STORMWATER MANAGEMENT REPORT

Prepared for

Burger King

16130 NW U.S. Highway 441

Alachua, Florida

January 20, 2020

Prepared by

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REPORT OF SUBSURFACE EXPLORATION dated January 9, 2020
by GHD incorporated by reference

PROJECT NARRATIVE

This project is 1.19 acres (51,958 s.f.) in area and is situated along the south side of U.S. Highway 441, 600 feet west of the south bound exit ramp for Interstate 75. The project site is in the City of Alachua, Florida. The site was once occupied by a gas station and commercial strip center. The buildings have been demolished, although the slabs remain, and the old gas pump islands have been removed. The predevelopment impervious area is 40,837 square feet.

The proposed development includes a Burger King restaurant, with drive thru and parking, and landscape areas to meet City of Alachua requirements. The postdevelopment impervious area is 32,552 square feet, a reduction of 8,285 square feet over the predevelopment amount.

As shown on the FEMA Map in Appendix A-1 of this report, the site is located in Flood Zones X. The finish floor of the new building is set at elevation 81.37 which is greater than 2 feet above the centerline of U.S. 441 adjacent to the building.

Further, a review of the FDEP WBID maps (Appendix A-2) indicates that the site is within the Mill Creek Sink and is impaired for Fecal Coliform and Dissolved Oxygen. Redeveloping the site results in a decrease in impervious and improved stormwater quality treatment, therefore net improvement is met utilizing presumptive criteria.

Agency Requirements:

Stormwater runoff is regulated by the Suwannee River Water Management District (SRWMD), the FDOT, and the City of Alachua.

The SRWMD requirements are two-fold:

1. Water quality: Given the connection to the Mill Creek Sink, water quality must be achieved by retaining the runoff from the first 2.0 inches of rainfall and percolating that volume within 72 hours.
2. Water quantity: Pre v. post rates are to be analyzed and compared for the 100 year frequency storm, with durations of 1-, 2-, 4-, 8-, and 24-hour, as well as 3-, 7-, and 10-days.

The FDOT requires critical duration storm analysis. So the SRWMD water quantity requirements will control as the SRWMD requires durations beyond that required by the FDOT.

The City of Alachua stormwater requirements are also two-fold:

1. Water quality: Percolate 80 percent of the runoff from a 3-year, 1-hour design storm within 72 hours after the storm event.
2. Water quantity: Meet SRWMD requirements.

Predevelopment Drainage Patterns:

The northern portion of the site (the parking lot and gas island area) sheetflows directly north to the right of way of U.S. 441. The southern portion (building area, a portion of the rear driveway, and rear grassed area) drain to a small pond located behind the old buildings. When the pond fills, additional runoff "pops-off" via surface flow near the northwest corner of the building area, and then flows into the U.S. 441 right of way.

Postdevelopment Drainage Patterns:

All site runoff is conveyed via a storm sewer system to a new pond on the west side of the property. The requisite water quality volume (see below) is stored below a weir and the remaining volume is discharged through a drop structure with a rectangular weir into the U.S. 441 right of way.

Water Quality (Retention) Design:

A 2-inch, 1-hour storm and a 3-year, 1-hour storm is run to determine the runoff generated from these events. The input is on pages 21 thru 25 of this report and the rainfall volumes are cu.ft., provided on page 26. Note that the rainfall volumes are 8,661 cu.ft. and 11,260 cu.ft., respectively, for these two events. Page 27 then shows that there is no discharge to US 441 for the 2-inch event, therefore this entire storm event is stored below the weir or percolated into the ground. Page 28 shows that the inflow volume to the pond is 4,511 cu.ft. for the 3-year, 1-hour event, while the discharge to the US 441 right of way is 308 cu.ft., or 6.8%. Therefore, 93.2% is stored below the weir or percolated into the ground; the 80% requirement is exceeded.

Page 35 shows that volume recovery is obtained in 30 hours. Therefore, water quality requirement are met.

Water Quantity (Detention) Design:

Using ICPR Version 4.05.02, the required storm events are routed through the system to determine the necessary control device dimensions as well as the suitability of pond capacity above the control level. Page 38 of this Report indicates a width of 5 inches (0.42 feet), which is detailed on sheet C05 of the construction plans.

The ICPR Routing Summary below provides a summary of the pre and post discharge rates, design high water levels, and the pages of the report where the ICPR output can be found.

CURVE NO. CALCULATIONS (PREDEVELOPMENT) – FOR ICPR ROUTING DESCRIBED ABOVE

	Curve No.	North Basin	South Basin
Impervious	98	30,094 s.f.	10,743 s.f.
Pond	100	-0-	2,400 s.f.
Pervious – Arrendondo Urban Land	49	2,400 s.f.	6,321 s.f.
Total		32,494 s.f. @ 94.4	19,464 s.f. @ 82.3

Predevelopment Curve numbers input into ICPR are shown on page 6 of this report.

Notes: See Appendix A-3 for pervious area CN

POND AREAS (PREDEVELOPMENT) – FOR ICPR ROUTING DESCRIBED ABOVE

ELEVATION	SOUTH POND
76	296 s.f. / 0.0068 ac
77	2400 s.f. / 0.0051 ac
78	6740 s.f. / 0.1547 ac

CURVE NO. CALCULATIONS (POSTDEVELOPMENT) – FOR ICPR ROUTING DESCRIBED ABOVE

Impervious:	32,552 sq.ft.	@ 98	
Pond:	4,737 sq.ft.	@ 100	
Pervious:	14,669 sq.ft.	@ 39	(See Appendix A-2 for pervious area CN)
Total:	51,958 sq.ft.	@ 81.5	

The Postdevelopment Curve number input into ICPR is shown on page 36 of this report.

POND AREAS (POSTDEVELOPMENT) – FOR ICPR ROUTING DESCRIBED ABOVE

ELEVATION	WEST POND
75.5	422 s.f. / 0.0097 ac
76.5	1,121 s.f. / 0.0257 ac
77.5	2,153 s.f. / 0.0494 ac
78.5	3,395 s.f. / 0.0779 ac
79.5	4,737 s.f. / 0.1087 ac

