Drainage Calculations for
SJRWMD & City of Winter Springs

Winter Springs Marketplace

Winter Springs, FL

Prepared by:

Kimley-Horn and Associates, Inc.
Orlando, Florida
149170016

July 14, 2020
(Revised 11/03/2020)

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Prepared for:

Tuscawilla Property Investors, LLC

Prepared by:

Kimley-Horn and Associates, Inc.
189 South Orange Avenue, Suite 1000
Orlando, Florida
CA 00000696
149170016

July 14, 2020
(Revised 11/03/2020)

Marcus I. Geiger, P.E., State of Florida, Professional Engineer, License No. 89199

This item has been digitally signed and sealed by Marcus I. Geiger, P.E. on the date indicated here.

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Digitally signed by Marcus I Geiger
DN: cn=Marcus I Geiger, c=US, o=KIMLEY-HORN AND ASSOCIATES, ou=A01410D00000172C79918990000F4E7, email=Marcus.Geiger@Kimley-Horn.com
Date: 2020.12.28 08:09:53 -05'00'

Marcus I. Geiger, P.E.
FL P.E. # 89199

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APPENDICES

1 SUMMARY

The Winter Springs Marketplace project is a 10.23-acre development located at the southwest corner of State Road 434 and Tuskawilla Road in Winter Springs, Florida (Sections 1 & 6, Township 21 South, Ranges 30 & 31 East). See **Appendix A** for the limits of the project site superimposed on a general location map, aerial imagery, the USGS Quad map, and Map No. 12117C0160F of the FEMA Flood Insurance Rate Map (FIRM), effective date September 28, 2007.

The proposed commercial property consists of six (6) commercial buildings and associated surface parking and utility infrastructure. The majority of the site is currently undeveloped and vacant. There is an existing abandoned building and surface parking lot located at the eastern corner of the site. The eastern portion of the site has been previously permitted through St. John's River Water Management District (SJRWMD) under Permit No. 83445-1 for the outfall to the drainage structure immediately south of the site's Tuskawilla Road driveway connection. The site has also been included in permitting for its outfall to the west under Permit No. 97490-1. Stormwater runoff from the proposed site will be managed via exfiltration trench and dry retention pond which drain into an onsite wet detention pond. These systems will meet or exceed all requirements of SJRWMD and the City of Winter Springs.

2 EXISTING CONDITIONS

The property is currently undeveloped and vacant. Per the FEMA FIRM located in **Appendix A**, the site is considered "Zone X – Area determined to be outside the 0.2% annual chance floodplain." Based on existing SJRWMD permitting and topographic data collected via survey, there is a high point ridge through the middle of the site. As a result, the site discharges to the east and west. SJRWMD Permit No. 83445-1 covers the existing allowable discharges to the east. SJRWMD Permit No. 97490-1 covers the allowable discharges from the site to the west.

2.1 SOILS

ECS Florida, LLA (ECS) has performed a geotechnical report for the proposed site. Please refer to the Preliminary Geotechnical Engineering Report prepared by ECS, dated November 15, 2018, which has been included in this application submittal, for details. The SCS Soil Survey for the proposed site can be found in **Appendix A** of the Drainage Calculations.

2.2 GROUNDWATER

The groundwater levels were investigated and determined by ECS and are included as part of their Geotechnical Report. Please refer to the Geotechnical Report prepared by ECS (dated November 15, 2018), which has been included with this submittal.

The table below summarizes the groundwater elevations obtained for each boring based on the provided geotechnical report by Terracon. Based on these results, Terracon estimates the seasonal high groundwater level to be at a depth ranging from 2.5 to 5 ft below existing grade across the site.

Table 1: Groundwater Elevations for Each Boring Location

Boring Label	Depth to Encountered Water Table (ft)	Boring Label	Depth to Encountered Water Table (ft)
B-1	4.5	**B-11**	5.5
B-2	5.0	**B-12**	5.5
B-3	3.5	**B-13**	4.0
B-4	4.5	**B-14**	5.0
B-5	5.5	**B-15**	5.0
B-6	5.0	**B-16**	5.0
B-7	4.0	**B-17**	4.5
B-8	4.5	**B-18**	4.5
B-9	5.5	**B-19**	4.0
B-10	5.5		

2.3 WETLANDS

There are no wetland impacts proposed for this project.

2.4 EXISTING DRAINAGE

Stormwater management systems are not provided for the currently undeveloped portion of the site. The Jesup's Reserve SJRWMD Permit (No. 97490-1) included the flows from the western portion of the site in their ultimate design of the 30" HDPE storm sewer trunk line. This 30" HDPE trunk line runs along the western site boundary and flows into wetlands located west of the site.

The Walgreens Drug Store #6575 SJRWMD Permit (No. 83445-1) determines the flows from the existing abandoned facility located at the eastern corner of the site. Flows from this portion of the site are captured within a dry retention pond within this abandoned parcel. The dry retention pond drains via a 150-ft 12" VPP discharge line to a drainage manhole just south of the abandoned parcel's driveway. Refer to the USGS Quad Map in addition to the pre-condition basin maps from each of these permits in ***Appendix A***.

2.4.1 BASINS

The property consists of two (2) basins. One basin drains west towards existing wetlands. The other basin drains east to the FDOT SR 434 right of way. Refer to Table 2 below for the pre-development basin summary and the Pre-Development Drainage Basin Map located in **Appendix A** for details.

Table 2: Pre-Development Basin Summary Table

	*Basin 100	**ONDICK
Drainage Basin Area (acres)	3.56	10.56
Total Impervious Area (acres)	0.82	1.27
% Impervious	23.0%	12.0%
Time of Conc., TC (min.)	38.5	82.0
Composite Curve Number, CN	60.3	61
Node	NODE 10	ONDICK

*This basin's data is based on SJRWMD Permit 83445-1

**This basin's data is based on SJRWMD Permit No. 97490-1

2.4.2 CN CALCULATIONS

The pre-development CN calculations utilized for the pre-development basins can be found in ***Appendix B***.

2.4.3 TIME OF CONCENTRATION

The time of concentration ('Tc') calculations utilized for the pre-development basins can be found in ***Appendix B***.

2.4.4 TAILWATER CONDITION

Tailwater conditions are based on the existing SJRWMD data provided in Permit No. 83445-1 previously permitted for the site. "Node 99" within this permit utilizes stages of 40 (NGVD) at hour Zero and 41 (NGVD) at hour 24. These values have been converted to NAVD using the 1.056-ft conversion factor for the area. See ***Appendix B*** for the associated permit data.

2.4.5 EXISTING DEVELOPMENT RUNOFF

The stormwater runoff from the pre-development basins is based on the existing SJRWMD data previously permitted for the site. Please refer to ***Appendix B*** for the historic permit data utilized to calculate pre-development flows for the site.

3 PROPOSED CONDITIONS

The 10.23-acre Winter Springs Marketplace project consists of six (6) commercial buildings and associated surface parking and utility infrastructure. The eastern corner of the project is reserved for future commercial usage. The stormwater runoff from the proposed site will be managed via exfiltration trench and dry pond which drain into an onsite wet detention pond to provide adequate water treatment (quality) and attenuation (quantity) volumes. The stormwater management system has been designed to meet or exceed the requirements of the City of Winter Springs and St. John's River Water Management District (SJRWMD).

3.1 REQUIRED PERMITS AND REVIEWS

- City of Winter Springs, FL
- St. John's River Water Management District (SJRWMD)

3.2 BASINS

Proposed conditions will divide onsite basins into sub basins for each of the exfiltration trenches throughout the site. The back of the site along Natures Way (Basin A) will drain into the dry retention pond at the back of the site. The wet detention pond at the front of the site along Tuskawilla Road sits within its own basin (Basin B). All onsite basins ultimately drain through this basin before draining offsite.

The remaining basins consist of the onsite exfiltration trench throughout the site. The delineation between each of the exfiltration trench basins (Basins C through G) are based on the surface grading which determines the greatest areas generating runoff to each system. Basin C includes the future commercial parcel which is assumed to have 80% impervious area. Basins H through J are the parking areas at the center of the site which must first drain into retention swales before draining into the exfiltration trenches. Table 3 below provides an on-site post-development basin summary. See **Appendix A** for the Post-Development Drainage Basin Map.

Table 3: Proposed Post-Development Basin Summary Table

	Basin A	Basin B	Basin C	Basin D	Basin E
Drainage Basin Area (acres)	0.83	1.12	2.97	0.88	0.49
***Total Impervious Area (acres)**	0.42	0.31	2.58	0.68	0.38
% Impervious	50.6%	27.7%	86.7%	77.3%	77.6%
Time of Conc., TC (min.)	10	10	10	10	10
Composite Curve Number, CN	68.6	73.5	90.1	84.5	84.6
Node	SMA-A.1	SMA-B	SMA-C	SMA-D	SMA-E

*Any wet pond water surface area not included in this figure.

	Basin F	Basin G.1	Basin G.2	Basin H	Basin I	Basin J
Drainage Basin Area (acres)	0.95	0.67	0.56	0.79	0.44	0.53
***Total Impervious Area (acres)**	0.67	0.67	0.56	0.54	0.34	0.45
% Impervious	70.5%	100%	100%	68.3%	77.3%	84.9%
Time of Conc., TC (min.)	10	15	15	10	10	10
Composite Curve Number, CN	80.2	98.0	98.0	79.1	84.8	89.5
Node	SMA-F	SMA-A.2	SMA-B	SWALE-1	SWALE-2	SWALE-3

*Any wet pond water surface area not included in this figure.

3.2.1 CN CALCULATIONS

The CN calculations for the post-development conditions can be found in ***Appendix C***.

3.2.2 TIME OF CONCENTRATION

The time of concentration ('Tc') calculations for the post-development drainage basins was determined to be the minimum of 10 minutes. Please refer to the Post-Development Drainage Basin Map in **Appendix A**.

3.2.3 SEASONAL HIGH WATER TABLE AND CONTROL ELEVATIONS

Seasonal High Water Table (SHWT) elevations were determined using the Geotechnical Report provided by ECS, which has been included with this submittal for details. Based on the provided ECS Report, the estimated seasonal high water table elevation occurs within 2.5 to 5-ft below existing grade.

3.3 STORMWATER MANAGEMENT

Stormwater runoff for the proposed Winter Springs Marketplace property will be treated and attenuated through the use of off-line exfiltration trenches and a dry pond along with a wet detention pond which ultimately receives all on site flows prior to discharging. Runoff from the on-site post-development basins will sheet flow into the proposed inlets which will route flows to the exfiltration trenches and dry retention ponds. See **Appendix C** for the exfiltration trench, dry retention pond, and wet detention pond calculations.

Dry retention pond SMA-A will utilize a Type D control structure to route flows to wet detention pond SMA-B. Wet retention pond SMA-B will utilize Type E boxes to discharge to the offsite outfalls. The exfiltration trenches will utilize a diversion box near pond SMA-B along with weir structures to intermediate manholes to outfall to the wet detention pond. The parking lot swales utilize Type D boxes with elevated tops to convey flows from the swales to the exfiltration trenches. See Table 4 below for a summary of the controls structures proposed for the site.

Table 4: Control Structure Design for the Proposed Ponds

Post-Development Node	Weir Dimensions	Weir Elevation (ft.)	Top Elevation (ft.)	Structure Type
SMA-A (Combined)	5-ft Wide Rectangular	45.60	46.00	Type-D Inlet
SMA-B (To West Outfall)	N/A	N/A	44.50	Type-E Inlet
	1.4-ft Wide Rectangular	43.00	44.5	Sharp Crested Vertical Weir Within Control Structure
	3-in Circular	40.50	N/A	Circular Orifice
SMA-B (To East Outfall)	N/A	N/A	44.50	Type-E Inlet
	0.5-ft Wide Rectangular	43.35	44.5	Sharp Crested Vertical Weir Within Control Structure
SMA-C	8.75-ft Wide Rectangular	43.33	44.94	Diversion Structure Built into Type-H 4-Grate Inlet
	18-in Circular	43.33	N/A	*18-in CMP Connection to Secondary Outfall Trunk Line
SMA-D	18-in Circular (2)	43.66	N/A	*18-in CMP Connection to Secondary Outfall Trunk Line
SMA-E	18-in Circular	43.06	N/A	*18-in CMP Connection to Secondary Outfall Trunk Line
SMA-F	18-in Circular (2)	43.00	N/A	*18-in CMP Connection to Secondary Outfall Trunk Line
SMA-G	18-in Circular (2)	43.33	N/A	*18-in CMP Connection to Secondary Outfall Trunk Line
SMA-H	N/A	N/A	45.25	Type-D Inlet
SMA-I	N/A	N/A	45.25	Type-D Inlet
SMA-J	N/A	N/A	45.25	Type-D Inlet

*The secondary outfalls within the exfiltration trenches are 18-inch CMP which tie into the bottom elevation of each trench system at 42.0-ft and connect to the secondary outfall manhole at their associated weir elevations.

3.3.1 TAILWATER CONDITIONS

The tailwater conditions for the post-development condition are the same as the pre-development condition. Please refer to Section 2.4.4.

3.3.2 WATER QUALITY (TREATMENT VOLUME)

Offline exfiltration trenches, dry retention ponds, and dry retention swales interconnected with a wet detention pond are utilized as the Best Management Practice (BMP) to reduce the discharge of pollutants associated with stormwater runoff. Due to the site's ultimate discharge to Lake Jessup, the volume required for the removal of phosphorous is a third criteria used in finding the required water quality volume. The following standards were utilized for the treatment volume requirements for off-line exfiltration trenches.

The greater of:

0.5 inch of runoff over the site (SJRWMD)

OR

1.25 inches of runoff over the impervious area (SJRWMD)

OR

Inches of runoff over basin area provided in BMPTrains analysis (SJRWMD)

Table 5: Dry Retention Pond Treatment Volume Required vs. Provided

Drainage Area	Drainage Area (acres)	*Imp. Area (acres)	Required TV						Provided TV
			0.5" Over Site	1.25" Over Impervious Area	Add'l 0.5" Over Site	Pres. Criteria Volume Req.	TV Required for Nutrient Removal	Total Required	
SMA-A	1.49	1.08	0.06 ac-ft	0.11 ac-ft	0.06 ac-ft	0.17 ac-ft	0.14 ac-ft	0.17 ac-ft	0.21 ac-ft
SMA C	2.97	2.58	0.12 ac-ft	0.27 ac-ft	0.12 ac-ft	0.39 ac-ft	0.35 ac-ft	0.39 ac-ft	**0.35 ac-ft
SMA D	0.88	0.68	0.04 ac-ft	0.07 ac-ft	0.04 ac-ft	0.11 ac-ft	0.11 ac-ft	0.11 ac-ft	0.11 ac-ft
SMA E	0.49	0.38	0.02 ac-ft	0.04 ac-ft	0.02 ac-ft	0.06 ac-ft	0.09 ac-ft	0.09 ac-ft	0.09 ac-ft
SMA F	0.95	0.67	0.04 ac-ft	0.07 ac-ft	0.04 ac-ft	0.11 ac-ft	0.11 ac-ft	0.11 ac-ft	0.11 ac-ft
SMA G	1.76	1.33	0.07 ac-ft	0.14 ac-ft	0.07 ac-ft	0.21 ac-ft	N/A	0.21 ac-ft	0.40 ac-ft
BASIN H	0.79	0.54	0.03 ac-ft	0.06 ac-ft	0.03 ac-ft	0.09 ac-ft	0.06 ac-ft	0.09 ac-ft	***0.06 ac-ft
BASIN I	0.44	0.34	0.02 ac-ft	0.04 ac-ft	0.02 ac-ft	0.06 ac-ft	0.06 ac-ft	0.08 ac-ft	***0.06 ac-ft
BASIN J	0.53	0.45	0.02 ac-ft	0.05 ac-ft	0.02 ac-ft	0.07 ac-ft	0.02 ac-ft	0.07 ac-ft	***0.02 ac-ft
							Total:	**1.21 ac-ft**	**1.315 ac-ft**

***** Impervious area does not include pond surface area.

****** Remainder of required volume is provided within interconnected exfiltration system SMA-G.

******* This system holds volume for nutrient removal pretreatment. Treatment volume in accordance with SJRWMD Applicant's Handbook (Vol. 2) Section 8.2 is provided within SMA-G.
******** SMA-G provides additional nutrient removal pre-treatment volume and attenuation. Basins flowing through this system have previously met nutrient removal criteria. The additional volume provided within this system assists interconnected SMA-C, H, I, & J in meeting presumptive criteria treatment volume.

The following standards were utilized for the treatment volume associated with incidental areas draining to interconnected wet ponds A and B.

The greater of:

1.0 inch of runoff over the site (SJRWMD)

OR

2.5 inches of runoff over the impervious area (SJRWMD)

Table 6: *Wet Detention Pond Treatment Volume Required vs. Provided*

Drainage Area	Drainage Area (acres)	*Imp. Area (acres)	Required TV			Provided TV
			1.0" Over Site	2.5" Over Impervious Area	Total Required	
SMA B	1.68	0.87	0.14 ac-ft	0.18 ac-ft	0.18 ac-ft	1.02 ac-ft

*Impervious area does not include pond surface area.

** SMA B provides treatment for Basins B & G.2 in accordance with Section 8.2 of the SJRWMD Applicant's Handbook (Vol. 2).

As shown in the Tables 5 & 6 above, the provided Treatment Volume is greater than the required Treatment Volume per SJRWMD criteria. Please see **Appendix C** for treatment volume calculations.

3.3.3 WATER QUALITY VOLUME RECOVERY (BLEED DOWN)

Per SJRWMD criteria, the dry retention areas are required to provide the capacity for the appropriate treatment volume within 72-hours following a storm event. The wet pond is required to drawdown one-half of its required treatment volume within 24 to 30 hours following a storm event, but no more than half in the first 24 hours. Refer to the tables below for summary of permeability constants used with the exfiltration drawdown analysis.

Table 7: Design Permeability Rates

K (Horizontal) ft/day	K (Vertical) ft/day
51	17*

**Value includes safety factor of 2*

Recovery time was determined utilizing Advanced Interconnected Channel & Pond Routing (ICPR Ver. 4.04.00). As designed, the proposed dry retention ponds will drawdown the required water quality volume in less than 72 hours. The wet ponds will drawdown the volume within the 24 to 30 hour period provided in SJRWMD criteria. See **Appendix E** for supporting recovery analysis and results.

3.3.4 PROPOSED DEVELOPMENT RUNOFF

The stormwater runoff from the post-development basins was determined using Advanced Interconnected Channel & Pond Routing (ICPR Ver. 4.04.00) by Streamline Technologies, Inc. Please refer to ***Appendix A*** for the nodal exhibit and ***Appendix D*** for the input report and summary of results.

Please refer to the table below for a summary of the pre- vs. post- development peak discharge rates (Q) and the resulting maximum stage within the proposed BMP.

Table 8: Runoff Analysis

Storm Event	Tuskawilla Outfall (EAST) Q_{max} (CFS)		Wetland Outfall (WEST) Q_{max} (CFS)	
	Pre	Post	Pre	Post
25yr-24hr	3.01	0.57	28.14	25.46

Table 9: Proposed Max Stages

Storm Event	SMA-A.1 Max Stage (ft.) (NAVD)	SMA-A.2 Max Stage (ft.) (NAVD)	SMA-B Max Stage (ft.) (NAVD)	SMA-C Max Stage (ft.) (NAVD)	SMA-D Max Stage (ft.) (NAVD)	SMA-E Max Stage (ft.) (NAVD)
Mean Annual	45.67	45.67	41.70	43.39	43.84	43.13
10yr-24hr	46.01	46.06	43.66	43.85	44.34	43.68
25yr-24hr	46.05	46.11	43.85	43.97	44.40	43.88
100yr-24hr	46.11	46.24	44.46	44.63	44.61	44.63
Top of Bank/Trench	46.50	46.50	45.00	44.63	44.30	44.25

Storm Event	SMA-F Max Stage (ft.) (NAVD)	SMA-G Max Stage (ft.) (NAVD)	SWALE 1 Max Stage (ft.) (NAVD)	SWALE 2 Max Stage (ft.) (NAVD)	SWALE 3 Max Stage (ft.) (NAVD)
Mean Annual	43.07	43.39	45.29	45.26	45.30
10yr-24hr	43.69	43.88	45.35	45.32	45.34
25yr-24hr	43.89	44.00	45.36	45.33	45.34
100yr-24hr	44.63	44.64	45.38	45.34	45.36
Top of Bank/Trench	44.65	44.52	45.35	45.35	45.35

3.3.5 MINIMUM BUILDING FINISHED FLOORS (100-YEAR STORM EVENTS)

As required by SJRWMD ERP Applicants Handbook (Volume II), all building finished floor elevations must be designed to be above the pond design high elevation of the 100 year storm event. Please refer to Table 7 below for a summary of the design high water elevations for the 100-year storm events.

As demonstrated, all building finished floor elevations are established above the recommended elevations.

Table 10: Minimum Building Finished Floors (100yr Storm Event)

	100yr-24hr Max. Stage	Min. Allowed Finished Floor El. (ft.) (NAVD)		100yr-24hr Max. Stage	Min. Allowed Finished Floor El. (ft.) (NAVD)
SMA A.1	46.11	46.30	**SMA F**	44.63	46.30
SMA A.2	46.24		**SMA G**	44.64	
SMA B	44.46		**SWALE 1**	45.38	
SMA C	44.63		**SWALE 2**	45.34	
SMA D	44.61		**SWALE 3**	45.36	
SMA E	44.63				

3.4 NUTRIENT LOADING ANALYSIS

A nutrient loading analysis was performed to provide a pre- versus post- nutrient loading analysis to show that the proposed development does not add to the impairment of the receiving water body by increasing the post-development nitrogen and phosphorus annual mass loading.

The requirements dictated by SJRWMD are that the post-development nutrient loading rate will not be greater than the pre-development loading rate. The proposed stormwater systems utilize a combination of exfiltration trench, dry retention pond, and dry retention swales in series with a wet detention pond to treat and attenuate post-development runoff.

The resulting PRE-development annual mass loading rates were calculated to be:

	Pre-Development Nitrogen Loading Rate (kg/year)	Pre-Development Phosphorous Loading Rate (kg/year)		Pre-Development Nitrogen Loading Rate (kg/year)	Pre-Development Phosphorous Loading Rate (kg/year)
BASIN A & G.1	0.176	0.058	**BASIN F**	0.565	0.188
BASIN B	0.062	0.021	**BASIN G.2**	0.019	0.006
BASIN C	3.134	1.041	**BASIN H**	0.470	0.156
BASIN D	0.521	0.173	**BASIN I**	0.145	0.048
BASIN E	0.224	0.074	**BASIN J**	0.018	0.006

The resulting POST-development annual mass loading rates were calculated to be:

	Post-Development Nitrogen Loading Rate (kg/year)	Post-Development Phosphorous Loading Rate (kg/year)		Post-Development Nitrogen Loading Rate (kg/year)	Post-Development Phosphorous Loading Rate (kg/year)
BASIN A & G.1	5.096	0.848	**BASIN F**	3.161	0.526
BASIN B	1.036	0.172	**BASIN G.2**	2.632	0.438
BASIN C	12.149	2.021	**BASIN H**	2.547	0.424
BASIN D	3.206	0.533	**BASIN I**	1.603	0.267
BASIN E	1.790	0.298	**BASIN J**	2.119	0.352

Based on the pre- vs. post- development loading rates, the treatment systems have been sequenced in the following order to provide the removal efficiencies needed.

BMPTrains System Routing						
Catchment 8 (SWALE 1)	↘	Catchment 3 (SMA-C)	↘			
Catchment 9 (SWALE 2)	→	Catchment 7 (SMA-G)	↘			
Catchment 10 (SWALE 3)	↗	Catchment 4 (SMA-D)	→	Catchment 2 (SMA-B)	→	OUTLET
		Catchment 5 (SMA-E)	↗			
		Catchment 6 (SMA-F)	↗			
				Catchment 1 (SMA-A.1 & A.2)	→	OUTLET

As shown in the table above, Basin A drains into Basin B's wet detention for further nutrient removal. Basin C through Basin G route through Basin B's wet detention pond for further nutrient removal. Basin H through Basin J pass through Basin G and Basin B for additional nutrient removal. See ***Appendix C*** for the removal efficiencies of each of the individual systems. The summary report within ***Appendix C*** provides the overall removal efficiency of the site given the sequence in which drainage must flow before it is discharged from the site. The table below provides the summary of the sites overall removal efficiency.

	Nitrogen Loading Rate (kg/year)	Nitrogen Removal Efficiency (%)	Phosphorous Loading Rate (kg/year)	Phosphorous Removal Efficiency (%)
Target	5.33	85%	1.771	70%
Provided	4.59	87%	0.472	92%

As designed, the proposed BMPs provide sufficient removal of the resulting post-development nitrogen and phosphorus nutrient loading. Please refer to Appendix C for the loading calculations, per BMP Trains 2020 Ver. 2.1.

3.5 CONCLUSION

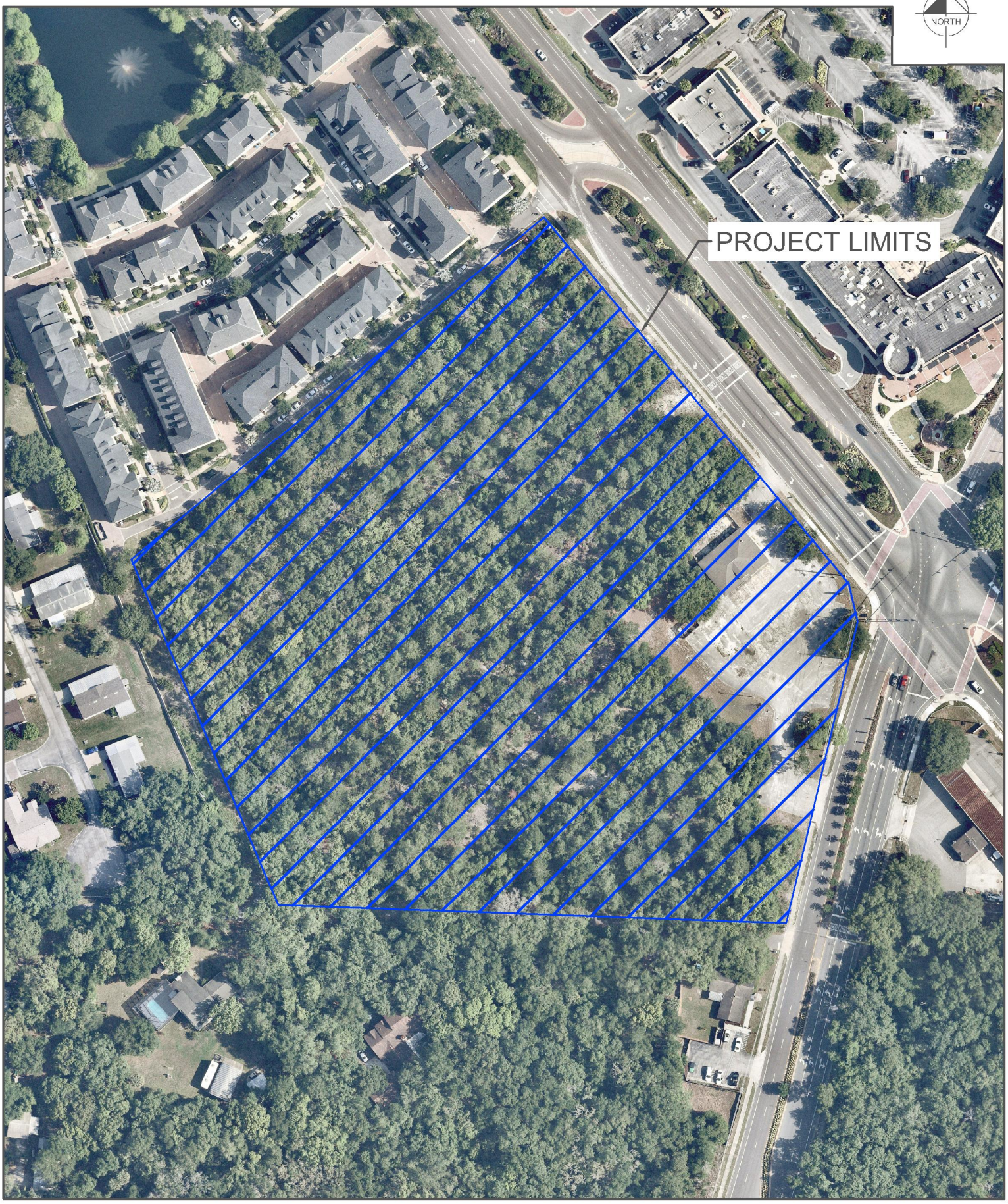
This Drainage Analysis demonstrates the proposed improvements and design of the proposed stormwater management system(s) meet or exceeds all the requirements of the St. John's River Water Management District (SJRWMD) and the City of Winter Springs.

