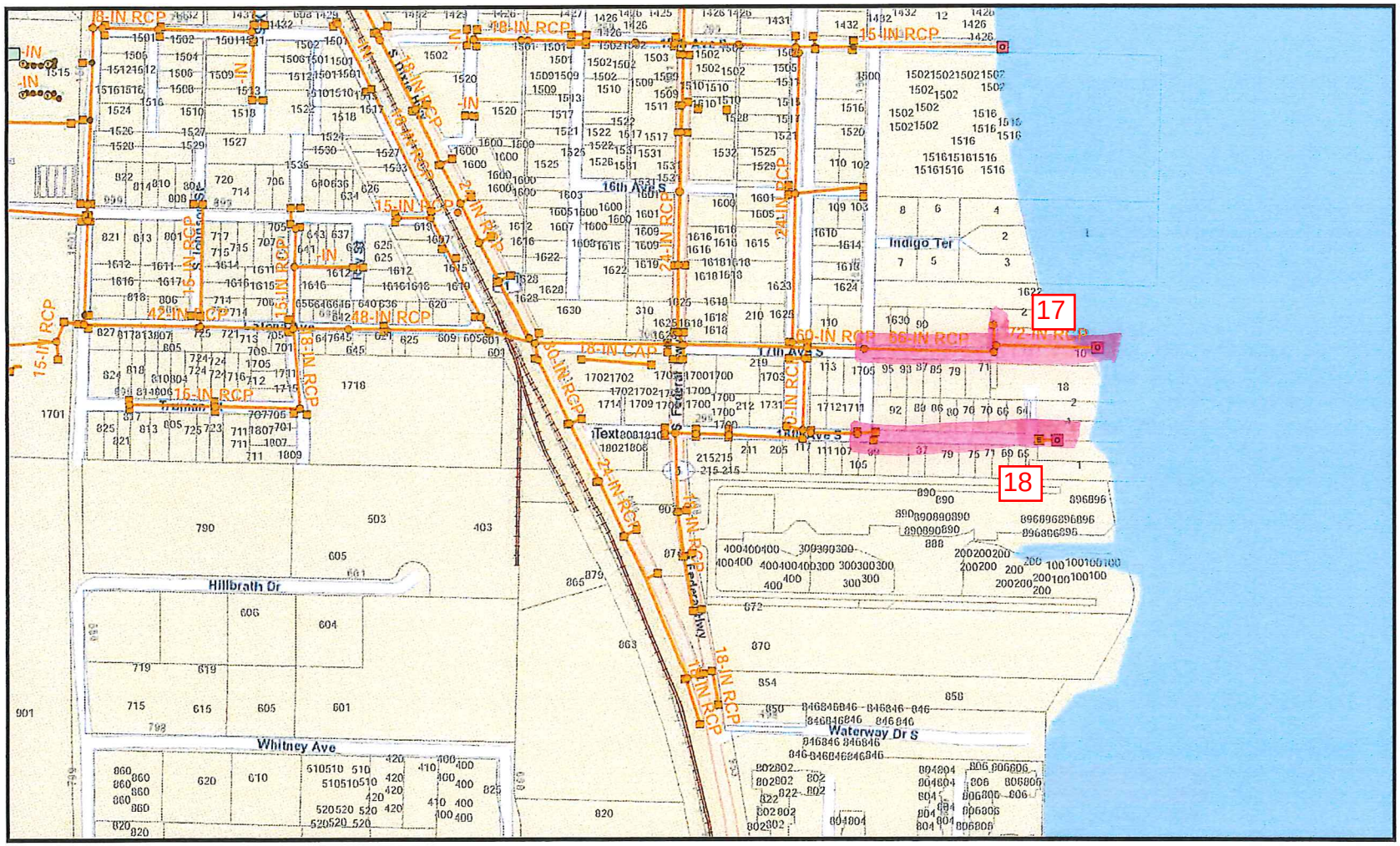

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Florida Statute 119 "Public Records" provides broad access to records maintained by the City, including mapping records. However specific attention of all GIS users is directed to F.S. 119.071 "General exemptions from inspection or copying of public records" that exempts specific information that is maintained within the City's GIS. Specifically any information concerning the floor plans of buildings, the location and attributes of Utilities infrastructure, and security facilities are exempt from the sunshine. All City personnel shall take specific care in the release of GIS materials to ensure only authorized release of this exempted material is done. GIS layer developers who create layers with exempt data shall include the appropriate references to F.S. 119.071(3), and the restriction to the access to the information within the metadata file of the layer.

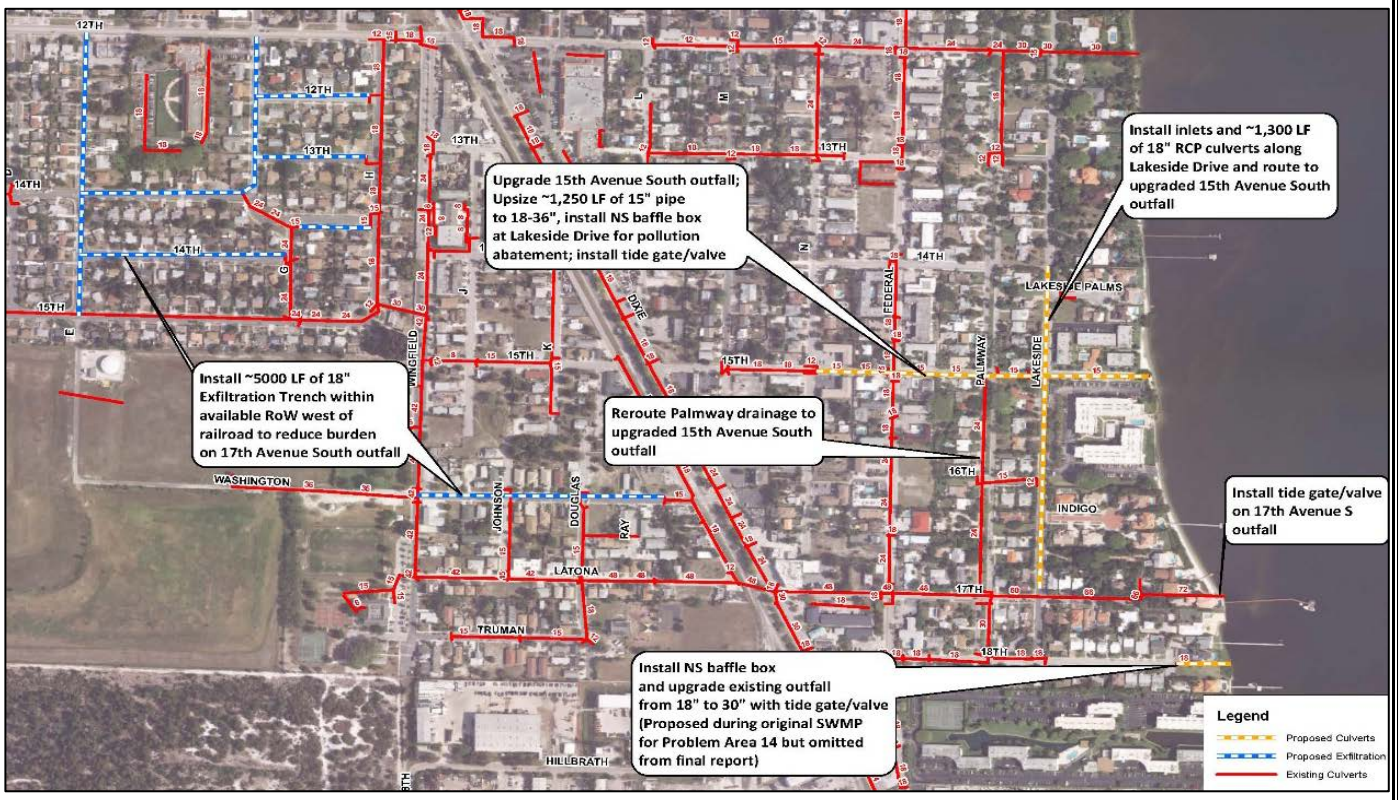
Attachment B

Figure B-1: North Lakeside Drive, Duke Drive, Notre Dame Drive and Wellesley Drive Problem Area 1

Problem Description: Multiple nodes in the northeast of the city exceed their assigned 5-year level-of-service; historic flooding noted along Federal Highway at Wellesley Drive