ICPR ROUTING SUMMARY

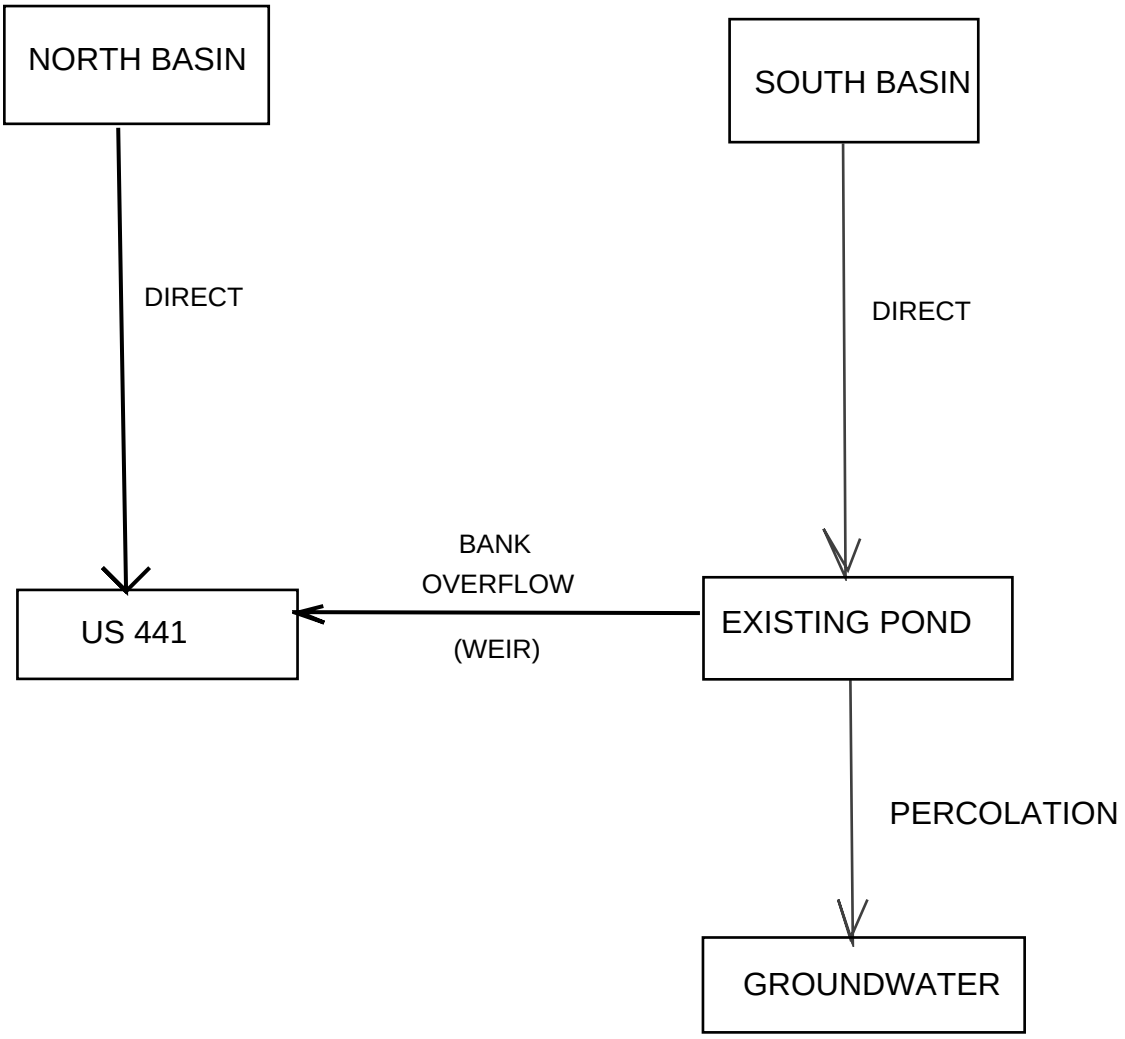
Storm Event Frequency / Duration	Peak Rainfall Amount (in.)[1]	Pre Q (cfs)[2]	Post Q (cfs)[3]	Post DHW[4]
100 yr. – 1 hr.	4.4	4.67	1.67	79.16
100 yr. – 2 hr.	5.4	3.91	1.88	79.25
100 yr. – 4 hr.	6.72	2.44	2.24	79.41
100 yr. – 8 hr.	8.0	2.49	2.43	79.48
100 yr. – 24 hr.	11.04	0.82	1.02	78.83
100 yr. – 3 day	13.8	0.75	0.75	78.68
100 yr. 7 day	16.0	0.52	0.53	78.53
100 yr. – 10 day	18.0	0.68	0.70	78.65

Notes:

1. See pages 8 thru 18 (pre) and 38 thru 48 (post) of this report for these input values, as well as Appendix A-4.
2. See page 19 of this report for these output values at the US 441 node.
3. See page 49 of this report for these output values at the US 441 node.
4. See page 49 of this report for these output values at the Pond node.

Note that for the 24 hour storm, the post exceeds the pre by 0.2 cfs, but that the total post is only 1.02 cfs. Also, for the 10 day storm, the post exceeds the pre by 0.02 cfs, but the total post is only 0.7 cfs. Since the 1 hour pre is 4.67 cfs, these small differences for the lesser events will not have an adverse impact on the downstream system.

PREDEVELOPMENT NODE-LINK DIAGRAM



PREDEVELOMENT

DRAINAGE MAP

Simple Basin: Ex North Basin

Scenario:	Predevelopment
Node:	US 441
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.7460 ac
Curve Number:	94.4
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: Ex South Basin

Scenario:	Predevelopment
Node:	Existing Pond
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.4470 ac
Curve Number:	82.3
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Node: Existing Pond

Scenario:	Predevelopment
Type:	Stage/Area
Base Flow:	0.00 cfs
Initial Stage:	78.00 ft
Warning Stage:	80.00 ft

Stage [ft]	Area [ac]	Area [ft2]
78.00	0.0068	296
79.00	0.0551	2400
80.00	0.1547	6739

Comment:

Node: Groundwater

Scenario: Predevelopment
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 70.00 ft
Warning Stage: 80.00 ft
Boundary Stage:

Comment:

Node: US 441

Scenario: Predevelopment
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 75.00 ft
Warning Stage: 80.00 ft
Boundary Stage:

Comment:

Weir Link: Ex Pond Overflow

Scenario: Predevelopment
From Node: Existing Pond
To Node: US 441
Link Count: 1
Flow Direction: Both
Damping: 0.0000 ft
Weir Type: Broad Crested Vertical
Geometry Type: Trapezoidal
Invert: 79.80 ft
Control Elevation: 79.80 ft
Max Depth: 0.20 ft
Extrapolation Method: Normal Projection

Bottom Clip

Default: 0.00 ft
Op Table:
Ref Node:

Top Clip

Default: 0.00 ft
Op Table:
Ref Node:

Discharge Coefficients

Weir Default: 2.800
Weir Table:
Orifice Default: 0.600

Bottom Width:	3.00 ft		
Left Slope:	6.000 (h:v)	Orifice Table:	
Right Slope:	6.000 (h:v)		

Comment:

Percolation Link: L-0020PERC

Scenario:	Predevelopment	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	Existing Pond		
To Node:	Groundwater	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	280.00 ft
Flow Direction:	Both	Perimeter 2:	520.00 ft
Aquifer Base Elevation:	55.00 ft	Perimeter 3:	920.00 ft
Water Table Elevation:	70.00 ft	Distance P1 to P2:	30.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	50.00 ft
Horizontal Conductivity:	1.000 fpd	# of Cells P1 to P2:	6
Vertical Conductivity:	2.000 fpd	# of Cells P2 to P3:	5
Fillable Porosity:	0.300		
Layer Thickness:	0.00 ft		

Comment: Permeter 1 based on 100' x 40'

Simulation: Pre 100 1

Scenario:	Predevelopment
Run Date/Time:	1/10/2020 1:33:34 PM
Program Version:	ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	2.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft
Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr
Smp/Man Basin Rain Opt: Global
Rainfall Name: ~FDOT-1
Rainfall Amount: 4.40 in
Storm Duration: 1.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: Pre 100 10 day

Scenario: Predevelopment
Run Date/Time: 1/10/2020 1:33:36 PM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

Year	Month	Day	Hour [hr]

Start Time:	0	0	0	0.0000
End Time:	0	0	0	240.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6		
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-240
		Rainfall Amount:	18.00 in
Edge Length Option:	Automatic	Storm Duration:	240.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2

Energy Switch (1D): Energy

Comment:

Simulation: Pre 100 2

Scenario: Predevelopment
Run Date/Time: 1/10/2020 1:34:16 PM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	3.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6		
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-2
		Rainfall Amount:	5.40 in
Edge Length Option:	Automatic	Storm Duration:	2.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Simulation: Pre 100 24

Scenario:	Predevelopment
Run Date/Time:	1/10/2020 1:34:18 PM
Program Version:	ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft
Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr
Smp/Man Basin Rain Opt: Global
Rainfall Name: ~FDOT-24
Rainfall Amount: 11.04 in
Storm Duration: 24.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: Pre 100 3 day