APPENDICES

APPENDIX A

FIGURES

Aerial Photograph
General Location Map
SCS soil survey
USGS Quad Map
FEMA F.I.R.M.
Pre-Development Basin Node Map
Post-Development Basin Node Map



EX-1

WINTER SPRINGS MARKETPLACE

CITY OF WINTER SPRINGS, FL

LOCATION MAP

Kimley»Horn

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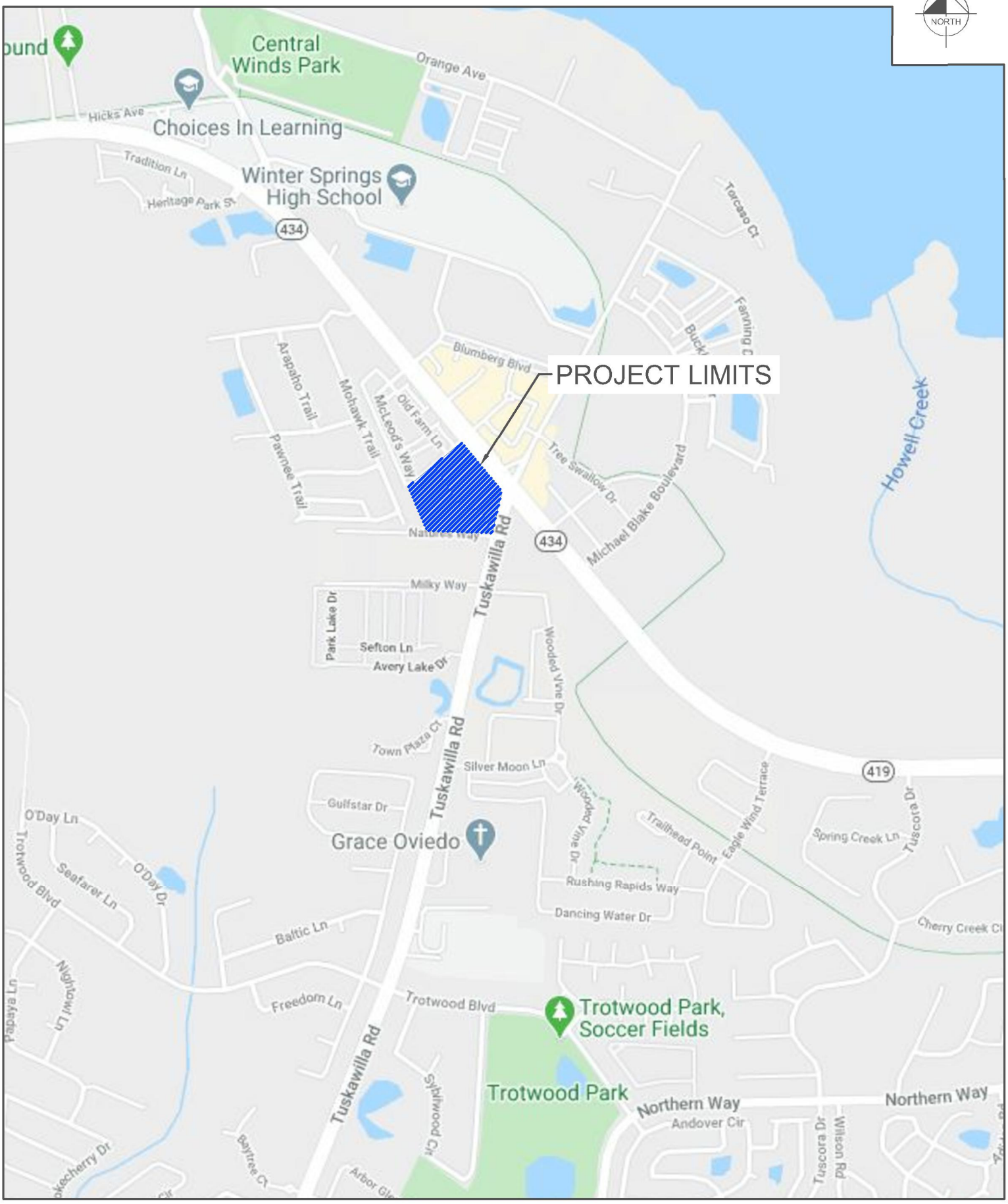

EX-2

WINTER SPRINGS MARKETPLACE

CITY OF WINTER SPRINGS, FL

LOCATION MAP

Kimley»Horn

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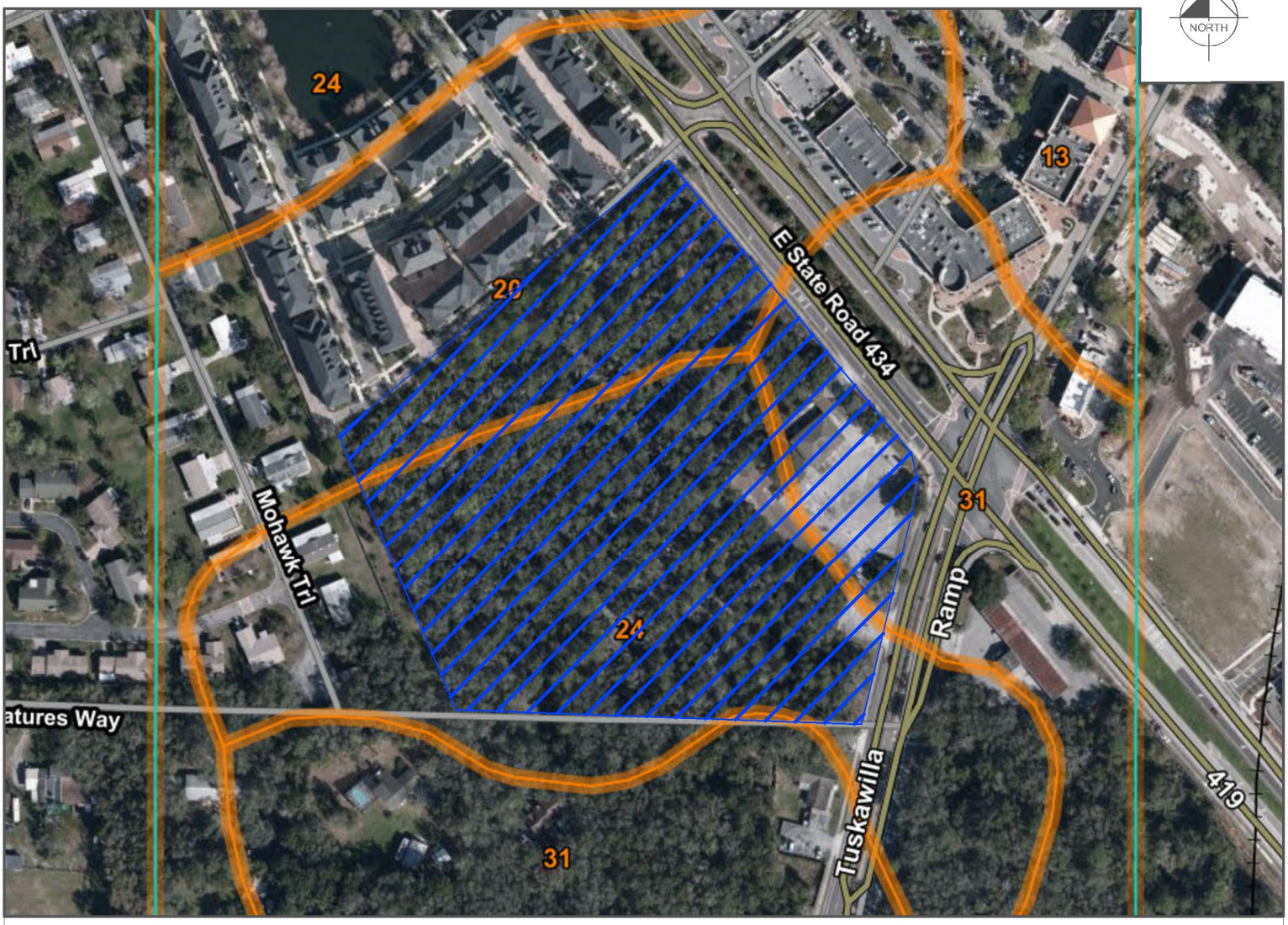

RUSLE2 Related Attributes–Seminole County, Florida								
Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
20—Myakka and EauGallie fine sands								
Myakka	58	151	A/D	.02	5	97.0	1.0	2.0
EauGallie	32	151	A/D	.02	5	97.0	1.0	2.0
24—Paola-St. Lucie sands, 0 to 5 percent slopes								
Paola	52	151	A	.02	5	98.0	1.0	1.0
St. Lucie	43	151	A	.02	5	99.0	0.5	0.5
31—Tavares-Millhopper complex, 0 to 5 percent slopes								
Tavares	63	151	A	.05	5	97.0	1.0	2.0
Millhopper	32	151	A	.05	5	94.0	1.0	5.0

EX-3

WINTER SPRINGS MARKETPLACE

CITY OF WINTER SPRINGS, FL

SOILS MAP

Kimley»Horn

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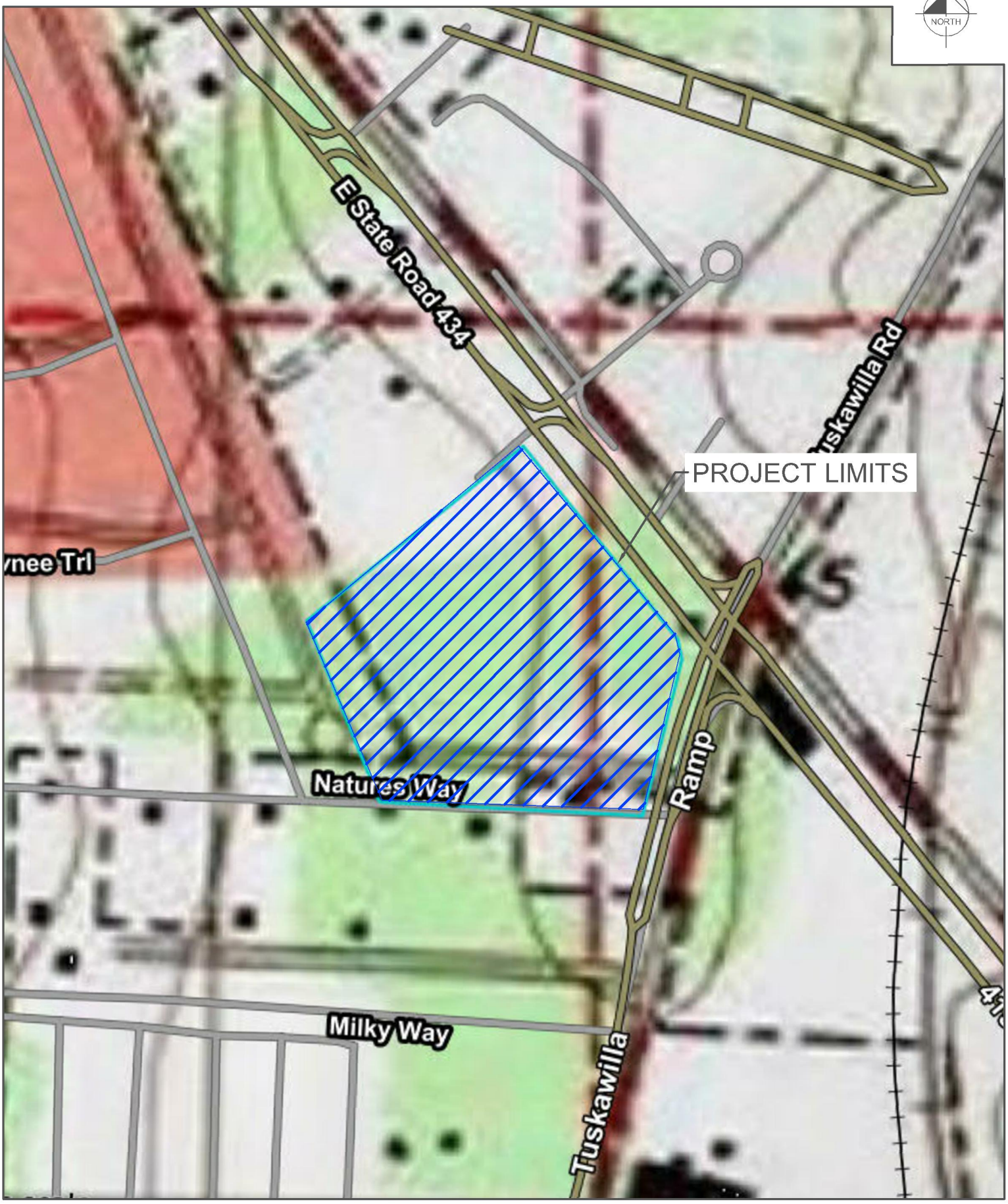


EX-4

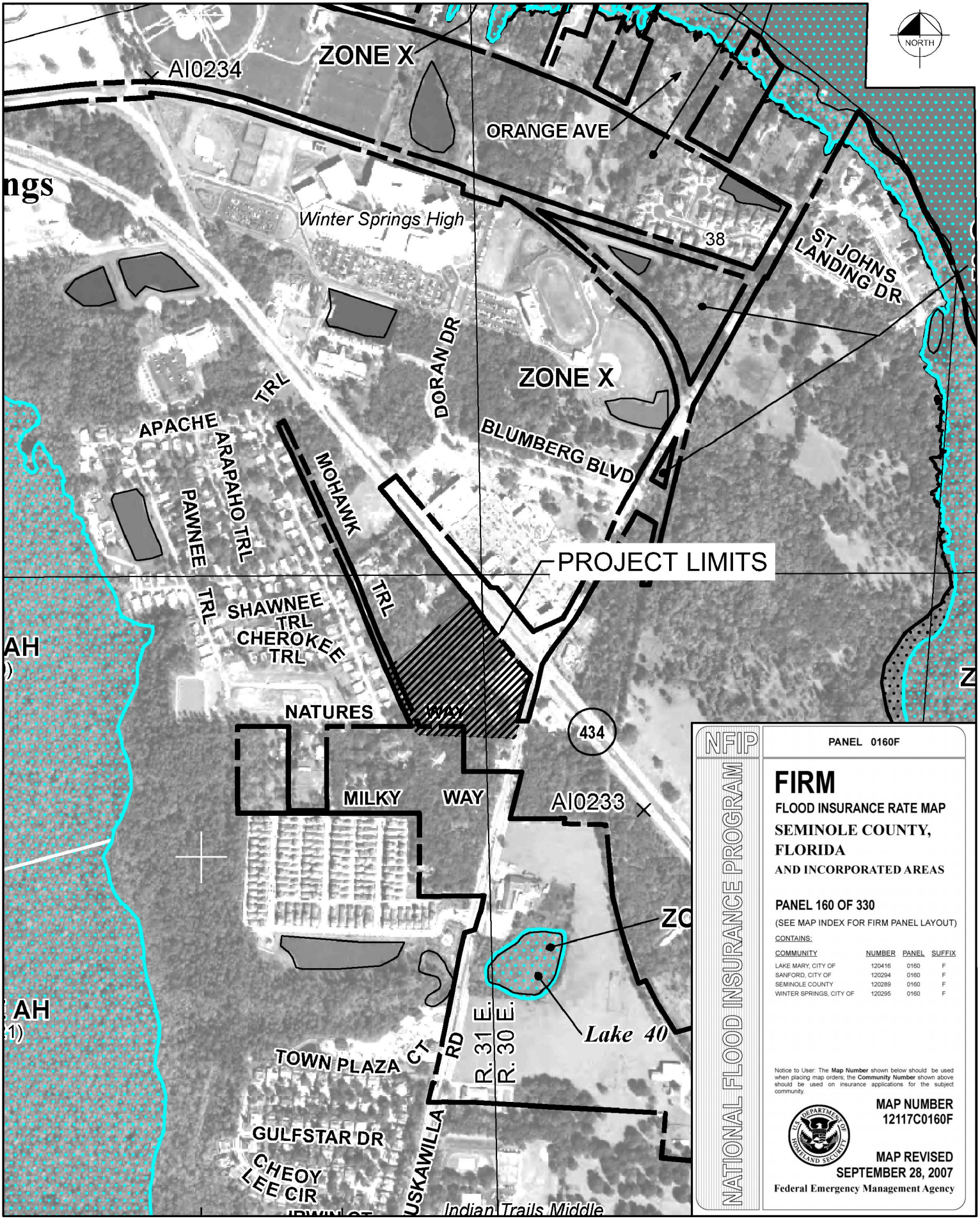
WINTER SPRINGS MARKETPLACE

CITY OF WINTER SPRINGS, FL

USGS QUAD MAP

Kimley»Horn

K:\ORL_Civil\149170016-Winter Springs Marketplace\CADD\EXHIBITS\DRAINAGE REPORT EXHIBITS.dwg



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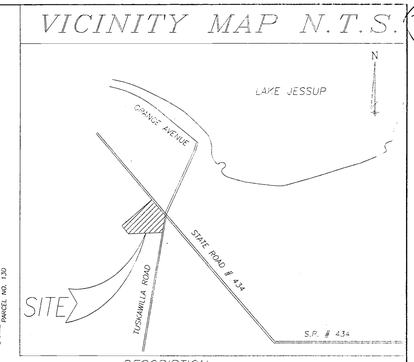
EX-5

WINTER SPRINGS MARKETPLACE

CITY OF WINTER SPRINGS, FL

FEMA F.I.R.M. MAP

Kimley»Horn



③

PLAT OF SURVEY

ALTA/ACSM LAND TITLE SURVEY

LEGEND

BB - BOTTOM OF BANK
BC - BACK OF CURB
→ - BACKFLOW PREVENTER
BM - BENCHMARK
BPC - BURIED POWER CABLE
CALC - CALCULATED
C&M - CALCULATED & MEASURED
Δ - CENTRAL ANGLE
CBW - CONCRETE BLOCK WALL
CF - CONCRETE FLUME
CHW - CONCRETE HEAD WALL
CLF - CHAIN LINK FENCE
℄ - CENTERLINE
CM - CONCRETE MONUMENT
CMP - CORRUGATED METAL PIPE
CO - CLEAN OUT
CONC - CONCRETE
COVD - COVERED
CP - CONCRETE PAD
CPP - CORRUGATED PLASTIC PIPE
CW - CONCRETE WALKWAY
D&M - DEED/DESC & MEASURED
DE - DRAINAGE EASEMENT
DESC - DESCRIPTION
▣ - DUMPSTER
DW - DRIVEWAY
(EM) - ELECTRIC METER
EB - ELECTRICAL BOX
ESMT - EASEMENT
E/P - EDGE OF PAVEMENT
FIRM - FLOOD INSURANCE RATE MAP
FFE - FINISHED FLOOR ELEVATION
FH - FIRE HYDRANT
FL - FLOW LINE
FND - FOUND
-G- - GAS LINE
(GM) - GAS METER
≻ - GUY WIRE ANCHOR
♿ - HANDICAP PARKING
HR - HANDICAP RAMP
INV - INVERT ELEVATION
IP - IRON PIPE
IR - IRON ROD
L - ARC LENGTH
☼ - LIGHT POLE
LSA - LANDSCAPED AREA
MEAS - MEASURED
⊐ - MITERED END SECTION
◑ - MONITORING WELL
N&D - NAIL & DISK
NTS - NOT TO SCALE
OHE - OVERHEAD ELECTRIC
OL - ON LINE
ORB - OFFICIAL RECORDS BOOK
PC - POINT OF CURVATURE
PEP - PER ENGINEERING PLANS
PG - PAGE
PI - POINT OF INTERSECTION
POB - POINT OF BEGINNING
POC - POINT OF COMMENCEMENT
PP - POWER POLE
PS - PARKING SPACES
PT - POINT OF TANGENCY
PVC - PLASTIC PIPE
R - CURVE RADIUS
RCP - REINFORCED CONCRETE PIPE
R/W - RIGHT OF WAY
⊕ - SANITARY MANHOLE
SAN - SANITARY LINE
SN - SIGN
00.00 - SPOT ELEVATION
-SD- - STORM/DRAIN LINE
◎ - STORM MANHOLE
[T] - TRANSFORMER
▦ - STORM INLET
TB - TOP OF BANK
TP - TRAFFIC POLE
⊥ - TRAFFIC SIGN
TR - TELEPHONE RISER
TSB - TRAFFIC SIGNAL BOX
TSW - TRAFFIC SIGNAL WIRE
TV - CABLE TV RISER
TYP - TYPICAL
UE - UTILITY EASEMENT
UNTL - UNDERGROUND TELEPHONE
-W- - WATER LINE
WF - WOOD FENCE
⊗ - WATER METER
— - WATER VALVE
- NUMBER
(#) - EASEMENT NUMBER

INVERTS

DOT INLET A
TOP = 45.88'
W INV (6" CPP) = 42.55'
NE INV (18" RCP) = 39.20'

DOT INLET B
TOP = 45.06'
NW INV (6" CPP) = 41.29'
NE INV (18" RCP) = 39.09'

INLET C
TOP = 44.64'
SW INV (18" RCP) = 39.04'

MANHOLE D
TOP = 43.36'
NW INV (18" RCP) = 38.43'
NE INV (18" RCP) = 38.72'
SW INV (18" RCP) = 38.55'

MANHOLE E
TOP = 43.26'
NE INV (18" RCP) = 38.88'
NW INV (18" RCP) = 39.01'

INLET F
TOP = 42.99'
SE INV (18" RCP) = 39.37'

INLET G
TOP = 44.86'
NE INV (12" CPP) = 42.33'
SE INV (18" RCP) = 40.61'
SW INV (18" RCP) = 40.71'

CONTROL STRUCTURE H **REACH #1**
TOP = 44.77'
NE INV (12" CPP) = 42.82'
NW INV (12" CPP) = 41.87'
WEIR = 44.36'

INLET I
TOP = 44.14'
W INV (2-12" CPP) = 41.99'

GREASE TRAP J
TOP = 45.49'
E INV (4" PVC) = 44.04'

GREASE TRAP K
TOP = 45.59'
W INV (4" PVC) = 44.00'

LINE CHART

L1 S 12°13'40" E 44.87' C&M

TREE CHART

114 - 12" OAK
119 - 13" OAK
120 - 14" OAK
121 - 12" OAK
122 - 10" PINE
125 - 18" OAK
141 - 8" OAK
142 - 24" OAK
155 - 6" OAK
158 - 7" OAK
167 - 7" OAK
168 - 8" OAK
169 - 10" OAK
203 - 48" OAK
265 - 6" OAK
266 - 11" OAK
267 - 6" OAK
268 - 16" OAK
269 - 16" OAK
270 - 30" OAK
271 - 11" PALM
272 - 13" OAK
273 - 24" OAK
274 - 34" OAK
437 - 6" OAK
438 - 15" OAK
439 - 10" OAK
440 - 12" PINE
441 - 6" PINE
442 - 8" PINE
443 - 23" PINE
444 - 8" OAK
445 - 12" OAK
446 - 6" OAK
447 - 7" PINE
448 - 13" PINE
449 - 13" PINE
450 - 7" OAK
451 - 12" PINE
452 - 10" OAK
453 - 6" OAK
454 - 10" PINE
455 - 11" PINE
456 - 13" OAK
457 - 10" PINE
458 - 13" PINE
459 - 8" PINE
460 - 7" PINE
461 - 24" PINE
462 - 7" OAK
463 - 10" OAK
464 - 10" OAK
465 - 10" OAK
466 - 12" PINE
467 - 8" PINE
468 - 6" PINE
469 - 6" PINE
470 - 22" PINE
471 - 15" PALM
472 - 18" PINE
473 - 18" PINE
474 - 16" PINE
475 - 12" PINE
476 - 7" OAK
477 - 12" PINE
478 - 10" PINE
479 - 6" OAK
480 - 6" PINE
481 - 13" PINE
482 - 16" PINE
483 - 15" PALM
484 - 8" PINE
485 - 11" PINE
486 - 15" PALM
487 - 13" PINE
488 - 12" PINE
489 - 12" PINE
490 - 12" PINE
491 - 12" PINE
493 - 8" PINE
495 - 10" OAK
496 - 15" PINE
497 - 15" PINE
498 - 8" PINE
499 - 30" PALM
500 - 10" PINE
501 - 8" PINE
502 - 13" PINE
504 - 15" PALM
505 - 7" OAK
506 - 7" OAK
507 - 20" PINE
509 - 7" PINE
510 - 6" PINE
511 - 7" OAK
512 - 24" OAK
513 - 20" PINE
514 - 15" PINE
515 - 15" PINE
516 - 15" PINE
517 - 15" PALM
518 - 12" PINE
524 - 10" PINE
525 - 18" PINE
526 - 6" CAMPHOR
527 - 13" PALM
528 - 6" PINE
529 - 6" PINE
530 - 16" PINE
531 - 6" PINE
532 - 18" PALM
533 - 18" PINE
534 - 20" PINE
535 - 20" PINE
536 - 15" PINE
537 - 6" MAPLE
540 - 12" PINE
541 - 10" PINE
542 - 13" PINE
543 - 11" PINE
544 - 14" PINE
545 - 13" PINE
546 - 15" PINE
547 - 18" PINE
548 - 14" PINE
552 - 14" PINE
553 - 2-9" MAPLE
554 - 14" PINE
555 - 15" PINE
556 - 6" MAPLE
557 - 12" PINE
558 - 6" PINE
559 - 13" PINE
560 - 14" PINE
561 - 7" PINE
562 - 14" PINE
563 - 13" PINE
564 - 15" PINE
565 - 6" PINE
566 - 6" PINE
567 - 16" PINE
573 - 10" MAPLE
574 - 10" PINE
575 - 9" MAPLE
576 - 16" MAPLE
577 - 12" PALM
578 - 9" PINE
579 - 9" SYCAMORE
580 - 25" PINE
581 - 9" PINE
582 - 9" PINE
583 - 10" PINE
584 - 7" PINE
585 - 14" PINE
586 - 6" PINE
587 - 22" PINE
588 - 18" PINE
589 - 10" PINE
590 - 8" PINE
591 - 16" PINE
592 - 9" OAK
593 - 8" OAK
594 - 9" OAK
595 - 12" PINE
596 - 12" PINE
597 - 13" PINE
598 - 16" PALM
599 - 12" PINE
600 - 6" OAK
601 - 7" OAK
602 - 8" OAK
603 - 8" OAK
604 - 7" OAK
605 - 8" OAK
606 - 6" OAK
607 - 16" PINE
608 - 15" PINE
609 - 6" OAK
610 - 6" PINE
611 - 6" OAK
612 - 7" OAK
613 - 6" OAK
614 - 6" OAK
615 - 8" OAK
616 - 8" OAK
617 - 6" OAK
618 - 7" OAK
619 - 10" OAK
620 - 9" OAK
621 - 6" OAK
622 - 6" OAK
623 - 6" OAK
624 - 8" OAK
625 - 10" OAK
626 - 7" OAK
627 - 6" OAK
628 - 14" PINE
629 - 8" OAK
630 - 7" OAK
631 - 7" OAK
632 - 24" PINE
633 - 7" PINE
634 - 14" PINE
635 - 6" TREE
636 - 12" PINE
638 - 12" PALM
639 - 10" OAK
640 - 14" OAK
341 - 10" OAK
642 - 11" OAK
643 - 9" OAK
644 - 6" OAK
645 - 6" OAK
647 - 15" PINE
649 - 10" OAK
650 - 9" OAK
651 - 11" PINE
652 - 10" OAK
653 - 15" PINE
654 - 13" PINE
655 - 10" PALM
656 - 7" OAK
657 - 12" PINE
658 - 12" PINE
659 - 7" PINE
660 - 15" PINE
661 - 6" PINE
662 - 2-7" OAK
663 - 8" OAK
664 - 14" PINE
665 - 12" PINE
666 - 6" PINE
667 - 6" PINE
668 - 13" PINE
669 - 11" PINE
670 - 10" PINE
671 - 14" PINE
672 - 12" PINE
673 - 8" PINE
674 - 11" PINE
675 - 10" PINE
676 - 10" PINE
677 - 8" PINE
678 - 8" PINE
679 - 10" PINE
680 - 9" PINE
681 - 7" PINE
682 - 9" PINE
683 - 7" PINE
684 - 6" PINE
685 - 7" PINE
686 - 11" OAK
687 - 6" OAK
688 - 2-6" OAK
689 - 16" OAK
690 - 6" OAK
691 - 9" OAK
692 - 13" PINE
693 - 9" PINE
694 - 9" PINE
695 - 6" OAK
696 - 7" PINE
697 - 11" OAK
698 - 9" OAK
699 - 8" OAK
700 - 6" OAK
701 - 6" PINE
702 - 36" OAK
703 - 7" OAK
704 - 6" OAK
705 - 6" OAK
706 - 12" PINE
707 - 6" PINE
708 - 11" PINE
709 - 13" PINE
710 - 7" PINE
711 - 7" PINE
713 - 8" PINE
714 - 12" PINE
715 - 6" OAK
716 - 12" OAK
717 - 12" PINE
718 - 7" OAK
719 - 6" PINE
720 - 8" OAK
721 - 11" PINE
722 - 6" PINE
723 - 7" PINE
724 - 6" PINE
725 - 8" OAK
726 - 9" OAK
727 - 2-12" PINE
728 - 7" OAK
729 - 7" PINE
730 - 6" OAK
731 - 8" OAK
733 - 7" PINE
734 - 6" OAK
735 - 6" OAK
736 - 7" OAK
737 - 7" OAK
748 - 6" PINE
749 - 8" PINE
750 - 8" OAK
751 - 9" OAK
752 - 2-14" OAK
753 - 9" OAK
754 - 6" PINE
755 - 6" OAK
756 - 8" PINE
784 - 10" OAK
785 - 24" OAK
786 - 10" OAK
787 - 9" OAK
788 - 9" OAK
789 - 9" OAK
790 - 8" OAK
791 - 10" PINE
792 - 13" OAK
793 - 20" OAK
794 - 15" OAK
795 - 7" OAK
796 - 8" OAK
797 - 6" OAK
798 - 18" OAK
799 - 42" OAK
800 - 15" OAK
801 - 6" PINE
802 - 6" PINE
803 - 7" OAK
804 - 7" OAK
805 - 7" OAK
806 - 6" OAK
807 - 16" PINE
808 - 11" PINE
809 - 13" OAK
810 - 8" PINE
811 - 2-15" OAK
812 - 8" OAK
813 - 12" PINE
814 - 6" PINE
815 - 6" PINE
816 - 6" OAK
817 - 14" OAK
818 - 15" PINE
823 - 6" OAK
824 - 10" OAK
825 - 7" OAK
826 - 11" OAK
827 - 24" OAK
828 - 12" OAK
829 - 14" OAK
830 - 15" OAK
831 - 7" PINE
832 - 12" OAK
833 - 13" OAK
834 - 8" OAK
835 - 15" OAK
836 - 17" OAK
837 - 13" OAK
838 - 37" OAK
839 - 8" PINE
840 - 7" OAK
841 - 12" OAK
842 - 20" OAK
843 - 9" PINE
844 - 6" OAK
944 - 13" OAK
945 - 7" OAK
946 - 6" PINE
947 - 9" PINE
949 - 15" OAK
950 - 12" OAK
951 - 14" OAK
952 - 11" OAK
956 - 14" PINE
957 - 13" PINE
962 - 12" PINE
963 - 16" PINE
964 - 11" OAK
965 - 18" OAK
966 - 20" OAK
967 - 6" OAK
968 - 6" PINE
969 - 14" PINE
970 - 11" PINE
971 - 11" OAK
972 - 18" OAK
973 - 12" OAK
974 - 18" PINE
975 - 6" PINE
976 - 13" PINE
977 - 13" PINE
978 - 6" PINE
979 - 11" PINE
980 - 11" PINE
981 - 15" PINE
982 - 11" PINE
983 - 14" PINE
987 - 23" PINE
988 - 12" OAK
989 - 16" PINE
990 - 6" OAK
991 - 12" OAK
992 - 13" PINE
993 - 13" PINE
994 - 6" OAK
995 - 8" OAK
996 - 6" OAK
997 - 17" OAK
998 - 11" PINE
999 - 10" PINE
1000 - 14" PINE
1001 - 6" PINE
1002 - 18" OAK
1003 - 7" PINE
1004 - 13" PINE
1005 - 12" OAK
1006 - 16" PINE
1007 - 12" OAK
1008 - 6" PINE
1010 - 8" OAK
1011 - 23" OAK
1012 - 7" OAK
1013 - 12" PINE
1014 - 10" PINE
1015 - 14" PINE
1016 - 6" OAK
1017 - 10" PINE
1018 - 10" OAK
1019 - 12" PINE
1020 - 7" OAK
1021 - 13" PINE
1022 - 10" PINE
1023 - 18" OAK
1024 - 14" OAK
1025 - 18" OAK
1026 - 28" PINE
1027 - 8" PINE
1028 - 7" PINE
1029 - 12" PINE
1030 - 15" PINE
1031 - 16" OAK
1032 - 7" PINE
1033 - 11" PINE
1034 - 8" PINE
1035 - 7" OAK
1036 - 7" OAK
1037 - 12" OAK
1038 - 10" OAK
1039 - 11" OAK
1040 - 6" OAK
1041 - 15" OAK
1042 - 10" OAK
1043 - 9" OAK
1044 - 20" PINE
1045 - 10" PINE
1046 - 10" PINE
1047 - 8" PINE
1048 - 16" OAK
1049 - 14" OAK
1054 - 14" OAK
1058 - 12" PINE
1061 - 12" OAK
1067 - 14" PINE
1076 - 16" PINE
1081 - 12" OAK
1082 - 11" OAK
1083 - 8" OAK
1084 - 12" OAK
1085 - 18" PINE
1086 - 7" OAK
1087 - 9" OAK
1088 - 6" OAK
1089 - 10" OAK
1090 - 6" PINE
1091 - 8" OAK
1092 - 8" OAK
1093 - 6" OAK
1094 - 8" OAK
1095 - 11" PINE
1096 - 15" PINE
1097 - 15" PINE
1098 - 12" PINE
1099 - 6" OAK
1100 - 10" OAK
1101 - 11" OAK
1102 - 10" OAK
1105 - 7" OAK
1106 - 6" OAK
1107 - 10" OAK
1108 - 10" OAK
1114 - 9" PINE
1115 - 7" OAK
1116 - 10" PINE
1148 - 7" OAK
1149 - 6" OAK
1150 - 8" OAK
1151 - 8" PINE
1152 - 13" PINE
1153 - 11" PINE
1154 - 11" PINE
1161 - 13" OAK
1162 - 8" OAK
1163 - 7" OAK
1164 - 8" OAK
1165 - 6" OAK
1167 - 8" PINE
1171 - 13" PINE
1172 - 10" PINE
1173 - 11" PINE
1174 - 7" OAK
1175 - 12" PINE
1176 - 10" PINE
1177 - 7" PINE
1178 - 13" PINE
1179 - 12" PINE
1180 - 12" PINE
1181 - 6" OAK
1182 - 6" OAK
1183 - 6" OAK
1184 - 7" OAK
1185 - 7" OAK
1186 - 6" OAK
1187 - 6" OAK
1188 - 6" PINE
1190 - 6" OAK
1191 - 6" OAK
1192 - 7" PINE
1193 - 6" OAK
1194 - 11" PINE
1195 - 6" OAK
1196 - 17" PINE
1197 - 16" PINE
1198 - 6" OAK
1199 - 6" OAK
1201 - 6" OAK
1204 - 6" OAK
1205 - 6" OAK
1207 - 9" PINE
1208 - 12" OAK
1209 - 12" PINE
1210 - 12" PINE
1211 - 6" OAK
1212 - 11" PINE
1213 - 6" OAK
1214 - 11" PINE
1215 - 6" OAK
1216 - 11" OAK
1217 - 6" PINE
1218 - 11" OAK
1219 - 9" OAK
1220 - 6" OAK
1221 - 13" PINE
1222 - 8" OAK
1223 - 6" OAK
1224 - 16" PINE
1225 - 11" PINE
1226 - 2-7" OAK
1227 - 13" PINE
1228 - 13" PINE
1229 - 6" OAK
1230 - 6" OAK
1231 - 12" PINE
1232 - 12" PINE
1233 - 11" OAK
1234 - 11" OAK
1235 - 7" PINE
1236 - 12" PINE
1238 - 12" PINE
1239 - 2-14" OAK
1240 - 9" OAK
1241 - 6" PINE
1242 - 13" PINE
1243 - 8" OAK
1244 - 11" PINE
1245 - 2-9" OAK
1246 - 10" PINE
1247 - 7" OAK
1248 - 7" OAK
1249 - 9" PINE
1250 - 2-8" PINE
1251 - 8" PINE
1252 - 11" PINE
1253 - 8" PINE
1254 - 9" PINE
1255 - 2-9" OAK
1256 - 2-9" OAK
1257 - 16" PINE
1258 - 7" OAK
1259 - 10" OAK
1260 - 8" OAK
1261 - 6" OAK
1262 - 16" OAK
1263 - 6" PINE
1264 - 8" OAK
1265 - 16" OAK
1266 - 3-8" OAK
1267 - 16" OAK
1268 - 7" PINE
1269 - 13" OAK
1270 - 6" PINE
1271 - 8" PINE
1272 - 6" PINE
1273 - 9" PINE
1274 - 10" OAK
1275 - 10" OAK
1276 - 6" OAK
1277 - 7" OAK
1278 - 10" PINE
1280 - 6" OAK
1281 - 9" PINE
1282 - 8" PINE

ACCURIGHT SURVEYS
of Orlando Inc., LB 4475
2012 E. Robinson St.
Orlando, Florida 32803
(407) 894-6314

THIS SURVEY MEETS THE "MINIMUM TECHNICAL STANDARDS" AS REQUIPED BY CHAPTER 61G17-6, FLORIDA BOARD OF LAND SURVEYORS, PURSUANT TO SECTION 472.027 OF THE FLORIDA STATUTES.

"NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF THIS FLORIDA LICENSED SURVEYOR AND MAPPER."

SURVEYOR'S CERTIFICATE

To:
NTR DEVELOPMENT, INC.:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the "Minimum Standard Detail Requirements for ALTA\ACSM Land Title Surveys," jointly established and adopted by ALTA, ACSM and NSPS in 1999, and includes items 1, 2, 3, 4, 5, 7(a), 7(b), 7 (c), 8, 10, and 11(a), of Table A thereof. Pursuant to the Accuracy Standards as adopted by ALTA, NSPS and ACSM and in effect on the date of this certification, undersigned further certifies that proper field procedures, instrumentation, and adequate survey personnel were employed in order to achieve results comparable to those outlined in the "Minimum Angle, Distance, and Closure Requirements for Survey Measurements Which Control Land Boundaries for ALTA/ACSM Land Title Surveys".

Date: May 10, 2001

Robert C. Johnson, P.S.M. 5551

APR 26 2002

VICINITY MAP N.T.S.

DESCRIPTION

PARENT TRACT

THAT PART OF THE UNPLATTED PART OF BLOCK B OF D.R. MITCHELLS'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5 OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT 186 FEET NORTH 38°45' WEST OF THE MOST EASTERLY CORNER OF THAT PART OF SAID BLOCK B LYING SOUTHWEST OF THE SANFORD ORLANDO ROAD AND RUNNING NORTH 38°45" WEST 200 FEET ALONG THE WESTERLY LINE OF THE SANFORD OVIEDO HIGHWAY: THENCE SOUTH 51°15' WEST 710.14 FEET: THENCE SOUTH 22°15" EAST 208 FEET; THENCE NORTH 51°15' EAST 770 FEET TO THE POINT OF BEGINNING. ALSO DESCRIBED AS LOT 8 ACCORDING TO JOE E. JOHNSTON'S SURVEY AS RECORDED IN DEED BOOK 147, PAGE 221, SEMINOLE COUNTY, FLORIDA.

LESS THAT PORTION OF PARCEL 130 IN ORDER OF TAKING IN OFFICIAL RECORDS BOOK 2831, PAGE 1024 THAT LIES WITHIN ABOVE DESCRIBED PROPERTY.

THAT PART OF THE UNPLATTED PART OF BLOCK "B" OF MITCHELL'S SURVEY OF THE LEVY GRANT DESCRIBED AS BEGINNING AT THE MOST EASTERLY CORNER OF THAT PART OF SAID BLOCK "B" LYING SOUTHWEST OF THE SANFORD-OVIEDO HIGHWAY AND RUNNING NORTH 38°45' WEST 186.0 FEET ALONG THE WESTERLY LINE OF THE RIGHT OF WAY OF THE SANFORD-OVIEDO HIGHWAY; THENCE SOUTH 51°15' WEST 770.0 FEET; THENCE SOUTH 22°15' EAST 13.5 FEET TO THE SOUTHWEST CORNER OF THE UNPLATTED PART OF BLOCK "B"; THENCE EAST ALONG THE NORTH LINE OF TUSCAWILLA A DISTANCE OF 497.0 FEET; THENCE NORTH 30' EAST 420.0 FEET TO THE POINT OF BEGINNING.

ALSO DESCRIBED AS: LOT 9, ACCORDING TO JOE E. JOHNSTON'S SURVEY AS RECORDED IN DEED BOOK 147, PAGE 221, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.

LESS THAT PART OF PARCEL 130 IN ORDER OF TAKING IN OFFICIAL RECORDS BOOK 2831, PAGE 1024, PUBLIC RECORDS OF SEMINOLE COUNTY THAT LIES WITHIN ABOVE DESCRIBED PROPERTY.

TOGETHER WITH THAT PORTION OF VACATED ROAD LYING SOUTHERLY OF ABOVE DESCRIBED PROPERTY AS DESCRIBED IN OFFICIAL RECORDS BOOK 2972, PAGE 373, PUBLIC RECORDS OF SEMINOLE COUNTY.

TOGETHER WITH THAT PART OF LOT 8, BLOCK A, LYING WESTERLY OF TUSKAWILLA ROAD, OF D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5 OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.

AND THAT PART OF LOT 8, BLOCK A, D.R. MICTHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, LYING WESTERLY FROM THE WESTERLY FIFTY FEET FROM THE CENTER LINE OF TUSKAWILLA ROAD, AS RECORDED IN O.R.B 2860, PAGE 510, SEMINOLE COUNTY, FLORIDA.

TOGETHER WITH

LOT 7, JOE E. JOHNSTONS SURVEY RECORDED IN DEED BOOK 147, PAGE 221, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, AND ALSO BEING THAT PART OF THE UNPLATTED PART OF BLOCK B OF D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, DESCRIBED AS BEGINNING AT A POINT 386 FEET NORTH 38 DEGREES 45 MINUTES WEST OF THE MOST EASTERLY CORNER OF THAT PART OF SAID BLOCK B LYING SOUTHWEST OF THE SANFORD-OVIEDO ROAD AND RUNNING NORTH 38 DEGREES 45 MINUTES WEST, 200 FEET ALONG THE WESTERLY LINE OF THE SANFORD-OVIEDO ROAD, THENCE SOUTH 51 DEGREES 15 MINUTES WEST 650.30 FEET; THENCE SOUTH 22 DEGREES 15 MINUTES EAST 208.8 FEET; THENCE NORTH 51 DEGREES 15 MINUTES EAST 710.14 FEET TO THE POINT OF BEGINNING, LESS AND EXCEPT THAT PART TAKEN FOR ROAD RIGHT OF WAY BY THE ORDER OF TAKING RECORDED JULY 27, 1994, IN OFFICIAL RECORDS BOOK 2803, PAGE 1023, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.

CONTAINS 448,300 SQUARE FEET OR 10.292 ACRES MORE OR LESS.

RIGHT-OF-WAY TAKING:

PARCEL NO. 130

A PART OF LOTS 8 AND 9 OF JOE E. JOHNSTON'S SURVEY AS RECORDED IN DEED BOOK 147, PAGE 221 OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA ALSO BEING A PART OF THE UNNUMBERED LOT IN BLOCK B, D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5 OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE NORTHEAST CORNER OF SAID UNNUMBERED LOT IN BLOCK B, BEING THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT OF WAY LINE OF FIRST STREET, A 30-FOOT WIDE UNOPENED RIGHT OF WAY AND THE WESTERLY RIGHT OF WAY LINE OF BRANTLEY AVENUE, A 50-FOOT WIDE RIGHT OF WAY; THENCE RUN NORTH 71°22'40" WEST ALONG THE SOUTHERLY RIGHT OF WAY LINE OF SAID FIRST STREET AND THE NORTH LINE OF SAID UNNUMBERED LOT IN BLOCK B A DISTANCE OF 1823.57 FEET TO A POINT ON THE BASELINE OF SURVEY OF S.R. 434 ACCORDING TO F.D.O.T. RIGHT OF WAY MAP SECTION 77070-2516; THENCE RUN SOUTH 38°32'22" EAST ALONG SAID BASELINE OF SURVEY OF S.R. 434 A DISTANCE OF 0.33 FEET; THENCE DEPARTING SAID BASELINE OF SURVEY OF S.R. 434 RUN NORTH 71°25'23" WEST A DISTANCE OF 55.26 FEET TO THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT OF WAY LINE OF SAID FIRST STREET AND THE SOUTHWESTERLY RIGHT OF WAY LINE OF SAID S.R. 434; THENCE RUN SOUTH 38°32'22" EAST ALONG SAID SOUTHWESTERLY RIGHT OF WAY LINE A DISTANCE OF 1600.79 FEET TO THE NORTHERNMOST CORNER OF SAID LOT 8 FOR A POINT OF BEGINNING; THENCE CONTINUE SOUTH 38°32'22" EAST ALONG SAID SOUTHWESTERLY RIGHT OF WAY LINE OF S.R.434 A DISTANCE OF 381.83 FEET TO THE WESTERLY RIGHT OF WAY LINE OF TUSKAWILLA ROAD, A 50-FOOT WIDE RIGHT OF WAY; THENCE SOUTH 14°15'06" WEST ALONG SAID WESTERLY RIGHT OF WAY LINE OF TUSKAWILLA ROAD A DISTANCE OF 12.03 FEET TO THE WESTERLY RIGHT OF WAY LINE OF A 30-FOOT WIDE UNOPENED RIGHT OF WAY; THENCE RUN SOUTH 29°20'59" WEST ALONG SAID WESTERLY RIGHT OF WAY LINE A DISTANCE OF 24.85 FEET; THENCE DEPARTING SAID WESTERLY RIGHT OF WAY LINE RUN NORTH 38°43'16" WEST A DISTANCE OF 398.46 FEET TO THE NORTHWESTERLY LINE OF SAID LOT 8; THENCE RUN NORTH 51°27'38" EAST ALONG SAID NORTHWESTERLY LINE OF LOT 8 A DISTANCE OF 33.87 FEET TO THE POINT OF BEGINNING.

CONTAINS 13,011 SQUARE FEET MORE OR LESS.

CROSS-ACCESS EASEMENT #1

THAT PART OF THE UNPLATTED BLOCK "B", D.R. MITCHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

FROM THE MOST EASTERLY CORNER OF SAID BLOCK "B", LYING SOUTHWESTERLY OF STATE ROAD 434; THENCE N 38°32'22" W ALONG THE OLD SOUTHWESTERLY RIGHT OF WAY LINE OF SAID STATE ROAD 434 A DISTANCE OF 186.00 FEET; THENCE S 51°27'38" W, 33.25 FEET TO A POINT ON THE NEW SOUTHWESTERLY RIGHT OF WAY LINE OF STATE ROAD 434 AND THE POINT OF BEGINNING; THENCE S 38°43'16" E ALONG THE NEW SOUTHWESTERLY RIGHT OF WAY LINE OF STATE ROAD 434 A DISTANCE OF 25.50 FEET; THENCE S 51°27'38" W, 45.50 FEET; THENCE N 38°43'16" W, 45.50 FEET; THENCE N 51°27'38" E, 45.50 FEET TO A POINT ON THE NEW SOUTHWESTERLY RIGHT OF WAY LINE OF STATE ROAD 434; THENCE S 38°43'16" E, ALONG SAID NEW SOUTHWESTERLY RIGHT OF WAY LINE A DISTANCE OF 20.00 FEET TO THE POINT OF BEGINNING.

CONTAINS 2070 SQUARE FEET OR 0.047 ACRES, MORE OR LESS.

CROSS-ACCESS EASEMENT #2

THAT PART OF LOT 9 SKETCH OF UNPLATTED BLOCK "B" AND LOT 8, BLOCK A, D.R. MITCHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

FROM THE MOST EASTERLY CORNER OF SAID BLOCK "B", LYING ON THE OLD SOUTHWESTERLY RIGHT OF WAY LINE OF STATE ROAD 419; THENCE S 14°15'06" W, 12.03 FEET (SEE STATE ROAD RIGHT OF WAY MAP SECTION 77070-2516, SHEET 9 OF 13); THENCE S 29°20'59" W, 111.36 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY LINE OF TUSKAWILLA ROAD: THENCE S 14°15'06" W, 115.16 FEET ALONG SAID WESTERLY RIGHT OF WAY LINE TO THE POINT OF BEGINNING; THENCE CONTINUE S 14°15'06" W, 56.20 FEET ALONG SAID WESTERLY RIGHT OF WAY LINE; THENCE N 57°03'04" W, 72.88 FEET; THENCE N 14°15'06" E, 82.35 FEET; THENCE S 57°03'04" E, 72.88 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY LINE OF TUSKAWILLA ROAD; THENCE S 14°15'06" W, 26.15 FEET ALONG SAID RIGHT OF WAY LINE TO THE POINT OF BEGINNING.

CONTAINS 5685 SQUARE FEET OR 0.131 ACRES, MORE OR LESS.

NOTES:

1. BEARING STRUCTURE BASED ON THE NORTHERLY R/W LINE OF NATURES WAY BEING: N86°57'23"W.
2. THIS SURVEY REFLECTS ONLY MATTERS OF RECORD AS PROVIDED BY THE CLIENT OR CLIENTS REPRESENTATIVE.
3. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
4. THIS SITE IS NOT IN A FLOOD PRONE AREA, IT IS IN ZONE X, AN AREA OF MINIMAL FLOODING BASED ON FLOOD INSURANCE RATE MAP, PANEL NO. 120289 0135 E, SEMINOLE COUNTY, FLORIDA.
5. ELEVATIONS BASED ON SEMINOLE COUNTY DATUM, BM #4733701 BEING: 45.515 FEET.
6. ACCORDING TO FLORIDA STATUTES, CHAPTER 472.025, A LAND SURVEYOR SHALL NOT AFFIX HIS SEAL OR NAME TO ANY PLAN OR DRAWING WHICH DEPICTS WORK WHICH HE IS NOT LICENSED TO PERFORM OR WHICH IS BEYOND HIS PROFESSION OR SPECIALTY THEREIN. THEREFORE, WE ARE UNABLE TO CERTIFY AS TO MUNICIPAL ZONING COMPLIANCE, INTERPRETATION OF ZONING CODES OR THE DETERMINATION OF VIOLATIONS THEREOF.
7. THIS SURVEY MADE WITHOUT BENEFIT OF COMMITMENT FOR TITLE.

Current BOUNDARY SURVEY DATE: 5-10-01
per Florida Statutes 61G17-6.003 2d

83445-1

DATE:	REVISION	BY:

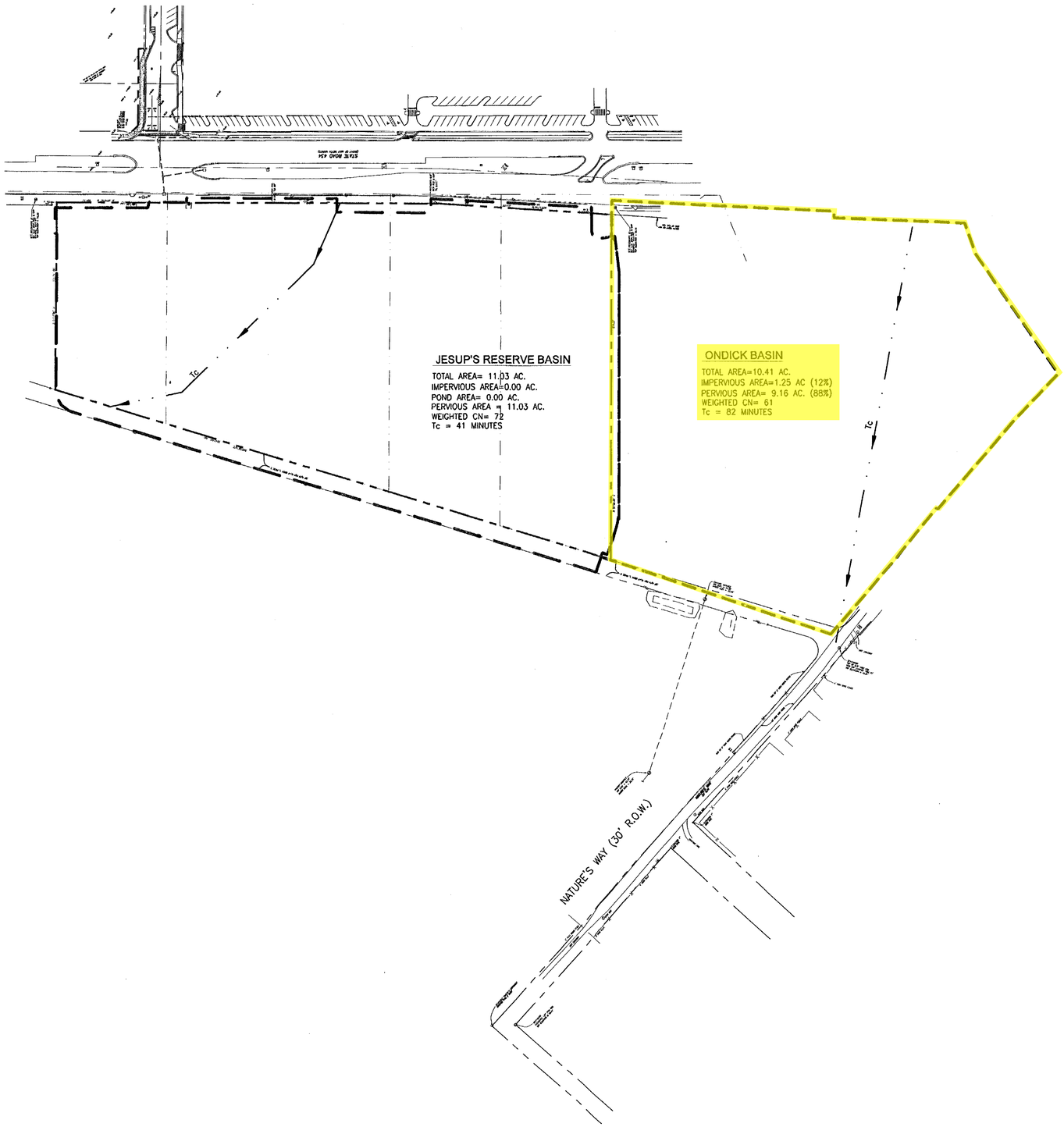
RECEIVED
APR 26 2002
PDS
ALTAMONTE SVC. CTR.

BOUNDARY, TOPOGRAPHIC & TREE SURVEY

SCALE: 1" = 40'
DATE: 5-10-01
CF: # SC147-BLK-A-LOTS8&9
APPROVED BY:
DRAWN BY: RLB/JB
PREPARED FOR: NTR DEVELOPMENT, INC.
LOCATION: SW CORNER OF STATE ROAD #434 AND TUSKAWILLA ROAD; SEMINOLE COUNTY, FLORIDA
FILE NUMBER: JOHNSTON'S SURVEY WALGREENS

PRE-DEVELOPMENT BASIN MAP

Pulled from SJRWMD Permit No. 83445-1



100' 0 100'

SCALE: 1"=100'

2 of 7

97490-1

RECEIVED
APR 01 2005
PDS
ALTAMONTE SVC. CTR

Pulled from SJRWMD Permit No. 97490-1

RS&H®
Architectural, Engineering, Planning and Environmental Services

Reynolds, Smith and Hills, Inc.
10748 DEERWOOD PARK BLVD SOUTH
JACKSONVILLE, FLORIDA 32256

904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001886 · EB0005620 · LCC000210

HIGHLANDER INVESTMENTS, LTD
1085 WEST MORSE AVENUE,
SUITE A
WINTER PARK, FLORIDA 32789

JESUP'S RESERVE

WINTER SPRINGS,
FLORIDA

SEAL

3/30/05

DAVID F. PEIGLER, PE
FL. NO. 44100

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: MARCH 18, 2005
REVIEWED BY: D. PEIGLER
DRAWN BY: J. NESS
DESIGNED BY: J. WARFLE

AEP PROJECT NUMBER
501-5760-000

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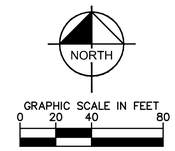
SHEET TITLE

PRE-DEVELOPEMENT DRAINAGE PLAN

SHEET NUMBER
C-4

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



NOTES:
THE FOLLOWING NOTES ARE PROVIDED TO ALLOW FOR CLARIFICATION OF ROUTING WITHIN THE SYSTEM.

1. BASIN G.1 FLOWS TO SMA-A.2
2. BASIN G.2 FLOWS TO SMA-B
3. BASIN H FLOWS TO SWALE 1
4. BASIN I FLOWS TO SWALE 2
5. BASIN J FLOWS TO SWALE 3
6. SWALES 1, 2, & 3 FLOW INTO SMA-G TO ALLOW FOR FURTHER NUTRIENT REMOVAL.

LEGEND:

- STAGE VOLUME NODE
- STAGE AREA NODE
- TIME STAGE NODE
- PIPE LINK
- DROP STRUCTURE LINK
- WEIR LINK
- PERCOLATION LINK
- BASIN BOUNDARY

No.	REVISIONS	DATE	BY

Kimley»Horn
189 S. ORANGE AVE, SUITE 1000, ORLANDO, FL 32801
PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM CA 00000696

LICENSED PROFESSIONAL
DATE:

KHA PROJECT
DATE
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

POST-DEVELOPMENT BASIN & NODE MAP

WINTER SPRINGS MARKETPLACE

SHEET NUMBER

APPENDIX B

Pre- Development Drainage Calculations and ICPR Analysis

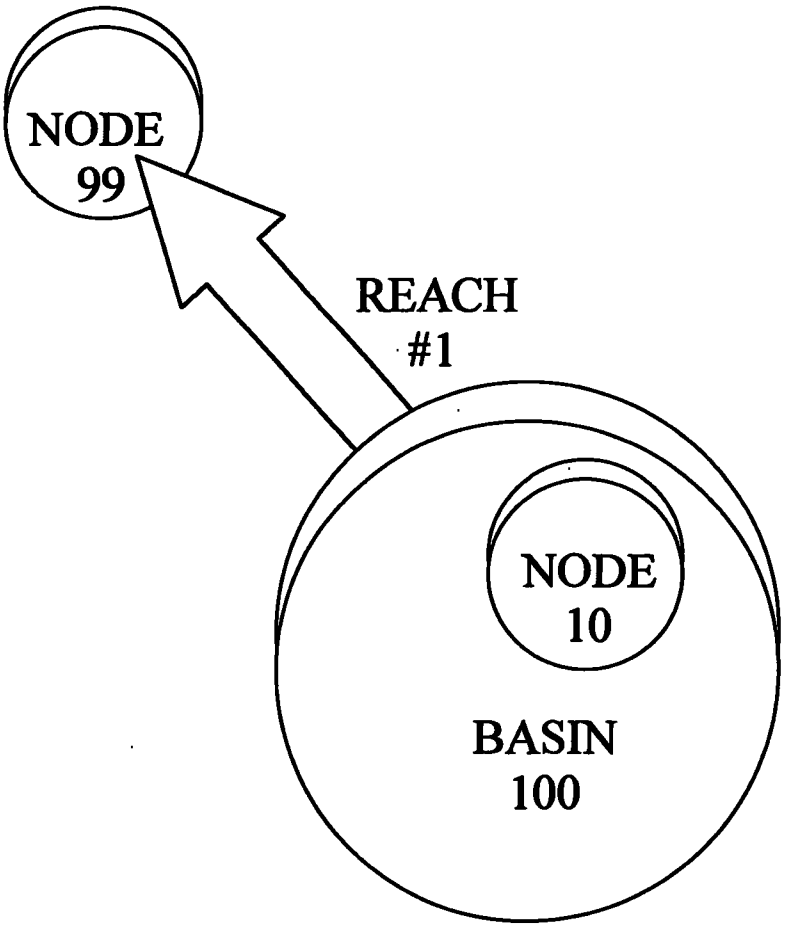
SJRWMD PERMIT NO. 83445-1

WALGREENS DRUG STORE #6575 EXISTING CONDITIONS MODELING OF SR 434 OUTFALL

PROJECT: **WALGREENS DRUG STORE #6575**
SEMINOLE COUNTY, FLORIDA

PRE DEVELOPMENT ANALYSIS

PRE-DEVELOPED HYD. SCHEMATIC:



AMERICAN CIVIL ENGINEERING COMPANY
207 N. MOSS ROAD, SUITE 211
WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327-7700
FAX: (407) 327-0227

PROJECT: **WALGREENS DRUG STORE #6575**
SEMINOLE COUNTY, FLORIDA

PRE-DEVELOPED ANALYSIS:

HYDROGRAPH DATA:

BASIN NO. **100**

TOTAL AREA (AC)	**3.56 ACRES**
PERVIOUS AREA (AC)	**2.74 ACRE**
IMPERVIOUS AREA (AC)	**0.82 ACRE**
WATER SURFACE AREA (AC)	**0.00 ACRE**

SCS SOIL TYPE	**PAOLA/MILLHOPPER HYD. GRP. A/A**	
PERVIOUS CN	**49**	
IMPERVIOUS CN	**98**	
WATER SURFACE CN	**100**	
COMPOSITE CN	[(2.74)(49) + (0.82)(98)] / [3.56]	**60.3**

TIME OF CONCENTRATION:

38.5 MINUTES

AMERICAN CIVIL ENGINEERING COMPANY
207 N. MOSS ROAD, SUITE 211
WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327-7700
FAX: (407) 327-0227

PROJECT: **WALGREENS DRUG STORE #6575**
SEMINOLE COUNTY, FLORIDA

PRE-DEVELOPED TIME OF CONCENTRATION COMPUTATIONS:
BASED ON SOIL CONVERSATION SERVICE (SCS) TECHNICAL RELEASE 55 (TR-55)

BASIN NUMBER: **100**

1. **OVERLAND FLOW:** $T_1 = [0.007 (nL)^{0.8}] / (P)^{0.5}(s)^{0.4}$

n = MANNING'S ROUGHNESS	**0.40**
L = FLOW LENGTH (ft)	**175**
P = 4.75 INCHES	
S = SLOPE OF HYD. GR. (ft/ft)	**0.0087**
T_1 = TRAVEL TIME (hr)	**0.64 HOUR**

2. CONCENTRATED FLOW: T2 = L/V

L = FLOW LENGTH (ft)	
V = VELOCITY BASED ON TR55	
T2 = TRAVEL TIME (hr)	**0.0 HOUR**

3. PIPE FLOW: T3 = L/V

L = FLOW LENGTH (ft)	
V = VEL. IN PIPE, ASSUME 4.0 ft/s	
T2 = TRAVEL TIME (hr)	**0.0 HOUR**

4. TOTAL TIME OF CONCENTRATION:

Tc = T1 + T2 + T3

Tc = 0.5 + 0.0 + 0.0 = **0.64 HOUR**

38.5 MIN.

PROJECT: **WALGREENS DRUG STORE #6575**
SEMINOLE COUNTY, FLORIDA

PRE-DEVELOPMENT ANALYSIS

STAGE/STORAGE DATA:

NODE **10**

STAGE (ELEV)	AREA (ACRE)	AVE. AREA (ACRE)	DEPTH (FEET)	INCREM. VOLUME (AC-FT)	ACCUM. VOLUME (AC-FT)
44.00	**0.18**	-	-	-	-
45.00	**0.26**	**0.22**	**1.00**	**0.22**	**0.22**

EXISTING OVERFLOW STRUCTURE:
TOP EL. = 44.77
INV. (NE) = 42.82
WEIR EL. = 44.36

AMERICAN CIVIL ENGINEERING COMPANY
207 N. MOSS ROAD, SUITE 211
WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327-7700
FAX: (407) 327-0227

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.30)
Copyright 1989-1990, Streamline Technologies, Inc.

