

Summary of Water Quality Treatment - Lot 6 (Hotel)																				
Zone	Inlet ID	Impervious Area (sf)	Pervious Area (sf)	Total Area (sf)	Total Area (Acres) <sup>1</sup>	Required Water Quality Volume (CF) <sup>2</sup>	Existing Developed Area Mitigation Credits (SF) <sup>9</sup>	Treatment Approach <sup>6</sup>	Filter Size Area Required <sup>8</sup> (SF)	Jellyfish Unit Provided <sup>5</sup>	1 Yr 24-hr Storm Event Peak Flow Rate (cfs) <sup>3</sup>	Required Isolator Row Chambers (Stormtech SC-740 (JF) or Cultec 150 XLHD (Focal Point)) <sup>4</sup>	Provided Filter Bed (SF)/Water Quality Volume (CF) <sup>7</sup>	Isolator Row Chambers (Stormtech SC-740 or Cultec 150 XLHD) Provided (EA) <sup>5</sup>						
Zone D	D-27	6,135.00	14,749.00	20,884.00	0.48	1002.88	-	FocalPoint Biofiltration System	89	N/A	1.19	6.43	96.00	7						
	D - 27 Brick South (Partial South Side)	10,395.00	0.00	10,395.00	0.24	866.25	6237.00	FocalPoint Biofiltration System		N/A										
Disturbed Perimeter Area		0.00	0.00	0.00	0.00	-	-	None	-	-	-	-	-	-						
<b>Zone D Totals (Lot 6 Portion)</b>		<b>16,530.00</b>	<b>14,749.00</b>	<b>31,279.00</b>	<b>0.72</b>	<b>1,869.13</b>	<b>6,237.00</b>	-	-	-	-	-	-	-						
Zone C Developed Area	C-14	7,447.00	876.00	8,323.00	0.19	649.78	0.00	Contech Jellyfish Filter	N/A	JF4 2-1	0.47	2.33	4051 CF	16						
	C-7	7,195.00	1,924.00	9,119.00	0.21	663.72	0.00				0.46	2.32								
	C-10	1,926.00	0.00	1,926.00	0.04	160.50	0.00				0.12	0.59								
	C-11	2,649.00	0.00	2,649.00	0.06	220.75	0.00				0.16	0.81								
	C-13 (non-roof portion)	933.00	0.00	933.00	0.02	77.75	0.00				0.06	0.28								
	C-15A (Roof)	10,055.00	0.00	10,055.00	0.23	837.92	0.00				0.61	3.07								
	C-15B (Roof)	9,660.00	0.00	9,660.00	0.22	805.00	0.00				0.59	2.95								
	C-15C (Future)	3,734.00	0.00	3,734.00	0.09	311.17	0.00				0.23	1.14								
	Disturbed Perimeter Area		0.00	0.00	0.00	0.00	0.00				0.00	N/A			-	-	-	-	-	-
	<b>Zone C Developed Area Subtotals</b>		<b>43,599.00</b>	<b>2,800.00</b>	<b>46,399.00</b>	<b>1.07</b>	<b>3,726.58</b>				<b>0.00</b>	-			-	-	2.70	13.49	N/A	N/A
Zone C Existing Buildings	C-13 BS-South Side (Partial)	2,995.00	0.00	2,995.00	0.00	249.58	1,797.00	Contech Jellyfish Filter	N/A	JF4 2-1 (included in above)	0.18	0.91	Included in Zone C above	Included in Zone C above						
<b>Zone C Existing Building Subtotal</b>		<b>2,995.00</b>	<b>0.00</b>	<b>2,995.00</b>	<b>0.00</b>	<b>249.58</b>	<b>1,797.00</b>	-	-	-	<b>0.18</b>	<b>0.91</b>	<b>0.00</b>	-						
<b>Zone C Totals</b>		<b>46,594.00</b>	<b>2,800.00</b>	<b>49,394.00</b>	<b>1.07</b>	<b>3,976.17</b>	<b>1,797.00</b>	-	<b>0.00</b>	<b>0.00</b>	<b>2.88</b>	<b>14.41</b>	<b>N/A</b>	<b>N/A</b>						