Scenario: Predevelopment
Run Date/Time: 1/10/2020 1:34:23 PM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000

End Time:	0	0	0	72.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6		
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-72
		Rainfall Amount:	13.80 in
Edge Length Option:	Automatic	Storm Duration:	72.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Simulation: Pre 100 4

Scenario: Predevelopment
Run Date/Time: 1/15/2020 10:37:57 AM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	5.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6		
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-4
		Rainfall Amount:	6.72 in
Edge Length Option:	Automatic	Storm Duration:	4.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Simulation: Pre 100 7 day

Scenario:	Predevelopment
Run Date/Time:	1/10/2020 1:34:37 PM
Program Version:	ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	168.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6		
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-168
		Rainfall Amount:	16.00 in
Edge Length Option:	Automatic	Storm Duration:	168.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Simulation: Pre 100 8

Scenario: Predevelopment
Run Date/Time: 1/10/2020 1:35:04 PM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	10.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

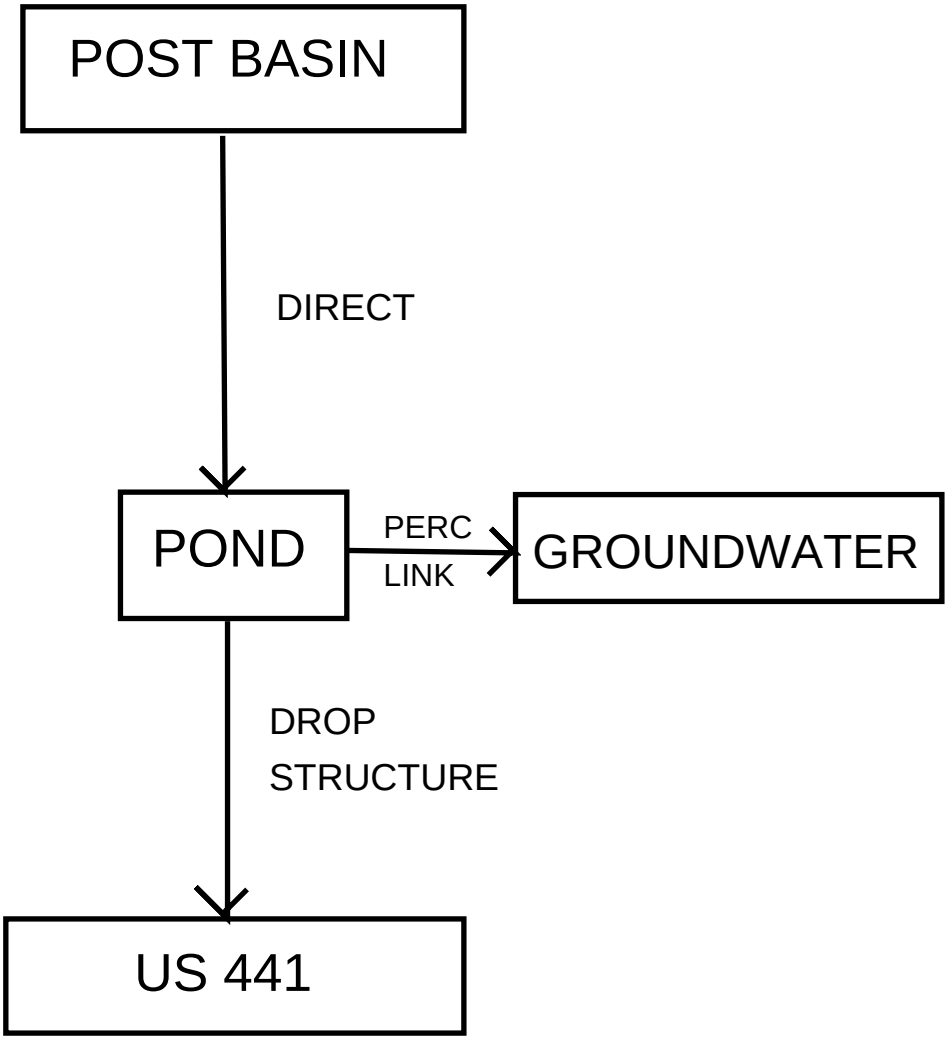
Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6		
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-8
		Rainfall Amount:	8.00 in
Edge Length Option:	Automatic	Storm Duration:	8.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Scenario	Sim	Node Name	Relative Time [hrs]	Maximum Stage [ft]	Maximum Total Inflow Rate [cfs]	Maximum Total Outflow Rate [cfs]
Predevelopment	Pre 100 1	Existing Pond	2.0026	79.64	2.01	0.12
Predevelopment	Pre 100 1	Groundwater	2.0026	70.00	0.12	0.00
Predevelopment	Pre 100 1	US 441	2.0026	75.00	4.67	0.00
Predevelopment	Pre 100 10 day	Existing Pond	240.0052	79.88	0.27	0.27
Predevelopment	Pre 100 10 day	Groundwater	240.0052	70.00	0.08	0.00
Predevelopment	Pre 100 10 day	US 441	240.0052	75.00	0.68	0.00
Predevelopment	Pre 100 2	Existing Pond	3.0034	79.83	1.77	0.18
Predevelopment	Pre 100 2	Groundwater	3.0034	70.00	0.14	0.00
Predevelopment	Pre 100 2	US 441	3.0034	75.00	3.91	0.00
Predevelopment	Pre 100 24	Existing Pond	30.0059	79.87	0.45	0.28
Predevelopment	Pre 100 24	Groundwater	30.0059	70.00	0.14	0.00
Predevelopment	Pre 100 24	US 441	30.0059	75.00	0.82	0.00
Predevelopment	Pre 100 3 day	Existing Pond	72.0068	79.89	0.30	0.29
Predevelopment	Pre 100 3 day	Groundwater	72.0068	70.00	0.09	0.00
Predevelopment	Pre 100 3 day	US 441	72.0068	75.00	0.75	0.00
Predevelopment	Pre 100 4	Existing Pond	5.0069	79.93	1.20	0.60
Predevelopment	Pre 100 4	Groundwater	5.0069	70.00	0.15	0.00
Predevelopment	Pre 100 4	US 441	5.0069	75.00	2.44	0.00
Predevelopment	Pre 100 7 day	Existing Pond	168.0021	79.87	0.21	0.21
Predevelopment	Pre 100 7 day	Groundwater	168.0021	70.00	0.06	0.00
Predevelopment	Pre 100 7 day	US 441	168.0021	75.00	0.52	0.00
Predevelopment	Pre 100 8	Existing Pond	10.0012	79.92	1.34	0.56
Predevelopment	Pre 100 8	Groundwater	10.0012	70.00	0.15	0.00
Predevelopment	Pre 100 8	US 441	10.0012	75.00	2.49	0.00

POSTDEVELOPMENT NODE-LINK DIAGRAM



Simple Basin: Post Basin

Scenario:	Postdevelopment
Node:	Proposed Pond
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	1.1930 ac
Curve Number:	81.5
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Node: Groundwater

Scenario:	Postdevelopment
Type:	Time/Stage
Base Flow:	0.00 cfs
Initial Stage:	70.00 ft
Warning Stage:	80.00 ft
Boundary Stage:	

Comment:

Node: Proposed Pond

Scenario:	Postdevelopment
Type:	Stage/Area
Base Flow:	0.00 cfs
Initial Stage:	75.50 ft
Warning Stage:	79.50 ft

Stage [ft]	Area [ac]	Area [ft2]
75.50	0.0097	423
76.50	0.0257	1119
77.50	0.0494	2152
78.50	0.0779	3393
79.50	0.1087	4735

