



**Planning & Development**  
**208 Sanford Road, Wells, Maine 04090**

Phone: (207) 646-5187, Fax: (207) 646-7046

Website: [www.wellstown.org](http://www.wellstown.org)

<i>Michael G. Livingston, Town Engineer/Planner</i>	<a href="mailto:mlivingston@wellstown.org">mlivingston@wellstown.org</a>
<i>Shannon M. L. Belanger, Assistant Planner</i>	<a href="mailto:sbelanger@wellstown.org">sbelanger@wellstown.org</a>

**Memo**

Date: May 16, 2019

To: Planning Board; BH2M

From: Michael G. Livingston, Town Engineer/Planner

Re: Wesley by the Sea Phase 3 Subdivision – Tax Map 72, Lot 5  
Stormwater Management Review and Design Review

**Analysis:**

Report provided by BH2M, Steven J. Blake II, PE #11695; dated January 2019, Revised 4-24-19

Pre and Post development Watershed Plans A and B

**Comments:**

- HydroCAD software utilized for modelling, good.
- Current rainfall intensity values used, good.
- On-site and off-site drainage basins included, good.
- Drainage basin limits appear to be accurately depicted on the pre and post drainage schematics. Contour lines not labelled. Post Dev pond and basin designations do not match HydroCad printout.
- Existing conditions appear well modelled for soils, surface areas and flow paths
- Proposed conditions also well modelled; areas and flow paths/ Tc's appropriate
- Pre and Post total areas equal at 57.24 acres
- Almost all stormwater from proposed road and lot areas is conveyed to the bio-retention area, good.
- Drain Manholes and catch basins modelled as ponds, good. All peak elevations less than rim elevations, good.
- Treatment ponds:
  - Pond 7 (Large Pond A) – sizing good; peak elevation 59.25 (25 yr) which is 3 ft. lower than berm, good.
  - Pond 8 (P.Pool) – small but effective; peak elevation close to berm height but OK.
  - Filter Pond at Willow Way appears not to have been modelled but small for treatment purposes only. OK, model more conservative without benefit of pond included in model.
- Analysis Point well modelled. Conservative due to exclusion of larger existing drainage basin to the existing pond and controlled dam outlet.
- Results of analysis conclude a reduction in peak stormwater flow rate post development of the project which meets Town requirements.

Design:

Report provided by BH2M, Steven J. Blake II, PE #11695; dated January 2019, Revised 4-24-19 and plans, Sheets 3 through 10 by BH2M, dated 4-23-19; Steven J. Blake II, PE #11695

- Sheet 3: Good overview plan of road, utilities and drainage
- Sheet 4: Good P&P of roadway, utilities and grading.  
Proposed pole to be noted at Harrissectet.  
Sewer service typical to be labelled.  
Good stabilized construction entrance and silt fence locations.  
Add proposed ADA parking space sign.
- Sheet 5: Good pond details and P&P section.  
Turn tee needs 25 ft. min. radii, grading to be adjusted.  
Top of berm cannot be 11 ft. wide based on 2 to 1 and 3 to 1 side slopes and top elevation of 62.5.  
Swale leading to pond needs increased berm height.  
Top of berm and elevation needs to be depicted and noted.  
Matting to be noted on 2 to 1 slopes
- Sheet 6: Good P&P sheet.  
Proposed light to be added.  
Crosswalk ahead signs to be added.
- Sheet 7: Good details of pond bench and spillway construction  
Good erosion control notes and details.
- Sheet 8: Good details for erosion control  
Good dewatering notes  
Good construction details
- Sheet 9: Good construction details  
Good road section  
Add ADA parking space sign
- Sheet 10: Good construction details  
Water trench detail a bit large  
A typical sewer service connection detail is needed

(See Plan markups)

Erosion Control:

Sheets 3, 7, and 8 address erosion control, BMP's being adhered to.

Stormwater Maintenance Plan:

Appendix F of Stormwater Management Report addresses Operation and Maintenance of the system.