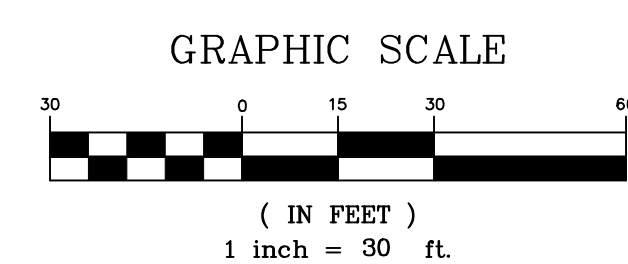
\*\*Previously Approved Filter Box

Developed Area Breakdown			Treatment Breakdown		
A.) Total New Developed Area Treated (SF)	63,549.00	1.46	% of Net Developed Area Treated = F/C	80.00%	112.64%
B.) Total New Developed Area untreated (SF)	0.00	0.00	% of Net Impervious Area Treated = L/I	95.00%	116.15%
C.) Total New Developed Area (SF) = A+B	63,549.00	1.46			
D.) Existing Developed Area Treated (SF)	13,390.00	0.31			
E.) Adjusted Existing Developed Area Treated (SF)	8,034.00	0.18			
F.) Total Net Developed Area Treated (SF) = A+E	71,583.00	1.64			
Impervious Area Breakdown					
G.) Total New Impervious Area treated (SF)	49,734.00	1.14			
H.) Total New Impervious Area untreated (SF)	0.00	0.00			
I.) Total New Impervious Area (SF) = G+H	49,734.00	1.14			
J.) Existing Impervious Area Treated (SF)	13,390.00	0.31			
K.) Adjusted Existing Impervious Area Treated (SF)	8,034.00	0.18			
L.) Total Net Impervious Area Treated (SF) = G+K	57,768.00	1.33			

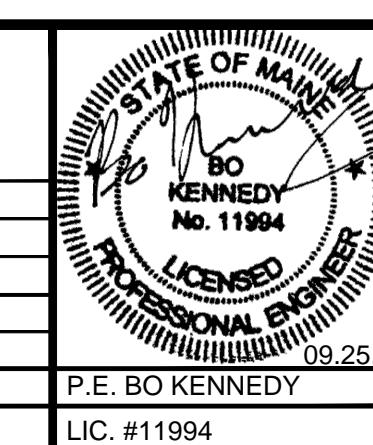
**NOTES AND ASSUMPTIONS:**

- All areas are based on the Placemaker Partners Permit drawings dated September 2017.
- The required water quality volumes have been computed based on Sections 7.4, 7.5 and 7.6 of the Maine DEP Volume III BMP's Technical Design Manual. The volume is computed to be 1" times the subcatchments impervious area and 0.4" times the subcatchments vegetated area. Existing buildings to remain are not required to be treated.
- The 1 year peak flow rates have been computed using the rational method. The rainfall intensities are derived from the Cumberland County IDF curve.
- Subsurface storage system sizing is based on a Stormtech SC-740 chamber system. All isolator rows have been computed per a 7/29/2016 letter from State of Maine to Stormtech re: Pretreatment Isolator Row of the Maine DEP Volume III BMP's Technical Manual. One chamber is required for each 0.2 cfs of the computed tributary 1 year peak flow rate.
- The required number of Jellyfish treatment units have been computed based on Contech Sizing requirements. The water quality volume for each unit is storage up stream and the amount of treatment cartridges are computed based sediment mass loading.
- Focal Point system was sized using the 2/22/201 approval letter from the State of Maine to Stormwater Systems ACF. See attached computations and separate focal point checklist for sizing.
- Provided Water Quality Volume for stormwater storage system computed using 61.38 CF of storage per chamber based on Storm Tech Chamber Design Manual.
- Vacant
- According to Chapter 500 Maine DEP stormwater rules Dated 2015; the department allows applicants to take credit for the treatment of existing impervious areas on site. For existing roofs the credit can be calculated by multiplying the total treated area by 0.6. The overall project was approved using this methodology.
- Vacant

PRELIMINARY – NOT FOR CONSTRUCTION



REV	DATE	DESCRIPTION
1	9/25/2017	FINAL SITE PLAN SUBMISSION



PROJECT	THE FOREFRONT AT THOMPSON'S POINT FOREFRONT HOTEL
SHEET TITLE	STORMWATER MANAGEMENT PLAN - 2
CLIENT	FOREFRONT HOTELIERS, LLC

PLACEMAKER PARTNERS, LLC	
501 DANFORTH STREET PORTLAND, ME 04102 bo@placemakerpartners.com	
DRAWN: DB	DATE: AUG. 2017
DESIGNED: BEK	SCALE: 1" = 30'
FILE NAME: HOTEL-SMP.dwg	
SHEET	C-5.2