Comment:

Node: US 441

Scenario:	Postdevelopment
Type:	Time/Stage
Base Flow:	0.00 cfs
Initial Stage:	75.00 ft
Warning Stage:	80.00 ft
Boundary Stage:	

Comment:

Percolation Link: L-0020PERC

Scenario:	Postdevelopment	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	Proposed Pond		
To Node:	Groundwater	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	320.00 ft
Flow Direction:	Both	Perimeter 2:	560.00 ft
Aquifer Base Elevation:	55.00 ft	Perimeter 3:	800.00 ft
Water Table Elevation:	70.00 ft	Distance P1 to P2:	30.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	50.00 ft
Horizontal Conductivity:	1.000 fpd	# of Cells P1 to P2:	6
Vertical Conductivity:	2.000 fpd	# of Cells P2 to P3:	5
Fillable Porosity:	0.300		
Layer Thickness:	0.00 ft		

Comment: Perimeter 1 based on 120' x 40'

Drop Structure Link: Pond Outfall

		Upstream Pipe		Downstream Pipe	
Scenario:	Postdevelopment	Invert:	77.10 ft	Invert:	76.90 ft
From Node:	Proposed Pond	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	US 441	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Solution:	Combine	Default:	0.00 ft	Default:	0.00 ft
Increments:	0	Op Table:		Op Table:	
Pipe Count:	1	Ref Node:		Ref Node:	
Damping:	0.0000 ft	Manning's N:	0.0000	Manning's N:	0.0000
Length:	91.00 ft	Top Clip			
FHWA Code:	0	Default:	0.00 ft	Default:	0.00 ft
Entr Loss Coef:	0.00	Op Table:		Op Table:	
Exit Loss Coef:	0.00	Ref Node:		Ref Node:	
Bend Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Location:	0.00 ft				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	78.00 ft
Control Elevation:	78.00 ft
Max Depth:	1.50 ft
Max Width:	0.42 ft
Fillet:	0.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Simulation: 2-inch rainfall

Scenario:	Postdevelopment
Run Date/Time:	1/20/2020 9:43:41 AM
Program Version:	ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	2.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6		
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-1
		Rainfall Amount:	2.00 in
Edge Length Option:	Automatic	Storm Duration:	1.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Simulation: Post 3 Year 1 Hour

Scenario: Postdevelopment
Run Date/Time: 1/20/2020 9:45:18 AM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	4.0000

Hydrology [sec]	Surface Hydraulics

		[sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr

Smp/Man Basin Rain Opt: Global

Rainfall Name: ~FDOT-1
Rainfall Amount: 2.60 in
Storm Duration: 1.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Scenario	Sim	Relative Time [hrs]	Precipitation Volume [ft3]
Postdevelopment	2-inch rainfall	0.0000	0
Postdevelopment	2-inch rainfall	0.2667	1438
Postdevelopment	2-inch rainfall	0.5167	5673
Postdevelopment	2-inch rainfall	0.7500	8228
Postdevelopment	2-inch rainfall	1.0000	8661
Postdevelopment	2-inch rainfall	1.2500	8661
Postdevelopment	2-inch rainfall	1.5167	8661
Postdevelopment	2-inch rainfall	1.7667	8661
Postdevelopment	2-inch rainfall	2.0167	8661
Postdevelopment	Post 3 Year 1 Hour	0.0000	0
Postdevelopment	Post 3 Year 1 Hour	0.2667	1869
Postdevelopment	Post 3 Year 1 Hour	0.5167	7375
Postdevelopment	Post 3 Year 1 Hour	0.7500	10697
Postdevelopment	Post 3 Year 1 Hour	1.0000	11260
Postdevelopment	Post 3 Year 1 Hour	1.2500	11260
Postdevelopment	Post 3 Year 1 Hour	1.5167	11260
Postdevelopment	Post 3 Year 1 Hour	1.7667	11260
Postdevelopment	Post 3 Year 1 Hour	2.0167	11260

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ft3]
Postdevelopment	2-inch rainfall	Groundwater	0.0000	70.00	0
Postdevelopment	2-inch rainfall	Groundwater	0.2511	70.00	0
Postdevelopment	2-inch rainfall	Groundwater	0.5000	70.00	6
Postdevelopment	2-inch rainfall	Groundwater	0.7502	70.00	25
Postdevelopment	2-inch rainfall	Groundwater	1.0001	70.00	61
Postdevelopment	2-inch rainfall	Groundwater	1.2517	70.00	105
Postdevelopment	2-inch rainfall	Groundwater	1.5034	70.00	151
Postdevelopment	2-inch rainfall	Groundwater	1.7555	70.00	198
Postdevelopment	2-inch rainfall	Groundwater	2.0055	70.00	244
Postdevelopment	2-inch rainfall	Proposed Pond	0.0000	75.50	0
Postdevelopment	2-inch rainfall	Proposed Pond	0.2511	75.50	0
Postdevelopment	2-inch rainfall	Proposed Pond	0.5000	75.69	101
Postdevelopment	2-inch rainfall	Proposed Pond	0.7502	76.74	1100
Postdevelopment	2-inch rainfall	Proposed Pond	1.0001	77.32	2100
Postdevelopment	2-inch rainfall	Proposed Pond	1.2517	77.51	2536
Postdevelopment	2-inch rainfall	Proposed Pond	1.5034	77.56	2684
Postdevelopment	2-inch rainfall	Proposed Pond	1.7555	77.55	2708
Postdevelopment	2-inch rainfall	Proposed Pond	2.0055	77.53	2709
Postdevelopment	2-inch rainfall	US 441	0.0000	75.00	0
Postdevelopment	2-inch rainfall	US 441	0.2511	75.00	0
Postdevelopment	2-inch rainfall	US 441	0.5000	75.00	0
Postdevelopment	2-inch rainfall	US 441	0.7502	75.00	0
Postdevelopment	2-inch rainfall	US 441	1.0001	75.00	0
Postdevelopment	2-inch rainfall	US 441	1.2517	75.00	0
Postdevelopment	2-inch rainfall	US 441	1.5034	75.00	0
Postdevelopment	2-inch rainfall	US 441	1.7555	75.00	0
Postdevelopment	2-inch rainfall	US 441	2.0055	75.00	0
Postdevelopment	Post 3 Year 1 Hour	Groundwater	0.0000	70.00	0
Postdevelopment	Post 3 Year 1 Hour	Groundwater	0.2511	70.00	0
Postdevelopment	Post 3 Year 1 Hour	Groundwater	0.5001	70.00	8
Postdevelopment	Post 3 Year 1 Hour	Groundwater	0.7500	70.00	35
Postdevelopment	Post 3 Year 1 Hour	Groundwater	1.0004	70.00	84
Postdevelopment	Post 3 Year 1 Hour	Groundwater	1.2505	70.00	144
Postdevelopment	Post 3 Year 1 Hour	Groundwater	1.5014	70.00	206
Postdevelopment	Post 3 Year 1 Hour	Groundwater	1.7504	70.00	268
Postdevelopment	Post 3 Year 1 Hour	Groundwater	2.0044	70.00	330
Postdevelopment	Post 3 Year 1 Hour	Groundwater	2.2579	70.00	391
Postdevelopment	Post 3 Year 1 Hour	Groundwater	2.5079	70.00	450
Postdevelopment	Post 3 Year 1 Hour	Groundwater	2.7579	70.00	509
Postdevelopment	Post 3 Year 1 Hour	Groundwater	3.0079	70.00	567
Postdevelopment	Post 3 Year 1 Hour	Groundwater	3.2579	70.00	624
Postdevelopment	Post 3 Year 1 Hour	Groundwater	3.5079	70.00	681