Project Description:	1. Upsize local collection systems to convey water around low lying areas. Upsize outfall flume from 18" to 30" RCP. Install (2) NS Baffle Boxes at Exfiltration and Outfall. 2. Install 750' of 18" Exfiltration Trench along Duke Drive. 3. Install 5,000' of 18" Exfiltration Trench between Dixie Highway and Federal Highway to address reported flooding along Federal.
Major Sub-basin(s):	HU-HVRD-LKSD; HU-DUKE-LKSD, HU-HRVD-FHWY; Discharges to Lake Worth Lagoon
TMDL/ W.Q. Impairment:	3226F1: Mercury
Conceptual Capital Cost:	$3,196,000 (July 2016 $)

Figure B-2: South Lakeside Drive, 17th Avenue South, 18th Avenue South Problem Area 16



Problem Description: Historic flooding along South Lakeside Drive, 17th Avenue South, and 18th Avenue South

Project Description:

1. Install new inlets and culverts along Lakeside Drive
2. Upsize the existing 15" outfall along 15th Avenue South with baffle box for pollution abatement
3. Reroute the existing drainage along South Palmway to discharge to upgraded 15th Avenue South outfall
4. Install 5,000 LF of 18" exfiltration trench in available RoW west of the railroad.
5. Upsize the existing 18" outfall along 18th Avenue South with baffle box for pollution abatement

Major Sub-basin(s): HU-15AVS-LKSD; HU-17AVS-PMWY2, HU-18AVS-PMWY; Discharges to Lake Worth Lagoon

TMDL/ W.Q. Impairment: 3226F1: Mercury

Conceptual Capital Cost: $2,373,000 (July 2016 $)

Figure B-3: 16th Avenue North, 8th Avenue North, North Golfview Road
Problem Area 17

Problem Description: Historic flooding along 16th Avenue North, North Golfview Road at 8th Avenue North

Project Description:

1. Install new inlets and outfall along 16th Avenue North with baffle box for pollution abatement.
2. Install tide gate on new 16th Avenue North outfall.
3. Install tide gate on 8th Avenue North outfall.

Major Sub-basin(s): HU-16AVN-OUT; HU-8AVN-LKSD; Discharges to Lake Worth Lagoon

TMDL/ W.Q. Impairment: 3226F1: Mercury

Conceptual Capital Cost: $251,000 (July 2016 $)

Table B-1: Opinion of Conceptual Capital Cost
Problem Area 1 - Alternative 1

Item No.	Item Description	Unit	Qty	Unit Cost	Capital Cost
1	Mobilization (approx. 5 percent)	LS	1	$ 95,100	$ 95,100
2	Traffic Control (approx. 2 percent)	LS	1	$ 38,000	$ 38,000
3	Pipe Removal	LF	2,660	$ 30	$ 79,800
4	18-in RCP, Class III	LF	300	$ 56	$ 16,800
5	24-in RCP, Class III	LF	1,035	$ 75	$ 77,625
6	30-in RCP, Class III	LF	200	$ 115	$ 23,000
7	36-in RCP, Class III	LF	1,500	$ 147	$ 220,500
8	42-in RCP, Class III	LF	900	$ 178	$ 160,200
9	18" Exfiltration Trench	LF	5,750	$ 110	$ 632,500
10	Curb Inlets	EA	60	$ 4,000	$ 240,000
11	Nutrient Separating Baffle Box	EA	2	$ 10,000	$ 20,000
12	Manhole, Type D-4 to D-6	EA	7	$ 6,000	$ 42,000
13	Manhole, Type J-bottom, <10'	EA	3	$ 8,000	$ 24,000
14	Milling Existing Asphalt Pavement, 2" Average Depth	SY	13,710	$ 4	$ 54,840
15	Asphaltic Concrete FC-12.5	TN	1,539	$ 115	$ 176,985
				Subtotal	**$ 1,902,000**
			Contingency:	30%	$570,600
			Survey, Engineering, and Permitting:	20%	$380,400
	Opinion of Conceptual Capital Cost				**$ 2,853,000**
	(Rounded to the nearest $1,000)				

These Opinions of Conceptual Capital Cost:

1. Are in June 2012 dollars.
2. Represent a conceptual master planning level of detail
3. Do not include potential replacement or rehabilitation of non-stormwater infrastructure (e.g., water, sewer, reuse, cable, telephone, gas, fiber optic, etc.)
4. Do not include potential land acquisition (unless noted).
5. Do not include any potential hazardous material or groundwater remediation.
6. Do not include any potential wetlands mitigation.
7. Do not include rock excavation and assume limited dewatering.
8. Have a 30% contingency.
9. Include a 20% allowance for engineering, surveying, and permitting.
10. Are rounded to the next highest $1,000.

Table B-2: Opinion of Conceptual Capital Cost
Problem Area 16 - Alternative 1

Item No.	Item Description	Unit	Qty	Unit Cost	Capital Cost
1	Mobilization (approx. 5 percent)	LS	1	$ 70,600	$ 70,600
2	Traffic Control (approx. 2 percent)	LS	1	$ 28,200	$ 28,200
3	Pipe Removal	LF	1,250	$ 30	$ 37,500
4	18-in RCP, Class III	LF	1,300	$ 56	$ 72,800
5	24-in RCP, Class III	LF	300	$ 75	$ 22,500
6	30-in RCP, Class III	LF	550	$ 115	$ 63,250
7	36-in RCP, Class III	LF	600	$ 147	$ 88,200
8	18" Exfiltration Trench	LF	5,000	$ 110	$ 550,000
9	Curb Inlets	EA	40	$ 4,000	$ 160,000
10	Nutrient Separating Baffle Box	EA	2	$ 10,000	$ 20,000
11	Tide Gate	EA	2	$ 30,000	$ 60,000
12	Manhole, Type J-bottom, <10'	EA	7	$ 8,000	$ 56,000
13	Milling Existing Asphalt Pavement, 2" Average Depth	SY	10,767	$ 4	$ 43,068
14	Asphaltic Concrete FC-12.5	TN	1,209	$ 115	$ 139,035
				Subtotal	**$ 1,412,000**
			Contingency:	30%	$423,600
			Survey, Engineering, and Permitting:	20%	$282,400
	Opinion of Conceptual Capital Cost *(Rounded to the nearest $1,000)*				**$ 2,118,000**

These Opinions of Conceptual Capital Cost:

1. Are in June 2012 dollars.
2. Represent a conceptual master planning level of detail
3. Do not include potential replacement or rehabilitation of non-stormwater infrastructure (e.g., water, sewer, reuse, cable, telephone, gas, fiber optic, etc.)
4. Do not include potential land acquisition (unless noted).
5. Do not include any potential hazardous material or groundwater remediation.
6. Do not include any potential wetlands mitigation.
7. Do not include rock excavation and assume limited dewatering.
8. Have a 30% contingency.
9. Include a 20% allowance for engineering, surveying, and permitting.
10. Are rounded to the next highest $1,000.

Table B-3: Opinion of Conceptual Capital Cost
Problem Area 17 - Alternative 1

Item No.	Item Description	Unit	Qty	Unit Cost	Capital Cost
1	Mobilization (approx. 5 percent)	LS	1	$ 7,500	$ 7,500
2	Traffic Control (approx. 2 percent)	LS	1	$ 3,000	$ 3,000
3	18-in RCP, Class III	LF	700	$ 56	$ 39,200
4	Curb Inlets	EA	4	$ 4,000	$ 16,000
5	Nutrient Separating Baffle Box	EA	1	$ 10,000	$ 10,000
6	Tide Gate	EA	2	$ 30,000	$ 60,000
7	Milling Existing Asphalt Pavement, 2" Average Depth	SY	760	$ 4	$ 3,040
8	Asphaltic Concrete FC-12.5	TN	85	$ 115	$ 9,775
				Subtotal	**$ 149,000**
			Contingency:	30%	$44,700
			Survey, Engineering, and Permitting:	20%	$29,800
	Opinion of Conceptual Capital Cost *(Rounded to the nearest $1,000)*				**$ 224,000**

These Opinions of Conceptual Capital Cost:

1. Are in June 2012 dollars.
2. Represent a conceptual master planning level of detail
3. Do not include potential replacement or rehabilitation of non-stormwater infrastructure (e.g., water, sewer, reuse, cable, telephone, gas, fiber optic, etc.)
4. Do not include potential land acquisition (unless noted).
5. Do not include any potential hazardous material or groundwater remediation.
6. Do not include any potential wetlands mitigation.
7. Do not include rock excavation and assume limited dewatering.
8. Have a 30% contingency.
9. Include a 20% allowance for engineering, surveying, and permitting.
10. Are rounded to the next highest $1,000.

