



June 21<sup>st</sup>, 2011

Jean Fraser - Planner  
City of Portland  
Planning & Urban Development Department  
389 Congress St., Room 308  
Portland, Maine 04101

Re: Comment Response to City of Portland Peer Review Engineer

Dear Jean Fraser,

On behalf of the project team Acorn Engineering, Inc. is pleased to respond to the comments provided by the City Peer Review Engineer dated July 15<sup>th</sup>, 2011 by David Senus, P.E. and Ashley Auger, E.I.T. of Woodward & Curran.

To facilitate the review Woodward & Curran's comments are provided below in italics followed by Acorn Engineering, Inc.'s response. To be thorough a response was provided even when it may appear unnecessary.

***Comments:***

- 1. The applicant should clarify how the proposed topography along the limits of work will match to existing grades on adjacent properties and internal to the site. It is unclear whether curbing, retaining walls, or other methods of grade transition are proposed. Several areas along the limit of work appear to result in a significant grade transition between proposed contours / spot grades and adjacent, existing topography.*

**Response:** The project team has clarified how the proposed grading matches into the existing conditions. To the North of the proposed building going around the site in a clockwise direction the proposed grading shall match the existing grade as proposed:

- Northern and eastern property line adjacent to the proposed building. The proposed grading shall match existing grades without the use of structural measures (curbing, retaining walls, etc.)
- Eastern and southern property line and adjacent to the parking lot and between the parking lot and existing building. The proposed grading shall match existing grades with the use of granite curbing.
- Eastern property line adjacent to the proposed building. The existing manmade berm partially located within the owners property may be relocated or removed, as note on the plans.

For clarity the existing grading contours were darkened to assist with your review. Please refer to the revised Grading, Drainage, Erosion & Sed. Control Plan (C-2).

- 2. The Utility Plan (C-1) and Grading, Drainage, Erosion & Sed. Control Plan (C-2) do not provide information on the materials of construction for surface features such as sidewalks, curbing, pavement, etc. An engineering plan should be provided addressing surface materials of construction (refer to Land Use Code 14-527 - Content of Site plan applications, (d)(4))*

**Response:** In accordance with the City of Portland Land Use Code 14-527 - Content of Site plan applications opening paragraph and, (d)(4,5) the Site Plans (L1, L2 and L3) by Soren Deniord Design Studio have been prepared under the supervision and reviewed by Will Savage, P.E. (license # 11419) a professional engineer licensed to practice in the State of Maine. The following note was added to the Grading, Drainage, Erosion & Sed. Control Plan (C-2):

REFER TO THE PLANS TITLED, FINAL SITE PLAN AND LANDSCAPE DETAILS PREPARED BY SOREN DENIORD DESIGN STUDIO FOR INFORMATION REGARDING THE LOCATION, DIMENSIONS, AND MATERIALS OF THE PROPOSED VEHICLE AND PEDESTRIAN ACCESS WAYS, AND BICYCLE ACCESS WAYS, WITH CORRESPONDING CURBING.

- 3. The proposed sawcut lines for utility connections within York Street should be extended and squared off to the furthest utility cut within the street, resulting in a single, rectangular trench patch.*

**Response:** The proposed sawcut line for the utility connections has been completed. Due to the need to move ahead with the installation of the proposed domestic water and fire service to the existing building and in an effort to minimize the traffic impact and disturbance within York Street the client opted to also install the proposed utility stubs (domestic water, sewer, and storm water) beyond the right of way. The client submitted for a street opening permit and administrative application. On June 9<sup>th</sup> – 10<sup>th</sup> the utility contractor installed the proposed sewer, water, and storm drain connections.

- 4. The plans should indicate the proposed rims and pipe inverts for all drainage structures, and should include pipe lengths, slopes, sizes and materials of construction for all conveyance and underdrain piping. The type of underdrain (perforation pattern; facing up or down) should be noted on the plan or in the details.*

**Response:** The Grading, Drainage, Erosion & Sed. Control Plan (C-2) and Detail Sheet (C-6) have been updated to indicated the pipe lengths, slopes, sizes and materials. In accordance with the City's Technical Standards the under drain perforations shall be oriented down as noted within the updated foundation drain detail.