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ft3]
Postdevelopment	Post 3 Year 1 Hour	Groundwater	3.7579	70.00	738
Postdevelopment	Post 3 Year 1 Hour	Groundwater	4.0079	70.00	793
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	0.0000	75.50	0
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	0.2511	75.50	0
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	0.5001	75.92	248
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	0.7500	77.27	1965
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	1.0004	77.94	3558
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	1.2505	78.15	4244
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	1.5014	78.18	4472
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	1.7504	78.14	4510
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	2.0044	78.10	4511
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	2.2579	78.07	4511
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	2.5079	78.04	4511
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	2.7579	78.02	4511
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	3.0079	78.00	4511
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	3.2579	77.98	4511
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	3.5079	77.96	4511
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	3.7579	77.94	4511
Postdevelopment	Post 3 Year 1 Hour	Proposed Pond	4.0079	77.92	4511
Postdevelopment	Post 3 Year 1 Hour	US 441	0.0000	75.00	0
Postdevelopment	Post 3 Year 1 Hour	US 441	0.2511	75.00	0
Postdevelopment	Post 3 Year 1 Hour	US 441	0.5001	75.00	0
Postdevelopment	Post 3 Year 1 Hour	US 441	0.7500	75.00	0
Postdevelopment	Post 3 Year 1 Hour	US 441	1.0004	75.00	0
Postdevelopment	Post 3 Year 1 Hour	US 441	1.2505	75.00	29
Postdevelopment	Post 3 Year 1 Hour	US 441	1.5014	75.00	117
Postdevelopment	Post 3 Year 1 Hour	US 441	1.7504	75.00	196
Postdevelopment	Post 3 Year 1 Hour	US 441	2.0044	75.00	249
Postdevelopment	Post 3 Year 1 Hour	US 441	2.2579	75.00	282
Postdevelopment	Post 3 Year 1 Hour	US 441	2.5079	75.00	299
Postdevelopment	Post 3 Year 1 Hour	US 441	2.7579	75.00	307
Postdevelopment	Post 3 Year 1 Hour	US 441	3.0079	75.00	308
Postdevelopment	Post 3 Year 1 Hour	US 441	3.2579	75.00	308
Postdevelopment	Post 3 Year 1 Hour	US 441	3.5079	75.00	308
Postdevelopment	Post 3 Year 1 Hour	US 441	3.7579	75.00	308
Postdevelopment	Post 3 Year 1 Hour	US 441	4.0079	75.00	308

Node: Groundwater

Scenario: Pond Recovery
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 70.00 ft
Warning Stage: 80.00 ft
Boundary Stage:

Comment:

Node: Proposed Pond

Scenario: Pond Recovery
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 78.00 ft
Warning Stage: 79.50 ft

Stage [ft]	Area [ac]	Area [ft2]
75.50	0.0097	423
76.50	0.0257	1119
77.50	0.0494	2152
78.50	0.0779	3393
79.50	0.1087	4735

Comment:

Node: US 441

Scenario: Pond Recovery
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 75.00 ft
Warning Stage: 80.00 ft
Boundary Stage:

Comment:

Percolation Link: L-0020PERC

Scenario: Pond Recovery
From Node: Proposed Pond
To Node: Groundwater
Surface Area Option: Vary Based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm

Link Count:	1		
Flow Direction:	Both	Perimeter 1:	320.00 ft
Aquifer Base Elevation:	55.00 ft	Perimeter 2:	560.00 ft
Water Table Elevation:	70.00 ft	Perimeter 3:	800.00 ft
Annual Recharge Rate:	0 ipy	Distance P1 to P2:	30.00 ft
Horizontal Conductivity:	1.000 fpd	Distance P2 to P3:	50.00 ft
Vertical Conductivity:	2.000 fpd	# of Cells P1 to P2:	6
Fillable Porosity:	0.300	# of Cells P2 to P3:	5
Layer Thickness:	0.00 ft		

Comment: Perimeter 1 based on 120' x 40'

Drop Structure Link: Pond Outfall		Upstream Pipe		Downstream Pipe	
Scenario:	Pond Recovery	Invert:	77.50 ft	Invert:	77.30 ft
From Node:	Proposed Pond	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	US 441	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Solution:	Combine	Default:	0.00 ft	Default:	0.00 ft
Increments:	0	Op Table:		Op Table:	
Pipe Count:	1	Ref Node:		Ref Node:	
Damping:	0.0000 ft	Manning's N:	0.0000	Manning's N:	0.0000
Length:	82.00 ft	Top Clip			
FHWA Code:	0	Default:	0.00 ft	Default:	0.00 ft
Entr Loss Coef:	0.00	Op Table:		Op Table:	
Exit Loss Coef:	0.00	Ref Node:		Ref Node:	
Bend Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Location:	0.00 ft				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Sharp Crested Vertical	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	78.00 ft	Op Table:	
Control Elevation:	78.00 ft	Ref Node:	
Max Depth:	1.50 ft	Discharge Coefficients	
Max Width:	0.42 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Simulation: Drawdown

Scenario: Pond Recovery
Run Date/Time: 1/20/2020 9:43:33 AM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	36.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft

IA Recovery Time: 24.0000 hr
Smp/Man Basin Rain: No Rainfall

Opt:

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]
Pond Recovery	Drawdown	Proposed Pond	0.0000	78.00
Pond Recovery	Drawdown	Proposed Pond	0.2511	77.98
Pond Recovery	Drawdown	Proposed Pond	0.5050	77.96
Pond Recovery	Drawdown	Proposed Pond	0.7527	77.94
Pond Recovery	Drawdown	Proposed Pond	1.0027	77.92
Pond Recovery	Drawdown	Proposed Pond	1.2527	77.90
Pond Recovery	Drawdown	Proposed Pond	1.5027	77.87
Pond Recovery	Drawdown	Proposed Pond	1.7527	77.85
Pond Recovery	Drawdown	Proposed Pond	2.0027	77.83
Pond Recovery	Drawdown	Proposed Pond	2.2527	77.81
Pond Recovery	Drawdown	Proposed Pond	2.5027	77.79
Pond Recovery	Drawdown	Proposed Pond	2.7527	77.77
Pond Recovery	Drawdown	Proposed Pond	3.0027	77.75
Pond Recovery	Drawdown	Proposed Pond	3.2527	77.73
Pond Recovery	Drawdown	Proposed Pond	3.5027	77.71
Pond Recovery	Drawdown	Proposed Pond	3.7527	77.69
Pond Recovery	Drawdown	Proposed Pond	4.0027	77.67
Pond Recovery	Drawdown	Proposed Pond	4.2527	77.65
Pond Recovery	Drawdown	Proposed Pond	4.5027	77.62
Pond Recovery	Drawdown	Proposed Pond	4.7527	77.60
Pond Recovery	Drawdown	Proposed Pond	5.0027	77.58
Pond Recovery	Drawdown	Proposed Pond	5.2527	77.56
Pond Recovery	Drawdown	Proposed Pond	5.5027	77.54
Pond Recovery	Drawdown	Proposed Pond	5.7527	77.52
Pond Recovery	Drawdown	Proposed Pond	6.0027	77.50
Pond Recovery	Drawdown	Proposed Pond	6.2527	77.48
Pond Recovery	Drawdown	Proposed Pond	6.5027	77.46
Pond Recovery	Drawdown	Proposed Pond	6.7527	77.44
Pond Recovery	Drawdown	Proposed Pond	7.0027	77.42
Pond Recovery	Drawdown	Proposed Pond	7.2527	77.40
Pond Recovery	Drawdown	Proposed Pond	7.5027	77.37
Pond Recovery	Drawdown	Proposed Pond	7.7527	77.35
Pond Recovery	Drawdown	Proposed Pond	8.0027	77.33
Pond Recovery	Drawdown	Proposed Pond	8.2527	77.31
Pond Recovery	Drawdown	Proposed Pond	8.5027	77.29
Pond Recovery	Drawdown	Proposed Pond	8.7527	77.27
Pond Recovery	Drawdown	Proposed Pond	9.0027	77.25
Pond Recovery	Drawdown	Proposed Pond	9.2527	77.23
Pond Recovery	Drawdown	Proposed Pond	9.5027	77.21
Pond Recovery	Drawdown	Proposed Pond	9.7527	77.19
Pond Recovery	Drawdown	Proposed Pond	10.0027	77.17
Pond Recovery	Drawdown	Proposed Pond	10.2527	77.15