Attachment C

Table C-1: Lake Worth SWMM Peak Stage Results (100-Year Simulations)

				Existing Condition SFWMD 100-year, 72-hour (16.2-inch) Original LWL Boundary (0.8 ft-NAVD)			Existing Condition SFWMD 100-year, 72-hour (16.2-inch) 2066 LWL Boundary (1.75 ft-NAVD)			
Nodes highlighted in yellow will experience increases in 100-year flood stage due to SLR										
Nodes highlighted in orange will not meet 100-year LOS with SLR projections										
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
10AVN-BARN	Aragon Ave W of I-95, N of 10th		14.0	15.3	1.3	NO	15.3	1.3	NO	0.0
10AVN-BNYN	Banyan Dr S of 10th Avenue N		12.2	11.9	-	YES	11.9	-	YES	0.0
10AVN-BOUT	Boutwell St N of 10th Avenue N		13.2	11.4	-	YES	11.4	-	YES	0.0
10AVN-DETR	Detroit St S of 10th Avenue N		12.5	12.6	0.1	YES	12.6	0.1	YES	0.0
10AVN-DIXE	10th Avenue N, W of Dixie Hwy		14.8	15.2	0.4	YES	15.2	0.4	YES	0.0
10AVN-ESTR	F Street, S of 10th Avenue		14.5	16.3	1.8	NO	16.3	1.8	NO	0.0
10AVN-LKSD	10th Avenue N & Lakeside		4.8	5.8	1.0	NO	5.8	1.0	NO	0.0
10AVN-MSTR	10th Avenue N, W of Fed Hwy		9.1	10.4	1.3	NO	10.4	1.3	NO	0.0
10AVS-DIXE	Dixie Hwy S of 10th Avenue S		13.6	14.8	1.2	NO	14.8	1.2	NO	0.0
10AVS-GSTR	H Street, S of 10th Avenue S	☼	13.5	16.0	2.5	NO	16.0	2.5	NO	0.0
10AVS-LKSD	9th Avenue S & Lakeside Dr		3.2	4.5	1.3	NO	4.5	1.3	NO	0.0
10AVS-NSTR	10th Avenue S, E of Fed Hwy		6.9	8.2	1.3	NO	8.2	1.3	NO	0.0
11AVN-I95E	FDOT ROW		15.0	17.1	2.1	-	17.1	2.1	-	0.0
11AVN-JSTR	Dixie Hwy, N & S of 11th Ave N		14.0	14.5	0.5	NO	14.5	0.5	NO	0.0
11AVN-LSTR	11th Avenue E of L Street		12.8	8.6	-	YES	8.6	-	YES	0.0
12AVN-DETR	13th Avenue N & Detroit St		10.3	11.5	1.2	NO	11.5	1.2	NO	0.0
12AVN-ESTR	12th Avenue & D Street		14.0	16.3	2.3	NO	16.3	2.3	NO	0.0
12AVS-BART	12th Avenue & Barton Street		17.9	17.2	-	YES	17.2	-	YES	0.0
12AVS-CSTR	C Terrace, S of 12th Avenue S		16.1	19.0	2.9	NO	19.0	2.9	NO	0.0
12AVS-I95	FDOT ROW		16.7	15.3	-	-	15.3	-	-	0.0
12AVS-LKOS	12th Avenue & Lake Osborne Dr		10.7	11.4	0.7	NO	11.4	0.7	NO	0.0
12AVS-PINE	12th Avenue & Ridge Street		15.6	17.9	2.3	NO	17.9	2.3	NO	0.0
12AVS-PMWY	12th Ave N & Lakeside Dr		3.5	4.4	0.9	NO	4.4	0.9	NO	0.0
12CTN-I95E	13th Ave N, W of A Street		16.5	15.4	-	YES	15.4	-	YES	0.0
13AVN-ESTR	F Street, N of 13th Ave N		14.0	16.3	2.3	NO	16.3	2.3	NO	0.0
13AVN-GSTR	Central Terr, N of 13th Ave N		13.9	15.4	1.5	NO	15.4	1.5	NO	0.0
13AVN-JTER	13th Avenue N & Dixie Hwy		14.6	14.5	-	YES	14.5	-	YES	0.0
13AVN-LKSD	Lakeside Dr, S of 13th Ave N		4.5	3.3	-	YES	3.3	-	YES	0.0
13AVN-OSTR	13th Ave N & O Street		7.7	7.8	0.1	YES	7.8	0.1	YES	0.0

Table C-1: Lake Worth SWMM Peak Stage Results (100-Year Simulations)

				Existing Condition SFWMD 100-year, 72-hour (16.2-inch) Original LWL Boundary (0.8 ft-NAVD)			Existing Condition SFWMD 100-year, 72-hour (16.2-inch) 2066 LWL Boundary (1.75 ft-NAVD)			
Nodes highlighted in yellow will experience increases in 100-year flood stage due to SLR										
Nodes highlighted in orange will not meet 100-year LOS with SLR projections										
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
13AVN-PALM	13th Ave N & Palmway		6.2	6.9	0.7	NO	6.9	0.7	NO	0.0
14AVN-JTER	14th Avenue N & Dixie Hwy		13.6	14.7	1.1	NO	14.7	1.1	NO	0.0
14AVN-LWMS	Lake Worth Middle school		14.5	13.4	-	YES	13.5	-	YES	0.0
14AVN-OSTR	14th Ave N & Lakeside		6.3	6.9	0.6	NO	6.9	0.6	NO	0.0
14AVS-BART	14th Ave S & Barton Rd		16.7	18.1	1.4	NO	18.1	1.4	NO	0.0
14AVS-CSTR	14th Ave S & C Terr		15.9	19.0	3.1	NO	19.0	3.1	NO	0.0
14AVS-I95	14th Ave S & Tropical Dr		14.7	15.8	1.1	NO	15.8	1.1	NO	0.0
15AVN-DIXE	15th Ave N, W of Dixie Hwy	☼	13.8	15.5	1.7	NO	15.5	1.7	NO	0.0
15AVN-FHWY	15th Ave N & Fed Hwy		10.5	11.4	0.9	NO	11.4	0.9	NO	0.0
15AVS-LKSD	15th Ave S & Palmway		4.6	4.9	0.3	YES	4.9	0.3	YES	0.0
15AVS-WNGF	12th Ave S & H Street		14.4	15.7	1.3	NO	15.7	1.3	NO	0.0
16AVN-LWGC	Lake Worth Golf Course		4.5	3.5	-	-	3.5	-	-	0.0
16AVN-OUT	16th Ave N, Bella Vista		2.3	3.0	0.7	NO	3.0	0.7	NO	0.0
16AVN-TERR	16th Ave N & Terr Drive		11.0	11.6	0.6	NO	11.6	0.6	NO	0.0
17AVN-I95E	17th Ave N & I-95		13.8	14.9	1.1	NO	14.9	1.1	NO	0.0
17AVS-DIXE	17th Ave S & Dixie Hwy		10.3	10.0	-	YES	10.0	-	YES	0.0
17AVS-PMWY	17th Ave S & Palmway		3.7	4.8	1.1	NO	4.9	1.2	NO	0.0
17AVS-PMWY2	17th Ave S, E of Lakside Dr	☼	2.0	3.5	1.5	NO	3.7	1.7	NO	0.2
18AVN-DIXE	18th Ave N & Dixie Hwy		14.5	16.0	1.5	NO	16.0	1.5	NO	0.0
18AVN-I95E	18th Ave N, E of I-95		11.5	11.6	0.1	YES	11.6	0.1	YES	0.0
18AVN-KSTR	K Street, S of 18th Ave N		12.9	13.1	0.2	YES	13.1	0.2	YES	0.0
18AVN-MSTR	18th Ave N & M Street		11.0	11.1	0.1	YES	11.1	0.1	YES	0.0
18AVN-FHWY	18th Ave N & Fed Hwy		10.3	9.0	-	YES	9.1	-	YES	0.0
18AVN-PALM	Lakside Dr, S of 18th Ave		4.9	6.3	1.4	NO	6.3	1.4	NO	0.0
18AVN-RSTR	18th Ave N & R Street		4.3	4.8	0.5	YES	4.9	0.6	NO	0.1
18AVS-PMWY	18th Ave S, E of Lakside Dr	☼	1.7	3.4	1.7	NO	3.6	1.9	NO	0.2
1AVS-DIXE	1st Ave S & H Street		14.0	15.6	1.6	NO	15.6	1.6	NO	0.0
1AVS-ESTR	E Street, N of Lake Ave		14.8	16.3	1.5	NO	16.3	1.5	NO	0.0

