

ORMOND CROSSINGS PHASE B

SECONDARY DRAINAGE SYSTEM CALCULATIONS

Prepared For:

Tomoka Holdings, LLC

AN ALLETE COMPANY

Prepared By:



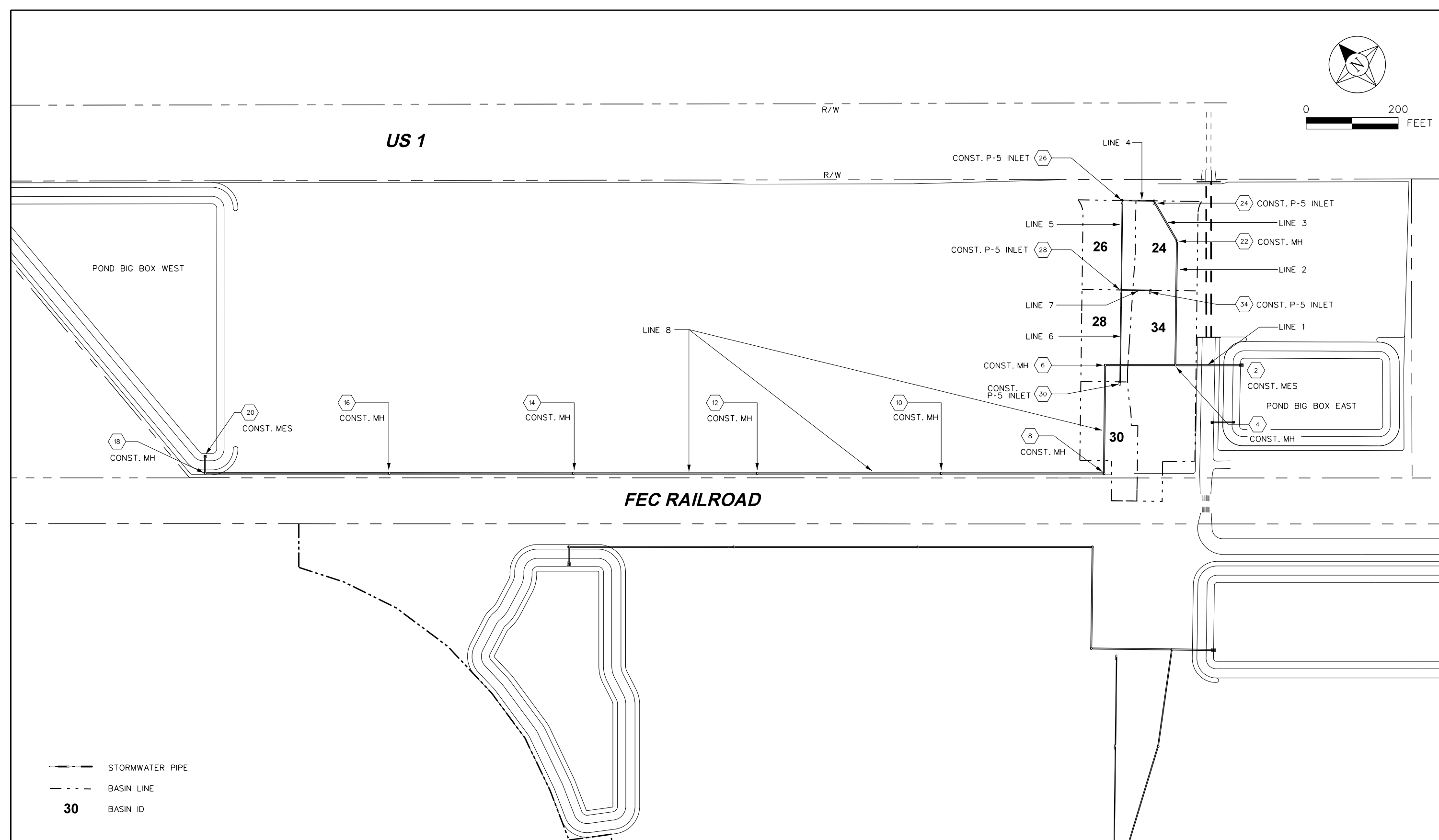
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Stormwater Management and Civil Engineering