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]
Pond Recovery	Drawdown	Proposed Pond	10.5027	77.12
Pond Recovery	Drawdown	Proposed Pond	10.7527	77.10
Pond Recovery	Drawdown	Proposed Pond	11.0027	77.08
Pond Recovery	Drawdown	Proposed Pond	11.2527	77.06
Pond Recovery	Drawdown	Proposed Pond	11.5027	77.04
Pond Recovery	Drawdown	Proposed Pond	11.7527	77.02
Pond Recovery	Drawdown	Proposed Pond	12.0027	77.00
Pond Recovery	Drawdown	Proposed Pond	12.2527	76.98
Pond Recovery	Drawdown	Proposed Pond	12.5027	76.96
Pond Recovery	Drawdown	Proposed Pond	12.7527	76.94
Pond Recovery	Drawdown	Proposed Pond	13.0027	76.92
Pond Recovery	Drawdown	Proposed Pond	13.2527	76.90
Pond Recovery	Drawdown	Proposed Pond	13.5027	76.87
Pond Recovery	Drawdown	Proposed Pond	13.7527	76.85
Pond Recovery	Drawdown	Proposed Pond	14.0027	76.83
Pond Recovery	Drawdown	Proposed Pond	14.2527	76.81
Pond Recovery	Drawdown	Proposed Pond	14.5027	76.79
Pond Recovery	Drawdown	Proposed Pond	14.7527	76.77
Pond Recovery	Drawdown	Proposed Pond	15.0027	76.75
Pond Recovery	Drawdown	Proposed Pond	15.2527	76.73
Pond Recovery	Drawdown	Proposed Pond	15.5027	76.71
Pond Recovery	Drawdown	Proposed Pond	15.7527	76.69
Pond Recovery	Drawdown	Proposed Pond	16.0027	76.67
Pond Recovery	Drawdown	Proposed Pond	16.2527	76.65
Pond Recovery	Drawdown	Proposed Pond	16.5027	76.62
Pond Recovery	Drawdown	Proposed Pond	16.7527	76.60
Pond Recovery	Drawdown	Proposed Pond	17.0027	76.58
Pond Recovery	Drawdown	Proposed Pond	17.2527	76.56
Pond Recovery	Drawdown	Proposed Pond	17.5027	76.54
Pond Recovery	Drawdown	Proposed Pond	17.7527	76.52
Pond Recovery	Drawdown	Proposed Pond	18.0027	76.50
Pond Recovery	Drawdown	Proposed Pond	18.2527	76.48
Pond Recovery	Drawdown	Proposed Pond	18.5027	76.46
Pond Recovery	Drawdown	Proposed Pond	18.7527	76.44
Pond Recovery	Drawdown	Proposed Pond	19.0027	76.42
Pond Recovery	Drawdown	Proposed Pond	19.2527	76.40
Pond Recovery	Drawdown	Proposed Pond	19.5027	76.37
Pond Recovery	Drawdown	Proposed Pond	19.7527	76.35
Pond Recovery	Drawdown	Proposed Pond	20.0027	76.33
Pond Recovery	Drawdown	Proposed Pond	20.2527	76.31
Pond Recovery	Drawdown	Proposed Pond	20.5027	76.29
Pond Recovery	Drawdown	Proposed Pond	20.7527	76.27

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]
Pond Recovery	Drawdown	Proposed Pond	21.0027	76.25
Pond Recovery	Drawdown	Proposed Pond	21.2527	76.23
Pond Recovery	Drawdown	Proposed Pond	21.5027	76.21
Pond Recovery	Drawdown	Proposed Pond	21.7527	76.19
Pond Recovery	Drawdown	Proposed Pond	22.0027	76.17
Pond Recovery	Drawdown	Proposed Pond	22.2527	76.15
Pond Recovery	Drawdown	Proposed Pond	22.5027	76.12
Pond Recovery	Drawdown	Proposed Pond	22.7527	76.10
Pond Recovery	Drawdown	Proposed Pond	23.0027	76.08
Pond Recovery	Drawdown	Proposed Pond	23.2527	76.06
Pond Recovery	Drawdown	Proposed Pond	23.5027	76.04
Pond Recovery	Drawdown	Proposed Pond	23.7527	76.02
Pond Recovery	Drawdown	Proposed Pond	24.0027	76.00
Pond Recovery	Drawdown	Proposed Pond	24.2527	75.98
Pond Recovery	Drawdown	Proposed Pond	24.5027	75.96
Pond Recovery	Drawdown	Proposed Pond	24.7527	75.94
Pond Recovery	Drawdown	Proposed Pond	25.0027	75.92
Pond Recovery	Drawdown	Proposed Pond	25.2527	75.90
Pond Recovery	Drawdown	Proposed Pond	25.5027	75.87
Pond Recovery	Drawdown	Proposed Pond	25.7527	75.85
Pond Recovery	Drawdown	Proposed Pond	26.0027	75.83
Pond Recovery	Drawdown	Proposed Pond	26.2527	75.81
Pond Recovery	Drawdown	Proposed Pond	26.5027	75.79
Pond Recovery	Drawdown	Proposed Pond	26.7527	75.77
Pond Recovery	Drawdown	Proposed Pond	27.0027	75.75
Pond Recovery	Drawdown	Proposed Pond	27.2527	75.73
Pond Recovery	Drawdown	Proposed Pond	27.5027	75.71
Pond Recovery	Drawdown	Proposed Pond	27.7527	75.69
Pond Recovery	Drawdown	Proposed Pond	28.0027	75.67
Pond Recovery	Drawdown	Proposed Pond	28.2527	75.65
Pond Recovery	Drawdown	Proposed Pond	28.5027	75.62
Pond Recovery	Drawdown	Proposed Pond	28.7527	75.60
Pond Recovery	Drawdown	Proposed Pond	29.0027	75.58
Pond Recovery	Drawdown	Proposed Pond	29.2527	75.56
Pond Recovery	Drawdown	Proposed Pond	29.5027	75.54
Pond Recovery	Drawdown	Proposed Pond	29.7527	75.52
Pond Recovery	Drawdown	Proposed Pond	30.0027	75.50
Pond Recovery	Drawdown	Proposed Pond	30.2527	75.50
Pond Recovery	Drawdown	Proposed Pond	30.5027	75.50
Pond Recovery	Drawdown	Proposed Pond	30.7527	75.50
Pond Recovery	Drawdown	Proposed Pond	31.0027	75.50
Pond Recovery	Drawdown	Proposed Pond	31.2527	75.50

Simple Basin: Post Basin

Scenario:	Postdevelopment
Node:	Proposed Pond
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	1.1930 ac
Curve Number:	81.5
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Node: Groundwater