Table C-1: Lake Worth SWMM Peak Stage Results (100-Year Simulations)

				Existing Condition SFWMD 100-year, 72-hour (16.2-inch) Original LWL Boundary (0.8 ft-NAVD)			Existing Condition SFWMD 100-year, 72-hour (16.2-inch) 2066 LWL Boundary (1.75 ft-NAVD)			
Nodes highlighted in yellow will experience increases in 100-year flood stage due to SLR										
Nodes highlighted in orange will not meet 100-year LOS with SLR projections										
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
1AVS-FSTR	1st Ave S & F Street	☼	13.1	16.3	3.2	NO	16.3	3.2	NO	0.0
1AVS-GLFV	Golfview Dr, S of 1st Ave S		2.5	3.7	1.2	NO	3.8	1.3	NO	0.0
1AVS-LKSD	Lakeside Dr, N of 1st Ave S	☼	4.8	5.6	0.8	NO	5.6	0.8	NO	0.0
1AVS-MSTR	1st Ave S & M Street		12.2	11.7	-	YES	11.7	-	YES	0.0
20AVN-DSTR	19th Ave N, E of D Street		14.9	16.3	1.4	NO	16.3	1.4	NO	0.0
22AVN-PARK	Park St, N of 22nd Ave N		13.9	16.2	2.3	NO	16.2	2.3	NO	0.0
24AVN-DIXE	E Coast Ave, S of 22nd Ave N		14.9	16.1	1.2	NO	16.1	1.2	NO	0.0
2AVN-ARCV	2nd Ave N, E of Boutwell Rd		11.7	11.7	-	YES	11.7	-	YES	0.0
2AVN-C16	2nd Ave N, E of C-16 canal		11.6	10.8	-	YES	10.8	-	YES	0.0
2AVN-CARL	Louis Dr, S of 2nd Ave N		10.7	11.1	0.4	YES	11.1	0.4	YES	0.0
2AVN-DETR	Evergreen Dr, N of 2nd Ave N		10.1	11.8	1.7	NO	11.8	1.7	NO	0.0
2AVN-DIXE	2nd Ave N, W of Dixie Hwy		14.1	15.5	1.4	NO	15.5	1.4	NO	0.0
2AVN-FSTR	2nd Ave N & F Street		14.5	16.3	1.8	NO	16.3	1.8	NO	0.0
2AVN-GLFV	Golfview Dr, S of 2nd Ave N		2.5	3.8	1.3	NO	3.8	1.3	NO	0.0
2AVN-GSTR	2nd Ave N & G Street		14.8	15.5	0.7	NO	15.5	0.7	NO	0.0
2AVN-LWGC	Lake Worth Golf Course		3.4	2.8	-	-	2.9	-	-	0.1
2AVN-PALM	2nd Ave N, E of Palmway		4.9	4.8	-	YES	4.9	-	YES	0.0
3AVN-EVTT	3rd Ave N, E of Everett Ct		12.5	11.1	-	YES	11.1	-	YES	0.0
3AVN-FSTR	3rd Ave N & F Street	☼	13.5	16.3	2.8	NO	16.3	2.8	NO	0.0
3AVN-I95E	3rd Ave N, E of A Street		14.8	17.5	2.7	NO	17.5	2.7	NO	0.0
3AVN-JSTR	3rd Ave N & J Street		14.8	15.5	0.7	NO	15.5	0.7	NO	0.0
3AVN-MSTR	3rd Ave N & M Street		12.2	12.8	0.6	NO	12.8	0.6	NO	0.0
3AVS-ERIE	Griswold Dr, S of Lake Osborne		8.8	10.8	2.0	NO	10.8	2.0	NO	0.0
3AVS-FHWY	3rd Ave S & Fed Hwy		8.5	8.3	-	YES	8.3	-	YES	0.0
3AVS-FSTR	3rd Ave S & F Street	☼	13.5	16.3	2.8	NO	16.3	2.8	NO	0.0
3AVS-GLFV	Golfview in Park	☼	3.3	4.0	0.7	NO	4.0	0.7	NO	0.0
3AVS-GRIS	Lake Osborne, NE of Griswold Dr		10.0	9.5	-	YES	9.5	-	YES	0.0
3AVS-I95	FDOT ROW		12.2	13.4	1.2	-	13.4	1.2	-	0.0

Table C-1: Lake Worth SWMM Peak Stage Results (100-Year Simulations)

				Existing Condition SFWMD 100-year, 72-hour (16.2-inch) Original LWL Boundary (0.8 ft-NAVD)			Existing Condition SFWMD 100-year, 72-hour (16.2-inch) 2066 LWL Boundary (1.75 ft-NAVD)			
Nodes highlighted in yellow will experience increases in 100-year flood stage due to SLR										
Nodes highlighted in orange will not meet 100-year LOS with SLR projections										
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
3AVS-HSTR	3rd Ave S & H Street		13.3	14.8	1.5	NO	14.8	1.5	NO	0.0
3AVS-LKSD	Lakeside Dr, N of 3rd Ave S	☼	4.8	5.8	1.0	NO	5.8	1.0	NO	0.0
3AVS-LSTR	3rd Ave S & L Street		13.5	10.5	-	YES	10.5	-	YES	0.0
4AVN-23RD	4th Ave N, W of Boutwell Rd		11.7	12.2	0.5	NO	12.2	0.5	YES	0.0
4AVN-C16	Palm Club Apartments		9.7	10.8	1.1	NO	10.8	1.1	NO	0.0
4AVN-FSTR	5th Ave N & F Street		13.9	16.3	2.4	NO	16.3	2.4	NO	0.0
4AVN-GSTR	4th Ave N & G Street		15.4	14.8	-	YES	14.8	-	YES	0.0
4AVN-JSTR	4th Ave S & J Street		14.0	14.6	0.6	NO	14.6	0.6	NO	0.0
4AVN-LKSD	4th Ave S & J Street		3.9	5.0	1.1	NO	5.0	1.1	NO	0.0
4AVN-LSTR	4th Ave N & L Street		13.5	14.1	0.6	NO	14.1	0.6	NO	0.0
4AVN-LWGC	Lake Worth Golf Course		3.0	3.2	0.2	-	3.2	0.2	-	0.1
4AVN-FHWY	4th Ave N & Fed Hwy		8.7	9.5	0.8	NO	9.5	0.8	NO	0.0
5AVS-ASTR	Sunrise Ct, E of A Street		12.3	15.5	3.2	NO	15.5	3.2	NO	0.0
5AVS-LKSD	Lakeside Dr, S of 5th Ave S	☼	4.9	5.3	0.4	YES	5.3	0.4	YES	0.0
5AVS-PALM	Palmway, S of 5th Ave S	☼	5.7	6.8	1.1	NO	6.8	1.1	NO	0.0
6AVN-23RD	23rd Ave, N of 4th Ave N		9.4	10.8	1.4	NO	10.8	1.4	NO	0.0
6AVN-DIXE	6th Ave N & Dixie Hwy		13.6	15.2	1.6	NO	15.2	1.6	NO	0.0
6AVN-FHWY	6th Ave N & Fed Hwy		8.5	9.2	0.7	NO	9.2	0.7	NO	0.0
6AVN-FSTR	7th Ave N & F Street	☼	13.7	16.3	2.6	NO	16.3	2.6	NO	0.0
6AVN-GSTR	6th Ave N & G Street		14.9	15.8	0.9	NO	15.8	0.9	NO	0.0
6AVN-I95W	FDOT ROW		12.0	18.0	6.0	-	18.0	6.0	-	0.0
6AVN-LKSD	Palmway, S of 6th Ave N		5.0	6.1	1.1	NO	6.1	1.1	NO	0.0
6AVN-LWGC	Lake Worth Golf Course Pk Lot		3.4	3.4	-	YES	3.4	0.0	YES	0.0
6AVS-ALPN	6th Ave S & Alpine		15.2	15.3	0.1	YES	15.2	0.0	YES	0.0
6AVS-ECST	6th Ave S, E of East Coast Ave		13.7	15.0	1.3	NO	15.0	1.3	NO	0.0
6AVS-ELM	6th Ave S & Elm	☼	11.6	15.5	3.9	NO	15.5	3.9	NO	0.0
6AVS-FSTR	7th Ave S & F Street		14.2	16.2	2.0	NO	16.2	2.0	NO	0.0
6AVS-I95	FDOT ROW		15.9	14.9	-	YES	14.9	-	YES	0.0