WALGREENS DRUG STORE #6575 - PRE DEVELOPED - 25 YR/24 HR
APRIL 19, 2002

NODE NAME	NODE TYPE	INI STAGE (ft)	X-COOR (ft)	Y-COOR (ft)	LENGTH (ft)	STAGE (ft)	AREA/TIME (ac)/(hr)
10	AREA	44.000	.000	.000	.000	44.000	.180
						45.000	.260
						46.000	2.500
99	TIME	40.000	.000	.000	.000	40.000	.000
						41.000	24.000

REACH SUMMARY

INDEX	RCHNAME	FRMNODE	TONODE	REACH TYPE
1	1	10	99	CIRCULAR CULVERT

Node-99 time stage node data in NGVD

>>REACH NAME : 1
FROM NODE : 10
TO NODE : 99
REACH TYPE : CIRCULAR CULVERT
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
TURBO SWITCH : OFF

CULVERT DATA :
SPAN (in): 12.000 RISE (in): 12.000 LENGTH (ft): 150.000
U/S INVERT (ft): 42.820 D/S INVERT (ft): 39.370 MANNING N: .026
ENTRNC LOSS: .500 # OF CULVERTS: 1.000

POSITION A : RECTANGULAR RISER SLOT
CREST EL. (ft): 44.770 CREST LN. (ft): 10.167 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

POSITION B : RECTANGULAR RISER SLOT
CREST EL. (ft): 44.360 CREST LN. (ft): 2.000 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

NOTE:

PRE DEVELOPMENT HYDROGRAPHS & ROUTINGS

SCSIIMOD
25 YEAR/24 HOUR

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.30)
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WALGREENS DRUG STORE #6575 - PRE DEVELOPED - 25 YR/24 HR
APRIL 19, 2002

BASIN NAME	100
NODE NAME	10
TIME INCREMENT (min)	5.00
RAINFALL FILE	SCSIIMOD
RAIN AMOUNT (in)	8.60
STORM DURATION (hrs)	24.00
AREA (ac)	3.56
CURVE NUMBER	60.30
DCIA (%)	.00
TC (mins)	38.50
LAG TIME (hrs)	.00
BASIN STATUS	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
100	5.21	12.00	3.82	

NODAL MIN/MAX/TIME CONDITIONS REPORT

NODE ID	PARAMETER	MINIMUMS VALUE	MINIMUMS TIME (hr)	MAXIMUMS VALUE	MAXIMUMS TIME (hr)
10	STAGE (ft):	44.00	8.50	45.05	13.00
	VOLUME (af):	.00	8.50	.29	13.00
	RUNOFF (cfs):	.00	8.50	5.21	12.00
	OFFSITE (cfs):	.00	24.00	.00	24.00
	OTHER (cfs):	.00	24.00	.00	24.00
	OUTFLOW (cfs):	.00	11.50	3.01	12.50
99	STAGE (ft):	40.00	.00	41.00	24.00
	VOLUME (af):	.00	11.75	1.02	24.00
	RUNOFF (cfs):	.00	24.00	.00	24.00
	OFFSITE (cfs):	.00	24.00	.00	24.00
	OTHER (cfs):	.00	11.50	3.01	12.50
	OUTFLOW (cfs):	.00	24.00	.00	24.00

NODAL MAXIMUM CONDITIONS REPORT

NODE ID	STAGE (ft)	VOLUME (af)	INFLOW RUNOFF (cfs)	INFLOW OFFSITE (cfs)	INFLOW OTHER (cfs)	OUTFLOW (cfs)
10	45.05	.29	5.21	.00	.00	3.01
99	41.00	1.02	.00	.00	3.01	.00

Max allowable out-flow rate

REACH MAXIMUM FLOW REPORT

REACH ID	TIME (hrs)	FLOW (cfs)	FR NODE NAME	STAGE (ft)	TO NODE NAME	STAGE (ft)
1	12.50	3.01	10	45.02	99	40.52

MEAN ANNUAL

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.30)
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WALGREENS DRUG STORE #6575 - PRE DEVELOPED - MEAN ANNUAL
APRIL 19, 2002

BASIN NAME	100
NODE NAME	10
TIME INCREMENT (min)	5.00
RAINFALL FILE	MEAN23
RAIN AMOUNT (in)	4.50
STORM DURATION (hrs)	24.00
AREA (ac)	3.56
CURVE NUMBER	60.30
DCIA (%)	.00
TC (mins)	38.50
LAG TIME (hrs)	.00
BASIN STATUS	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
100	1.46	12.17	1.04	

NODAL MIN/MAX/TIME CONDITIONS REPORT

NODE ID	PARAMETER	MINIMUMS VALUE	MINIMUMS TIME (hr)	MAXIMUMS VALUE	MAXIMUMS TIME (hr)
10	STAGE (ft):	44.00	11.25	44.59	13.50
	VOLUME (af):	.00	11.25	.13	13.50
	RUNOFF (cfs):	.00	11.25	1.45	12.25
	OFFSITE (cfs):	.00	24.00	.00	24.00
	OTHER (cfs):	.00	24.00	.00	24.00
	OUTFLOW (cfs):	.00	12.50	.69	13.50
99	STAGE (ft):	40.00	.00	41.00	24.00
	VOLUME (af):	.00	12.50	.22	24.00
	RUNOFF (cfs):	.00	24.00	.00	24.00
	OFFSITE (cfs):	.00	24.00	.00	24.00
	OTHER (cfs):	.00	12.50	.69	13.50
	OUTFLOW (cfs):	.00	24.00	.00	24.00

NODAL MAXIMUM CONDITIONS REPORT

NODE ID	STAGE (ft)	VOLUME (af)	INFLOW RUNOFF (cfs)	INFLOW OFFSITE (cfs)	INFLOW OTHER (cfs)	OUTFLOW (cfs)
10	44.59	.13	1.45	.00	.00	.69
99	41.00	.22	.00	.00	.69	.00

REACH MAXIMUM FLOW REPORT

REACH ID	TIME (hrs)	FLOW (cfs)	FR NODE NAME	STAGE (ft)	TO NODE NAME	STAGE (ft)
1	13.50	.69	10	44.59	99	40.56

SJRWMD PERMIT NO. 97490-1

JESUP'S RESERVE EXISTING CONDITIONS MODELING OF WETLAND OUTFALL

Runoff curve number and runoff

Project:	Jesup's Reserve	By:	EMB	Date:	3/15/2005
Location:	Seminole County	Checked:	JSG	Date:	3/15/2005

Highlight one: [Present] Developed

Highlight one: [Jesup (on-site)] Ondick (off-site)

1. Runoff curve number

soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious, unconnected/connected impervious area ratio)	CN Table 2-2	CN Figure 2-3	CN Figure 2-4	Area ☐ acre ☒ %	Product of CN x area
Myakka and Eau Gallie, B/D	Wood or forest land: good cover	77			37.0	2849
Paola-St. Lucie, A	Wood or forest land: thin stand, poor cover	45			8.0	360
Paola-St. Lucie, A	Open space: poor condition	68			40.0	2720
Pomello, C	Open space: poor condition	86			10.0	860
Pomello, C	Wood or forest land: thin stand, poor cover	77			5.0	385
				Totals ➡	100	7,174

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{7174}{100} = 71.74$$

Use CN ➡ **72**

2. Runoff

S = 1000/CN - 10 = 3.89

	Storm #1	Storm #2	Storm #3
Frecuency ..... yr			
Rainfall, P (24 hr) ..... in			
Runoff, Q ..... in			

Runoff curve number and runoff

Project:	Jesup's Reserve	By:	EMB	Date:	3/15/2005
Location:	Seminole County	Checked:	JSG	Date:	3/15/2005

Highlight one: Present | Developed

Highlight one: Jesup (on-site) | Ondick (off-site)

1. Runoff curve number

soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious, unconnected/connected impervious area ratio)	CN Table 2-2	CN Figure 2-3	CN Figure 2-4	Area ☐ acre ☒ %	Product of CN x area
Myakka and Eau Gallie, B/D	Wood or forest: good condition	77			28.0	2156
Myakka and Eau Gallie, B/D	Open space: poor condition	89			7.0	623
Paola-St. Lucie, A	Wood or forest: good condition	25			20.0	500
Paola-St. Lucie, A	Wood or forest: poor condition	45			27.0	1215
Tavares-Millhopper, A	Open space: poor condition	68			6.0	408
Impervious	Impervious Land	98			12.0	1176
				Totals ➡	100	6,078

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{6078}{100} = 60.78$$

Use CN ➡ **61**

2. Runoff

$S = 1000/CN - 10 = 6.39$

	Storm #1	Storm #2	Storm #3
Frecuency ..... yr			
Rainfall, P (24 hr) ..... in			
Runoff, Q ..... in			

Runoff curve number and runoff

Project:	Jesup's Reserve	By:	EMB	Date:	3/15/2005
Location:	Seminole County	Checked:	JSG	Date:	3/15/2005

Highlight one: Present | Developed

Highlight one: Jesup (on-site) | Ondick (off-site)

1. Runoff curve number

soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious, unconnected/connected impervious area ratio)	CN Table 2-2	CN Figure 2-3	CN Figure 2-4	Area ☐ acre ☒ %	Product of CN x area
Myakka and Eau Gallie, B/D	Open Space: good condition	80			6.9	552
Paola-St. Lucie, A	Open Space: good condition	39			9.0	351
Pomello, C	Open Space: good condition	74			3.0	222
Impervious	Impervious Land	98			64.6	6,331
Impervious	Impervious Pond Area	100			10.0	1000
Paola-St. Lucie, A	Pervious Pond Area	39			6.5	253.5
				Totals ➡	100	8,709

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{8{,}709}{100} = 87.09$$

Use CN ➡ **87**

2. Runoff

S = 1000/CN - 10 = 1.49

	Storm #1	Storm #2	Storm #3
Frecuency ..... yr			
Rainfall, P (24 hr) ..... in			
Runoff, Q ..... in			

Time of Concentration (TR-55)

Project:	Jesup's Reserve	By:	EMB	Date:	03/15/05
Location:	Seminole County	Checked:	JSG	Date:	03/15/05

Highlight one: **Present** | Developed

Highlight one: **Jesup (on-site)** | Ondick (off-site)

Sheet flow

	Segment ID	1			
1. Surface Description (Table 3-1)		Range			
2. Manning's roughness coeff., n (Table 3-1)		0.13			
3. Flow Length, L (total <= 300 ft)	ft	300			
4. 2-year 24-hour rainfall, P_2	in	5.0			
5. Land slope, s	ft/ft	0.005			
6. $Tt = (0.007 * (nL)^{4/5})/((P_2^{1/2})*(s^{2/5}))$	hr	0.489	+	0.000	= 0.489

Shallow concentrate flow

	Segment ID	2			
7. Surface description (paved or unpaved)		Unpaved	Unpaved		
8. Flow length, L	ft	220	90		
9. Watercourse slope, s	ft/ft	0.003	0.008		
10. Average velocity, V (figure 3-1)	ft/s	0.433	0.483		
11. Tt = (L/(3600*V)	hr	0.141	+	0.052	= 0.193

Channel flow

	Segment ID				
12. Cross section flow area, a	ft^2				
13. Wetted perimeter, Pw	ft				
14. Hydraulic radius, r = a/Pw	ft				
15. Channel slope, s	ft/ft				
16. Manning/s roughness coeff.	n				
17. $V = (1.49*(r^{2/3})*(s^{1/2}))/n$	ft/s				
18. Flow length, L	ft				
19. Tt = (L/3600*V)	hr	0.000	+	0.000	= 0.000

Total

20. Total Tc (add 6,11,and 19)	hr	0.681
21. Total Tc	min	40.88
Plus pipe flow	min	0
Total	**min**	**40.9**
→ **Use**	**min**	**41.0**

Notes:

Time of Concentration (TR-55)

Project:	Jesup's Reserve	By:	EMB	Date:	03/15/05
Location:	Seminole County	Checked:	JSG	Date:	03/15/05

Highlight one: Present | Developed

Highlight one: Jesup (on-site) | Ondick (off-site)

Sheet flow

	Segment ID		
1. Surface Description (Table 3-1)	1		
2. Manning's roughness coeff., n (Table 3-1)	Woods		
3. Flow Length, L (total <= 300 ft) ft	0.4		
4. 2-year 24-hour rainfall, P_2 in	300		
5. Land slope, s ft/ft	5.00		
6. $Tt = (0.007 * (nL)^{4/5})/((P_2^{1/4})*(s^{2/5}))$ hr	0.006		
	1.116	+ 0.000	= 1.116

Shallow concentrate flow

	Segment ID		
7. Surface description (paved or unpaved)	2		
8. Flow length, L ft	Unpaved		
9. Watercourse slope, s ft/ft	453		
10. Average velocity, V (figure 3-1) ft/s	0.010		
11. Tt = (L/(3600*V) hr	0.50		
	0.252	+ 0.000	= 0.252

Channel flow

	Segment ID		
12. Cross section flow area, a ft^2			
13. Wetted perimeter, Pw ft			
14. Hydraulic radius, r = a/Pw ft			
15. Channel slope, s ft/ft			
16. Manning/s roughness coeff. n			
17. $V = (1.49*(r^{2/3})*(s^{1/2}))/n$ ft/s			
18. Flow length, L ft			
19. Tt = (L/3600*V) hr			
	0.000	+ 0.000	= 0.000

Total

20. Total Tc (add 6,11,and 19) hr	1.368
21. Total Tc min	82.07
Plus pipe flow ... min	0
Total ..... min	**82.1**
→ Use .....min	**82.0**

Notes:

Time of Concentration (TR-55)

Project:	Jesup's Reserve	By:	EMB	Date:	03/15/05
Location:	Seminole County	Checked:	JSG	Date:	03/15/05

Highlight one: **Present** / Developed

Highlight one: **Jesup (on-site)** / Ondick (off-site)

Sheet flow

	Segment ID	1			
1. Surface Description (Table 3-1)		Grass			
2. Manning's roughness coeff., n (Table 3-1)		0.41			
3. Flow Length, L (total <= 300 ft)	ft	10			
4. 2-year 24-hour rainfall, P_2	in	5.000			
5. Land slope, s	ft/ft	0.015			
6. $Tt = (0.007 * (nL)^{4/5})/((P_2^{1/2})*(s^{2/5}))$	hr	0.052	+	0.000	= 0.052

Shallow concentrate flow

	Segment ID	2			
7. Surface description (paved or unpaved)		Unpaved			
8. Flow length, L	ft	50			
9. Watercourse slope, s	ft/ft	0.015			
10. Average velocity, V (figure 3-1)	ft/s	0.08			
11. Tt = (L/(3600*V)	hr	0.167	+	0.000	= 0.167

Channel flow

	Segment ID	Pipe Flow			
12. Cross section flow area, a	ft^2	1.77			
13. Wetted perimeter, Pw	ft	4.71			
14. Hydraulic radius, r = a/Pw	ft	0.376			
15. Channel slope, s	ft/ft	0.002			
16. Manning/s roughness coeff.	n	0.012			
17. $V = (1.49*(r^{2/3})*(s^{1/2}))/n$	ft/s	2.50			
18. Flow length, L	ft	835			
19. Tt = (L/3600*V)	hr	0.093	+	0.000	= 0.093

Total

20. Total Tc (add 6,11,and 19)	hr	0.312
21. Total Tc	min	18.72
Plus pipe flow	min	0
Total	**min**	**18.7**
→ **Use**	**min**	**19.0**

Notes:

AdICPR Model Results

Hydrologic and Hydraulic Calculations

Jesup's Reserve Pre-Development Conditions
Input Summary

==========
==== Basins ====
==========

Name: Jessup
Group: BASE

Node: Jessup
Type: SCS Unit Hydrograph

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 11.030
Curve Number: 72.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 41.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: Ondick
Group: BASE

Node: Ondick
Type: SCS Unit Hydrograph

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 10.410
Curve Number: 61.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 82.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Includes five parcels at the northwest quadrant of the
intersection of SR 434 and Tuskawilla Road.

==========
==== Hydrology Simulations ====
==========

Name: 100Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Pre\100Yr-24Hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 10.80

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 25Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Pre\25Yr-24Hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 8.64

Time(hrs)	Print Inc(min)

30.000 5.00

==== Routing Simulations ====

Name: Hydrology Sim:
Filename:

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 0.00 Delta Z Factor: 0.00000
Time Step Optimizer: 0.000
Start Time(hrs): 0.000 End Time(hrs): 0.00
Min Calc Time(sec): 0.0000 Max Calc Time(sec): 0.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)

Group	Run
BASE	Yes

==== Boundary Conditions ====

Jesup's Reserve Pre-Development Conditions
Basin Summary

Basin Name:	Jessup
Group Name:	BASE
Simulation:	100Yr-24Hr
Node Name:	Jessup
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	5.47
Comp Time Inc (min):	5.47
Rainfall File:	Flmod
Rainfall Amount (in):	10.800
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	41.00
Time Shift (hrs):	0.00
Area (ac):	11.030
Vol of Unit Hyd (in):	1.000
Curve Number:	72.000
DCIA (%):	0.000
Time Max (hrs):	12.39
Flow Max (cfs):	27.829
Runoff Volume (in):	7.214
Runoff Volume (ft3):	288851.667

Basin Name:	Ondick
Group Name:	BASE
Simulation:	100Yr-24Hr
Node Name:	Ondick
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	10.93
Comp Time Inc (min):	10.93
Rainfall File:	Flmod
Rainfall Amount (in):	10.800
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	82.00
Time Shift (hrs):	0.00
Area (ac):	10.410
Vol of Unit Hyd (in):	1.000
Curve Number:	61.000
DCIA (%):	0.000
Time Max (hrs):	12.94
Flow Max (cfs):	12.885
Runoff Volume (in):	5.683
Runoff Volume (ft3):	214739.698

Basin Name:	Jessup
Group Name:	BASE
Simulation:	25Yr-24Hr
Node Name:	Jessup
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	5.47
Comp Time Inc (min):	5.47
Rainfall File:	Flmod
Rainfall Amount (in):	8.640
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	41.00
Time Shift (hrs):	0.00
Area (ac):	11.030
Vol of Unit Hyd (in):	1.000
Curve Number:	72.000
DCIA (%):	0.000
Time Max (hrs):	12.39
Flow Max (cfs):	20.235
Runoff Volume (in):	5.256
Runoff Volume (ft3):	210429.379

Basin Name:	Ondick
Group Name:	BASE
Simulation:	25Yr-24Hr
Node Name:	Ondick
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	10.93
Comp Time Inc (min):	10.93
Rainfall File:	Flmod
Rainfall Amount (in):	8.640
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	82.00
Time Shift (hrs):	0.00
Area (ac):	10.410
Vol of Unit Hyd (in):	1.000
Curve Number:	61.000
DCIA (%):	0.000
Time Max (hrs):	12.94
Flow Max (cfs):	8.727
Runoff Volume (in):	3.930
Runoff Volume (ft3):	148492.145

Jesup's Reserve Post-Development Conditions
Input Summary

==========
==== Basins ====
==========

Name: Jessup
Group: BASE
Node: Pond1
Type: SCS Unit Hydrograph
Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 11.030
Curve Number: 87.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 19.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: Ondick
Group: BASE
Node: Ondick
Type: SCS Unit Hydrograph
Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 10.410
Curve Number: 61.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 82.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Includes five parcels at the northwest quadrant of the
intersection of SR 434 and Tuskawilla Road.

==========
==== Nodes ====
==========

Name: Ondick
Group: BASE
Type: Manhole, 1/2 Diameter Grooved
Base Flow(cfs): 0.000
Plunge Factor: 1.00
Init Stage(ft): 35.450
Warn Stage(ft): 43.000

Stage(ft)	Area(ac)

Name: Pond1
Group: BASE
Type: Stage/Area
Base Flow(cfs): 0.000
Init Stage(ft): 41.200
Warn Stage(ft): 44.000

Stage(ft)	Area(ac)
41.200	1.1010
45.000	1.3490

Name: Wetland
Group: BASE
Type: Time/Stage
Base Flow(cfs): 0.000
Init Stage(ft): 35.000
Warn Stage(ft): 35.300

Time(hrs)	Stage(ft)
0.00	35.000
48.00	35.000

==========
==== Operating Tables ====
==========

Name:
Group: BASE

Type: Bottom Clip
Function: Time vs. Depth of Clip

Time(hrs)	Clip Depth(in)

Pipes

Name: Outfall
Group: BASE
From Node: Ondick
To Node: Wetland
Length(ft): 1319.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 1.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.50
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	30.00	30.00
Rise(in):	30.00	30.00
Invert(ft):	34.770	29.500
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Drop Structures

Name: Pond1Outlet
Group: BASE
From Node: Pond1
To Node: Ondick
Length(ft): 564.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 1.000
Exit Loss Coef: 0.500
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Solution Incs: 10

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	30.00	30.00
Rise(in):	30.00	30.00
Invert(ft):	36.300	34.770
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

*** Weir 1 of 3 for Drop Structure Pond1Outlet ***

Count: 1
Type: Vertical: Mavis
Flow: Both
Geometry: Circular
TABLE
Bottom Clip(in): 0.000
Top Clip(in): 0.000
Weir Disc Coef: 3.200
Orifice Disc Coef: 0.600
Span(in): 2.84
Rise(in): 2.84
Invert(ft): 40.700
Control Elev(ft): 41.200

*** Weir 2 of 3 for Drop Structure Pond1Outlet ***

Count: 2
Type: Vertical: Mavis
Flow: Both
TABLE
Bottom Clip(in): 0.000
Top Clip(in): 0.000
Weir Disc Coef: 3.200

Geometry: Rectangular
Orifice Disc Coef: 0.600

Span(in): 33.00
Rise(in): 13.12
Invert(ft): 42.440
Control Elev(ft): 42.440

*** Weir 3 of 3 for Drop Structure Pond1Outlet ***

Count: 1
Type: Horizontal
Flow: Both
Geometry: Rectangular
TABLE
Bottom Clip(in): 0.000
Top Clip(in): 0.000
Weir Disc Coef: 3.200
Orifice Disc Coef: 0.600

Span(in): 48.00
Rise(in): 36.00
Invert(ft): 43.700
Control Elev(ft): 43.700

==== Hydrology Simulations ====

Name: 100Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\100Yr-24Hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 10.80

Time(hrs)	Print Inc(min)
48.000	5.00

Name: 25Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\25Yr-24Hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 8.64

Time(hrs)	Print Inc(min)
48.000	5.00

Name: 3Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\3Yr-24Hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 5.64

Time(hrs)	Print Inc(min)
48.000	5.00

==== Routing Simulations ====

Name: 100Yr-24Hr
Hydrology Sim: 100Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\100Yr-24Hr.I32

Execute: Yes
Restart: No
Patch: No
Alternative: No

Max Delta Z(ft): 1.00
Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000
End Time(hrs): 48.00
Min Calc Time(sec): 0.5000
Max Calc Time(sec): 60.0000
Boundary Stages: 100Yr-24Hr
Boundary Flows:

Time(hrs)	Print Inc(min)
48.000	5.000

Group	Run
BASE	Yes

Name: 25Yr-24Hr Hydrology Sim: 25Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\25Yr-24Hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 48.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: 25Yr-24Hr Boundary Flows:

Time(hrs)	Print Inc(min)
48.000	5.000

Group	Run
BASE	Yes

Name: 3Yr-24Hr Hydrology Sim: 3Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\3Yr-24Hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 48.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
48.000	5.000

Group	Run
BASE	Yes

==== Boundary Conditions ====

Name: 25Yr-24Hr Node: Wetland Type: Stage

Time(hrs)	Stage(ft)
0.000	35.230
48.000	35.230

Name: 100Yr-24Hr Node: Wetland Type: Stage

Time(hrs)	Stage(ft)
0.000	35.290
48.000	35.290

Jesup's Reserve Post-Development Conditions
Basin Summary

Basin Name:	Jessup
Group Name:	BASE
Simulation:	100Yr-24Hr
Node Name:	Pond1
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	2.53
Comp Time Inc (min):	2.53
Rainfall File:	Flmod
Rainfall Amount (in):	10.800
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	19.00
Time Shift (hrs):	0.00
Area (ac):	11.030
Vol of Unit Hyd (in):	1.000
Curve Number:	87.000
DCIA (%):	0.000
Time Max (hrs):	12.12
Flow Max (cfs):	51.588
Runoff Volume (in):	9.188
Runoff Volume (ft3):	367879.063

Basin Name:	Ondick
Group Name:	BASE
Simulation:	100Yr-24Hr
Node Name:	Ondick
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	10.93
Comp Time Inc (min):	10.93
Rainfall File:	Flmod
Rainfall Amount (in):	10.800
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	82.00
Time Shift (hrs):	0.00
Area (ac):	10.410
Vol of Unit Hyd (in):	1.000
Curve Number:	61.000
DCIA (%):	0.000
Time Max (hrs):	12.94
Flow Max (cfs):	12.885
Runoff Volume (in):	5.683
Runoff Volume (ft3):	214739.698

Basin Name:	Jessup
Group Name:	BASE
Simulation:	25Yr-24Hr
Node Name:	Pond1
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	2.53
Comp Time Inc (min):	2.53
Rainfall File:	Flmod
Rainfall Amount (in):	8.640
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	19.00
Time Shift (hrs):	0.00
Area (ac):	11.030
Vol of Unit Hyd (in):	1.000
Curve Number:	87.000
DCIA (%):	0.000
Time Max (hrs):	12.12
Flow Max (cfs):	40.164
Runoff Volume (in):	7.070
Runoff Volume (ft3):	283075.943

Basin Name:	Ondick
Group Name:	BASE
Simulation:	25Yr-24Hr
Node Name:	Ondick
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	10.93
Comp Time Inc (min):	10.93
Rainfall File:	Flmod
Rainfall Amount (in):	8.640
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	82.00
Time Shift (hrs):	0.00
Area (ac):	10.410
Vol of Unit Hyd (in):	1.000
Curve Number:	61.000
DCIA (%):	0.000
Time Max (hrs):	12.94
Flow Max (cfs):	8.727
Runoff Volume (in):	3.930
Runoff Volume (ft3):	148492.145

Jesup's Reserve Post-Development Conditions
Node Maximums

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
Ondick	BASE	100Yr-24Hr	12.94	42.712	43.000	0.0090	195	12.91	31.374	12.93	31.364
Pond1	BASE	100Yr-24Hr	13.03	44.260	44.000	0.0050	56660	12.17	50.821	12.23	21.173
Wetland	BASE	100Yr-24Hr	0.00	35.290	35.300	0.2900	429	12.93	31.364	0.00	0.000
Ondick	BASE	25Yr-24Hr	12.84	41.180	43.000	0.0076	195	12.82	28.141	12.84	28.140
Pond1	BASE	25Yr-24Hr	12.78	43.561	44.000	0.0050	54671	12.17	39.606	12.56	19.941
Wetland	BASE	25Yr-24Hr	0.00	35.230	35.300	0.2300	429	12.84	28.140	0.00	0.000

MAX ALLOWABLE 25YR-24HR STORM DISCHARGE RATE

Interconnected Channel and Pond Routing Model (ICPR) ©2002 Streamline Technologies, Inc.

Jesup's Reserve Post-Development Conditions
Link Maximums

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
Outfall	BASE	100Yr-24Hr	12.93	31.364	1.718	12.94	42.712	0.00	35.290
Pond1Outlet	BASE	100Yr-24Hr	12.23	21.173	0.050	13.03	44.260	12.94	42.712
Outfall	BASE	25Yr-24Hr	12.84	28.140	1.913	12.84	41.180	0.00	35.230
Pond1Outlet	BASE	25Yr-24Hr	12.56	19.941	0.054	12.78	43.561	12.84	41.180

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APPENDIX C

Post- Development Drainage Calculations

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-A"

Basin Area = 0.83 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.41	A	Cover > 75%	39	16.1
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.42	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	40.7
			WEIGHTED CURVE NUMBER =	**68.6**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-B"

Basin Area = 1.12 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.46	A	Cover > 75%	39	18.1
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.34	A,B,C,D	Impervious (Pond)	98	33.6
0.31	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	30.5
			WEIGHTED CURVE NUMBER =	**73.5**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-C"

Basin Area = 2.97 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.40	A	Cover > 75%	39	15.5
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
2.58	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	252.4
			WEIGHTED CURVE NUMBER =	**90.1**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-D"

Basin Area = 0.88 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.20	A	Cover > 75%	39	7.9
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.68	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	66.7
			WEIGHTED CURVE NUMBER =	**84.5**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-E"

Basin Area = 0.49 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.11	A	Cover > 75%	39	4.3
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.38	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	36.9
			WEIGHTED CURVE NUMBER =	**84.6**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-F"

Basin Area = 0.95 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.29	A	Cover > 75%	39	11.2
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.67	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	65.2
			WEIGHTED CURVE NUMBER =	**80.2**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-G.1"

Basin Area = 0.67 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
	A	Cover > 75%	39	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.67	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	65.3
			WEIGHTED CURVE NUMBER =	**98.0**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-G.2"

Basin Area = 0.56 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
	A	Cover > 75%	39	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.56	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	54.8
			WEIGHTED CURVE NUMBER =	**98.0**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-H"

Basin Area = 0.79 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.25	A	Cover > 75%	39	9.8
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.54	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	52.5
			WEIGHTED CURVE NUMBER =	**79.1**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-I"

Basin Area = 0.44 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.10	A	Cover > 75%	39	3.9
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.34	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	33.8
			WEIGHTED CURVE NUMBER =	**84.8**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-J"

Basin Area = 0.53 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.08	A	Cover > 75%	39	3.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.45	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	44.5
			WEIGHTED CURVE NUMBER =	**89.5**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION POND "SMA-A" (COMBINED VOLUME)

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**Online**

Basin A Area =	0.83	acres
Basin G.1 Area =	0.67	acres
Total Basin Area =	1.49	acres
Basin A Impervious Area =	0.42	acres
Basin G.1 Impervious Area =	0.67	acres
Total Impervious Area =	1.08	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.06	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.11	acre-ft.
PLUS		
Online TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.06	acre-ft.
OR		
*Nutrient Removal = **1.165"** of runoff from drainage area = [(Basin Area-NWL Area)(1.165")]/12" =	0.14	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.17**	**acre-ft.**
	7,614	**CF**
Required Treatment Volume at Elevation =	45.42	ft
Provided Treatment Volume =	**0.21**	**acre-ft.**
	9,021	**CF**
Provided Treatment Volume at Elevation =	45.60	ft

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	46.5	3	9,156	0.210	15,984	0.367
	45.5	2	6,360	0.146	8,226	0.189
	44.5	1	3,966	0.091	3,063	0.070
BOTTOM	43.5	0	2,159	0.050	0	0.000

* Slopes > Elev. 43.5 ft (4:1)

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION POND "SMA-A.1"

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	46.5	3	6,112	0.140	11,368	0.261
	45.5	2	4,457	0.102	6,084	0.140
	44.5	1	2,967	0.068	2,372	0.054
BOTTOM	43.5	0	1,776	0.041	0	0.000

* Slopes > Elev. 43.5 ft (4:1)

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION POND "SMA-A.2"

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	46.5	3	3,044	0.070	4,616	0.106
	45.5	2	1,903	0.044	2,142	0.049
	44.5	1	999	0.023	691	0.016
BOTTOM	43.5	0	383	0.009	0	0.000

* Slopes > Elev. 43.5 ft (4:1)

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

WET DETENTION PROPOSED POND SMA-B

Littoral Zone OR Pre-Treatment Provided?	**YES**
Discharge Directly to Class I, II, III or OFW?	**NO**

Basin B Area =	1.12	acres
Basin G.2 Area =	0.56	acres
Total Basin Area =	1.68	acres
Basin B Impervious Area =	0.31	acres
Basin G.2 Impervious Area =	0.56	acres
Total Impervious Area (Excluding pond area) =	0.87	acres
TV = 1" of runoff over site = [(Basin Area)(1")]/12" =	0.14	acre-ft.
OR		
TV = 2.5" of runoff from imp. area = [(Imp Area)(2.5")]/12" =	0.18	acre-ft.

TOTAL REQUIRED TREATMENT VOLUME =	**0.18**	**acre-ft.**
	7,902	**CF**
Required Treatment Volume at Elevation =	41.01	ft
1/2 Required Treatment Volume =	0.09	acre-ft.
1/2 Required Treatment Volume at Elevation =	40.75	ft

Provided Treatment Volume =	**1.02**	**acre-ft.**
	44,608	**CF**
Provided Treatment Volume at Elevation =	43.00	ft

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	45	4.5	26,001	0.597	91,417	2.10
	44	3.5	23,385	0.537	66,724	1.53
	43	2.5	20,848	0.479	44,608	1.02
	42	1.5	18,398	0.422	24,985	0.57
	41	0.5	16,066	0.369	7,753	0.18
NWL	40.5	0	14,945	0.343	0	0.00
	39.5	1	12,218	0.280	13,582	0.31
	38.5	2	9,696	0.223	24,539	0.56
	37.5	3	8,742	0.201	33,758	0.77
	36.5	4	7,820	0.180	42,039	0.97
	35.5	5	6,928	0.159	49,413	1.13
	34.5	6	6,075	0.139	55,914	1.28
	33.5	7	5,262	0.121	61,583	1.41
	32.5	8	4,488	0.103	66,458	1.53
	31.5	9	3,758	0.086	70,581	1.62
	30.5	10	3,112	0.071	74,016	1.70
	29.5	11	2,553	0.059	76,848	1.76
BOTTOM	28.5	12	2,061	0.047	79,155	1.82

* Slopes > Elev. 40.5 ft (5:1), < Elev. 40.5 ft (2:1)

Mean Depth =	**5.30 ft**

REQUIRED PERMANENT POOL VOLUME

WET DETENTION PROPOSED POND SMA-B

Littoral Zone OR Pre-Treatment Provided?	**YES**
Discharge Directly to Class I, II, III or OFW?	**NO**

PPV = (DA*C*R*RT)/(WS* CF)

POND SMA-B

DA = Drainage Area =	1.68	acres
C = Runoff Coefficient =	0.550	
R = Wet Season Rainfall Depth =	31.0	inches
RT = Residence Time =	14	days
WS = Wet Season =	153	days
CF = Conversion Factor =	12	in/ft
Required PPV	0.22	ac-ft
additional 50% for no littoral Zone	N/A	ac-ft
additional 50% for OFW discharge	N/A	ac-ft

PPV Required 0.22 ac-ft

PPV Provided 1.82 ac-ft

Runoff Coefficient Calculation

	AREA (AC)	RUNOFF COEFFICIENT
IMPERVIOUS AREA	0.87	0.90
PERVIOUS AREA	0.46	0.30

C = [(Impervious Area)x(0.90) + (Pervious Area)x(0.30)] / (Total Area)

RUNOFF COEFFICIENT = 0.550

DRAWDOWN CALCULATION

WET DETENTION PROPOSED POND SMA-B

Q = TV / 2 t CF = 0.041 CFS

WHERE:
- TV = TREATMENT VOLUME = 7902 CF
- t = RECOVERY TIME = 27 HrS
- CF = CONV FACTOR = 3600 sec/Hr

$H = (H_1 + H_2) / 2$ = 0.38 Ft.

WHERE:
- H_1 = DEPTH OF TOTAL TREATMENT VOLUME = 0.51 Ft.
- H_2 = DEPTH OF HALF THE TREATMENT VOLUME = 0.25 Ft.