Scenario:	Postdevelopment
Type:	Time/Stage
Base Flow:	0.00 cfs
Initial Stage:	70.00 ft
Warning Stage:	80.00 ft
Boundary Stage:	

Comment:

Node: Proposed Pond

Scenario:	Postdevelopment
Type:	Stage/Area
Base Flow:	0.00 cfs
Initial Stage:	75.50 ft
Warning Stage:	79.50 ft

Stage [ft]	Area [ac]	Area [ft2]
75.50	0.0097	423
76.50	0.0257	1119
77.50	0.0494	2152
78.50	0.0779	3393
79.50	0.1087	4735

Comment:

Node: US 441

Scenario:	Postdevelopment
Type:	Time/Stage
Base Flow:	0.00 cfs
Initial Stage:	75.00 ft
Warning Stage:	80.00 ft
Boundary Stage:	

Comment:

Percolation Link: L-0020PERC

Scenario:	Postdevelopment	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	Proposed Pond		
To Node:	Groundwater	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	320.00 ft
Flow Direction:	Both	Perimeter 2:	560.00 ft
Aquifer Base Elevation:	55.00 ft	Perimeter 3:	800.00 ft
Water Table Elevation:	70.00 ft	Distance P1 to P2:	30.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	50.00 ft
Horizontal Conductivity:	1.000 fpd	# of Cells P1 to P2:	6
Vertical Conductivity:	2.000 fpd	# of Cells P2 to P3:	5
Fillable Porosity:	0.300		
Layer Thickness:	0.00 ft		

Comment: Perimeter 1 based on 120' x 40'

Drop Structure Link: Pond Outfall

		Upstream Pipe		Downstream Pipe	
Scenario:	Postdevelopment	Invert:	77.10 ft	Invert:	76.90 ft
From Node:	Proposed Pond	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	US 441	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Solution:	Combine	Default:	0.00 ft	Default:	0.00 ft
Increments:	0	Op Table:		Op Table:	
Pipe Count:	1	Ref Node:		Ref Node:	
Damping:	0.0000 ft	Manning's N:	0.0000	Manning's N:	0.0000
Length:	91.00 ft	Top Clip			
FHWA Code:	0	Default:	0.00 ft	Default:	0.00 ft
Entr Loss Coef:	0.00	Op Table:		Op Table:	
Exit Loss Coef:	0.00	Ref Node:		Ref Node:	
Bend Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Location:	0.00 ft				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	78.00 ft
Control Elevation:	78.00 ft
Max Depth:	1.50 ft
Max Width:	0.42 ft
Fillet:	0.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Simulation: Post 100 1

Scenario:	Postdevelopment
Run Date/Time:	1/20/2020 9:43:42 AM
Program Version:	ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	2.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6		
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-1
		Rainfall Amount:	4.40 in
Edge Length Option:	Automatic	Storm Duration:	1.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Simulation: Post 100 10 day

Scenario: Postdevelopment
Run Date/Time: 1/20/2020 9:43:44 AM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	240.0000

Hydrology [sec]	Surface Hydraulics

		[sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft

Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr

Smp/Man Basin Rain Opt: Global

Rainfall Name: ~FDOT-240
Rainfall Amount: 18.00 in
Storm Duration: 240.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: Post 100 2

Scenario: Postdevelopment
Run Date/Time: 1/20/2020 9:44:21 AM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	3.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft

IA Recovery Time: 24.0000 hr

Smp/Man Basin Rain Global

		Opt:	
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-2
		Rainfall Amount:	5.40 in
Edge Length Option:	Automatic	Storm Duration:	2.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Simulation: Post 100 24

Scenario: Postdevelopment
Run Date/Time: 1/20/2020 9:44:22 AM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources		Lookup Tables	
Rainfall Folder:		Boundary Stage Set:	
		Extern Hydrograph Set:	
Unit Hydrograph Folder:		Curve Number Set:	
		Green-Ampt Set:	
		Vertical Layers Set:	
		Impervious Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6		
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-24
		Rainfall Amount:	11.04 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Simulation: Post 100 3 day

Scenario:	Postdevelopment
Run Date/Time:	1/20/2020 9:44:27 AM
Program Version:	ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	72.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft
Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr
Smp/Man Basin Rain Opt: Global
Rainfall Name: ~FDOT-72
Rainfall Amount: 13.80 in
Storm Duration: 72.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: Post 100 4

Scenario: Postdevelopment

Run Date/Time: 1/20/2020 9:44:46 AM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	5.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft

IA Recovery Time: 24.0000 hr
Smp/Man Basin Rain Opt: Global

Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-4
		Rainfall Amount:	6.72 in
Edge Length Option:	Automatic	Storm Duration:	4.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Simulation: Post 100 7 day

Scenario: Postdevelopment
Run Date/Time: 1/20/2020 9:44:48 AM
Program Version: ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	168.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Lookup Tables

Boundary Stage Set:

		Extern Hydrograph Set:	
Unit Hydrograph Folder:		Curve Number Set:	
		Green-Ampt Set:	
		Vertical Layers Set:	
		Impervious Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6		
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft		
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-168
		Rainfall Amount:	16.00 in
Edge Length Option:	Automatic	Storm Duration:	168.0000 hr
		Dflt Damping (1D):	0.0050 ft
		Min Node Srf Area (1D):	100 ft2
		Energy Switch (1D):	Energy

Comment:

Simulation: Post 100 8

Scenario:	Postdevelopment
Run Date/Time:	1/20/2020 9:45:14 AM
Program Version:	ICPR4 4.05.02

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	10.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:

Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft
Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr

Smp/Man Basin Rain Opt: Global

Rainfall Name: ~FDOT-8
Rainfall Amount: 8.00 in
Storm Duration: 8.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Scenario	Sim	Node Name	Relative Time [hrs]	Maximum Stage [ft]	Maximum Total Inflow Rate [cfs]	Maximum Total Outflow Rate [cfs]
Postdevelopment	Post 100 1	Groundwater	2.0002	70.00	0.10	0.00
Postdevelopment	Post 100 1	Proposed Pond	2.0002	79.16	5.25	1.77
Postdevelopment	Post 100 1	US 441	2.0002	75.00	1.67	0.00
Postdevelopment	Post 100 10 day	Groundwater	240.0054	70.00	0.07	0.00
Postdevelopment	Post 100 10 day	Proposed Pond	240.0054	78.65	0.73	0.73
Postdevelopment	Post 100 10 day	US 441	240.0054	75.00	0.70	0.00
Postdevelopment	Post 100 2	Groundwater	3.0005	70.00	0.10	0.00
Postdevelopment	Post 100 2	Proposed Pond	3.0005	79.25	4.62	1.98
Postdevelopment	Post 100 2	US 441	3.0005	75.00	1.88	0.00
Postdevelopment	Post 100 24	Groundwater	30.0027	70.00	0.09	0.00
Postdevelopment	Post 100 24	Proposed Pond	30.0027	78.83	1.20	1.11
Postdevelopment	Post 100 24	US 441	30.0027	75.00	1.02	0.00
Postdevelopment	Post 100 3 day	Groundwater	72.0039	70.00	0.07	0.00
Postdevelopment	Post 100 3 day	Proposed Pond	72.0039	78.68	0.80	0.79
Postdevelopment	Post 100 3 day	US 441	72.0039	75.00	0.75	0.00
Postdevelopment	Post 100 4	Groundwater	5.0023	70.00	0.11	0.00
Postdevelopment	Post 100 4	Proposed Pond	5.0023	79.41	3.16	2.35
Postdevelopment	Post 100 4	US 441	5.0023	75.00	2.24	0.00
Postdevelopment	Post 100 7 day	Groundwater	168.0071	70.00	0.07	0.00
Postdevelopment	Post 100 7 day	Proposed Pond	168.0071	78.53	0.55	0.55
Postdevelopment	Post 100 7 day	US 441	168.0071	75.00	0.53	0.00
Postdevelopment	Post 100 8	Groundwater	10.0023	70.00	0.11	0.00
Postdevelopment	Post 100 8	Proposed Pond	10.0023	79.48	3.53	2.54
Postdevelopment	Post 100 8	US 441	10.0023	75.00	2.43	0.00