Table C-1: Lake Worth SWMM Peak Stage Results (100-Year Simulations)

				Existing Condition SFWMD 100-year, 72-hour (16.2-inch) Original LWL Boundary (0.8 ft-NAVD)			Existing Condition SFWMD 100-year, 72-hour (16.2-inch) 2066 LWL Boundary (1.75 ft-NAVD)			
Nodes highlighted in yellow will experience increases in 100-year flood stage due to SLR										
Nodes highlighted in orange will not meet 100-year LOS with SLR projections										
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
6AVS-LKOS	6th Ave S & Lake Osborne		11.5	11.9	0.4	YES	11.9	0.4	YES	0.0
6AVS-RLPM	Royal Palm, S of 6th Ave S		13.5	15.5	2.0	NO	15.5	2.0	NO	0.0
6AVS-WRGT	6th Ave S & Wright Dr		13.5	14.0	0.5	NO	14.0	0.5	NO	0.0
7AVN-23RD	7th Ave N, W of 23rd Ave N		9.7	10.9	1.2	NO	10.9	1.2	NO	0.0
7AVN-BARN	Barnett Ln, S of 7th Ave N		14.0	15.4	1.4	NO	15.4	1.4	NO	0.0
7AVN-C16	SW Treatment Pond		9.0	9.7	0.7	NO	9.7	0.7	NO	0.0
7AVN-DETR	7th Ave N, W of Detroit St		10.7	11.9	1.2	NO	11.9	1.2	NO	0.0
7AVN-FINN	7th Ave N & Finn St	☼	17.9	13.5	-	YES	14.2	-	YES	0.8
7AVN-PNTR	Pine Terr, N of 9th Ave N		16.4	18.0	1.6	NO	18.0	1.6	NO	0.0
7AVS-HSTR	7th Ave S, 9th Ave S, H Street		12.8	15.0	2.2	NO	15.0	2.2	NO	0.0
7AVS-MSTR	7th Ave S & M Street		9.7	8.8	-	YES	8.8	-	YES	0.0
8AVN-DIXE	7th Ave N & Dixie Hwy		13.5	15.2	1.7	NO	15.2	1.7	NO	0.0
8AVN-LKSD	Lakeside, S of 8th Ave N		3.7	5.3	1.6	NO	5.3	1.6	NO	0.0
8AVN-LWGC	Lake Worth Golf Course		3.5	3.2	-	YES	3.2	-	YES	0.0
8AVN-MSTR	8th Ave N & Fed Hwy		9.7	10.3	0.6	NO	10.3	0.6	NO	0.0
9AVN-DIXE	9th Ave N & Dixie Hwy		14.6	15.2	0.6	NO	15.2	0.6	NO	0.0
9AVN-I95	FDOT ROW		12.0	18.0	6.0	-	18.0	6.0	-	0.0
9AVN-LKSD	9th Ave N & Lakeside		4.4	5.6	1.2	NO	5.6	1.2	NO	0.0
9AVN-LWGC	Lake Worth Golf Course		3.6	4.8	1.2	NO	4.9	1.3	NO	0.0
9AVN-MSTR	9th Ave N & Fed Hwy		9.6	9.9	0.3	YES	9.9	0.3	YES	0.0
9AVS-DIXE	9th Ave S & Dixie Hwy		13.3	14.8	1.5	NO	14.8	1.5	NO	0.0
9AVS-RLPM	9th Ave S & Royal Palm		13.9	16.1	2.2	NO	16.1	2.2	NO	0.0
BARN-DETR	Boutwell Rd & Keast Ln		10.5	10.3	-	YES	10.3	-	YES	0.0
BART-ELEM	Barton Elementary		17.5	18.1	0.6	NO	18.1	0.6	NO	0.0
BYRO-MEDA	SW Treatment Pond		14.5	8.3	-	YES	8.3	-	YES	0.0
COLL-LKOS	Collier Ave & Lake Osborne Terr		11.1	12.1	1.0	NO	12.1	1.0	NO	0.0
COLM-FHWY	Cornell Dr & Fed Hwy		9.8	10.6	0.8	NO	10.6	0.8	NO	0.0
DUKE-DIXE	Columbia Dr & Dixie hwy		15.3	15.0	-	YES	15.0	-	YES	0.0

Table C-1: Lake Worth SWMM Peak Stage Results (100-Year Simulations)

				Existing Condition SFWMD 100-year, 72-hour (16.2-inch) Original LWL Boundary (0.8 ft-NAVD)			Existing Condition SFWMD 100-year, 72-hour (16.2-inch) 2066 LWL Boundary (1.75 ft-NAVD)			
Nodes highlighted in yellow will experience increases in 100-year flood stage due to SLR										
Nodes highlighted in orange will not meet 100-year LOS with SLR projections										
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
DUKE-FHWY	Maryland Dr & Fed Hwy		12.5	10.2	-	YES	10.2	-	YES	0.0
DUKE-LKSD	Duke Dr & Georgia Ln		3.9	5.3	1.4	NO	5.3	1.4	NO	0.0
HARB-DRVE	Harbor Dr, E of Lakeside Dr		3.3	4.2	0.9	NO	4.3	1.0	NO	0.0
HRVD-FHWY	Yale Dr & Fed Hwy		9.3	10.5	1.2	NO	10.5	1.2	NO	0.0
HVRD-LKSD	Harvrd Dr * Lakeside Dr		4.5	5.9	1.4	NO	5.9	1.4	NO	0.0
LAKE-GLFV	Golfview Rd, N of Lake Ave		2.1	3.8	1.7	NO	3.8	1.7	NO	0.0
LAKE-LKSD	Lakeside Dr, N of Lake Ave	☼	4.0	5.2	1.2	NO	5.2	1.2	NO	0.0
LAKE-MSTR	Lake Ave & Fed Hwy		9.4	10.3	0.9	NO	10.3	0.9	NO	0.0
LKOS-SNOW	Lake Osborne Dr & Snowden Dr		11.4	12.4	1.0	NO	12.4	1.0	NO	0.0
LTNA-RRAV	Latona Ave & Railroad Ave		10.7	11.3	0.6	NO	11.3	0.6	NO	0.0
LWTH-ARCV	John Prince Memorial Park		10.4	10.8	0.4	YES	10.8	0.4	YES	0.0
LWTH-ERIE	Lake Osborne Dr & Erie St		9.9	10.7	0.8	NO	10.7	0.8	NO	0.0
LWTH-ERIE2	Lake Worth Rd & Erie St		12.7	11.2	-	YES	11.2	-	YES	0.0
LWTH-I95E	Lake Worth Rd, E of I-95		14.7	16.5	1.8	NO	16.5	1.8	NO	0.0
OCEAN-BLVDN	Ocean Blvd & Lake Worth Rd		3.6	3.9	0.3	YES	3.9	0.3	YES	0.0
OCEAN-BLVDS	Ocean Blvd, S of Lake Worth Rd		3.0	4.4	1.4	NO	4.5	1.5	NO	0.0
PERC-VERN-POND1	Pierce Dr & Vermont St		10.1	11.2	1.1	NO	11.2	1.1	NO	0.0
PERC-VERN-POND2	SW Treatment Pond		9.5	10.1	0.6	-	10.1	0.6	-	0.0
RUPP-PARK	Rupp Ln & Park St		14.7	16.2	1.5	NO	16.2	1.5	NO	0.0
TERR-DRVE	Terrace Drive E, N of 17th Ave N		9.7	10.9	1.2	NO	10.9	1.2	NO	0.0
TERR-DRVW	Terrace Drive W, N of 17th Ave N		10.6	10.8	0.2	YES	10.8	0.2	YES	0.0
WASH-CSTR	15th Ave S, W Cell of Old Landfill		17.0	15.6	-	-	15.6	-	-	0.0
WASH-GSTR	Wash Ave, E Cell of Old Landfill		15.7	15.5	-	-	15.5	-	-	0.0
WASH-WNGF	Latona Ave & Wingfield St		13.9	15.6	1.7	NO	15.6	1.7	NO	0.0
WELS-NADM	Wellesley Dr & Notre Dame Dr		1.7	3.8	2.1	NO	3.8	2.1	NO	0.0
WRTH-I95E	FDOT ROW		8.0	10.2	2.2	-	10.2	2.2	-	0.0
WRTH-LANT	Fed Hwy, S of Latona Ave		7.7	7.5	-	YES	7.5	-	YES	0.0