ORIFICE

$Q = C A (2 g h)^{1/2}$ ORIFICE FLOW EQUATION

$A = Q / C (2 g H)^{1/2}$ = 0.01 SF

WHERE:
- C = ORIFICE COEFFICIENT = 0.6
- g = CONSTANT = 32.2 Ft/S^2
- H = HEAD = 0.38 Ft.
- Q = RATE OF DISCHARGE = 0.041 CFS

THEREFORE: CALCULATED ORIFICE DIAMETER

$D = (4 A / PI)^{1/2}$ = **1.58** INCHES **Min. = 2.75 inches**

PROVIDED = 3.0 INCHES

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED EXFILTRATION TRENCH C

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin C Area =	2.97	acres
Basin C Impervious Area =	2.58	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.12	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.27	acre-ft.
PLUS		
ne TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.12	acre-ft.
OR		
*Nutrient Removal = **1.396"** of runoff from drainage area = [(Basin Area-NWL Area)(**1.396"**)]/12" =	0.35	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.39** **17,082**	**acre-ft.** **CF**

*See BMPTrains analysis for required inches over catchment area.

**0.35-ac-ft of volume provided within Exfiltration Trench C system, remainder of the 0.39-ac-ft of required volume provided within interconnected exfiltration system SMA-G.

SMA-C (COMBINED) STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Elevation nutrient volume is provided:	43.33	ft.
Required Nutrient Treatment Volume:	0.39	ac.ft.
Provided Nutrient Removal Volume:	0.35	ac.ft.

			PIPE		STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	43.58	1.58	0.00	0.0	0.0	0.0	16,579.2	0.381
	43.58	1.58	0.00	0.0	0.0	0.0	16,579.2	0.381
PIPE	43.58	1.58	0.04	141.2	196.3	337.5	16,579.2	0.381
	43.50	1.50	0.07	251.6	163.2	414.8	16,241.7	0.373
	43.42	1.42	0.09	437.1	319.0	756.0	15,827.0	0.363
	43.33	1.33	0.10	577.5	276.9	854.3	15,070.9	0.346
	43.25	1.25	0.11	666.9	250.0	917.0	14,216.6	0.326
	43.17	1.17	0.12	731.9	230.5	962.5	13,299.6	0.305
	43.08	1.08	0.13	779.7	216.2	995.9	12,337.2	0.283
	43.00	1.00	0.13	813.5	206.1	1,019.5	11,341.3	0.260
	42.92	0.92	0.13	835.2	199.6	1,034.7	10,321.7	0.237
	42.83	0.83	0.13	845.8	196.4	1,042.2	9,287.0	0.213
	42.75	0.75	0.13	845.9	196.4	1,042.2	8,244.8	0.189
	42.67	0.67	0.13	835.3	199.5	1,034.8	7,202.6	0.165
	42.58	0.58	0.13	813.8	206.0	1,019.7	6,167.7	0.142
	42.50	0.50	0.12	780.3	216.0	996.3	5,148.0	0.118
	42.42	0.42	0.11	733.3	230.1	963.4	4,151.7	0.095
	42.33	0.33	0.10	670.0	249.1	919.1	3,188.2	0.073
	42.25	0.25	0.09	584.9	274.7	859.5	2,269.1	0.052
	42.17	0.17	0.07	465.8	310.4	776.2	1,409.6	0.032
	42.08	0.08	0.04	261.8	371.6	633.4	633.4	0.015
	42.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

SMA-C (17" CMP) STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	8,458	sf
Pipe Diameter =	17	in
Pipe Invert =	42.00	ft
Total Pipe Length =	3,218	ft
Stone Porosity =	30	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	43.42	1.42	1.42	1.58	0.00	0.0	0.0	0.0	7,144.9	0.164
	43.42	1.42	1.42	1.58	0.00	0.0	0.0	0.0	7,144.9	0.164
PIPE	43.42	1.42	1.42	1.58	0.04	120.6	175.2	295.9	7,144.9	0.164
	43.33	1.33	1.33	1.54	0.07	214.3	147.2	361.4	6,849.0	0.157
	43.25	1.25	1.25	1.47	0.08	268.4	130.9	399.4	6,487.6	0.149
	43.17	1.17	1.17	1.39	0.10	306.8	119.4	426.2	6,088.2	0.140
	43.08	1.08	1.08	1.29	0.10	334.9	111.0	445.8	5,662.0	0.130
	43.00	1.00	1.00	1.19	0.11	355.2	104.9	460.1	5,216.2	0.120
	42.92	0.92	0.92	1.08	0.11	369.0	100.8	469.7	4,756.1	0.109
	42.83	0.83	0.83	0.96	0.12	377.0	98.3	475.3	4,286.4	0.098
	42.75	0.75	0.75	0.85	0.12	379.6	97.6	477.2	3,811.1	0.087
	42.67	0.67	0.67	0.73	0.12	377.0	98.3	475.3	3,333.9	0.077
	42.58	0.58	0.58	0.61	0.11	369.0	100.8	469.7	2,858.5	0.066
	42.50	0.50	0.50	0.50	0.11	355.2	104.9	460.1	2,388.8	0.055
	42.42	0.42	0.42	0.39	0.10	334.9	111.0	445.8	1,928.7	0.044
	42.33	0.33	0.33	0.28	0.10	306.8	119.4	426.2	1,482.9	0.034
	42.25	0.25	0.25	0.19	0.08	268.4	130.9	399.4	1,056.7	0.024
	42.17	0.17	0.17	0.10	0.07	214.3	147.2	361.4	657.3	0.015
	42.08	0.08	0.08	0.04	0.04	120.6	175.3	295.9	295.9	0.007
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

SMA-C (19" CMP) STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	9,547	sf
Pipe Diameter =	19	in
Pipe Invert =	42.00	ft
Total Pipe Length =	3,555	ft
Stone Porosity =	30	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	43.58	1.58	1.58	1.97	0.00	0.0	0.0	0.0	9,434.3	0.217
	43.58	1.58	1.58	1.97	0.00	0.0	0.0	0.0	9,434.3	0.217
PIPE	43.58	1.58	1.58	1.97	0.04	141.2	196.3	337.5	9,434.3	0.217
	43.50	1.50	1.50	1.93	0.07	251.6	163.2	414.8	9,096.8	0.209
	43.42	1.42	1.42	1.86	0.09	316.4	143.7	460.2	8,682.1	0.199
	43.33	1.33	1.33	1.77	0.10	363.2	129.7	492.9	8,221.9	0.189
	43.25	1.25	1.25	1.67	0.11	398.5	119.1	517.6	7,729.0	0.177
	43.17	1.17	1.17	1.56	0.12	425.2	111.1	536.3	7,211.4	0.166
	43.08	1.08	1.08	1.44	0.13	444.8	105.2	550.0	6,675.1	0.153
	43.00	1.00	1.00	1.31	0.13	458.3	101.2	559.5	6,125.1	0.141
	42.92	0.92	0.92	1.18	0.13	466.2	98.8	565.0	5,565.6	0.128
	42.83	0.83	0.83	1.05	0.13	468.8	98.0	566.9	5,000.6	0.115
	42.75	0.75	0.75	0.92	0.13	466.2	98.8	565.0	4,433.7	0.102
	42.67	0.67	0.67	0.79	0.13	458.3	101.2	559.5	3,868.7	0.089
	42.58	0.58	0.58	0.66	0.13	444.8	105.2	550.0	3,309.2	0.076
	42.50	0.50	0.50	0.53	0.12	425.2	111.1	536.3	2,759.2	0.063
	42.42	0.42	0.42	0.41	0.11	398.5	119.1	517.6	2,222.9	0.051
	42.33	0.33	0.33	0.30	0.10	363.2	129.7	492.9	1,705.3	0.039
	42.25	0.25	0.25	0.20	0.09	316.4	143.7	460.2	1,212.4	0.028
	42.17	0.17	0.17	0.11	0.07	251.6	163.2	414.8	752.3	0.017
	42.08	0.08	0.08	0.04	0.04	141.2	196.3	337.5	337.5	0.008
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED EXFILTRATION TRENCH D

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin D Area =	0.88	acres
Impervious Area =	0.68	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.04	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.07	acre-ft.
PLUS		
e TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.04	acre-ft.
OR		
*Nutrient Removal = **1.469"** of runoff from drainage area = [(Basin Area-NWL Area)(**1.469"**)]/12" =	0.11	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.11** **4,710**	**acre-ft.** **CF**

*See BMPTrains analysis for required inches over catchment area.

SMA-D STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	4,422	sf
Pipe Diameter =	24	in
Pipe Invert =	42.00	ft
Total Pipe Length =	1,287	ft
Stone Porosity =	30	%
Stone Above Pipe =		in
Stone Below Invert =	0	in

Elevation nutrient volume is provided:	43.66	ft.
Required Nutrient Treatment Volume:	0.11	ac.ft.
Provided Nutrient Removal Volume:	0.11	ac.ft.

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	44.00	2.00	2.00	3.14	0.00	0.0	0.0	0.0	5,482.1	0.126
	44.00	2.00	2.00	3.14	0.00	0.0	0.0	0.0	5,482.1	0.126
PIPE	44.00	2.00	2.00	3.14	0.04	57.6	93.3	150.9	5,482.1	0.126
	43.92	1.92	1.92	3.10	0.08	103.2	79.6	182.8	5,331.2	0.122
	43.83	1.83	1.83	3.02	0.10	130.7	71.3	202.0	5,148.4	0.118
	43.75	1.75	1.75	2.91	0.12	151.2	65.2	216.4	4,946.3	0.114
	43.67	1.67	1.67	2.80	0.13	167.2	60.4	227.6	4,730.0	0.109
	43.58	1.58	1.58	2.67	0.14	180.1	56.5	236.6	4,502.4	0.103
	43.50	1.50	1.50	2.53	0.15	190.5	53.4	243.9	4,265.7	0.098
	43.42	1.42	1.42	2.38	0.15	198.7	50.9	249.6	4,021.9	0.092
	43.33	1.33	1.33	2.22	0.16	205.0	49.0	254.1	3,772.2	0.087
	43.25	1.25	1.25	2.07	0.16	209.6	47.6	257.3	3,518.2	0.081
	43.17	1.17	1.17	1.90	0.17	212.7	46.7	259.4	3,260.9	0.075
	43.08	1.08	1.08	1.74	0.17	214.2	46.3	260.5	3,001.5	0.069
	43.00	1.00	1.00	1.57	0.17	214.2	46.3	260.5	2,741.0	0.063
	42.92	0.92	0.92	1.40	0.17	212.7	46.7	259.4	2,480.6	0.057
	42.83	0.83	0.83	1.24	0.16	209.6	47.6	257.3	2,221.2	0.051
	42.75	0.75	0.75	1.08	0.16	205.0	49.0	254.1	1,963.9	0.045
	42.67	0.67	0.67	0.92	0.15	198.7	50.9	249.6	1,709.8	0.039
	42.58	0.58	0.58	0.76	0.15	190.5	53.4	243.9	1,460.2	0.034
	42.50	0.50	0.50	0.61	0.14	180.1	56.5	236.6	1,216.3	0.028
	42.42	0.42	0.42	0.47	0.13	167.2	60.4	227.6	979.7	0.022
	42.33	0.33	0.33	0.34	0.12	151.2	65.2	216.4	752.1	0.017
	42.25	0.25	0.25	0.23	0.10	130.7	71.3	202.0	535.7	0.012
	42.17	0.17	0.17	0.13	0.08	103.2	79.6	182.8	333.7	0.008
	42.08	0.08	0.08	0.04	0.04	57.6	93.3	150.9	150.9	0.003
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED EXFILTRATION TRENCH E

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin E Area =	0.49	acres
Impervious Area =	0.38	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.04	acre-ft.
PLUS		
e TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
*Nutrient Removal = **2.261"** of runoff from drainage area = [(Basin Area-NWL Area)(**2.261"**)]/12" =	0.09	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.09**	**acre-ft.**
	3,999	**CF**

*See BMPTrains analysis for required inches over catchment area.

SMA-E STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	5,960	sf
Pipe Diameter =	23	in
Pipe Invert =	42.00	ft
Total Pipe Length =	1,856	ft
Stone Porosity =	30	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

Elevation nutrient volume is provided:	43.06	ft.
Required Nutrient Treatment Volume:	0.09	ac.ft.
Provided Nutrient Removal Volume:	0.09	ac.ft.

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	43.92	1.92	1.92	2.89	0.00	0.0	0.0	0.0	7,175.4	0.165
	43.92	1.92	1.92	2.89	0.00	0.0	0.0	0.0	7,175.4	0.165
PIPE	43.92	1.92	1.92	2.89	0.04	81.3	124.6	205.9	7,175.4	0.165
	43.83	1.83	1.83	2.84	0.08	145.6	105.3	250.9	6,969.5	0.160
	43.75	1.75	1.75	2.76	0.10	184.1	93.8	277.9	6,718.6	0.154
	43.67	1.67	1.67	2.66	0.11	212.7	85.2	297.9	6,440.7	0.148
	43.58	1.58	1.58	2.55	0.13	235.0	78.5	313.5	6,142.8	0.141
	43.50	1.50	1.50	2.42	0.14	252.7	73.2	325.9	5,829.3	0.134
	43.42	1.42	1.42	2.29	0.14	266.8	69.0	335.8	5,503.4	0.126
	43.33	1.33	1.33	2.14	0.15	277.8	65.7	343.5	5,167.6	0.119
	43.25	1.25	1.25	1.99	0.15	286.1	63.2	349.2	4,824.1	0.111
	43.17	1.17	1.17	1.84	0.16	291.8	61.5	353.3	4,474.9	0.103
	43.08	1.08	1.08	1.68	0.16	295.2	60.4	355.7	4,121.6	0.095
	43.00	1.00	1.00	1.52	0.16	296.3	60.1	356.4	3,765.9	0.086
	42.92	0.92	0.92	1.36	0.16	295.2	60.4	355.7	3,409.5	0.078
	42.83	0.83	0.83	1.20	0.16	291.8	61.5	353.3	3,053.9	0.070
	42.75	0.75	0.75	1.05	0.15	286.1	63.2	349.2	2,700.6	0.062
	42.67	0.67	0.67	0.89	0.15	277.8	65.7	343.5	2,351.3	0.054
	42.58	0.58	0.58	0.74	0.14	266.8	69.0	335.8	2,007.9	0.046
	42.50	0.50	0.50	0.60	0.14	252.7	73.2	325.9	1,672.1	0.038
	42.42	0.42	0.42	0.46	0.13	235.0	78.5	313.5	1,346.2	0.031
	42.33	0.33	0.33	0.34	0.11	212.7	85.2	297.9	1,032.7	0.024
	42.25	0.25	0.25	0.22	0.10	184.1	93.8	277.9	734.8	0.017
	42.17	0.17	0.17	0.12	0.08	145.6	105.3	250.9	456.9	0.010
	42.08	0.08	0.08	0.04	0.04	81.3	124.6	205.9	205.9	0.005
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED EXFILTRATION TRENCH F

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin F Area =	0.95	acres
Impervious Area =	0.67	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.04	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.07	acre-ft.
PLUS		
e TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.04	acre-ft.
OR		
*Nutrient Removal = **1.369"** of runoff from drainage area = [(Basin Area-NWL Area)(**1.369"**)]/12" =	0.11	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.11** **4,749**	**acre-ft.** **CF**

*See BMPTrains analysis for required inches over catchment area.
**0.02 ac-ft of nutrient removal volume provided within Exfiltration Trench F system.
Remainder of the 0.11-ac-ft of volume provided within wet detention pond SMA-B.

SMA-F STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	4,551	sf
Pipe Diameter =	37	in
Pipe Invert =	41.50	ft
Total Pipe Length =	1,069	ft
Stone Porosity =	30	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

Elevation nutrient volume is provided:	43.00	ft.
Required Nutrient Treatment Volume:	0.11	ac.ft.
Provided Nutrient Removal Volume:	0.11	ac.ft.

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	44.58	3.08	3.08	7.47	0.00	0.0	0.0	0.0	9,797.8	0.22
	44.58	3.08	3.08	7.47	0.00	0.0	0.0	0.0	9,797.8	0.22
	44.58	3.08	3.08	7.47	0.06	59.7	95.9	155.6	9,797.8	0.22
	44.50	3.00	3.00	7.41	0.10	107.8	81.4	189.2	9,642.3	0.22
	44.42	2.92	2.92	7.31	0.13	137.6	72.5	210.1	9,453.0	0.22
	44.33	2.83	2.83	7.18	0.15	160.6	65.6	226.2	9,242.9	0.21
	44.25	2.75	2.75	7.03	0.17	179.5	59.9	239.4	9,016.7	0.21
	44.17	2.67	2.67	6.86	0.18	195.4	55.2	250.5	8,777.3	0.20
	44.08	2.58	2.58	6.68	0.20	209.0	51.1	260.1	8,526.8	0.20
	44.00	2.50	2.50	6.49	0.21	220.8	47.5	268.3	8,266.7	0.19
	43.92	2.42	2.42	6.28	0.22	231.1	44.5	275.5	7,998.3	0.18
	43.83	2.33	2.33	6.06	0.22	240.0	41.8	281.7	7,722.8	0.18
	43.75	2.25	2.25	5.84	0.23	247.7	39.5	287.1	7,441.1	0.17
	43.67	2.17	2.17	5.61	0.24	254.2	37.5	291.7	7,153.9	0.16
	43.58	2.08	2.08	5.37	0.24	259.8	35.8	295.7	6,862.2	0.16
	43.50	2.00	2.00	5.13	0.25	264.5	34.4	298.9	6,566.5	0.15
	43.42	1.92	1.92	4.88	0.25	268.2	33.3	301.5	6,267.6	0.14
	43.33	1.83	1.83	4.63	0.25	271.0	32.5	303.5	5,966.1	0.14
	43.25	1.75	1.75	4.37	0.26	273.1	31.9	304.9	5,662.6	0.13
	43.17	1.67	1.67	4.12	0.26	274.3	31.5	305.8	5,357.7	0.12
PIPE	43.08	1.58	1.58	3.86	0.26	274.7	31.4	306.0	5,051.9	0.12
	43.00	1.50	1.50	3.60	0.26	274.3	31.5	305.8	4,745.9	0.11
	42.92	1.42	1.42	3.35	0.26	273.1	31.9	304.9	4,440.1	0.10
	42.83	1.33	1.33	3.09	0.25	271.0	32.5	303.5	4,135.2	0.09
	42.75	1.25	1.25	2.84	0.25	268.2	33.3	301.5	3,831.7	0.09
	42.67	1.17	1.17	2.59	0.25	264.5	34.4	298.9	3,530.2	0.08
	42.58	1.08	1.08	2.34	0.24	259.8	35.8	295.7	3,231.3	0.07
	42.50	1.00	1.00	2.10	0.24	254.2	37.5	291.7	2,935.7	0.07
	42.42	0.92	0.92	1.86	0.23	247.7	39.5	287.1	2,643.9	0.06
	42.33	0.83	0.83	1.63	0.22	240.0	41.8	281.7	2,356.8	0.05
	42.25	0.75	0.75	1.40	0.22	231.1	44.5	275.5	2,075.0	0.05
	42.17	0.67	0.67	1.19	0.21	220.8	47.5	268.3	1,799.5	0.04
	42.08	0.58	0.58	0.98	0.20	209.0	51.1	260.1	1,531.2	0.04
	42.00	0.50	0.50	0.79	0.18	195.4	55.2	250.5	1,271.1	0.03
	41.92	0.42	0.42	0.60	0.17	179.5	59.9	239.4	1,020.5	0.02
	41.83	0.33	0.33	0.44	0.15	160.6	65.6	226.2	781.2	0.02
	41.75	0.25	0.25	0.29	0.13	137.6	72.5	210.1	554.9	0.01
	41.67	0.17	0.17	0.16	0.10	107.8	81.4	189.2	344.8	0.01
	41.58	0.08	0.08	0.06	0.06	59.7	95.9	155.6	155.6	0.00
	41.50	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.00
STONE	41.50	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.00
	41.50	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.00

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED EXFILTRATION TRENCH G

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin H Area =	0.79	acres
Basin I Area =	0.44	acres
Basin J Area =	0.53	acres
Total Basin Area =	1.76	acres
Basin H ImperviousArea =	0.54	acres
Basin I Impervious Area =	0.34	acres
Basin J Impervious Area =	0.45	acres
Total Impervious Area (Excluding Pond Area) =	1.33	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.07	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.14	acre-ft.
PLUS		
e TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.07	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.21**	**acre-ft.**
	9,251	**CF**

*See BMPTrains analysis for required inches over catchment area.

SMA-G STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	19,282	sf
Pipe Diameter =	27	in
Pipe Invert =	42.00	ft
Total Pipe Length =	5,797	ft
Stone Porosity =	30	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

Elevation nutrient volume is provided:	43.33	ft.
Required Nutrient Treatment Volume:	0.25	ac.-ft.
Provided Nutrient Removal Volume:	0.40	ac.-ft.

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	44.25	2.25	2.25	3.98	0.00	0.0	0.0	0.0	29,150.6	0.669
	44.25	2.25	2.25	3.98	0.00	0.0	0.0	0.0	29,150.6	0.669
PIPE	44.25	2.25	2.25	3.98	0.05	275.8	399.3	675.1	29,150.6	0.669
	44.17	2.17	2.17	3.93	0.09	495.3	333.5	828.8	28,475.5	0.654
	44.08	2.08	2.08	3.84	0.11	628.9	293.4	922.3	27,646.7	0.635
	44.00	2.00	2.00	3.73	0.13	729.4	263.2	992.6	26,724.4	0.614
	43.92	1.92	1.92	3.61	0.14	809.6	239.2	1,048.8	25,731.8	0.591
	43.83	1.83	1.83	3.47	0.15	875.1	219.5	1,094.6	24,683.0	0.567
	43.75	1.75	1.75	3.32	0.16	929.0	203.3	1,132.4	23,588.4	0.542
	43.67	1.67	1.67	3.16	0.17	973.4	190.0	1,163.4	22,456.0	0.516
	43.58	1.58	1.58	2.99	0.17	1,009.4	179.2	1,188.6	21,292.6	0.489
	43.50	1.50	1.50	2.82	0.18	1,037.9	170.7	1,208.6	20,104.0	0.462
	43.42	1.42	1.42	2.64	0.18	1,059.5	164.2	1,223.7	18,895.4	0.434
	43.33	1.33	1.33	2.45	0.19	1,074.7	159.6	1,234.4	17,671.7	0.406
	43.25	1.25	1.25	2.27	0.19	1,083.7	156.9	1,240.7	16,437.3	0.377
	43.17	1.17	1.17	2.08	0.19	1,086.7	156.0	1,242.8	15,196.7	0.349
	43.08	1.08	1.08	1.89	0.19	1,083.7	156.9	1,240.7	13,953.9	0.320
	43.00	1.00	1.00	1.71	0.19	1,074.7	159.6	1,234.4	12,713.2	0.292
	42.92	0.92	0.92	1.52	0.18	1,059.5	164.2	1,223.7	11,478.9	0.264
	42.83	0.83	0.83	1.34	0.18	1,037.9	170.7	1,208.6	10,255.2	0.235
	42.75	0.75	0.75	1.16	0.17	1,009.4	179.2	1,188.6	9,046.6	0.208
	42.67	0.67	0.67	0.99	0.17	973.4	190.0	1,163.4	7,858.0	0.180
	42.58	0.58	0.58	0.82	0.16	929.0	203.3	1,132.4	6,694.5	0.154
	42.50	0.50	0.50	0.66	0.15	875.1	219.5	1,094.6	5,562.2	0.128
	42.42	0.42	0.42	0.51	0.14	809.6	239.2	1,048.8	4,467.5	0.103
	42.33	0.33	0.33	0.37	0.13	729.4	263.2	992.6	3,418.8	0.078
	42.25	0.25	0.25	0.24	0.11	628.9	293.4	922.3	2,426.2	0.056
	42.17	0.17	0.17	0.13	0.09	495.3	333.5	828.8	1,503.9	0.035
	42.08	0.08	0.08	0.05	0.05	275.8	399.3	675.1	675.1	0.015
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED SWALE 1

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin H Area =	0.79	acres
Impervious Area =	0.54	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.03	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.06	acre-ft.
PLUS		
Online TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.03	acre-ft.
OR		
*Nutrient Removal = **0.93"** of runoff from drainage area = [(Basin Area-NWL Area)(**0.93"**)]/12" =	0.06	acre-ft.

TOTAL REQUIRED TREATMENT VOLUME =	**0.09**	**acre-ft.**
	3,859	**CF**
Required Treatment Volume at Elevation =	45.88	ft

Provided Treatment Volume =	**0.06**	**acre-ft.**
	2,658	**CF**
Provided Treatment Volume at Elevation =	45.25	ft

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	45.35	2	2,500	0.057	2,893	0.066
TOP OF STRUCTURE	45.25	1.9	2,390	0.055	2,648	0.061
	44.35	1	1,432	0.033	929	0.021
BOTTOM	43.35	0	425	0.010	0	0.000

* Slopes > Elev. 43.35 ft (3:1)

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED SWALE 2

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin I Area =	0.44	acres
Impervious Area =	0.34	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.04	acre-ft.
PLUS		
Online TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
*Nutrient Removal = **1.65"** of runoff from drainage area = [(Basin Area-NWL Area)(**1.65"**)]/12" =	0.06	acre-ft.

TOTAL REQUIRED TREATMENT VOLUME =	**0.06**	**acre-ft.**
	2,659	**CF**
Required Treatment Volume at Elevation =	45.26	ft

Provided Treatment Volume =	**0.06**	**acre-ft.**
	2,658	**CF**
Provided Treatment Volume at Elevation =	45.25	ft

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	45.35	2	2,500	0.057	2,893	0.066
TOP OF STRUCTURE	45.25	1.9	2,390	0.055	2,648	0.061
	44.35	1	1,432	0.033	929	0.021
BOTTOM	43.35	0	425	0.010	0	0.000

* Slopes > Elev. 43.35 ft (3:1)

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED SWALE 3

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin J Area =	0.53	acres
Impervious Area =	0.45	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.05	acre-ft.
PLUS		
Online TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
*Nutrient Removal = **0.53"** of runoff from drainage area = [(Basin Area-NWL Area)(**0.53"**)]/12" =	0.02	acre-ft.

TOTAL REQUIRED TREATMENT VOLUME =	**0.07**	**acre-ft.**
	3,023	**CF**
Required Treatment Volume at Elevation =	47.30	ft

Provided Treatment Volume =	**0.02**	**acre-ft.**
	1,025	**CF**
Provided Treatment Volume at Elevation =	45.25	ft

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	45.35	1.5	1,504	0.035	1,165	0.027
TOP OF STRUCTURE	45.25	1.4	1,406	0.032	1,020	0.023
	44.35	0.5	553	0.013	138	0.003
BOTTOM	43.85	0	0	0.000	0	0.000

* Slopes > Elev. 43.85 ft (3:1)

BMPTRAINS NUTRIENT REMOVAL REPORT

Complete Report (not including cost) Ver 2.1.0

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020 11:10:16 AM

Site and Catchment Information

Analysis: Net Improvement

Catchment Name	BASIN A & G.1	Basin B	Basin C	Basin D	Basin E	Basin F	Basin G.2	Basin H	Basin I	Basin J
Rainfall Zone	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2
Annual Mean Rainfall	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03

Pre-Condition Landuse Information

Landuse	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346
Area (acres)	1.49	1.12	2.97	0.88	0.49	0.95	0.56	0.79	0.44	0.53
Rational Coefficient (0-1)	0.02	0.01	0.20	0.11	0.09	0.11	0.01	0.11	0.06	0.01

Non DCIA Curve Number	55.00	39.00	39.00	39.00	76.00	80.00	39.00	80.00	71.00	39.00
DCIA Percent (0-100)	0.00	0.50	23.80	13.00	0.00	0.00	0.00	0.00	0.00	0.00
Nitrogen EMC (mg/l)	1.042	1.042	1.042	1.042	1.042	1.042	1.042	1.042	1.042	1.042
Phosphorus EMC (mg/l)	0.346	0.346	0.346	0.346	0.346	0.346	0.346	0.346	0.346	0.346
Runoff Volume (ac-ft/yr)	0.137	0.049	2.439	0.406	0.174	0.440	0.015	0.366	0.113	0.014
Nitrogen Loading (kg/yr)	0.176	0.062	3.134	0.521	0.224	0.565	0.019	0.470	0.145	0.018
Phosphorus Loading (kg/yr)	0.058	0.021	1.041	0.173	0.074	0.188	0.006	0.156	0.048	0.006

PRE-CONDITION NITROGEN LOADING RATE

PRE-CONDITION PHOSPHOROUS LOADING RATE

Post-Condition Landuse Information

Landuse	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188

Area (acres)	1.49	1.12	2.97	0.88	0.49	0.95	0.56	0.79	0.44	0.53
Rational Coefficient (0-1)	0.59	0.23	0.70	0.63	0.63	0.57	0.81	0.55	0.63	0.69
Non DCIA Curve Number	39.00	39.00	39.00	39.00	39.00	39.00	39.00	39.00	39.00	39.00
DCIA Percent (0-100)	72.50	27.70	86.90	77.30	77.50	70.50	100.00	68.30	77.30	84.90
Wet Pond Area (ac)	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nitrogen EMC (mg/l)	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130
Phosphorus EMC (mg/l)	0.188	0.188	0.188	0.188	0.188	0.188	0.188	0.188	0.188	0.188
Runoff Volume (ac-ft/yr)	3.658	0.744	8.720	2.301	1.285	2.269	1.889	1.828	1.151	1.521
Nitrogen Loading (kg/yr)	5.096	1.036	12.149	3.206	1.790	3.161	2.632	2.547	1.603	2.119
Phosphorus Loading (kg/yr)	0.848	0.172	2.021	0.533	0.298	0.526	0.438	0.424	0.267	0.352

PRE-CONDITION NITROGEN LOADING RATE

PRE-CONDITION PHOSPHOROUS LOADING RATE

Catchment Number: 1 Name: BASIN A & G.1

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Retention Design

Retention Depth (in)	1.670
Retention Volume (ac-ft)	0.207

Watershed Characteristics

Catchment Area (acres)	1.49
Contributing Area (acres)	1.490
Non-DCIA Curve Number	39.00
DCIA Percent	72.50
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	97
Provided TN Treatment Efficiency (%)	91
Required TP Treatment Efficiency (%)	93
Provided TP Treatment Efficiency (%)	91

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Media Mix Information

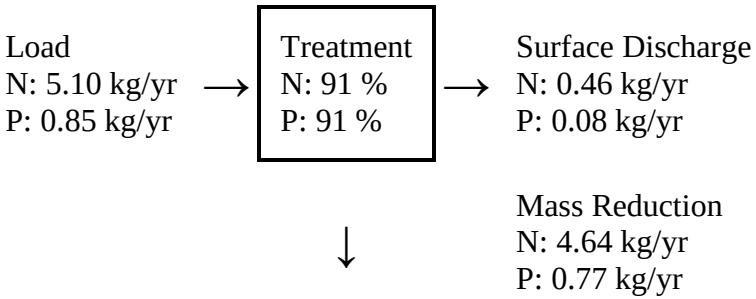
Type of Media Mix	Not Specified
Media N Reduction (%)	

Media P Reduction (%)

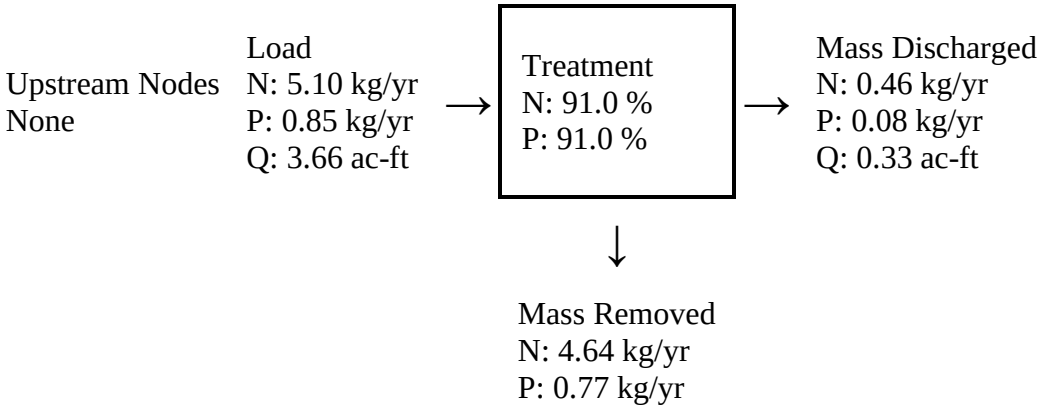
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	4.638
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.772
TP Concentration (mg/L)	0.000

