

ESTIMATE FOR ENGINEERING SERVICES

PROJECT: Infiltration and Inflow Study of Town of PB Sanitary Sewer System - PHASE 1					SHEET 1 of 1							
CLIENT: Town of Palm Beach					FILE NO.							
ESTIMATOR: TCJ					DATE: 10/14/18							
DESCRIPTION: See Scope of Services												
DIRECT LABOR (MAN-HOURS)												
	Principal Engineer	Project Manager	Sr. Eng. / Sr. Tech. Advisor	Sr. Prof. Eng	Reg. Prof Engineer	Eng. Intern	Analyst	Sr. Designer	Admin / Tech.	SUB (ADS) (RADISE)	EXP	LINE TOTAL
PHASE 1 - STUDY												
Task 1 -- Project Kickoff and Data Collection												
Project Kickoff Meeting	2.0	4.0		2.0	8.0				2.0		\$750.00	\$3,992
Data Request Preparation		1.0			2.0				1.0			\$639
GIS Sewer Maps Review and Service Area Identification		4.0		2.0	4.0		24.0		2.0			\$4,473
Identification of Sewer Depths		1.0			6.0		16.0		2.0			\$2,892
Cross checking of Groundwater Table Information v.Sewer Depth		2.0			4.0		12.0					\$2,260
Identification of Sewer System age/pipe materials		1.0			4.0		12.0					\$2,010
Determination of lined v. unlined sewer		2.0			6.0		12.0		2.0			\$2,749
Review of LS/PS SCADA data		2.0		8.0	16.0		2.0		1.0			\$4,465
Conversion of SCADA run times to hourly		1.0		2.0	4.0		24.0					\$3,526
Review of Town rainfall data/rain gauge locations		1.0			4.0							\$831
Review of Town transmission costs/metered data		2.0		2.0	4.0							\$1,417
Determination of seasonal population fluctuations v. flow rates		1.0		4.0	2.0		2.0					\$1,409
Review of existing geotech data and determination of add'l data required				2.0	6.0		2.0					\$1,405
Task 2 -- Desktop I&I Analysis												
Analyze and organize flow data monitoring data		4.0	6.0		8.0		20.0		2.0		\$750.00	\$6,295
Input data into DMT					12.0		30.0		2.0			\$4,890
Perform RDII analysis and generate hydrographs					32.0				2.0			\$4,849
Summarize and export data		2.0			16.0				2.0			\$3,023
Perform data check/review for inconsistencies		2.0	4.0	2.0	8.0				2.0			\$3,010
Generate DWF analysis		2.0			8.0							\$1,662
Generate WWF analysis		2.0			8.0							\$1,662
Develop lift station area priority		2.0	2.0	8.0	6.0				2.0			\$3,321
Task 3 -- Flow Metering Monitoring Plan and Reprt												
Develop Report Content	2.0	20.0	8.0	8.0	32.0				16.0		\$1,200.00	\$15,946
Develop Maps and Figures		4.0	2.0		8.0		32.0		2.0			\$5,911
Coordinate with ADS on meter locations		6.0			4.0					\$6,000.00		\$8,079
Coordinate with RADISE piezometer locations		4.0			4.0					\$3,500.00		\$5,080
TOTALS												
TOTAL HOURS	4.0	70.0	22.0	40.0	216.0	0.0	188.0	0.0	40.0	9500.0	\$2,700.00	\$95,796
LABOR (\$/HOUR)	\$273.02	\$249.65	\$203.38	\$168.10	\$145.35	\$115.99	\$98.27	\$142.79	\$98.98	1.00	1.0	
TOTALS	\$1,092.08	\$17,475.50	\$4,474.36	\$6,724.00	\$31,395.60	\$0.00	\$18,474.76	\$0.00	\$3,959.20	\$9,500.00	\$2,700.00	\$95,796