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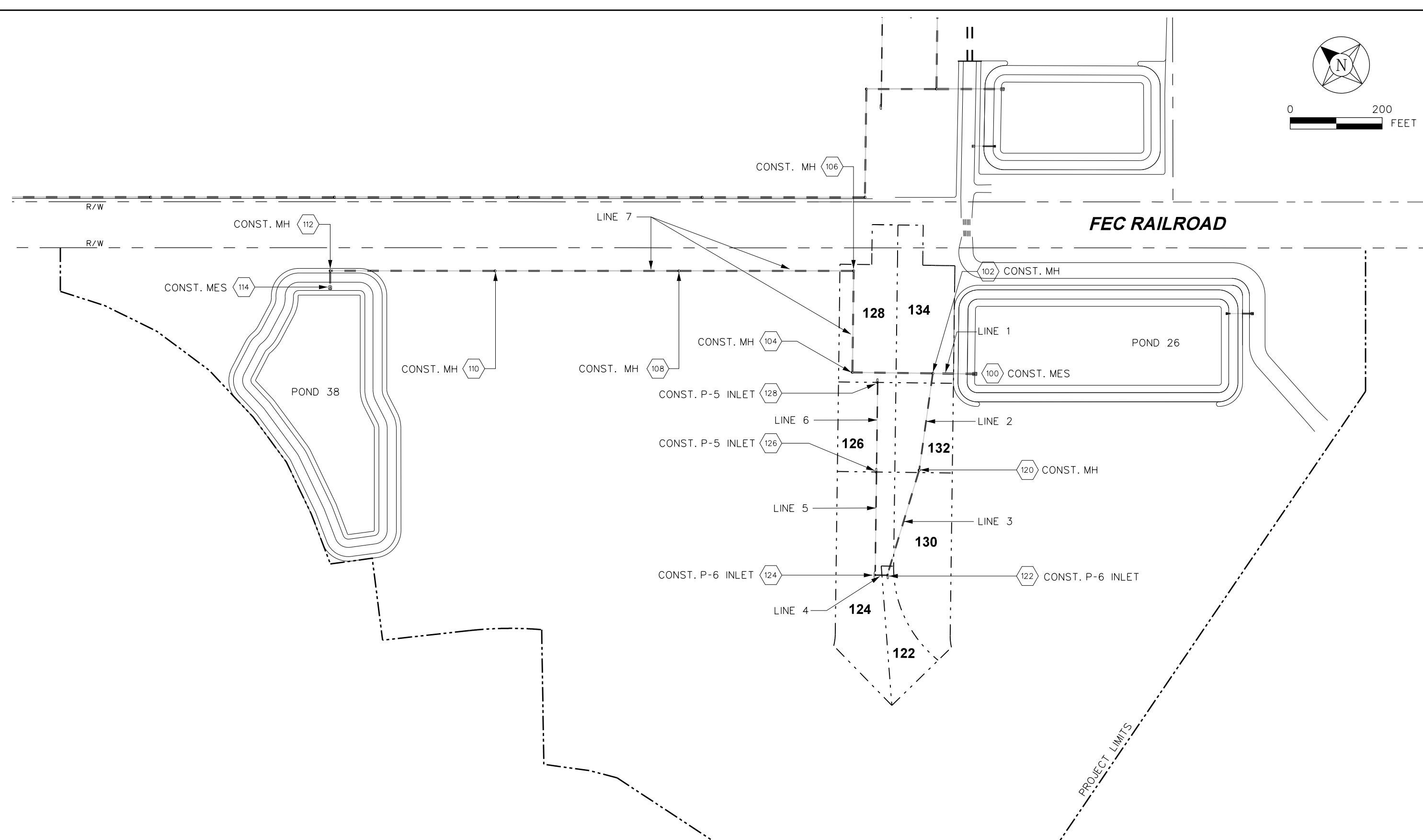
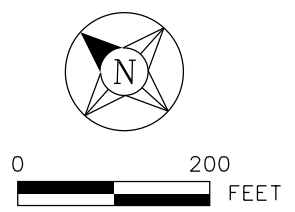
December 2014



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12/18/2014

Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID	
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)		
1	End	147	0.00	3.47	0.00	0.00	3.12	10.0	46.4	3.4	25.66	32.09	3.63	36	0.20	16.00	16.29	26.02	26.21	0.00	36.67		
2	1	265	0.00	3.47	0.00	0.00	3.12	10.0	12.7	6.1	20.27	19.87	4.13	30	0.20	22.65	23.18	26.37	26.92	36.67	35.00		
3	2	95	0.61	3.47	0.90	0.55	3.12	10.0	12.3	6.1	20.27	19.87	4.13	30	0.20	23.18	23.37	27.08	27.28	35.00	31.21		
4	3	66	0.51	2.86	0.90	0.46	2.57	10.0	12.1	6.1	16.71	10.87	5.32	24	0.20	23.37	23.50	27.44	27.75	31.21	31.21		
5	4	185	0.48	2.35	0.90	0.43	2.12	10.0	11.7	6.2	13.73	26.45	7.93	18	5.41	23.50	33.50	28.10	34.88	31.21	39.90		
6	5	190	0.56	0.56	0.90	0.50	0.50	10.0	10.0	6.5	3.27	29.76	2.98	18	6.84	33.50	46.50	35.84	47.19	39.90	53.19		
7	5	61	1.31	1.31	0.90	1.18	1.18	10.0	10.0	6.5	7.66	5.05	4.33	18	0.20	33.50	33.62	35.60	35.88	39.90	39.90		
8	1	2400	0.00	0.00	0.00	0.00	0.00	10.0	10.0	0.0	5.39	18.61	1.10	30	0.18	16.29	20.50	26.56	26.91	36.67	30.00		
Ormond Crossings Phase B																Number of lines: 8				Run Date: 12-18-2014			
NOTES: Intensity = 121.07 / (Inlet time + 21.50) ^ 0.85; Return period = 5 Yrs. ; Total flows limited to inlet captured flows. ; c = cir e = ellip b = box																							