Load Diagram for Retention (stand-alone)



Load Diagram for Retention (As Used In Routing)



Catchment Number: 2 Name: Basin B

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Wet Detention Design

Permanent Pool Volume (ac-ft)	0.063
Permanent Pool Volume (ac-ft) for 31 days residence	0.063
Annual Residence Time (days)	31
Littoral Zone Efficiency Credit	
Wetland Efficiency Credit	

Watershed Characteristics

Catchment Area (acres)	1.12
Contributing Area (acres)	0.780
Non-DCIA Curve Number	39.00
DCIA Percent	27.70

Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	94
Provided TN Treatment Efficiency (%)	38
Required TP Treatment Efficiency (%)	88
Provided TP Treatment Efficiency (%)	65

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

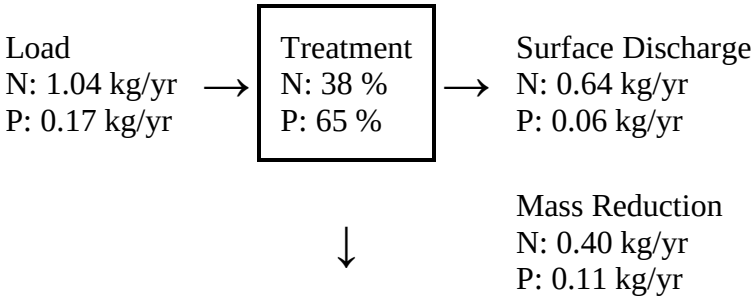
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

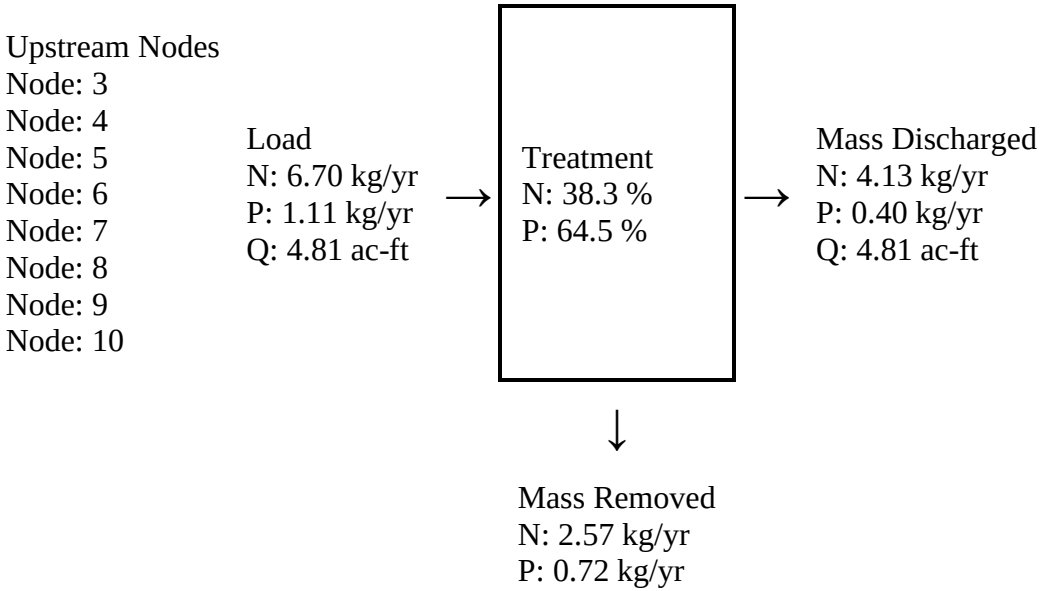
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for Wet Detention (stand-alone)



Load Diagram for Wet Detention (As Used In Routing)



Catchment Number: 3 Name: Basin C

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Exfiltration Trench Design

Pipe Span (in)	18.0
Pipe Rise (in)	18.0
Pipe Length (ft)	5,352.0
Trench Width (ft)	3.5
Trench Depth (ft)	1.5
Trench Length (ft)	5,355.5
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.35
Retention Depth (in over CA)	1.396

Watershed Characteristics

Catchment Area (acres)	2.97
Contributing Area (acres)	2.970
Non-DCIA Curve Number	39.00
DCIA Percent	86.90
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	74
Provided TN Treatment Efficiency (%)	83
Required TP Treatment Efficiency (%)	49

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Provided TP Treatment Efficiency (%) 83

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

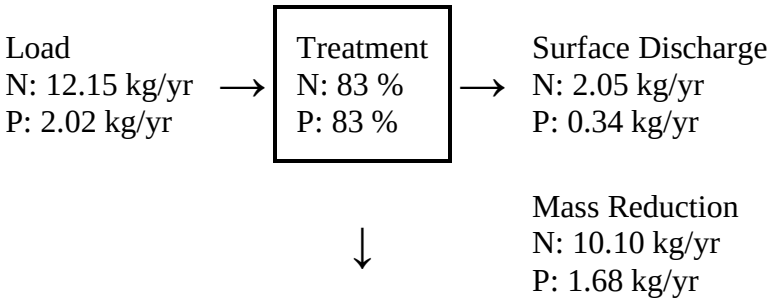
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

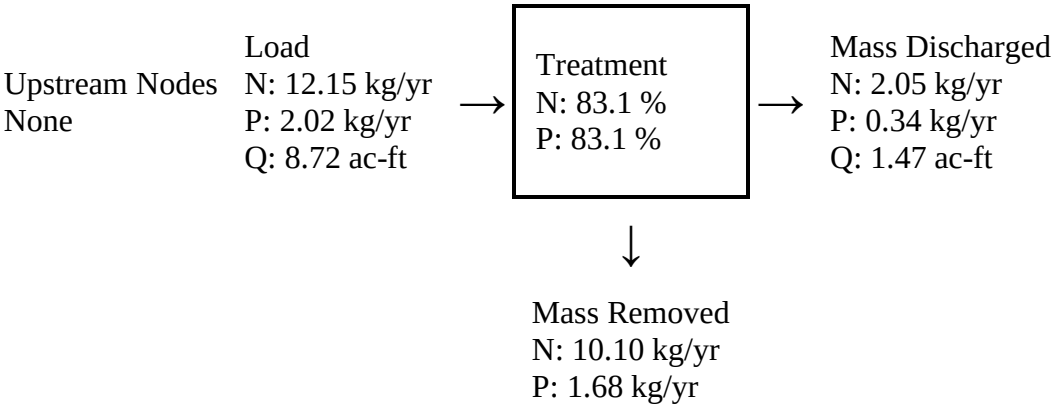
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	10.097
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	1.680
TP Concentration (mg/L)	0.000

Load Diagram for Exfiltration Trench (stand-alone)



Load Diagram for Exfiltration (As Used In Routing)



Catchment Number: 4 Name: Basin D

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Exfiltration Trench Design

Pipe Span (in)	24.0
Pipe Rise (in)	24.0
Pipe Length (ft)	1,018.0
Trench Width (ft)	4.0
Trench Depth (ft)	2.0
Trench Length (ft)	1,022.0
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.11

Retention Depth (in over CA) 1.469

Watershed Characteristics

Catchment Area (acres)	0.88
Contributing Area (acres)	0.880
Non-DCIA Curve Number	39.00
DCIA Percent	77.30
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	84
Provided TN Treatment Efficiency (%)	87
Required TP Treatment Efficiency (%)	68
Provided TP Treatment Efficiency (%)	87

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

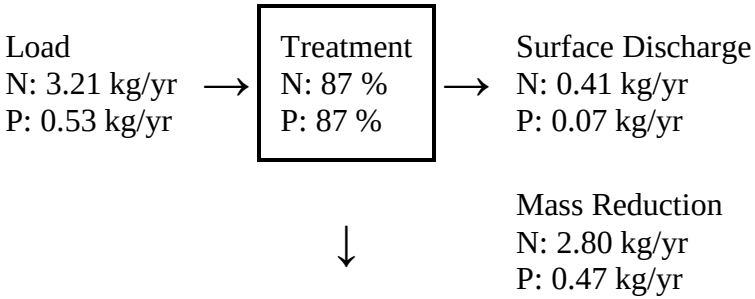
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

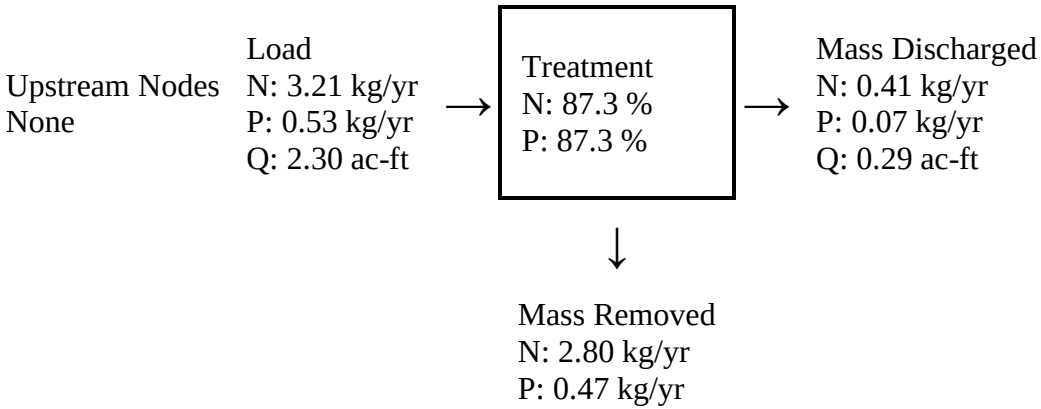
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	2.798
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.465
TP Concentration (mg/L)	0.000

Load Diagram for Exfiltration Trench (stand-alone)



Load Diagram for Exfiltration (As Used In Routing)



Catchment Number: 5 Name: Basin E

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Exfiltration Trench Design

Pipe Span (in)	23.0
Pipe Rise (in)	23.0
Pipe Length (ft)	946.0
Trench Width (ft)	3.9
Trench Depth (ft)	1.9
Trench Length (ft)	949.9
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.09
Retention Depth (in over CA)	2.261

Watershed Characteristics

Catchment Area (acres)	0.49
Contributing Area (acres)	0.490
Non-DCIA Curve Number	39.00
DCIA Percent	77.50
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	87
Provided TN Treatment Efficiency (%)	95
Required TP Treatment Efficiency (%)	75

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Provided TP Treatment Efficiency (%) 95

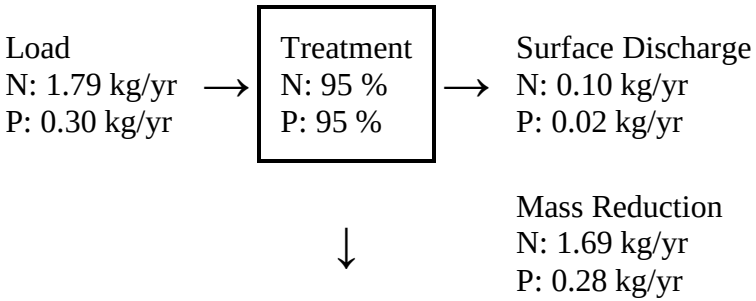
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

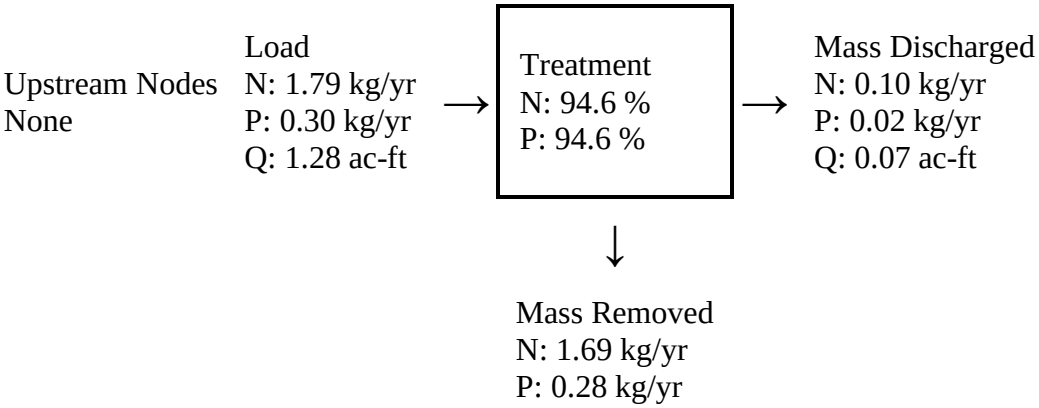
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	1.694
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.282
TP Concentration (mg/L)	0.000

Load Diagram for Exfiltration Trench (stand-alone)



Load Diagram for Exfiltration (As Used In Routing)



Catchment Number: 6 Name: Basin F

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Exfiltration Trench Design

Pipe Span (in)	37.0
Pipe Rise (in)	37.0
Pipe Length (ft)	471.0
Trench Width (ft)	5.1
Trench Depth (ft)	3.1
Trench Length (ft)	476.1
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.11

Retention Depth (in over CA) 1.369

Watershed Characteristics

Catchment Area (acres)	0.95
Contributing Area (acres)	0.950
Non-DCIA Curve Number	39.00
DCIA Percent	70.50
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	82
Provided TN Treatment Efficiency (%)	88
Required TP Treatment Efficiency (%)	64
Provided TP Treatment Efficiency (%)	88

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

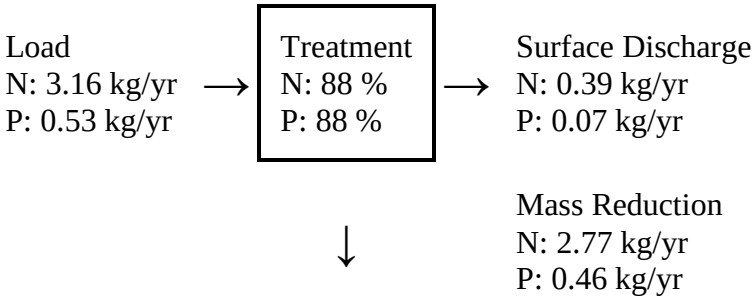
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

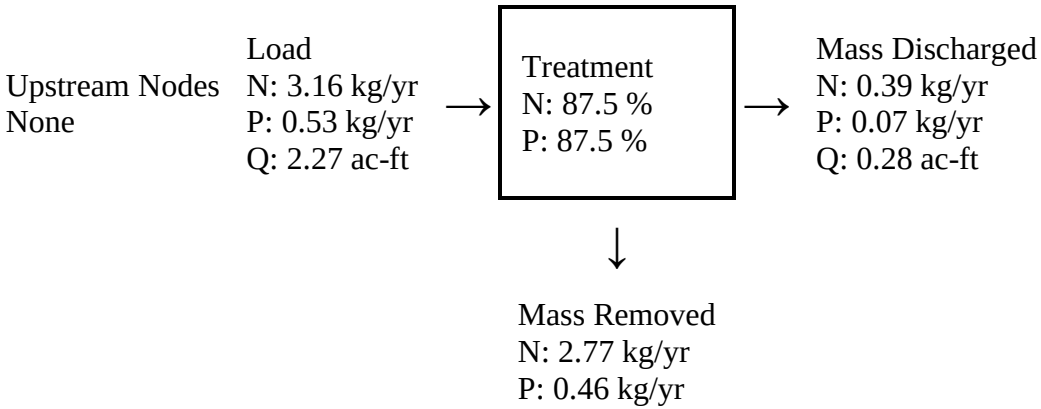
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	2.766
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.460
TP Concentration (mg/L)	0.000

Load Diagram for Exfiltration Trench (stand-alone)



Load Diagram for Exfiltration (As Used In Routing)



Catchment Number: 7 Name: Basin G.2

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

None Design

Watershed Characteristics

Catchment Area (acres)	0.56
Contributing Area (acres)	0.560
Non-DCIA Curve Number	39.00
DCIA Percent	100.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	99
Provided TN Treatment Efficiency (%)	
Required TP Treatment Efficiency (%)	99
Provided TP Treatment Efficiency (%)	

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

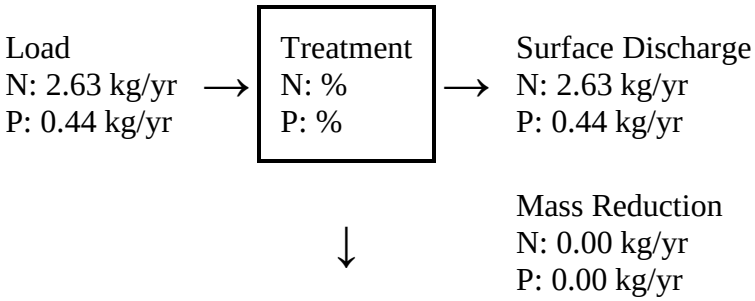
Media Mix Information

Type of Media Mix	
Media N Reduction (%)	0.000
Media P Reduction (%)	0.000

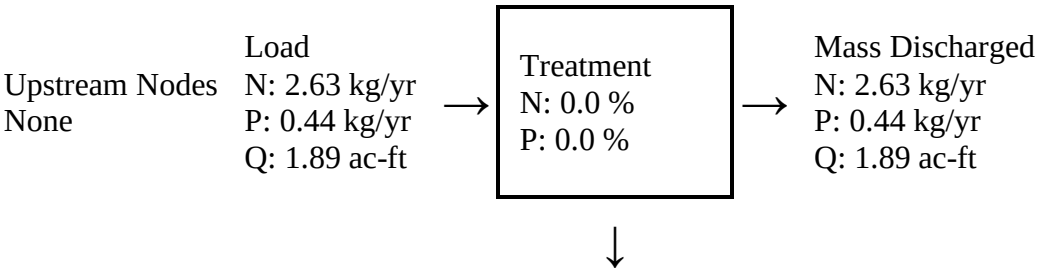
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for None (stand-alone)



Load Diagram for None (As Used In Routing)



Mass Removed
N: 0.00 kg/yr
P: 0.00 kg/yr

Catchment Number: 8 Name: Basin H

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Multiple BMP in Series Design Parameters

BMP in Series Number: 1
BMP Type: Retention

Retention Depth (in)	0.930
Retention Volume (ac-ft)	0.061

BMP in Series Number: 2
BMP Type: Exfiltration

Pipe Span (in)	27.0
Pipe Rise (in)	27.0
Pipe Length (ft)	2,550.0
Trench Width (ft)	4.3
Trench Depth (ft)	2.3
Trench Length (ft)	2,554.3
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.34
Retention Depth (in over CA)	5.118

BMP in Series Number: 3
BMP Type: None

BMP in Series Number: 4
BMP Type: None

Watershed Characteristics

Catchment Area (acres)	0.79
Contributing Area (acres)	0.790
Non-DCIA Curve Number	39.00
DCIA Percent	68.30
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	82
Provided TN Treatment Efficiency (%)	99
Required TP Treatment Efficiency (%)	63
Provided TP Treatment Efficiency (%)	99

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Media Mix Information

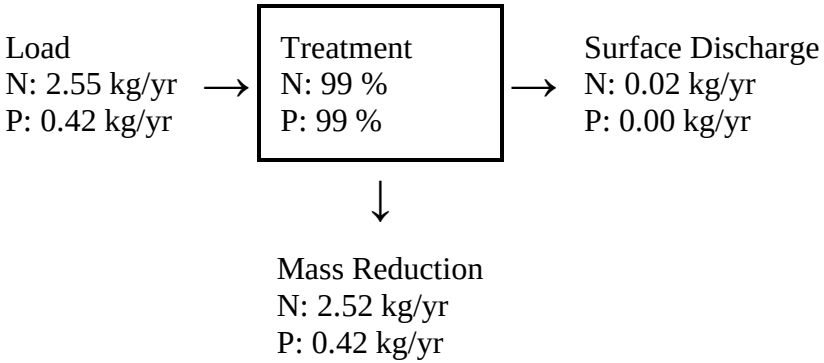
Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

Groundwater Discharge (Stand-Alone)

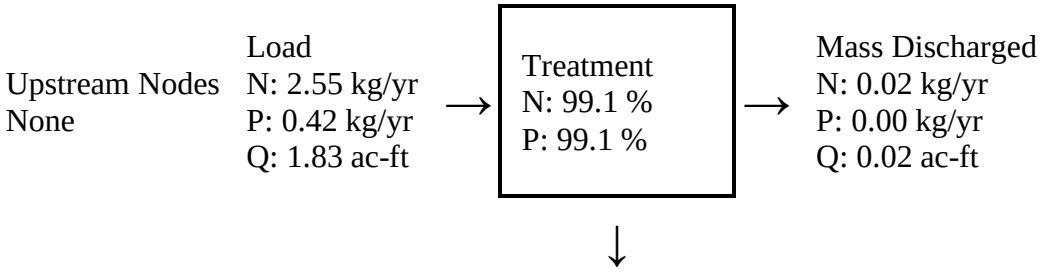
Treatment Rate (MG/yr)	0.000

TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load for Multiple BMP in Series



Load Diagram for Multiple BMP (As Used In Routing)



Mass Removed
N: 2.52 kg/yr
P: 0.42 kg/yr

Catchment Number: 9 Name: Basin I

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Multiple BMP in Series Design Parameters

BMP in Series Number: 1
BMP Type: Retention

Retention Depth (in)	1.650
Retention Volume (ac-ft)	0.061

BMP in Series Number: 2
BMP Type: Exfiltration

Pipe Span (in)	27.0
Pipe Rise (in)	27.0
Pipe Length (ft)	2,550.0
Trench Width (ft)	4.3
Trench Depth (ft)	2.3
Trench Length (ft)	2,554.3
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.34
Retention Depth (in over CA)	9.189

BMP in Series Number: 3
BMP Type: None

BMP in Series Number: 4
BMP Type: None

Watershed Characteristics

Catchment Area (acres)	0.44
Contributing Area (acres)	0.440
Non-DCIA Curve Number	39.00
DCIA Percent	77.30
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	91
Provided TN Treatment Efficiency (%)	99
Required TP Treatment Efficiency (%)	82
Provided TP Treatment Efficiency (%)	99

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Media Mix Information

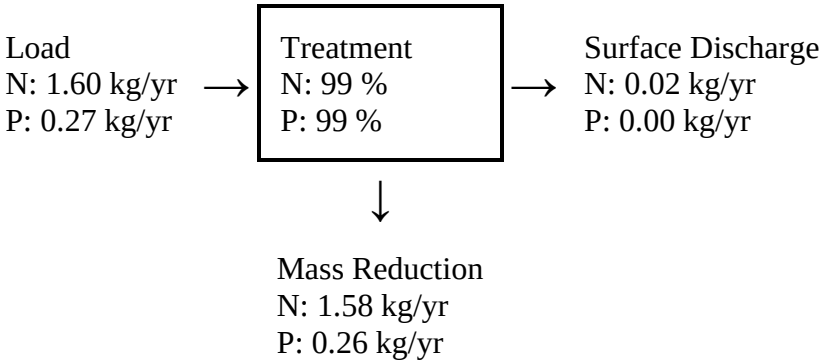
Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

Groundwater Discharge (Stand-Alone)

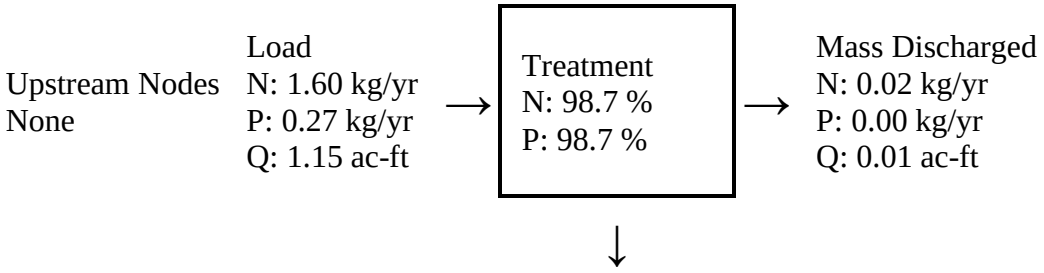
Treatment Rate (MG/yr)	0.000

TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load for Multiple BMP in Series



Load Diagram for Multiple BMP (As Used In Routing)



Mass Removed
N: 1.58 kg/yr
P: 0.26 kg/yr

Catchment Number: 10 Name: Basin J

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Multiple BMP in Series Design Parameters

BMP in Series Number: 1
BMP Type: Retention

Retention Depth (in)	0.530
Retention Volume (ac-ft)	0.023

BMP in Series Number: 2
BMP Type: Exfiltration

Pipe Span (in)	27.0
Pipe Rise (in)	27.0
Pipe Length (ft)	2,550.0
Trench Width (ft)	4.3
Trench Depth (ft)	2.3
Trench Length (ft)	2,554.3
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.34
Retention Depth (in over CA)	7.628

BMP in Series Number: 3
BMP Type: None

BMP in Series Number: 4
BMP Type: None

Watershed Characteristics

Catchment Area (acres)	0.53
Contributing Area (acres)	0.530
Non-DCIA Curve Number	39.00
DCIA Percent	84.90
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	99
Provided TN Treatment Efficiency (%)	98
Required TP Treatment Efficiency (%)	98
Provided TP Treatment Efficiency (%)	98

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Media Mix Information

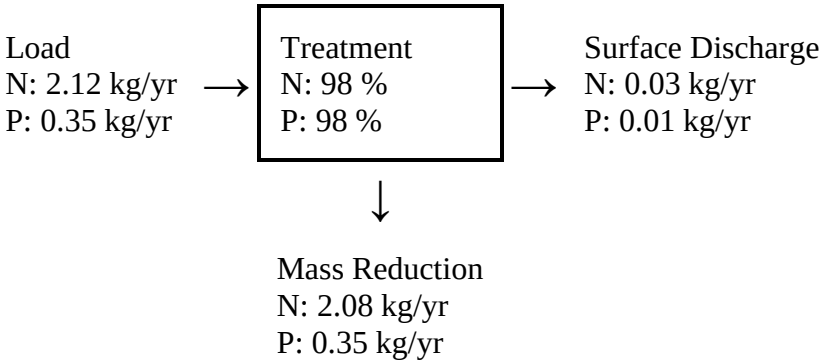
Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

Groundwater Discharge (Stand-Alone)

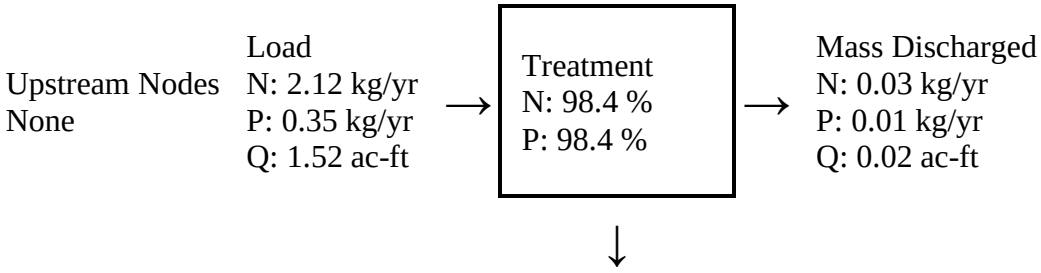
Treatment Rate (MG/yr)	0.000

TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load for Multiple BMP in Series



Load Diagram for Multiple BMP (As Used In Routing)



Mass Removed
N: 2.08 kg/yr
P: 0.35 kg/yr

Summary Treatment Report Version: 2.1.0

Project: Winter Springs Marketplace (Rev. 5)

Date:11/12/2020

Analysis Type: Net Improvement
BMP Types:

- Catchment 1 - Retention
- Catchment 2 - Wet Detention
- Catchment 3 - Exfiltration Trench
- Catchment 4 - Exfiltration Trench
- Catchment 5 - Exfiltration Trench
- Catchment 6 - Exfiltration Trench
- Catchment 7 - None
- Catchment 8 - Multiple BMP
- Catchment 9 - Multiple BMP
- Catchment 10 - Multiple BMP

Total nitrogen target removal met? YES
Total phosphorus target removal met? YES

Treatment system each catchment provides

Routing Summary
Catchment 1 Routed to Outlet
Catchment 2 Routed to Outlet
Catchment 3 Routed to Catchment 2
Catchment 4 Routed to Catchment 2
Catchment 5 Routed to Catchment 2
Catchment 6 Routed to Catchment 2
Catchment 7 Routed to Catchment 2
Catchment 8 Routed to Catchment 2
Catchment 9 Routed to Catchment 2
Catchment 10 Routed to Catchment 2

How each of the catchments are routed to the ultimate outfall.