National Flood Hazard Layer FIRMette

FEMA

29°48'22.64"N

82°31'24.67"W

82°30'47.22"W

29°47'51.42"N

0 250 500 1,000 1,500 2,000 Feet 1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

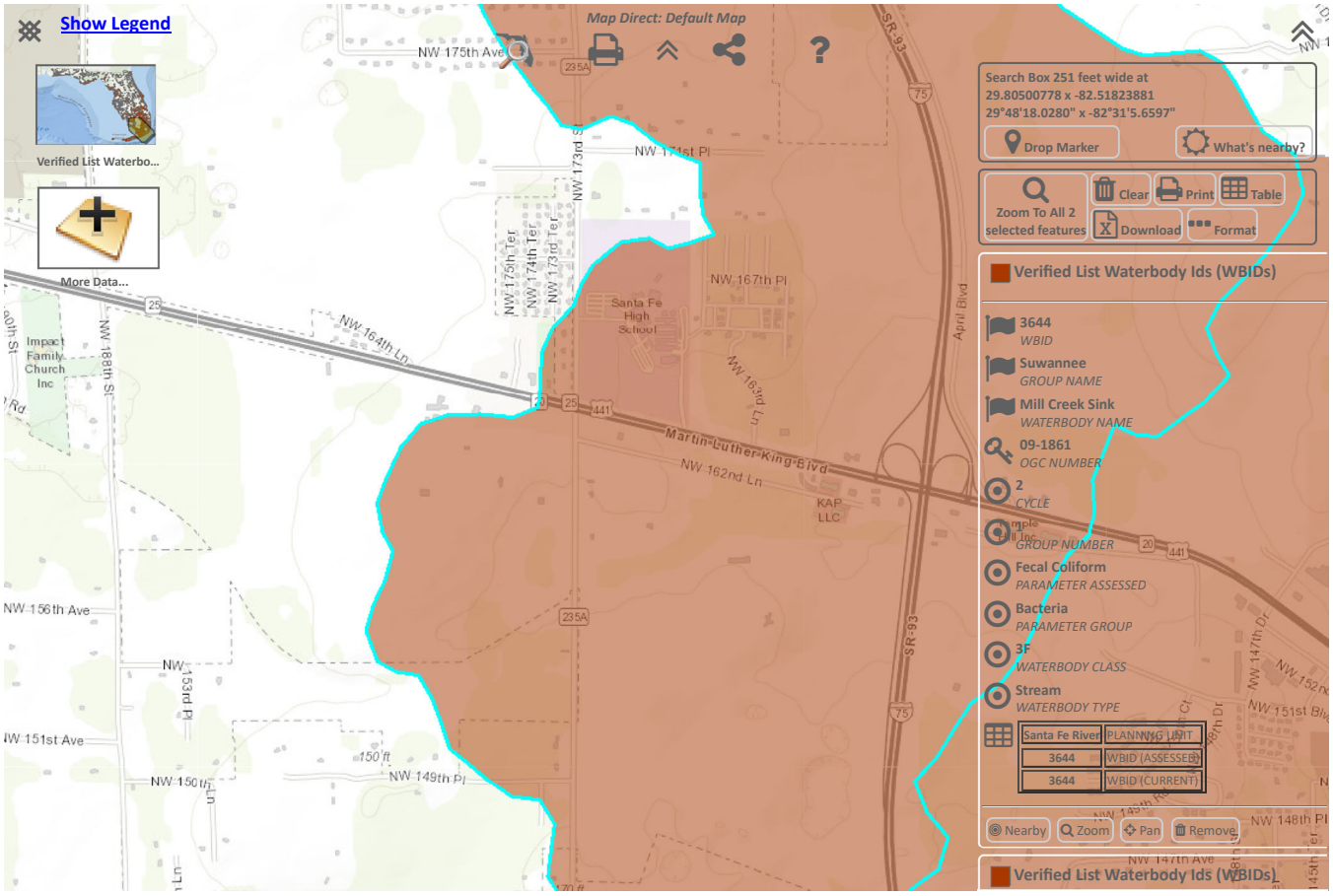
N

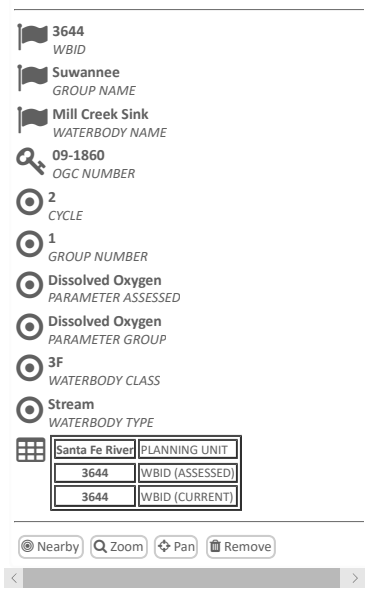
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/6/2020 at 10:20:34 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.





Show Imagery Slider

1:18,055

0 0.15 0.3mi

--Show County--

A-2

Table 2-3d.—Runoff curve numbers for urban areas[1]

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area[2]	A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.)[3]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		PRE 49	69	79	84
Good condition (grass cover > 75%)		POST 39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only)[4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation)[5]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2a).					

[1] Average runoff condition.
[2] The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition.
[3] CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.
[4] Composite CN's for natural desert landscaping should be computed based on the impervious area (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.
[5] Composite CN's to use for the design of temporary measures during grading and construction should be computed using the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

District Rainfall Distribution Data

Values for P_{total} (inches)[1]

For the counties of Madison, Hamilton, Suwannee, Columbia, Baker and Union.

Frequency (years)	Duration (hours)							
	1	2	4	8	24	72	168	240
3	2.50	2.64	3.08	3.52	4.56	5.80	7.30	8.00
10	3.05	3.70	4.40	5.12	6.72	8.30	10.10	11.80
25	3.45	4.30	5.12	6.00	7.92	10.00	12.30	14.00
100	4.20	5.10	6.08	7.36	9.84	12.40	14.00	16.10

For the counties of Taylor, Lafayette, Dixie, Gilchrist, Levy, Alachua and Bradford.

Frequency (years)	Duration (hours)							
	1	2	4	8	24	72	168	240
3	2.60	3.20	3.80	4.48	6.00	7.60	9.50	10.80
10	3.20	4.00	4.80	5.84	7.92	8.90	11.00	12.50
25	3.60	4.40	5.28	6.56	8.64	11.00	13.00	15.00
100	4.40	5.40	6.72	8.00	11.04	13.80	16.00	18.00

1-HOUR DURATION

T(hrs)	P/P_{total}	I/P_{total}
0	0	0
.1	.020	.200
.2	.080	.600
.3	.200	1.200
.4	.410	2.100
.5	.625	2.150
.6	.805	1.800
.7	.915	1.100
.8	.985	0.700
.9	.995	0.100
1.0	1.000	0

[1] Values for durations through 24 hours were taken from Florida Department of Transportation intensity curves. Values for durations greater than 24 hours were taken from National Weather Service Technical Paper No. 49, 1964.