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12/18/2014

Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	97	0.00	2.94	0.00	0.00	2.65	10.0	14.6	5.8	23.02	35.94	3.26	36	0.25	16.00	16.24	26.67	26.77	0.00	36.67	
2	1	211	0.00	2.94	0.00	0.00	2.65	10.0	13.4	6.0	17.18	10.93	5.47	24	0.20	22.78	23.20	26.90	27.94	36.67	36.47	
3	2	211	0.35	2.94	0.90	0.32	2.65	10.0	12.2	6.1	17.18	10.93	5.47	24	0.20	23.20	23.62	28.17	29.21	36.47	32.69	
4	3	25	1.18	2.59	0.90	1.06	2.33	10.0	12.1	6.1	15.14	5.09	8.57	18	0.20	25.12	25.17	29.49	29.93	32.69	32.69	
5	4	193	0.56	1.41	0.90	0.50	1.27	10.0	11.0	6.3	8.24	19.43	4.66	18	2.92	25.17	30.80	31.65	32.66	32.69	37.25	
6	5	185	0.85	0.85	0.90	0.77	0.77	10.0	10.0	6.5	4.97	28.24	3.81	18	6.16	30.80	42.20	33.04	43.05	37.25	48.64	
7	1	800	0.00	0.00	0.00	0.00	0.00	10.0	10.0	0.0	5.84	30.46	1.19	30	0.47	16.24	20.00	27.04	27.18	36.67	30.00	

Ormond Crossings Phase B

Number of lines: 7

Run Date: 12-18-2014

NOTES: Intensity = 121.07 / (Inlet time + 21.50) ^ 0.85; Return period = 5 Yrs. ; Total flows limited to inlet captured flows. ; c = cir e = ellip b = box

Project Name: Ormond Crossings

Date: 12/18/2014

Project Location: Phase B

Prepared By: BRW

Checked by: _____

Design Frequency: 10 -yr.

Allowable Width: 8.0 feet

Allowable Depth: 0.5 feet

Inlet No.	Basin No.	Location				Runoff				By-pass Flow			Slope		Inlet		By-pass Flow	
		Station	Offset	LT	RT	Area (ac)	Coeff (C)	Rain (I)	Q (cfs)	From Inlet No.	Q (cfs)	Q (cfs)	Cross (ft/ft)	Long. (ft/ft)	Type	Capacity (cfs)	To Inlet No.	Q (cfs)
S26	B26	11+33	39.75		X	0.51	0.90	4.00	1.8	S28	0.0	1.8	0.020	0.0090	P-5	1.8		0.0
S24	B24	11+33	27.75	X		0.61	0.90	4.00	2.2	S34	1.9	4.1	0.020	0.0090	P-5	3.1		1.0
S28	B28	13+28	39.75	X		0.48	0.90	4.00	1.7	S30	0.1	1.8	0.020	0.0679	P-5	1.9	S26	0.0
S34	B34	13+28	22.81	X		1.31	0.90	4.00	4.7		0.0	4.7	0.020	0.0679	P-5	2.8	S24	1.9
S30	B30	15+28	39.75	X		0.56	0.90	4.00	2.0		0.0	2.0	0.020	0.0679	P-5	1.9	S28	0.1
S128	B128	21+30	39.75		X	0.85	0.90	4.00	3.1		0.0	3.1	0.020	-0.0644	P-5	2.2	S126	0.9
S126	B126	23+25	37.75	X		0.56	0.90	4.00	2.0	S128	0.9	2.9	0.020	-0.0644	P-5	2.1	S124	0.8
S124	B124	25+49	37.75	X		1.18	0.90	4.00	4.2	S126	0.8	5.0	0.020	0.0030	P-6	5.0		0.0
S122	B122	25+49	14.21	X		0.35	0.90	4.00	1.3		0.0	1.3	0.020	0.0030	P-6	1.3		0.0