Confirmation the system, as designed, treats for nitrogen and phosphorous in the ultimate discharge from site

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	5.33 kg/yr	
Total N post load	35.34 kg/yr	
Target N load reduction	85 %	
Target N discharge load	5.33 kg/yr	
Percent N load reduction	87 %	
Provided N discharge load	4.59 kg/yr	10.12 lb/yr
Provided N load removed	30.75 kg/yr	67.8 lb/yr

Target overall site loading rate based on existing conditions loading rate

Provided overall site loading rate

Phosphorus

Surface Water Discharge

Total P pre load	1.771 kg/yr	
Total P post load	5.879 kg/yr	
Target P load reduction	70 %	
Target P discharge load	1.771 kg/yr	
Percent P load reduction	92 %	
Provided P discharge load	.472 kg/yr	1.04 lb/yr
Provided P load removed	5.407 kg/yr	11.924 lb/yr

Target overall site loading rate based on existing conditions loading rate

Provided overall site loading rate

From Pre-Condition Loads

Existing N Discharge	5.33 (kg/yr)
Existing P Discharge	1.771 (kg/yr)

REQUIRED SMA-B PPV CHECK

WET DETENTION PROPOSED POND SMA-B

Littoral Zone OR Pre-Treatment Provided?	**YES**
Discharge Directly to Class I, II, III or OFW?	**NO**

Basin B Area =	1.12	acres
Basin C Area =	2.97	acres
Basin D Area =	0.88	acres
Basin E Area =	0.49	acres
Basin F Area =	0.95	acres
Basin G.2 Area =	0.56	acres
Basin H Area =	0.79	acres
Basin I Area =	0.44	acres
Basin J Area =	0.53	acres
Total Basin Area =	8.74	acres

Basin B Impervious Area =	0.31	acres
Basin C Impervious Area =	2.58	acres
Basin D Impervious Area =	0.68	acres
Basin E Impervious Area =	0.38	acres
Basin F Impervious Area =	0.67	acres
Basin G.2 Impervious Area =	0.56	acres
Basin H Impervious Area =	0.54	acres
Basin I Impervious Area =	0.34	acres
Basin J Impervious Area =	0.45	acres
Total Impervious Area (Excluding pond area) =	6.50	acres

PPV = (DA*C*R*RT)/(WS* CF)

POND SMA-B

DA = Drainage Area =	8.74	acres
C = Runoff Coefficient =	0.735	
R = Wet Season Rainfall Depth =	31.0	inches
RT = Residence Time =	14	days
WS = Wet Season =	153	days
CF = Conversion Factor =	12	in/ft
Required PPV	1.52	ac-ft
additional 50% for no littoral Zone	N/A	ac-ft
additional 50% for OFW discharge	N/A	ac-ft

PPV Required for area of upstream basins draining through SMA-B in nutrient removal treatment train

PPV Required	**1.52 ac-ft**
PPV Provided	**1.82 ac-ft**

Runoff Coefficient Calculation

	AREA (AC)	RUNOFF COEFFICIENT
IMPERVIOUS AREA	6.50	0.90
PERVIOUS AREA	1.89	0.30

C = [(Impervious Area)x(0.90) + (Pervious Area)x(0.30)] / (Total Area)

RUNOFF COEFFICIENT =	0.735

APPENDIX D

Post- Development ICPR Analysis

Node Max Conditions [POST-CONDITIONS (DIVERSION)]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
CS-C	100YR-24HR	47.08	40.70	0.0014	11.18	11.18	460
D15	100YR-24HR	46.78	44.63	0.0036	8.06	6.34	137
D16	100YR-24HR	46.89	44.62	-0.0014	8.86	8.64	309
D17	100YR-24HR	47.22	44.60	0.0015	16.13	15.96	238
D18	100YR-24HR	46.22	44.57	0.0014	15.96	15.80	325
D19	100YR-24HR	46.12	44.55	0.0107	15.80	15.64	293
D32	100YR-24HR	44.76	44.62	0.0145	14.48	10.88	100
D33	100YR-24HR	45.52	44.51	0.0210	36.62	25.61	196
D34	100YR-24HR	45.96	44.48	0.0835	83.54	36.62	151
D38	100YR-24HR	44.24	40.89	0.0010	8.31	8.33	367
D39	100YR-24HR	46.26	44.46	0.0010	2.69	2.52	177
D40	100YR-24HR	46.62	44.46	0.0010	2.86	2.69	191
D43	100YR-24HR	46.28	44.52	0.0010	3.03	2.86	178
GWT D & E	100YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT G & SWALES	100YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT-A	100YR-24HR	42.01	42.00	0.0000	0.00	0.00	0
GWT-C	100YR-24HR	41.01	41.00	0.0000	0.00	0.00	0
GWT-F	100YR-24HR	40.51	40.50	0.0000	0.00	0.00	0
JESUP POND 1	100YR-24HR	45.00	44.08	0.0004	50.50	24.21	56160
ONDICK	100YR-24HR	45.12	40.51	0.0019	34.97	34.97	568
POST-EAST-OUTFALL	100YR-24HR	39.94	39.94	0.0002	1.86	0.00	0
SMA-A.1	100YR-24HR	46.50	46.11	0.0003	6.74	6.60	5457
SMA-A.2	100YR-24HR	46.50	46.24	0.0007	3.61	3.36	2754
SMA-B	100YR-24HR	45.00	44.46	-0.0535	33.41	83.54	24586
SMA-C	100YR-24HR	44.63	44.63	-0.0145	18.21	15.62	13197
SMA-D	100YR-24HR	44.30	44.61	0.0006	5.17	4.83	3308
SMA-E	100YR-24HR	44.25	44.63	0.0004	3.10	0.95	4673
SMA-F	100YR-24HR	44.65	44.63	0.0004	5.32	6.51	3811
SMA-G	100YR-24HR	44.52	44.64	0.0005	12.75	7.24	15012
SWALE 1	100YR-24HR	45.35	45.38	0.0003	4.33	4.31	2483
SWALE 2	100YR-24HR	45.35	45.34	0.0003	2.61	2.59	2477

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
SWALE 3	100YR-24HR	45.35	45.36	0.0002	3.24	3.23	1525
WETLAND	100YR-24HR	35.01	35.00	0.0000	34.97	9.73	0
CS-C	10YR-24HR	47.08	36.87	0.0014	6.44	3.90	460
D15	10YR-24HR	46.78	43.68	0.0009	3.83	3.81	139
D16	10YR-24HR	46.89	43.68	-0.0014	5.16	5.17	309
D17	10YR-24HR	47.22	43.68	-0.0017	8.57	8.37	238
D18	10YR-24HR	46.22	43.68	0.0014	8.37	8.26	325
D19	10YR-24HR	46.12	43.67	0.0107	12.03	8.16	293
D32	10YR-24HR	44.76	43.77	0.0145	14.48	8.26	100
D33	10YR-24HR	45.52	43.67	0.0210	36.62	16.32	196
D34	10YR-24HR	45.96	43.67	0.0835	83.54	36.62	151
D38	10YR-24HR	44.24	36.88	0.0010	3.64	2.88	367
D39	10YR-24HR	46.26	43.66	0.0010	2.06	1.97	177
D40	10YR-24HR	46.62	43.67	0.0010	2.16	2.06	191
D43	10YR-24HR	46.28	43.67	0.0010	2.26	2.16	180
GWT D & E	10YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT G & SWALES	10YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT-A	10YR-24HR	42.01	42.00	0.0000	0.00	0.00	0
GWT-C	10YR-24HR	41.01	41.00	0.0000	0.00	0.00	0
GWT-F	10YR-24HR	40.51	40.50	0.0000	0.00	0.00	0
JESUP POND 1	10YR-24HR	45.00	43.52	0.0005	36.21	16.51	54546
ONDICK	10YR-24HR	45.12	36.85	0.0019	20.26	20.25	568
POST-EAST-OUTFALL	10YR-24HR	39.94	39.94	0.0003	0.28	0.00	0
SMA-A.1	10YR-24HR	46.50	46.01	0.0005	4.02	3.71	5289
SMA-A.2	10YR-24HR	46.50	46.06	0.0007	2.69	2.08	2551
SMA-B	10YR-24HR	45.00	43.66	-0.0535	20.15	83.54	22538
SMA-C	10YR-24HR	44.63	43.85	-0.0145	13.27	14.48	13198
SMA-D	10YR-24HR	44.30	44.34	0.0009	3.67	3.16	3308
SMA-E	10YR-24HR	44.25	43.68	0.0003	2.03	0.67	4673
SMA-F	10YR-24HR	44.65	43.69	0.0006	3.69	3.11	3812
SMA-G	10YR-24HR	44.52	43.88	0.0006	11.95	4.21	15008
SWALE 1	10YR-24HR	45.35	45.35	0.0004	2.99	2.97	2483

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
SWALE 2	10YR-24HR	45.35	45.32	0.0005	1.85	1.84	2460
SWALE 3	10YR-24HR	45.35	45.34	0.0001	2.35	2.35	1507
WETLAND	10YR-24HR	35.01	35.00	0.0000	20.25	9.73	0
CS-C	25YR-24HR	47.08	37.97	0.0014	6.44	5.72	460
D15	25YR-24HR	46.78	43.88	0.0010	4.72	4.63	139
D16	25YR-24HR	46.89	43.88	-0.0011	6.63	6.51	309
D17	25YR-24HR	47.22	43.88	-0.0014	11.08	10.96	238
D18	25YR-24HR	46.22	43.87	0.0014	10.96	10.85	325
D19	25YR-24HR	46.12	43.87	0.0107	12.03	10.73	293
D32	25YR-24HR	44.76	43.90	0.0145	14.48	9.45	100
D33	25YR-24HR	45.52	43.86	0.0210	36.62	19.62	196
D34	25YR-24HR	45.96	43.86	0.0835	83.54	36.62	151
D38	25YR-24HR	44.24	38.00	0.0010	3.95	4.02	367
D39	25YR-24HR	46.26	43.86	0.0010	2.20	2.08	177
D40	25YR-24HR	46.62	43.86	0.0010	2.33	2.20	191
D43	25YR-24HR	46.28	43.87	0.0010	2.46	2.33	178
GWT D & E	25YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT G & SWALES	25YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT-A	25YR-24HR	42.01	42.00	0.0000	0.00	0.00	0
GWT-C	25YR-24HR	41.01	41.00	0.0000	0.00	0.00	0
GWT-F	25YR-24HR	40.51	40.50	0.0000	0.00	0.00	0
JESUP POND 1	25YR-24HR	45.00	43.64	0.0004	39.93	19.90	54907
ONDICK	25YR-24HR	45.12	37.92	0.0019	25.47	25.46	568
POST-EAST-OUTFALL	25YR-24HR	39.94	39.94	0.0003	0.57	0.00	0
SMA-A.1	25YR-24HR	46.50	46.05	0.0005	4.72	4.54	5348
SMA-A.2	25YR-24HR	46.50	46.11	0.0007	2.93	2.45	2613
SMA-B	25YR-24HR	45.00	43.85	-0.0535	24.40	83.54	23023
SMA-C	25YR-24HR	44.63	43.97	-0.0145	14.56	14.48	13198
SMA-D	25YR-24HR	44.30	44.40	0.0010	4.06	3.66	3308
SMA-E	25YR-24HR	44.25	43.88	0.0003	2.24	0.88	4673
SMA-F	25YR-24HR	44.65	43.89	0.0006	4.11	3.71	3811
SMA-G	25YR-24HR	44.52	44.00	0.0005	12.49	4.63	15010

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
SWALE 1	25YR-24HR	45.35	45.36	0.0004	3.34	3.32	2483
SWALE 2	25YR-24HR	45.35	45.33	0.0005	2.05	2.04	2465
SWALE 3	25YR-24HR	45.35	45.34	0.0001	2.58	2.58	1515
WETLAND	25YR-24HR	35.01	35.00	0.0000	25.46	9.73	0
CS-C	MEAN ANNUAL	47.08	35.02	0.0014	6.44	3.64	460
D15	MEAN ANNUAL	46.78	41.71	-0.0001	0.16	0.16	100
D16	MEAN ANNUAL	46.89	41.71	0.0008	0.39	0.27	301
D17	MEAN ANNUAL	47.22	41.71	0.0010	0.89	0.99	238
D18	MEAN ANNUAL	46.22	41.70	0.0012	2.29	1.40	325
D19	MEAN ANNUAL	46.12	41.70	0.0107	12.03	2.29	293
D32	MEAN ANNUAL	44.76	43.39	0.0145	14.48	0.40	100
D33	MEAN ANNUAL	45.52	41.70	0.0210	36.62	12.03	196
D34	MEAN ANNUAL	45.96	41.70	0.0835	83.54	36.62	151
D38	MEAN ANNUAL	44.24	35.02	0.0010	3.64	0.32	367
D39	MEAN ANNUAL	46.26	41.70	0.0010	1.19	1.17	203
D40	MEAN ANNUAL	46.62	41.70	0.0010	1.22	1.19	193
D43	MEAN ANNUAL	46.28	41.70	0.0010	1.22	1.22	232
GWT D & E	MEAN ANNUAL	40.01	40.00	0.0000	0.00	0.00	0
GWT G & SWALES	MEAN ANNUAL	40.01	40.00	0.0000	0.00	0.00	0
GWT-A	MEAN ANNUAL	42.01	42.00	0.0000	0.00	0.00	0
GWT-C	MEAN ANNUAL	41.01	41.00	0.0000	0.00	0.00	0
GWT-F	MEAN ANNUAL	40.51	40.50	0.0000	0.00	0.00	0
JESUP POND 1	MEAN ANNUAL	45.00	42.77	0.0004	16.99	1.76	52411
ONDICK	MEAN ANNUAL	45.12	35.02	0.0019	9.73	6.44	568
POST-EAST-OUTFALL	MEAN ANNUAL	39.94	39.94	0.0006	0.00	0.00	0
SMA-A.1	MEAN ANNUAL	46.50	45.67	0.0003	1.61	0.26	4726
SMA-A.2	MEAN ANNUAL	46.50	45.67	0.0007	1.45	0.82	2114
SMA-B	MEAN ANNUAL	45.00	41.70	-0.0535	2.52	83.54	17695
SMA-C	MEAN ANNUAL	44.63	43.39	-0.0145	6.59	14.48	13198
SMA-D	MEAN ANNUAL	44.30	43.84	0.0004	1.67	0.26	3308
SMA-E	MEAN ANNUAL	44.25	43.13	0.0002	0.92	0.02	4673
SMA-F	MEAN ANNUAL	44.65	43.07	0.0003	1.55	0.16	3811

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
SMA-G	MEAN ANNUAL	44.52	43.39	0.0003	4.56	0.17	15010
SWALE 1	MEAN ANNUAL	45.35	45.29	0.0004	1.23	0.70	2430
SWALE 2	MEAN ANNUAL	45.35	45.26	0.0003	0.85	0.15	2408
SWALE 3	MEAN ANNUAL	45.35	45.30	0.0001	1.16	1.15	1465
WETLAND	MEAN ANNUAL	35.01	35.00	0.0000	2.12	9.73	0

Simple Basin Runoff Summary [POST-CONDITIONS (DIVERSION)]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
BASIN A	100YR-24HR	3.83	12.0500	10.60	6.57	0.8267	68.6	0.00	0.00
BASIN B	100YR-24HR	5.67	12.0500	10.60	7.23	1.1200	73.5	0.00	0.00
BASIN C	100YR-24HR	18.21	12.0500	10.60	9.38	2.9700	90.1	0.00	0.00
BASIN D	100YR-24HR	5.17	12.0500	10.60	8.67	0.8832	84.5	0.00	0.00
BASIN E	100YR-24HR	2.85	12.0500	10.60	8.68	0.4872	84.6	0.00	0.00
BASIN F	100YR-24HR	5.32	12.0500	10.60	8.11	0.9536	80.2	0.00	0.00
BASIN G.1	100YR-24HR	3.61	12.0833	10.60	10.36	0.6659	98.0	0.00	0.00
BASIN G.2	100YR-24HR	3.03	12.0833	10.60	10.36	0.5591	98.0	0.00	0.00
BASIN H	100YR-24HR	4.33	12.0500	10.60	7.97	0.7877	79.1	0.00	0.00
BASIN I	100YR-24HR	2.61	12.0500	10.60	8.71	0.4439	84.8	0.00	0.00
BASIN J	100YR-24HR	3.24	12.0500	10.60	9.30	0.5302	89.5	0.00	0.00
JESSUP	100YR-24HR	50.50	12.1333	10.60	8.99	11.0300	87.0	0.00	0.00
BASIN A	10YR-24HR	2.46	12.0500	7.90	4.21	0.8267	68.6	0.00	0.00
BASIN B	10YR-24HR	3.77	12.0500	7.90	4.77	1.1200	73.5	0.00	0.00
BASIN C	10YR-24HR	13.27	12.0500	7.90	6.71	2.9700	90.1	0.00	0.00
BASIN D	10YR-24HR	3.67	12.0500	7.90	6.05	0.8832	84.5	0.00	0.00
BASIN E	10YR-24HR	2.03	12.0500	7.90	6.06	0.4872	84.6	0.00	0.00
BASIN F	10YR-24HR	3.69	12.0500	7.90	5.55	0.9536	80.2	0.00	0.00
BASIN G.1	10YR-24HR	2.69	12.0833	7.90	7.66	0.6659	98.0	0.00	0.00
BASIN G.2	10YR-24HR	2.26	12.0833	7.90	7.66	0.5591	98.0	0.00	0.00
BASIN H	10YR-24HR	2.99	12.0500	7.90	5.42	0.7877	79.1	0.00	0.00
BASIN I	10YR-24HR	1.85	12.0500	7.90	6.09	0.4439	84.8	0.00	0.00
BASIN J	10YR-24HR	2.35	12.0500	7.90	6.64	0.5302	89.5	0.00	0.00
JESSUP	10YR-24HR	36.21	12.1333	7.90	6.35	11.0300	87.0	0.00	0.00
BASIN A	25YR-24HR	2.81	12.0500	8.60	4.81	0.8267	68.6	0.00	0.00
BASIN B	25YR-24HR	4.26	12.0500	8.60	5.40	1.1200	73.5	0.00	0.00
BASIN C	25YR-24HR	14.56	12.0500	8.60	7.40	2.9700	90.1	0.00	0.00
BASIN D	25YR-24HR	4.06	12.0500	8.60	6.73	0.8832	84.5	0.00	0.00
BASIN E	25YR-24HR	2.24	12.0500	8.60	6.74	0.4872	84.6	0.00	0.00
BASIN F	25YR-24HR	4.11	12.0500	8.60	6.21	0.9536	80.2	0.00	0.00
BASIN G.1	25YR-24HR	2.93	12.0833	8.60	8.36	0.6659	98.0	0.00	0.00
BASIN G.2	25YR-24HR	2.46	12.0833	8.60	8.36	0.5591	98.0	0.00	0.00

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
BASIN H	25YR-24HR	3.34	12.0500	8.60	6.07	0.7877	79.1	0.00	0.00
BASIN I	25YR-24HR	2.05	12.0500	8.60	6.76	0.4439	84.8	0.00	0.00
BASIN J	25YR-24HR	2.58	12.0500	8.60	7.33	0.5302	89.5	0.00	0.00
JESSUP	25YR-24HR	39.93	12.1333	8.60	7.03	11.0300	87.0	0.00	0.00
BASIN A	MEAN ANNUAL	0.79	12.0667	4.30	1.44	0.8267	68.6	0.00	0.00
BASIN B	MEAN ANNUAL	1.38	12.0667	4.30	1.78	1.1200	73.5	0.00	0.00
BASIN C	MEAN ANNUAL	6.59	12.0500	4.30	3.21	2.9700	90.1	0.00	0.00
BASIN D	MEAN ANNUAL	1.67	12.0500	4.30	2.68	0.8832	84.5	0.00	0.00
BASIN E	MEAN ANNUAL	0.92	12.0500	4.30	2.69	0.4872	84.6	0.00	0.00
BASIN F	MEAN ANNUAL	1.55	12.0500	4.30	2.31	0.9536	80.2	0.00	0.00
BASIN G.1	MEAN ANNUAL	1.45	12.0833	4.30	4.06	0.6659	98.0	0.00	0.00
BASIN G.2	MEAN ANNUAL	1.22	12.0833	4.30	4.06	0.5591	98.0	0.00	0.00
BASIN H	MEAN ANNUAL	1.23	12.0500	4.30	2.22	0.7877	79.1	0.00	0.00
BASIN I	MEAN ANNUAL	0.85	12.0500	4.30	2.71	0.4439	84.8	0.00	0.00
BASIN J	MEAN ANNUAL	1.16	12.0500	4.30	3.15	0.5302	89.5	0.00	0.00
JESSUP	MEAN ANNUAL	16.99	12.1500	4.30	2.91	11.0300	87.0	0.00	0.00

Simple Basin: BASIN A

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-A.1
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.8267 ac
Curve Number:	68.6
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN B

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-B
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	1.1200 ac
Curve Number:	73.5
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN C

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-C
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs

Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	2.9700 ac
Curve Number:	90.1
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN D

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-D
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.8832 ac
Curve Number:	84.5
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN E

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-E
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.4872 ac
Curve Number:	84.6
% Impervious:	0.00
% DCIA:	0.00

% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN F

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-F
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	9999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.9536 ac
Curve Number:	80.2
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN G.1

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-A.2
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	15.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.6659 ac
Curve Number:	98.0
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN G.2

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	D43
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	15.0000 min
Max Allowable Q:	999999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.5591 ac
Curve Number:	98.0
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN H

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SWALE 1
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.7877 ac
Curve Number:	79.1
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN I

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SWALE 2
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs

Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.4439 ac
Curve Number:	84.8
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN J

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SWALE 3
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.5302 ac
Curve Number:	89.5
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: JESSUP

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	JESUP POND 1
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	19.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	11.0300 ac
Curve Number:	87.0
% Impervious:	0.00
% DCIA:	0.00

% Direct: 0.00
Rainfall Name:

Comment: BASED ON SJRWMD APP. NO. 97490-1

Node: CS-C

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 33.30 ft
Warning Stage: 47.08 ft

Comment:

Node: D15

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 41.30 ft
Warning Stage: 46.78 ft

Comment:

Node: D16

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 40.18 ft
Warning Stage: 46.89 ft

Comment:

Node: D17

Scenario: POST-CONDITIONS

(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 35.15 ft
Warning Stage: 47.22 ft

Comment:

Node: D18

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 35.06 ft
Warning Stage: 46.22 ft

Comment:

Node: D19

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 34.93 ft
Warning Stage: 46.12 ft

Comment:

Node: D32

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 40.25 ft
Warning Stage: 44.76 ft

Comment:

Node: D33

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 34.86 ft
Warning Stage: 45.52 ft

Comment:

Node: D34

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 34.34 ft
Warning Stage: 45.96 ft

Comment:

Node: D38

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 33.80 ft
Warning Stage: 44.24 ft

Comment:

Node: D39

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 39.23 ft
Warning Stage: 46.26 ft

Comment:

Node: D40

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 39.37 ft
Warning Stage: 46.62 ft

Comment:

Node: D43

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 39.29 ft
Warning Stage: 46.28 ft

Comment:

Node: GWT D & E

Scenario: POST-CONDITIONS (DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 40.00 ft
Warning Stage: 40.01 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	40.00
0	0	0	72.0000	40.00

Comment: SYSTEM SMA-E - SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-4, B-6, B-9

SYSTEM SMA-D - SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-9, B-11, B-12, B-15

Node: GWT G & SWALES

Scenario: POST-CONDITIONS (DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 40.00 ft
Warning Stage: 40.01 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	40.00
0	0	0	72.0000	40.00

Comment: SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-2, B-3, B-5, B-6

Node: GWT-A

Scenario: POST-CONDITIONS (DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 42.00 ft
Warning Stage: 42.01 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	42.00
0	0	0	72.0000	42.00

Comment: SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-7 & B-13

Node: GWT-C

Scenario: POST-CONDITIONS (DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 41.00 ft
Warning Stage: 41.01 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	41.00
0	0	0	72.0000	41.00

Comment: SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-8, B-11, B-16

Node: GWT-F

Scenario: POST-CONDITIONS (DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 40.50 ft
Warning Stage: 40.51 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	40.50
0	0	0	72.0000	40.50

Comment: SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-3, B-4, B-6

Node: JESUP POND 1

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 41.20 ft
Warning Stage: 45.00 ft

Stage [ft]	Area [ac]	Area [ft2]
41.20	1.1010	47960
45.00	1.3490	58762

Comment: BASED ON SJRWMD APP. NO. 97490-1, NODE "POND 1"

Node: ONDICK

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 32.89 ft
Warning Stage: 45.12 ft

Comment: BASED ON AS-BUILTS FOR STRUCTURE "S-7" PROVIDED BY THE CITY OF WINTER SPRINGS.

Node: POST-EAST-OUTFALL

Scenario: POST-CONDITIONS

(DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 38.94 ft
Warning Stage: 39.94 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	38.94
0	0	0	24.0000	39.94

Comment: BASED ON OUTFALL "NODE 99" FROM SJRWMD PERMIT NO. 83445-1. CONVERTED FROM NGVD29 TO NAVD88 USING 1.056-FT CONVERSION FACTOR.

Node: SMA-A.1

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 43.50 ft
Warning Stage: 46.50 ft

Stage [ft]	Area [ac]	Area [ft2]
43.50	0.0410	1786
44.50	0.0680	2962
45.50	0.1020	4443
46.50	0.1400	6098

Comment:

Node: SMA-A.2

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 43.50 ft
Warning Stage: 46.50 ft

Stage [ft]	Area [ac]	Area [ft2]
43.50	0.0090	392
44.50	0.0230	1002
45.50	0.0440	1917
46.50	0.0700	3049

Comment:

Node: SMA-B

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 40.50 ft
Warning Stage: 45.00 ft

Stage [ft]	Area [ac]	Area [ft2]
40.50	0.3430	14941
41.00	0.3690	16074
42.00	0.4220	18382
43.00	0.4790	20865
44.00	0.5370	23392
45.00	0.5970	26005

Comment:

Node: SMA-C

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 42.00 ft
Warning Stage: 44.63 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
42.00	0.00	0
42.08	0.02	653
42.17	0.03	1394
42.25	0.05	2265
42.33	0.07	3180
42.42	0.10	4138
42.50	0.12	5140
42.58	0.14	6186
42.67	0.17	7187
42.75	0.19	8233
42.83	0.21	9278
42.92	0.24	10324
43.00	0.26	11326
43.08	0.28	12327
43.17	0.31	13286
43.25	0.33	14201
43.33	0.35	15072
43.42	0.36	15812
43.50	0.37	16248
43.58	0.38	16596

Comment: SHWT ASSUMED TO BE 41-FT NAVD-88

SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-8, B-11, B-16

Node: SMA-D

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 42.00 ft
Warning Stage: 44.30 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
42.00	0.00	0
42.08	0.00	131
42.17	0.01	348
42.25	0.01	523
42.33	0.02	741
42.42	0.02	958
42.50	0.03	1220
42.58	0.03	1481
42.67	0.04	1699
42.75	0.05	1960
42.83	0.05	2222
42.92	0.06	2483
43.00	0.06	2744
43.08	0.07	3006
43.17	0.08	3267
43.25	0.08	3528
43.33	0.09	3790
43.42	0.09	4008
43.50	0.10	4269
43.58	0.10	4487
43.67	0.11	4748
43.75	0.11	4966
43.83	0.12	5140
43.92	0.12	5314
44.00	0.13	5489

Comment: SHWT ASSUMED TO BE 40-FT NAVD88

SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-9, B-11, B-12, B-15

Node: SMA-E

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 42.00 ft
Warning Stage: 44.25 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
42.00	0.00	0
42.08	0.01	218
42.17	0.01	436
42.25	0.02	741
42.33	0.02	1045
42.42	0.03	1350
42.50	0.04	1655
42.58	0.05	2004
42.67	0.05	2352
42.75	0.06	2701
42.83	0.07	3049
42.92	0.08	3398
43.00	0.09	3746
43.08	0.10	4138
43.17	0.10	4487
43.25	0.11	4835
43.33	0.12	5184
43.42	0.13	5489
43.50	0.13	5837
43.58	0.14	6142
43.67	0.15	6447
43.75	0.15	6708
43.83	0.16	6970
43.92	0.17	7187

Comment: SHWT ASSUMED TO BE 40-FT NAVD88

SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-4, B-6, B-9

Node: SMA-F

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 41.50 ft
Warning Stage: 44.65 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
44.58	0.23	9888

Stage [ft]	Volume [ac-ft]	Volume [ft3]
44.50	0.22	9757
44.42	0.22	9540
44.33	0.21	9322
44.25	0.21	9104
44.17	0.20	8886
44.08	0.20	8625
44.00	0.19	8364
43.92	0.19	8102
43.83	0.18	7797
43.75	0.17	7536
43.67	0.17	7231
43.58	0.16	6926
43.50	0.15	6621
43.42	0.14	6316
43.33	0.14	6011
43.25	0.13	5706
43.17	0.12	5401
43.08	0.12	5097
43.00	0.11	4792
42.92	0.10	4487
42.83	0.10	4182
42.75	0.09	3877
42.67	0.08	3572
42.58	0.08	3267
42.50	0.07	2962
42.42	0.06	2657
42.33	0.06	2396
42.25	0.05	2091
42.17	0.04	1830
42.08	0.04	1525
42.00	0.03	1263
41.92	0.02	1045
41.83	0.02	784
41.75	0.01	566
41.67	0.01	348
41.58	0.00	174
41.50	0.00	0

Comment: SHWT ASSUMED TO BE 40.5-FT NAVD88

SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-3, B-4, B-6

Node: SMA-G

Scenario: POST-CONDITIONS (DIVERSION)

Type: Stage/Volume

Base Flow: 0.00 cfs
Initial Stage: 42.00 ft
Warning Stage: 44.52 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
42.00	0.00	0
42.08	0.02	653
42.17	0.04	1525
42.25	0.06	2439
42.33	0.08	3398
42.42	0.10	4487
42.50	0.13	5576
42.58	0.15	6708
42.67	0.18	7841
42.75	0.21	9060
42.83	0.24	10237
42.92	0.26	11500
43.00	0.29	12720
43.08	0.32	13939
43.17	0.35	15202
43.25	0.38	16422
43.33	0.41	17685
43.42	0.43	18905
43.50	0.46	20125
43.58	0.49	21301
43.67	0.52	22477
43.75	0.54	23610
43.83	0.57	24699
43.92	0.59	25744
44.00	0.61	26746
44.08	0.64	27661
44.17	0.65	28488
44.25	0.67	29142

Comment: SHWT ASSUMED TO BE 40.0-FT NAVD88

SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-2, B-3, B-5, B-6

Node: SWALE 1

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 43.35 ft
Warning Stage: 45.35 ft

Stage [ft]	Area [ac]	Area [ft2]
43.35	0.0100	436
44.35	0.0330	1437
45.25	0.0550	2396
45.35	0.0570	2483

Comment:

Node: SWALE 2

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 43.35 ft
Warning Stage: 45.35 ft

Stage [ft]	Area [ac]	Area [ft2]
43.35	0.0100	436
44.35	0.0330	1437
45.25	0.0550	2396
45.35	0.0570	2483

Comment:

Node: SWALE 3

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 43.85 ft
Warning Stage: 45.35 ft

Stage [ft]	Area [ac]	Area [ft2]
43.85	0.0000	0
44.35	0.0130	566
45.25	0.0320	1394
45.35	0.0350	1525

Comment:

Node: WETLAND

Scenario: POST-CONDITIONS

(DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 35.00 ft
Warning Stage: 35.01 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	35.00
0	0	0	48.0000	35.00

Comment: BASED ON SJRWMD APP. NO. 97490-1

Pipe Link: CS-C > ONDICK		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	33.20 ft	Invert:	33.10 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	CS-C	Geometry: Circular		Geometry: Circular	
To Node:	ONDICK	Max Depth:	2.50 ft	Max Depth:	2.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	49.05 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: D-38 > CS-C		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	33.80 ft	Invert:	33.20 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D38	Geometry: Circular		Geometry: Circular	
To Node:	CS-C	Max Depth:	2.50 ft	Max Depth:	2.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	295.59 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: D15 > D16		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	41.30 ft	Invert:	41.15 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D15	Geometry: Circular		Geometry: Circular	
To Node:	D16	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	75.10 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: D16 > D17		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	40.18 ft	Invert:	40.03 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D16	Geometry: Circular		Geometry: Circular	
To Node:	D17	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	157.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	0.50	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: D17 > D18		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	35.15 ft	Invert:	35.06 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D17	Geometry: Circular		Geometry: Circular	
To Node:	D18	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			

Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	89.40 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	0.50	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D18 > D19		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	35.06 ft	Invert:	35.93 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D18	Geometry: Circular		Geometry: Circular	
To Node:	D19	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	128.96 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	0.50	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D19 > D33		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	34.93 ft	Invert:	34.86 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D19	Geometry: Circular		Geometry: Circular	
To Node:	D33	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	74.84 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Drop Structure Link: D32 > D33		Upstream Pipe		Downstream Pipe	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	40.92 ft	Invert:	38.73 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D32	Geometry: Circular		Geometry: Circular	
To Node:	D33	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	72.59 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	1	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Sharp Crested Vertical	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	43.33 ft	Ref Node:	
Control Elevation:	43.33 ft	Discharge Coefficients	
Max Depth:	999999999.00 ft	Weir Default:	3.200
Max Width:	8.75 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Pipe Link: D33 > D34		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	34.86 ft	Invert:	34.34 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D33	Geometry: Circular		Geometry: Circular	
To Node:	D34	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	48.00 ft	Ref Node:		Ref Node:	

FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00		Top Clip		
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D34 > SMA-B		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	34.34 ft	Invert:	33.93 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D34	Geometry: Circular		Geometry: Circular	
To Node:	SMA-B	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Link Count:	1		Bottom Clip		
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	38.41 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00		Top Clip		
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D39 > SMA-B		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	39.23 ft	Invert:	39.00 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D39	Geometry: Circular		Geometry: Circular	
To Node:	SMA-B	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1		Bottom Clip		
Flow Direction:	Positive	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	105.71 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00		Top Clip		
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D40 > D39		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	39.37 ft	Invert:	39.23 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D40	Geometry: Circular		Geometry: Circular	
To Node:	D39	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	71.33 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D43 > D40		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	40.29 ft	Invert:	39.90 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D43	Geometry: Circular		Geometry: Circular	
To Node:	D40	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	196.50 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Drop Structure Link: JESUP POND OUTFALL		Upstream Pipe		Downstream Pipe	
		Invert:	38.25 ft	Invert:	32.89 ft
Scenario:	POST-CONDITIONS (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
		Geometry: Circular		Geometry: Circular	
From Node:	JESUP POND 1	Max Depth:	2.50 ft	Max Depth:	2.50 ft
To Node:	ONDICK	Bottom Clip			
Link Count:	1	Default:	0.00 ft	Default:	0.00 ft
Flow Direction:	Both	Op Table:		Op Table:	
Solution:	Combine	Ref Node:		Ref Node:	
Increments:	0	Manning's N:	0.0000	Manning's N:	0.0000
Pipe Count:	1	Top Clip			

Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1004.00 ft	Op Table:		Op Table:	
FHWA Code:	1	Ref Node:		Ref Node:	
Entr Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50				
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment: LENGTH OF PIPE AND INVERTS BASED ON AS-BUILTS PROVIDED BY CITY OF WINTER SPRINGS

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	43.64 ft
Control Elevation:	43.64 ft
Max Depth:	3.00 ft
Max Width:	4.50 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: TYPE E INLET

Weir Component

Weir:	2
Weir Count:	2
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	42.57 ft
Control Elevation:	42.57 ft
Max Depth:	999999999.00 ft
Max Width:	2.75 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:

Weir Component

Weir:	3
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Circular
Invert:	41.46 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	

Control Elevation:	41.46 ft
Max Depth:	0.24 ft

Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Pipe Link: OUTFALL		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	32.89 ft	Invert:	29.53 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	ONDICK	Geometry: Circular		Geometry: Circular	
To Node:	WETLAND	Max Depth:	2.50 ft	Max Depth:	2.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	890.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment: BASED ON ELEVATIONS AND LENGTHS PROVIDED WITHIN AS-BUILTS PROVIDED BY CITY OF WINTER SPRINGS.