Table C-2: Lake Worth SWMM Peak Stage Results (5-Year Simulation with Alternatives)

Nodes highlighted in yellow will experience increases in 5-year flood stage due to SLR
Nodes highlighted in orange will not meet 5-year LOS with SLR projections

				Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) Original Boundary Condition (0.8 ft NAVD)			Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) 2066 Boundary Condition (1.75 ft NAVD)			
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
10AVN-BARN	Aragon Ave W of I-95, N of 10th		14.0	13.9	-	YES	13.9	-	YES	0.0
10AVN-BNYN	Banyan Dr S of 10th Avenue N		12.2	11.3	-	YES	11.3	-	YES	0.0
10AVN-BOUT	Boutwell St N of 10th Avenue N		13.2	9.4	-	YES	9.4	-	YES	0.0
10AVN-DETR	Detroit St S of 10th Avenue N		12.5	11.6	-	YES	11.6	-	YES	0.0
10AVN-DIXE	10th Avenue N, W of Dixie Hwy		14.8	13.9	-	YES	13.9	-	YES	0.0
10AVN-ESTR	F Street, S of 10th Avenue		14.5	14.9	0.4	YES	14.9	0.4	YES	0.0
10AVN-LKSD	10th Avenue N & Lakeside		4.8	5.2	0.4	YES	5.2	0.4	YES	0.0
10AVN-MSTR	10th Avenue N, W of Fed Hwy		9.1	9.5	0.4	YES	9.5	0.4	YES	0.0
10AVS-DIXE	Dixie Hwy S of 10th Avenue S		13.6	13.2	-	YES	13.2	-	YES	0.0
10AVS-GSTR	H Street, S of 10th Avenue S	☼	13.5	14.1	0.6	NO	14.1	0.6	NO	0.0
10AVS-LKSD	9th Avenue S & Lakeside Dr		3.2	3.4	0.2	YES	3.7	0.5	YES	0.3
10AVS-NSTR	10th Avenue S, E of Fed Hwy		6.9	7.4	0.5	YES	7.5	0.6	NO	0.1
11AVN-I95E	FDOT ROW		15.0	14.9	-	-	14.9	-	-	0.0
11AVN-JSTR	Dixie Hwy, N & S of 11th Ave N		14.0	14.0	0.0	YES	14.0	0.0	YES	0.0
11AVN-LSTR	11th Avenue E of L Street		12.8	8.1	-	YES	8.1	-	YES	0.0
12AVN-DETR	13th Avenue N & Detroit St		10.3	9.7	-	YES	9.7	-	YES	0.0
12AVN-ESTR	12th Avenue & D Street		14.0	14.5	0.5	YES	14.6	0.6	NO	0.1
12AVS-BART	12th Avenue & Barton Street		17.9	14.3	-	YES	14.3	-	YES	0.0
12AVS-CSTR	C Terrace, S of 12th Avenue S		16.1	15.8	-	YES	15.8	-	YES	0.0
12AVS-I95	FDOT ROW		16.7	12.0	-	-	12.0	-	-	0.0
12AVS-LKOS	12th Avenue & Lake Osborne Dr		10.7	10.1	-	YES	10.1	-	YES	0.0
12AVS-PINE	12th Avenue & Ridge Street		15.6	15.9	0.3	YES	15.9	0.3	YES	0.0
12AVS-PMWY	12th Ave N & Lakeside Dr		3.5	3.8	0.3	YES	3.8	0.3	YES	0.0
12CTN-I95E	13th Ave N, W of A Street		16.5	13.9	-	YES	13.9	-	YES	0.0
13AVN-ESTR	F Street, N of 13th Ave N		14.0	14.4	0.4	YES	14.5	0.5	YES	0.1
13AVN-GSTR	Central Terr, N of 13th Ave N		13.9	14.0	0.1	YES	14.1	0.2	YES	0.0
13AVN-JTER	13th Avenue N & Dixie Hwy		14.6	11.8	-	YES	11.8	-	YES	0.0

Table C-2: Lake Worth SWMM Peak Stage Results (5-Year Simulation with Alternatives)

Nodes highlighted in yellow will experience increases in 5-year flood stage due to SLR
Nodes highlighted in orange will not meet 5-year LOS with SLR projections

				Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) Original Boundary Condition (0.8 ft NAVD)			Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) 2066 Boundary Condition (1.75 ft NAVD)			
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
13AVN-LKSD	Lakeside Dr, S of 13th Ave N		4.5	2.6	-	YES	2.7	-	YES	0.1
13AVN-OSTR	13th Ave N & O Street		7.7	5.5	-	YES	5.6	-	YES	0.0
13AVN-PALM	13th Ave N & Palmway		6.2	4.5	-	YES	4.6	-	YES	0.1
14AVN-JTER	14th Avenue N & Dixie Hwy		13.6	13.5	-	YES	13.6	-	YES	0.1
14AVN-LWMS	Lake Worth Middle school		14.5	9.6	-	YES	9.6	-	YES	0.0
14AVN-OSTR	14th Ave N & Lakeside		6.3	6.1	-	YES	6.1	-	YES	0.0
14AVS-BART	14th Ave S & Barton Rd		16.7	15.4	-	YES	15.4	-	YES	0.0
14AVS-CSTR	14th Ave S & C Terr		15.9	16.4	0.5	YES	16.4	0.5	YES	0.0
14AVS-I95	14th Ave S & Tropical Dr		14.7	12.1	-	YES	12.1	-	YES	0.0
15AVN-DIXE	15th Ave N, W of Dixie Hwy	☼	13.8	14.3	0.4	YES	14.5	0.7	NO	0.2
15AVN-FHWY	15th Ave N & Fed Hwy		10.5	10.8	0.3	YES	10.8	0.3	YES	0.0
15AVS-LKSD	15th Ave S & Palmway		4.6	4.5	-	YES	4.5	-	YES	0.0
15AVS-WNGF	12th Ave S & H Street		14.4	14.5	0.1	YES	14.5	0.1	YES	0.0
16AVN-LWGC	Lake Worth Golf Course		4.5	1.9	-	-	2.0	-	-	0.2
16AVN-OUT	16th Ave N, Bella Vista		2.3	2.6	0.3	YES	2.6	0.3	YES	0.0
16AVN-TERR	16th Ave N & Terr Drive		11.0	7.8	-	YES	7.8	-	YES	0.0
17AVN-I95E	17th Ave N & I-95		13.8	12.1	-	YES	12.1	-	YES	0.0
17AVS-DIXE	17th Ave S & Dixie Hwy		10.3	8.4	-	YES	8.6	-	YES	0.2
17AVS-PMWY	17th Ave S & Palmway		3.7	3.5	-	YES	4.0	0.3	YES	0.5
17AVS-PMWY2	17th Ave S, E of Lakside Dr	☼	2.0	2.2	0.2	YES	2.9	0.9	NO	0.7
18AVN-DIXE	18th Ave N & Dixie Hwy		14.5	14.9	0.4	YES	14.9	0.4	YES	0.0
18AVN-I95E	18th Ave N, E of I-95		11.5	9.7	-	YES	9.7	-	YES	0.0
18AVN-KSTR	K Street, S of 18th Ave N		12.9	12.4	-	YES	12.4	-	YES	0.0
18AVN-MSTR	18th Ave N & M Street		11.0	9.3	-	YES	9.4	-	YES	0.1
18AVN-FHWY	18th Ave N & Fed Hwy		10.3	7.6	-	YES	7.7	-	YES	0.1
18AVN-PALM	Lakside Dr, S of 18th Ave		4.9	5.3	0.4	YES	5.5	0.6	NO	0.2
18AVN-RSTR	18th Ave N & R Street		4.3	3.3	-	YES	3.9	-	YES	0.6

Table C-2: Lake Worth SWMM Peak Stage Results (5-Year Simulation with Alternatives)

Nodes highlighted in yellow will experience increases in 5-year flood stage due to SLR
Nodes highlighted in orange will not meet 5-year LOS with SLR projections

				Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) Original Boundary Condition (0.8 ft NAVD)			Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) 2066 Boundary Condition (1.75 ft NAVD)			
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
18AVS-LKSD	18th Ave S & Lakside Dr		3.6	3.6	-	YES	4.0	0.4	YES	0.5
18AVS-PMWY	18th Ave S, E of Lakside Dr		1.7	2.1	0.4	YES	2.2	0.5	YES	0.1
1AVS-DIXE	1st Ave S & H Street		14.0	13.4	-	YES	13.8	-	YES	0.4
1AVS-ESTR	E Street, N of Lake Ave		14.8	13.6	-	YES	13.9	-	YES	0.3
1AVS-FSTR	1st Ave S & F Street	☼	13.1	13.6	0.5	YES	13.9	0.8	NO	0.3
1AVS-GLFV	Golfview Dr, S of 1st Ave S		2.5	2.8	0.3	YES	2.9	0.4	YES	0.1
1AVS-LKSD	Lakeside Dr, N of 1st Ave S	☼	4.8	5.2	0.4	YES	5.2	0.4	YES	0.0
1AVS-MSTR	1st Ave S & M Street		12.2	10.2	-	YES	10.5	-	YES	0.3
20AVN-DSTR	19th Ave N, E of D Street		14.9	15.1	0.2	YES	15.1	0.2	YES	0.0
22AVN-PARK	Park St, N of 22nd Ave N		13.9	14.3	0.4	YES	14.4	0.5	YES	0.0
24AVN-DIXE	E Coast Ave, S of 22nd Ave N		14.9	15.3	0.4	YES	15.3	0.4	YES	0.0
2AVN-ARCV	2nd Ave N, E of Boutwell Rd		11.7	11.1	-	YES	11.1	-	YES	0.0
2AVN-C16	2nd Ave N, E of C-16 canal		11.6	9.8	-	YES	9.8	-	YES	0.0
2AVN-CARL	Louis Dr, S of 2nd Ave N		10.7	10.0	-	YES	10.0	-	YES	0.0
2AVN-DETR	Evergreen Dr, N of 2nd Ave N		10.1	10.0	-	YES	10.0	-	YES	0.0
2AVN-DIXE	2nd Ave N, W of Dixie Hwy		14.1	14.4	0.3	YES	14.5	0.4	YES	0.1
2AVN-FSTR	2nd Ave N & F Street		14.5	13.7	-	YES	14.0	-	YES	0.3
2AVN-GLFV	Golfview Dr, S of 2nd Ave N		2.5	2.3	-	YES	2.8	0.3	YES	0.4
2AVN-GSTR	2nd Ave N & G Street		14.8	14.1	-	YES	14.2	-	YES	0.1
2AVN-LWGC	Lake Worth Golf Course		3.4	2.2	-	-	2.6	-	-	0.4
2AVN-PALM	2nd Ave N, E of Palmway		4.9	3.3	-	YES	3.7	-	YES	0.4
3AVN-EVTT	3rd Ave N, E of Everett Ct		12.5	10.2	-	YES	10.2	-	YES	0.0
3AVN-FSTR	3rd Ave N & F Street	☼	13.5	13.9	0.4	YES	14.1	0.6	NO	0.2
3AVN-I95E	3rd Ave N, E of A Street		14.8	15.3	0.5	YES	15.3	0.5	YES	0.0
3AVN-JSTR	3rd Ave N & J Street		14.8	13.9	-	YES	14.0	-	YES	0.1
3AVN-MSTR	3rd Ave N & M Street		12.2	9.3	-	YES	9.5	-	YES	0.2
3AVS-ERIE	Griswold Dr, S of Lake Osborne		8.8	9.1	0.3	YES	9.1	0.3	YES	0.0

Table C-2: Lake Worth SWMM Peak Stage Results (5-Year Simulation with Alternatives)

Nodes highlighted in yellow will experience increases in 5-year flood stage due to SLR
Nodes highlighted in orange will not meet 5-year LOS with SLR projections

				Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) Original Boundary Condition (0.8 ft NAVD)			Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) 2066 Boundary Condition (1.75 ft NAVD)			
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
3AVS-FHWY	3rd Ave S & Fed Hwy		8.5	7.8	-	YES	7.9	-	YES	0.0
3AVS-FSTR	3rd Ave S & F Street	☼	13.5	13.5	0.0	YES	13.8	0.3	YES	0.3
3AVS-GLFV	Golfview in Park		3.3	3.1	-	YES	3.4	0.1	YES	0.4
3AVS-GRIS	Lake Osborne, NE of Griswold Dr		10.0	8.3	-	YES	8.3	-	YES	0.0
3AVS-I95	FDOT ROW		12.2	10.2	-	-	10.2	-	-	0.0
3AVS-HSTR	3rd Ave S & H Street		13.3	12.2	-	YES	12.5	-	YES	0.3
3AVS-LKSD	Lakeside Dr, N of 3rd Ave S	☼	4.8	4.8	0.0	YES	5.0	0.2	YES	0.1
3AVS-LSTR	3rd Ave S & L Street		13.5	9.4	-	YES	9.5	-	YES	0.1
4AVN-23RD	4th Ave N, W of Boutwell Rd		11.7	11.9	0.2	YES	11.9	0.2	YES	0.0
4AVN-C16	Palm Club Apartments		9.7	9.3	-	YES	9.3	-	YES	0.0
4AVN-FSTR	5th Ave N & F Street		13.9	13.9	0.0	YES	14.1	0.2	YES	0.2
4AVN-GSTR	4th Ave N & G Street		15.4	12.1	-	YES	12.3	-	YES	0.2
4AVN-JSTR	4th Ave S & J Street		14.0	11.5	-	YES	11.8	-	YES	0.2
4AVN-LKSD	4th Ave S & J Street		3.9	3.9	-	YES	4.2	0.3	YES	0.4
4AVN-LSTR	4th Ave N & L Street		13.5	10.3	-	YES	10.6	-	YES	0.3
4AVN-LWGC	Lake Worth Golf Course		3.0	1.4	-	-	2.1	-	-	0.7
4AVN-FHWY	4th Ave N & Fed Hwy		8.7	6.4	-	YES	6.7	-	YES	0.3
5AVS-ASTR	Sunrise Ct, E of A Street		12.3	12.8	0.5	YES	12.8	0.5	YES	0.1
5AVS-LKSD	Lakeside Dr, S of 5th Ave S		4.9	4.7	-	YES	4.8	-	YES	0.0
5AVS-PALM	Palmway, S of 5th Ave S	☼	5.7	5.9	0.2	YES	5.9	0.2	YES	0.0
6AVN-23RD	23rd Ave, N of 4th Ave N		9.4	10.2	0.8	NO	10.2	0.8	NO	0.0
6AVN-DIXE	6th Ave N & Dixie Hwy		13.6	13.8	0.2	YES	13.9	0.3	YES	0.1
6AVN-FHWY	6th Ave N & Fed Hwy		8.5	7.6	-	YES	8.0	-	YES	0.4
6AVN-FSTR	7th Ave N & F Street	☼	13.7	14.0	0.3	YES	14.2	0.5	YES	0.2
6AVN-GSTR	6th Ave N & G Street		14.9	13.9	-	YES	14.1	-	YES	0.1
6AVN-I95W	FDOT ROW		12.0	15.9	3.9	-	15.9	3.9	-	0.0
6AVN-LKSD	Palmway, S of 6th Ave N		5.0	4.1	-	YES	4.7	-	YES	0.6

Table C-2: Lake Worth SWMM Peak Stage Results (5-Year Simulation with Alternatives)