Percolation Link: SMA A.1 > GWT			
Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	SMA-A.1	Vertical Flow Termination:	Horizontal Flow Algorithm
To Node:	GWT-A	Perimeter 1:	200.00 ft
Link Count:	1	Perimeter 2:	200.00 ft
Flow Direction:	Both	Perimeter 3:	200.00 ft
Aquifer Base Elevation:	25.00 ft	Distance P1 to P2:	50.00 ft
Water Table Elevation:	42.00 ft	Distance P2 to P3:	450.00 ft
Annual Recharge Rate:	0 ipy	# of Cells P1 to P2:	10
Horizontal Conductivity:	25.500 fpd	# of Cells P2 to P3:	45
Vertical Conductivity:	0.000 fpd		
Fillable Porosity:	0.250		
Layer Thickness:	1.50 ft		

Comment:

Percolation Link: SMA A.2 > GWT			
Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	SMA-A.2	Vertical Flow Termination:	Horizontal Flow Algorithm
To Node:	GWT-A	Perimeter 1:	200.00 ft
Link Count:	1	Perimeter 2:	200.00 ft
Flow Direction:	Both	Perimeter 3:	200.00 ft
Aquifer Base Elevation:	25.00 ft	Distance P1 to P2:	50.00 ft
Water Table Elevation:	42.00 ft	Distance P2 to P3:	450.00 ft
Annual Recharge Rate:	0 ipy	# of Cells P1 to P2:	10
Horizontal Conductivity:	25.500 fpd	# of Cells P2 to P3:	45
Vertical Conductivity:	0.000 fpd		
Fillable Porosity:	0.250		
Layer Thickness:	1.50 ft		

Comment:

Drop Structure Link: SMA B > EAST OUTFALL		Upstream Pipe		Downstream Pipe	
		Invert:	39.84 ft	Invert:	39.55 ft
Scenario:	POST-CONDITIONS (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
		Geometry: Circular		Geometry: Circular	
From Node:	SMA-B	Max Depth:	1.50 ft	Max Depth:	1.50 ft
To Node:	POST-EAST-OUTFALL	Bottom Clip			
		Default:	0.00 ft	Default:	0.00 ft
Link Count:	1	Op Table:		Op Table:	
Flow Direction:	Both	Ref Node:		Ref Node:	
Solution:	Combine	Manning's N:	0.0000	Manning's N:	0.0000
Increments:	0	Top Clip			
Pipe Count:	1	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	59.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00				
Exit Loss Coef:	0.00				
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment: NGVD TO NAVD CONVERSION FACTOR OF 1.056.
POND OUTFALL TO TIE INTO LOWEST ELEVATION OF EXISTING STRUCTURE AT INVERT 40.61 (NGVD)

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	44.50 ft		

Control Elevation:	44.50 ft
Max Depth:	3.00 ft
Max Width:	4.50 ft
Fillet:	0.00 ft

Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: TYPE E BOX

Weir Component	
Weir:	2
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	43.35 ft
Control Elevation:	43.35 ft
Max Depth:	999999999.00 ft
Max Width:	0.50 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:

Drop Structure Link: SMA B > WEST OUTFALL	
Scenario:	POST-CONDITIONS (DIVERSION)
From Node:	SMA-B
To Node:	D38
Link Count:	1
Flow Direction:	Both
Solution:	Combine
Increments:	0
Pipe Count:	1
Damping:	0.0000 ft
Length:	230.08 ft
FHWA Code:	1
Entr Loss Coef:	1.00
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream Pipe	
Invert:	34.26 ft
Manning's N:	0.0120
Geometry: Circular	
Max Depth:	2.50 ft
Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream Pipe	
Invert:	33.80 ft
Manning's N:	0.0120
Geometry: Circular	
Max Depth:	2.50 ft
Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

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:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	44.50 ft	Op Table:	
Control Elevation:	44.50 ft	Ref Node:	
Max Depth:	3.00 ft	Discharge Coefficients	
Max Width:	4.50 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment: TYPE E BOX

Weir Component			
Weir:	2	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:	43.00 ft	Op Table:	
Control Elevation:	43.00 ft	Ref Node:	
Max Depth:	999999999.00 ft	Discharge Coefficients	
Max Width:	1.40 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Weir Component			
Weir:	3	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:	Circular	Default:	0.00 ft
Invert:	40.50 ft	Op Table:	
Control Elevation:	40.50 ft	Ref Node:	
Max Depth:	0.25 ft	Discharge Coefficients	
		Weir Default:	3.200
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Pipe Link: SMA C > D32		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	39.80 ft	Invert:	39.73 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	SMA-C	Geometry: Circular		Geometry: Circular	
To Node:	D32	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	70.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Percolation Link: SMA C > GWT			
Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	User Specified
		Bottom Elevation:	42.00 ft
From Node:	SMA-C	Surface Area:	0.7185 ac
To Node:	GWT-C	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	354.00 ft
Flow Direction:	Both	Perimeter 2:	432.00 ft
Aquifer Base Elevation:	25.00 ft	Perimeter 3:	490.00 ft
Water Table Elevation:	41.00 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	25.500 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	0.000 fpd	# of Cells P2 to P3:	45
Fillable Porosity:	0.250		
Layer Thickness:	1.00 ft		
Comment:			

Percolation Link: SMA D > GWT			
Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	User Specified
		Bottom Elevation:	42.00 ft
From Node:	SMA-D	Surface Area:	0.3090 ac
To Node:	GWT D & E	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	254.00 ft
Flow Direction:	Both	Perimeter 2:	337.00 ft
Aquifer Base Elevation:	25.00 ft	Perimeter 3:	1044.00 ft
Water Table Elevation:	40.00 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	25.500 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	0.000 fpd	# of Cells P2 to P3:	45

Fillable Porosity:	0.250
Layer Thickness:	2.00 ft

Comment:

Percolation Link: SMA E > GWT

Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	User Specified
		Bottom Elevation:	42.00 ft
From Node:	SMA-E	Surface Area:	0.5063 ac
To Node:	GWT D & E	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	120.00 ft
Flow Direction:	Both	Perimeter 2:	120.00 ft
Aquifer Base Elevation:	25.00 ft	Perimeter 3:	120.00 ft
Water Table Elevation:	40.00 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	25.500 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	0.000 fpd	# of Cells P2 to P3:	45
Fillable Porosity:	0.250		
Layer Thickness:	2.00 ft		

Comment:

Percolation Link: SMA G > GWT

Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	User Specified
		Bottom Elevation:	42.00 ft
From Node:	SMA-G	Surface Area:	0.8593 ac
To Node:	GWT G & SWALES	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	389.00 ft
Flow Direction:	Both	Perimeter 2:	468.00 ft
Aquifer Base Elevation:	25.00 ft	Perimeter 3:	1161.00 ft
Water Table Elevation:	40.00 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	25.500 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	0.000 fpd	# of Cells P2 to P3:	45
Fillable Porosity:	0.250		
Layer Thickness:	2.00 ft		

Comment:

Pipe Link: SMA G > SMA C

		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	42.00 ft	Invert:	42.00 ft
		Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SMA-G	Geometry:	Circular	Geometry:	Circular
To Node:	SMA-C	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	2	Bottom Clip			

Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	95.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Weir Link: SMA-A > CS-C (1)

Scenario:	POST-CONDITIONS (DIVERSION)	Bottom Clip	
		Default:	0.00 ft
From Node:	SMA-A.1	Op Table:	
To Node:	CS-C	Ref Node:	
Link Count:	1	Top Clip	
Flow Direction:	Both	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:	
Weir Type:	Sharp Crested Vertical	Ref Node:	
Geometry Type:	Rectangular	Discharge Coefficients	
Invert:	45.60 ft	Weir Default:	2.800
Control Elevation:	45.60 ft	Weir Table:	
Max Depth:	999999.00 ft	Orifice Default:	0.600
Max Width:	5.00 ft	Orifice Table:	
Fillet:	0.00 ft		

Comment:

Weir Link: SMA-A > CS-C (2)

Scenario:	POST-CONDITIONS (DIVERSION)	Bottom Clip	
		Default:	0.00 ft
From Node:	SMA-A.1	Op Table:	
To Node:	CS-C	Ref Node:	
Link Count:	1	Top Clip	
Flow Direction:	Both	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:	
Weir Type:	Horizontal	Ref Node:	
Geometry Type:	Rectangular	Discharge Coefficients	
Invert:	46.00 ft	Weir Default:	2.800
Control Elevation:	46.00 ft	Weir Table:	
Max Depth:	3.08 ft	Orifice Default:	0.600
Max Width:	4.08 ft	Orifice Table:	
Fillet:	0.00 ft		

Comment:

Pipe Link: SMA-A EQUALIZER		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	44.00 ft	Invert:	43.50 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	SMA-A.2	Geometry: Circular		Geometry: Circular	
To Node:	SMA-A.1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	146.00 ft	Ref Node:		Ref Node:	
FHWA Code:	5	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: SMA-C > D17		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	42.00 ft	Invert:	43.33 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SMA-C	Geometry: Circular		Geometry: Circular	
To Node:	D17	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	27.70 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: SMA-D > D17		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	42.00 ft	Invert:	43.66 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SMA-D	Geometry: Circular		Geometry: Circular	
To Node:	D17	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	2	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	48.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			

Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: SMA-E > D16		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	42.00 ft	Invert:	43.06 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SMA-E	Geometry: Circular		Geometry: Circular	
To Node:	D16	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	67.10 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Percolation Link: SMA-F > GWT			
Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	User Specified
		Bottom Elevation:	41.50 ft
From Node:	SMA-F	Surface Area:	0.1354 ac
To Node:	GWT-F	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	157.00 ft
Flow Direction:	Both	Perimeter 2:	236.00 ft
Aquifer Base Elevation:	25.00 ft	Perimeter 3:	943.00 ft
Water Table Elevation:	40.50 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	25.500 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	0.000 fpd	# of Cells P2 to P3:	45
Fillable Porosity:	0.250		
Layer Thickness:	1.00 ft		

Comment:

Pipe Link: SMA-G > D15		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	42.00 ft	Invert:	43.33 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200

From Node:	SMA-G	Geometry: Circular		Geometry: Circular	
To Node:	D15	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	27.70 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: SMA-G > D16		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	42.00 ft	Invert:	43.33 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SMA-G	Geometry: Circular		Geometry: Circular	
To Node:	D16	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	53.40 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Drop Structure Link: SWALE 1 > SMA G		Upstream Pipe		Downstream Pipe	
Scenario:	POST-CONDITION	Invert:	42.10 ft	Invert:	42.00 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SWALE 1	Geometry: Circular		Geometry: Circular	
To Node:	SMA-G	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	2	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	4.00 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	1	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	

Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	**Top Clip**	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	45.25 ft	Ref Node:	
Control Elevation:	45.25 ft	**Discharge Coefficients**	
Max Depth:	3.08 ft	Weir Default:	3.200
Max Width:	4.08 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment: TYPE D BOX

Drop Structure Comment:

Drop Structure Link: SWALE 2 > SMA G		Upstream Pipe		Downstream Pipe	
Scenario:	POST-CONDITION	Invert:	42.10 ft	Invert:	42.00 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SWALE 2	Geometry: Circular		Geometry: Circular	
To Node:	SMA-G	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	2	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	4.00 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	1	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1		
Weir Count:	1	Default:	0.00 ft

Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	45.25 ft
Control Elevation:	45.25 ft
Max Depth:	3.08 ft
Max Width:	4.08 ft
Fillet:	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: TYPE D BOX

Drop Structure Comment:

Drop Structure Link: SWALE 3 > SMA G		Upstream Pipe		Downstream Pipe	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	42.10 ft	Invert:	42.00 ft
		Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SWALE 3	Geometry: Circular		Geometry: Circular	
To Node:	SMA-G	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	2	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	4.00 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	1	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component	
Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	45.25 ft
Control Elevation:	45.25 ft
Max Depth:	3.08 ft
Max Width:	4.08 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

Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment: TYPE D BOX

Drop Structure Comment:

Weir Link: WEIR SMA-F > D40

Scenario:	POST-CONDITIONS (DIVERSION)	**Bottom Clip**	
		Default:	0.00 ft
From Node:	SMA-F	Op Table:	
To Node:	D15	Ref Node:	
Link Count:	2	**Top Clip**	
Flow Direction:	Both	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:	
Weir Type:	Sharp Crested Vertical	Ref Node:	
Geometry Type:	Arch Structural Plate	**Discharge Coefficients**	
Invert:	43.00 ft	Weir Default:	2.800
Control Elevation:	43.00 ft	Weir Table:	
Max Depth:	1.58 ft	Orifice Default:	0.600
Max Width:	3.08 ft	Orifice Table:	

Comment:

Simulation: 100YR-24HR

Scenario:	POST-CONDITIONS (DIVERSION)
Run Date/Time:	11/10/2020 6:11:39 PM
Program Version:	ICPR4 4.07.04

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]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage 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
Dflt Damping (2D): 0.0050 ft

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~FLMOD
Rainfall Amount: 10.60 in
Storm Duration: 24.0000 hr
Dflt Damping (1D): 0.0050 ft

Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: 100 yr / 24 hr

Simulation: 10YR-24HR

Scenario: POST-CONDITIONS (DIVERSION)
Run Date/Time: 11/10/2020 6:27:23 PM
Program Version: ICPR4 4.07.04

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]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:	
Reference ET Folder:	
Unit Hydrograph Folder:	

Lookup Tables

Boundary Stage Set:	
Extern Hydrograph Set:	
Curve Number Set:	SITE
Green-Ampt Set:	
Vertical Layers Set:	
Impervious Set:	SITE
Roughness Set:	
Crop Coef Set:	
Fillable Porosity Set:	
Conductivity Set:	
Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	7.90 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: 10 yr / 24 hr

Simulation: 25YR-24HR

Scenario:	POST-CONDITIONS (DIVERSION)
Run Date/Time:	11/10/2020 6:37:55 PM
Program Version:	ICPR4 4.07.04

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]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	8.60 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: 25 yr / 24 hr

Simulation: MEAN ANNUAL

Scenario: POST-CONDITIONS (DIVERSION)
Run Date/Time: 11/10/2020 6:49:02 PM
Program Version: ICPR4 4.07.04

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]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	4.30 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: Mean Annual (2.33 yr / 24 hr)

APPENDIX E

Wet & Dry Pond Recovery Analysis

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	0.0000	45.60	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	0.2501	45.42	0.85
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	0.5003	45.25	0.80
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	0.7501	45.07	0.75
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	1.0001	44.90	0.70
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	1.2502	44.76	0.45
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	1.5004	44.65	0.36
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	1.7500	44.56	0.31
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	2.0000	44.48	0.28
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	2.2501	44.40	0.25
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	2.5002	44.32	0.23
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	2.7501	44.25	0.21
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	3.0001	44.19	0.19
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	3.2503	44.13	0.16
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	3.5002	44.08	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	3.7502	44.05	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	4.0002	44.02	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	4.2504	43.99	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	4.5004	43.96	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	4.7501	43.94	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	5.0005	43.91	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	5.2505	43.89	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	5.5000	43.87	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	5.7500	43.84	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	6.0005	43.82	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	6.2504	43.80	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	6.5005	43.78	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	6.7500	43.76	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	7.0000	43.74	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	7.2504	43.73	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	7.5005	43.71	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	7.7502	43.69	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	8.0001	43.68	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	8.2501	43.66	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	8.5000	43.64	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	8.7506	43.63	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	9.0002	43.61	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	9.2504	43.60	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	9.5003	43.59	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	9.7502	43.57	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	10.0000	43.56	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	10.2501	43.55	0.03

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	10.5006	43.53	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	10.7501	43.52	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	11.0004	43.51	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	11.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	11.5002	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	11.7503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	12.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	12.2506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	12.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	12.7505	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	13.0002	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	13.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	13.5000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	13.7500	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	14.0004	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	14.2507	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	14.5001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	14.7506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	15.0000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	15.2502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	15.5001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	15.7502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	16.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	16.2506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	16.5006	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	16.7504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	17.0006	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	17.2503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	17.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	17.7502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	18.0001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	18.2503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	18.5003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	18.7506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	19.0004	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	19.2502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	19.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	19.7506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	20.0007	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	20.2503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	20.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	20.7503	43.50	0.00

SMA-A.1 RECOVERS WITHIN 11.25 HOURS

REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	63.0034	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	63.2512	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	63.5007	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	63.7512	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	64.0007	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	64.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	64.5038	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	64.7510	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	65.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	65.2508	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	65.5025	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	65.7538	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	66.0030	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	66.2532	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	66.5041	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	66.7503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	67.0029	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	67.2516	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	67.5030	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	67.7530	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	68.0055	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	68.2504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	68.5001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	68.7527	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	69.0002	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	69.2536	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	69.5040	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	69.7562	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	70.0025	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	70.2514	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	70.5014	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	70.7510	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	71.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	71.2558	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	71.5045	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	71.7544	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	72.0073	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	0.0000	45.60	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	0.2501	45.42	0.36
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	0.5003	45.25	0.34
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	0.7501	45.07	0.31
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	1.0001	44.90	0.28

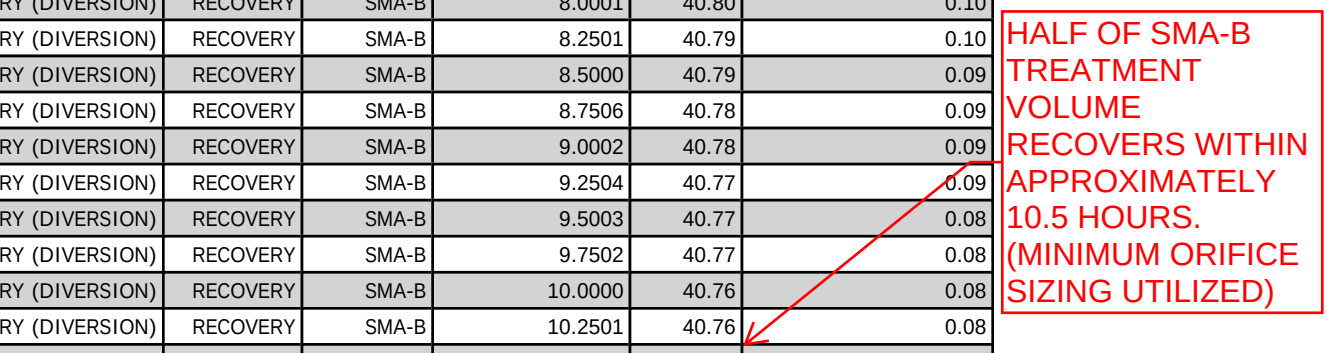
Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	1.2502	44.76	0.24
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	1.5004	44.65	0.22
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	1.7500	44.56	0.21
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	2.0000	44.47	0.19
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	2.2501	44.39	0.18
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	2.5002	44.32	0.18
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	2.7501	44.25	0.17
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	3.0001	44.18	0.16
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	3.2503	44.10	0.15
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	3.5002	43.99	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	3.7502	43.86	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	4.0002	43.76	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	4.2504	43.66	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	4.5004	43.58	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	4.7501	43.51	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	5.0005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	5.2505	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	5.5000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	5.7500	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	6.0005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	6.2504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	6.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	6.7500	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	7.0000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	7.2504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	7.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	7.7502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	8.0001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	8.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	8.5000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	8.7506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	9.0002	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	9.2504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	9.5003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	9.7502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	10.0000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	10.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	10.5006	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	10.7501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	11.0004	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	11.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	11.5002	43.50	0.00

SMA-A.2 RECOVERS WITHIN 5.0 HOURS

REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	64.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	64.5038	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	64.7510	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	65.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	65.2508	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	65.5025	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	65.7538	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	66.0030	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	66.2532	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	66.5041	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	66.7503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	67.0029	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	67.2516	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	67.5030	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	67.7530	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	68.0055	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	68.2504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	68.5001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	68.7527	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	69.0002	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	69.2536	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	69.5040	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	69.7562	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	70.0025	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	70.2514	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	70.5014	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	70.7510	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	71.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	71.2558	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	71.5045	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	71.7544	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	72.0073	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	0.0000	41.01	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	0.2501	41.00	0.15
RECOVERY (DIVERSION)	RECOVERY	SMA-B	0.5003	40.99	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	0.7501	40.99	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	1.0001	40.98	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	1.2502	40.97	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	1.5004	40.96	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	1.7500	40.96	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	2.0000	40.95	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	2.2501	40.94	0.13

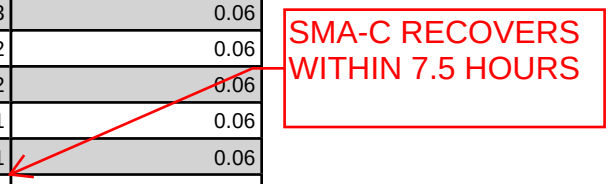
Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-B	2.5002	40.94	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	2.7501	40.93	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	3.0001	40.92	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	3.2503	40.92	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	3.5002	40.91	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	3.7502	40.90	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	4.0002	40.90	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	4.2504	40.89	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	4.5004	40.88	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	4.7501	40.88	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	5.0005	40.87	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	5.2505	40.86	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	5.5000	40.86	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	5.7500	40.85	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	6.0005	40.85	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	6.2504	40.84	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	6.5005	40.83	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	6.7500	40.83	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	7.0000	40.82	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	7.2504	40.82	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	7.5005	40.81	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	7.7502	40.81	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	8.0001	40.80	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	8.2501	40.79	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	8.5000	40.79	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-B	8.7506	40.78	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-B	9.0002	40.78	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-B	9.2504	40.77	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-B	9.5003	40.77	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-B	9.7502	40.77	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-B	10.0000	40.76	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-B	10.2501	40.76	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-B	10.5006	40.75	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-B	10.7501	40.75	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	11.0004	40.74	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	11.2501	40.74	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	11.5002	40.74	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	11.7503	40.73	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	12.0003	40.73	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	12.2506	40.73	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	12.5005	40.72	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	12.7505	40.72	0.06



REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

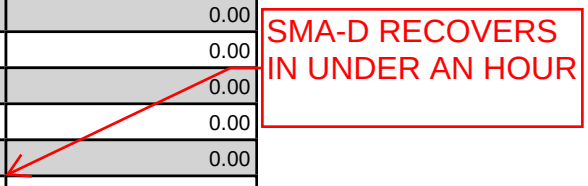
Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-B	65.5025	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	65.7538	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	66.0030	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	66.2532	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	66.5041	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	66.7503	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	67.0029	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	67.2516	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	67.5030	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	67.7530	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	68.0055	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	68.2504	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	68.5001	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	68.7527	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	69.0002	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	69.2536	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	69.5040	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	69.7562	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	70.0025	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	70.2514	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	70.5014	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	70.7510	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	71.0003	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	71.2558	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	71.5045	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	71.7544	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	72.0073	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	0.0000	43.33	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	0.2501	42.59	2.03
RECOVERY (DIVERSION)	RECOVERY	SMA-C	0.5003	42.48	1.18
RECOVERY (DIVERSION)	RECOVERY	SMA-C	0.7501	42.41	0.82
RECOVERY (DIVERSION)	RECOVERY	SMA-C	1.0001	42.35	0.61
RECOVERY (DIVERSION)	RECOVERY	SMA-C	1.2502	42.31	0.47
RECOVERY (DIVERSION)	RECOVERY	SMA-C	1.5004	42.28	0.38
RECOVERY (DIVERSION)	RECOVERY	SMA-C	1.7500	42.25	0.31
RECOVERY (DIVERSION)	RECOVERY	SMA-C	2.0000	42.23	0.27
RECOVERY (DIVERSION)	RECOVERY	SMA-C	2.2501	42.20	0.23
RECOVERY (DIVERSION)	RECOVERY	SMA-C	2.5002	42.19	0.20
RECOVERY (DIVERSION)	RECOVERY	SMA-C	2.7501	42.17	0.17
RECOVERY (DIVERSION)	RECOVERY	SMA-C	3.0001	42.15	0.15
RECOVERY (DIVERSION)	RECOVERY	SMA-C	3.2503	42.14	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-C	3.5002	42.13	0.12

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-C	3.7502	42.12	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-C	4.0002	42.11	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-C	4.2504	42.10	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-C	4.5004	42.09	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-C	4.7501	42.08	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-C	5.0005	42.07	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-C	5.2505	42.06	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-C	5.5000	42.05	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-C	5.7500	42.04	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-C	6.0005	42.04	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	6.2504	42.03	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	6.5005	42.02	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	6.7500	42.02	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	7.0000	42.01	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	7.2504	42.01	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	7.5005	42.00	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-C	7.7502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	8.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	8.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	8.5000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	8.7506	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	9.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	9.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	9.5003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	9.7502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	10.0000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	10.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	10.5006	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	10.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	11.0004	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	11.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	11.5002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	11.7503	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	12.0003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	12.2506	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	12.5005	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	12.7505	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	13.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	13.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	13.5000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	13.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	14.0004	42.00	0.00



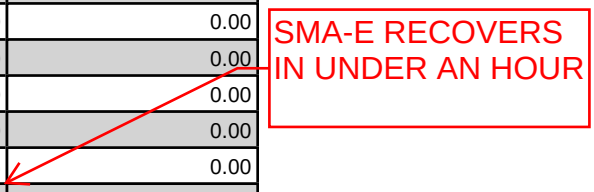
REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-C	66.7503	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	67.0029	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	67.2516	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	67.5030	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	67.7530	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	68.0055	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	68.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	68.5001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	68.7527	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	69.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	69.2536	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	69.5040	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	69.7562	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	70.0025	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	70.2514	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	70.5014	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	70.7510	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	71.0003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	71.2558	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	71.5045	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	71.7544	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	72.0073	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	0.0000	43.66	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	0.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	0.5003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	0.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	1.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	1.2502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	1.5004	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	1.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	2.0000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	2.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	2.5002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	2.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	3.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	3.2503	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	3.5002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	3.7502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	4.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	4.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	4.5004	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	4.7501	42.00	0.00



REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-D	68.0055	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	68.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	68.5001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	68.7527	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	69.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	69.2536	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	69.5040	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	69.7562	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	70.0025	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	70.2514	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	70.5014	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	70.7510	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	71.0003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	71.2558	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	71.5045	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	71.7544	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	72.0073	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	0.0000	43.06	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	0.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	0.5003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	0.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	1.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	1.2502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	1.5004	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	1.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	2.0000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	2.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	2.5002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	2.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	3.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	3.2503	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	3.5002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	3.7502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	4.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	4.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	4.5004	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	4.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	5.0005	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	5.2505	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	5.5000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	5.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	6.0005	42.00	0.00

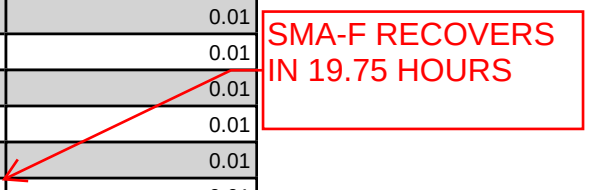


REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-E	69.2536	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	69.5040	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	69.7562	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	70.0025	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	70.2514	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	70.5014	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	70.7510	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	71.0003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	71.2558	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	71.5045	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	71.7544	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	72.0073	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	0.0000	43.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	0.2501	42.49	0.41
RECOVERY (DIVERSION)	RECOVERY	SMA-F	0.5003	42.42	0.23
RECOVERY (DIVERSION)	RECOVERY	SMA-F	0.7501	42.37	0.17
RECOVERY (DIVERSION)	RECOVERY	SMA-F	1.0001	42.33	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-F	1.2502	42.29	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-F	1.5004	42.26	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-F	1.7500	42.23	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-F	2.0000	42.21	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-F	2.2501	42.19	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-F	2.5002	42.16	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-F	2.7501	42.14	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-F	3.0001	42.12	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-F	3.2503	42.11	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-F	3.5002	42.09	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-F	3.7502	42.07	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-F	4.0002	42.06	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-F	4.2504	42.04	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-F	4.5004	42.03	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-F	4.7501	42.01	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-F	5.0005	42.00	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-F	5.2505	41.98	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-F	5.5000	41.97	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	5.7500	41.95	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	6.0005	41.94	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	6.2504	41.93	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	6.5005	41.91	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	6.7500	41.90	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	7.0000	41.89	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	7.2504	41.88	0.04

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-F	7.5005	41.87	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	7.7502	41.86	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	8.0001	41.85	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	8.2501	41.84	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	8.5000	41.83	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	8.7506	41.82	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	9.0002	41.81	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	9.2504	41.80	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	9.5003	41.79	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	9.7502	41.78	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	10.0000	41.77	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	10.2501	41.76	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	10.5006	41.75	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	10.7501	41.74	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	11.0004	41.74	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	11.2501	41.73	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	11.5002	41.72	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	11.7503	41.71	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	12.0003	41.70	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	12.2506	41.70	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	12.5005	41.69	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	12.7505	41.68	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	13.0002	41.67	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	13.2501	41.66	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	13.5000	41.66	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	13.7500	41.65	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	14.0004	41.64	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	14.2507	41.63	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	14.5001	41.63	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	14.7506	41.62	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	15.0000	41.61	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	15.2502	41.61	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	15.5001	41.60	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	15.7502	41.59	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	16.0003	41.59	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	16.2506	41.58	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	16.5006	41.57	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	16.7504	41.57	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	17.0006	41.56	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	17.2503	41.55	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	17.5005	41.55	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	17.7502	41.54	0.01

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-F	18.0001	41.54	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	18.2503	41.53	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	18.5003	41.53	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	18.7506	41.52	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	19.0004	41.52	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	19.2502	41.51	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	19.5005	41.51	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	19.7506	41.50	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	20.0007	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	20.2503	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	20.5005	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	20.7503	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	21.0009	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	21.2510	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	21.5005	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	21.7501	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	22.0003	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	22.2509	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	22.5006	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	22.7510	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	23.0005	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	23.2506	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	23.5004	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	23.7503	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	24.0011	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	24.2507	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	24.5000	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	24.7504	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	25.0004	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	25.2513	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	25.5010	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	25.7510	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	26.0012	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	26.2501	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	26.5004	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	26.7503	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	27.0012	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	27.2506	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	27.5002	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	27.7513	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	28.0002	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	28.2505	41.50	0.00



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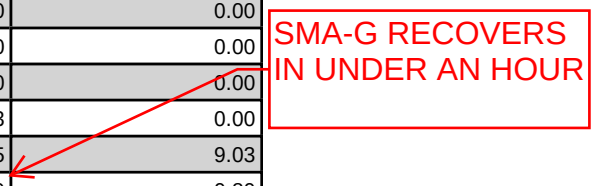
Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-F	70.5014	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	70.7510	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	71.0003	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	71.2558	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	71.5045	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	71.7544	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	72.0073	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	0.0000	43.33	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	0.2501	42.35	9.03
RECOVERY (DIVERSION)	RECOVERY	SMA-G	0.5003	42.00	0.80
RECOVERY (DIVERSION)	RECOVERY	SMA-G	0.7501	42.00	0.55
RECOVERY (DIVERSION)	RECOVERY	SMA-G	1.0001	42.00	0.39
RECOVERY (DIVERSION)	RECOVERY	SMA-G	1.2502	42.00	0.29
RECOVERY (DIVERSION)	RECOVERY	SMA-G	1.5004	42.00	0.22
RECOVERY (DIVERSION)	RECOVERY	SMA-G	1.7500	42.00	0.17
RECOVERY (DIVERSION)	RECOVERY	SMA-G	2.0000	42.00	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-G	2.2501	42.00	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-G	2.5002	42.00	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-G	2.7501	42.00	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-G	3.0001	42.00	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-G	3.2503	42.00	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-G	3.5002	42.00	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-G	3.7502	42.00	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-G	4.0002	42.00	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-G	4.2504	42.00	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-G	4.5004	42.00	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-G	4.7501	42.00	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-G	5.0005	42.00	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-G	5.2505	42.00	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-G	5.5000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	5.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	6.0005	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	6.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	6.5005	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	6.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	7.0000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	7.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	7.5005	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	7.7502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	8.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	8.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	8.5000	42.00	0.00



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