Nodes highlighted in yellow will experience increases in 5-year flood stage due to SLR
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				Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) Original Boundary Condition (0.8 ft NAVD)			Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) 2066 Boundary Condition (1.75 ft NAVD)			
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
6AVN-LWGC	Lake Worth Golf Course Pk Lot		3.4	1.9	-	YES	2.5	-	YES	0.7
6AVS-ALPN	6th Ave S & Alpine		15.2	11.0	-	YES	11.0	-	YES	0.0
6AVS-ECST	6th Ave S, E of East Coast Ave		13.7	14.0	0.3	YES	14.0	0.3	YES	0.0
6AVS-ELM	6th Ave S & Elm	☼	11.6	11.4	-	YES	11.4	-	YES	0.0
6AVS-FSTR	7th Ave S & F Street		14.2	14.7	0.5	YES	14.7	0.5	YES	0.0
6AVS-I95	FDOT ROW		15.9	10.9	-	YES	10.9	-	YES	0.0
6AVS-LKOS	6th Ave S & Lake Osborne		11.5	11.5	-	YES	11.5	-	YES	0.0
6AVS-RLPM	Royal Palm, S of 6th Ave S		13.5	12.7	-	YES	12.7	-	YES	0.0
6AVS-WRGT	6th Ave S & Wright Dr		13.5	13.9	0.4	YES	13.9	0.4	YES	0.0
7AVN-23RD	7th Ave N, W of 23rd Ave N		9.7	10.3	0.6	NO	10.3	0.6	NO	0.0
7AVN-BARN	Barnett Ln, S of 7th Ave N		14.0	13.6	-	YES	13.6	-	YES	0.0
7AVN-C16	SW Treatment Pond		9.0	7.6	-	YES	7.6	-	YES	0.0
7AVN-DETR	7th Ave N, W of Detroit St		10.7	10.7	0.0	YES	10.7	0.0	YES	0.0
7AVN-FINN	7th Ave N & Finn St	☼	17.9	13.1	-	YES	14.0	-	YES	0.8
7AVN-PNTR	Pine Terr, N of 9th Ave N		16.4	15.9	-	YES	15.9	-	YES	0.0
7AVS-HSTR	7th Ave S, 9th Ave S, H Street		12.8	13.4	0.6	NO	13.4	0.6	NO	0.0
7AVS-MSTR	7th Ave S & M Street		9.7	8.2	-	YES	8.2	-	YES	0.0
8AVN-DIXE	7th Ave N & Dixie Hwy		13.5	11.5	-	YES	12.1	-	YES	0.6
8AVN-LKSD	Lakeside, S of 8th Ave N		3.7	3.3	-	YES	3.7	0.0	YES	0.5
8AVN-LWGC	Lake Worth Golf Course		3.5	2.1	-	YES	2.6	-	YES	0.5
8AVN-MSTR	8th Ave N & Fed Hwy		9.7	9.4	-	YES	9.5	-	YES	0.1
9AVN-DIXE	9th Ave N & Dixie Hwy		14.6	12.2	-	YES	12.2	-	YES	0.0
9AVN-I95	FDOT ROW		12.0	15.9	3.9	-	15.9	3.9	-	0.0
9AVN-LKSD	9th Ave N & Lakeside		4.4	4.7	0.3	YES	4.8	0.4	YES	0.1
9AVN-LWGC	Lake Worth Golf Course		3.6	3.5	-	YES	3.6	-	YES	0.1
9AVN-MSTR	9th Ave N & Fed Hwy		9.6	9.5	-	YES	9.5	-	YES	0.0
9AVS-DIXE	9th Ave S & Dixie Hwy		13.3	13.8	0.5	YES	13.8	0.5	YES	0.0

Table C-2: Lake Worth SWMM Peak Stage Results (5-Year Simulation with Alternatives)

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				Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) Original Boundary Condition (0.8 ft NAVD)			Combined Alternatives SFWMD 5-year, 24-hour (7.0-inch) 2066 Boundary Condition (1.75 ft NAVD)			
Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
9AVS-RLPM	9th Ave S & Royal Palm		13.9	12.2	-	YES	12.2	-	YES	0.0
BARN-DETR	Boutwell Rd & Keast Ln		10.5	9.5	-	YES	9.5	-	YES	0.0
BART-ELEM	Barton Elementary		17.5	16.9	-	YES	16.9	-	YES	0.0
BYRO-MEDA	SW Treatment Pond		14.5	8.0	-	YES	8.0	-	YES	0.0
COLL-LKOS	Collier Ave & Lake Osborne Terr		11.1	11.5	0.4	YES	11.5	0.4	YES	0.0
COLM-FHWY	Cornell Dr & Fed Hwy		9.8	8.3	-	YES	8.3	-	YES	0.0
DUKE-DIXE	Columbia Dr & Dixie hwy		15.3	12.1	-	YES	12.1	-	YES	0.0
DUKE-FHWY	Maryland Dr & Fed Hwy		12.5	6.7	-	YES	6.7	-	YES	0.0
DUKE-LKSD	Duke Dr & Georgia Ln		3.9	4.4	0.5	YES	4.6	0.7	NO	0.2
HARB-DRVE	Harbor Dr, E of Lakeside Dr		3.3	1.3	-	YES	2.0	-	YES	0.7
HRVD-FHWY	Yale Dr & Fed Hwy		9.3	9.4	0.1	YES	9.4	0.1	YES	0.0
HVRD-LKSD	Harvrd Dr * Lakeside Dr		4.5	4.0	-	YES	4.0	-	YES	0.1
LAKE-GLFV	Golfview Rd, N of Lake Ave		2.1	2.3	0.2	YES	2.8	0.7	NO	0.5
LAKE-LKSD	Lakeside Dr, N of Lake Ave	☼	4.0	4.5	0.5	YES	4.6	0.6	NO	0.1
LAKE-MSTR	Lake Ave & Fed Hwy		9.4	9.9	0.5	YES	10.0	0.5	YES	0.0
LKOS-SNOW	Lake Osborne Dr & Snowden Dr		11.4	11.7	0.3	YES	11.7	0.3	YES	0.0
LTNA-RRAV	Latona Ave & Railroad Ave		10.7	9.7	-	YES	9.8	-	YES	0.1
LWTH-ARCV	John Prince Memorial Park		10.4	9.0	-	YES	9.0	-	YES	0.0
LWTH-ERIE	Lake Osborne Dr & Erie St		9.9	9.0	-	YES	9.0	-	YES	0.0
LWTH-ERIE2	Lake Worth Rd & Erie St		12.7	9.5	-	YES	9.5	-	YES	0.0
LWTH-I95E	Lake Worth Rd, E of I-95		14.7	15.1	0.4	YES	15.1	0.4	YES	0.0
OCEAN-BLVDN	Ocean Blvd & Lake Worth Rd		3.6	2.1	-	YES	2.9	-	YES	0.8
OCEAN-BLVDS	Ocean Blvd, S of Lake Worth Rd		3.0	1.6	-	YES	2.5	-	YES	1.0
PERC-VERN-POND1	Pierce Dr & Vermont St		10.1	10.5	0.4	YES	10.5	0.4	YES	0.0
PERC-VERN-POND2	SW Treatment Pond		9.5	9.4	-	-	9.4	-	-	0.0
RUPP-PARK	Rupp Ln & Park St		14.7	11.2	-	YES	11.2	-	YES	0.0
TERR-DRVE	Terrace Drive E, N of 17th Ave N		9.7	9.0	-	YES	9.0	-	YES	0.0

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Node	**Inlet Location**	**Known Historical Flooding Location**	**LIDAR Low Point Rim Elev. (ft) NAVD**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Existing Peak Stage (ft) NAVD**	**Flood Depth (ft)**	**Meets LOS?**	**Increase in Flood Stage Due to Sea Level Rise (ft)**
TERR-DRVW	Terrace Drive W, N of 17th Ave N		10.6	7.5	-	YES	7.5	-	YES	0.0
WASH-CSTR	15th Ave S, W Cell of Old Landfill		17.0	11.2	-	-	11.2	-	-	0.0
WASH-GSTR	Wash Ave, E Cell of Old Landfill		15.7	11.2	-	-	11.2	-	-	0.0
WASH-WNGF	Latona Ave & Wingfield St		13.9	13.6	-	YES	13.7	-	YES	0.0
WELS-NADM	Wellesley Dr & Notre Dame Dr		1.7	2.5	0.8	NO	2.9	1.2	NO	0.3
WRTH-I95E	FDOT ROW		8.0	9.3	1.3	-	9.3	1.3	-	0.0
WRTH-LANT	Fed Hwy, S of Latona Ave		7.7	7.4	-	YES	7.4	-	YES	0.0