- 5. In accordance with the City of Portland Technical Manual Figure II-12, the single pipe trench detail should specify a minimum of nine inches of crushed stone bedding on either side of the pipe for work within the Right-of-Way.*

**Response:** The Single Pipe Trench Detail provides a minimum width of 3 ft with a maximum width of 4 ft for a 6" pipe diameter. At the minimum trench width 3ft would provide a 15" of crushed stone on either side of the pipe. All pipe within the Right of

Way does not exceed 6". As mentioned above the utility and stormdrain work within the Right of Way was complete on June 9<sup>th</sup>-10<sup>th</sup>.

6. *Details should be provided for the eight inch Nyloplast inline drain.*

**Response:** The detail for the Nyloplast inline drain titled Inline Drain Detail is provided on Detail Sheet 1 (C-3).

7. *The location of the proposed sedimentation barriers should be indicated on the plans.*

**Response:** The location of the proposed sedimentation barrier is shown on the revised Grading, Drainage, Erosion & Sed. Control Plan (C-2) and on the Detail Sheet 4 (C-6).

8. *The composition of the Erosion Control Mix Berm should be specified in accordance with Section B-1 of the Maine Department of Environmental Protection (MaineDEP) Erosion and Sediment Control Best Management Practices (BMPs).*

**Response:** The Erosion Control Mix Berm Detail has been updated in accordance with Section B-1 of the Maine DEP - Erosion and Sediment Control Best Management Practices (BMPs)

9. *The catch basin at the south edge of the parking lot (CB1) has a proposed rim elevation that is even with the adjacent parking lot grades. To avoid runoff bypassing this catch basin and entering York Street, the rim elevation should be lowered by approximately 3" per the City's guidance on Typical Pavement Grading on Slopes for Catch Basin and Inlet (Figure II-10 of the Technical Manual)*

**Response:** The Catch Basin Detail located on Detail Sheet 2 (C-4) was updated to include lowering the rim elevation by 3" from the surrounding grades in accordance with the City's Technical Manual (Figure II-10).

10. *The applicant proposes to utilize the building's foundation drain system for conveyance of surface drainage and roof drainage. We recommend the applicant evaluate this approach with the project's geotechnical and structural engineers.*

**Response:** The project team shall coordinate and review the use of the building foundation drain with the project's geotechnical and structural engineers.

11. *The applicant should clarify how much space is provided above the weir and below the top slab of the outlet control structure on the Outlet Control Structure Detail.*

**Response:** The Outlet Control Structure Detail has been updated to specify the space requested. Given the site constraints there is 3" between the top of the weir and below the bottom of the flattop. As modeled within HydroCAD the weir shall not be overtopped for the 25-year storm event. When modeled for the 100-year storm event the maximum elevation is 34.65' which remains below the bottom of the flattop.

12. *The exact placement of geotextile fabric around and below the isolator row on the Isolator Row Detail is unclear from the detail provided. The applicant should clarify how the geotextile*

*layers are to be placed around and below the StormTech Chamber isolator row. The placement of geotextile fabric shall conform with Section 7.3 of Volume III of the MaineDEP Stormwater Management BMPs for Underdrained Subsurface Sand Filters (USSFs):*

**Response:** Agree the Isolator Row Detail has been updated in accordance with the Manufactures recommendations and the Maine DEP Stormwater Management BMPs for Underdrained Subsurface Sand Filters (USSFs) Section 7.3.

*13. The StormTech chambers & stone (subsurface detention pond) are proposed to be lined with a low density polyethylene liner due to the presence of a high groundwater table. Detail(s) for the pipe penetrations through this liner system should be provided.*

**Response:** Agree a typical Pipe Penetration Detail was added to Detail Sheet 4 (C-6) the material of the pipe penetrating the liner was also clarified to specify PVC SDR 35 verse a ribbed HDPE pipe. Based upon the Tech Sheet provided by StormTech titled Thermoplastic Liners for detention Systems. The type of liner was expanded from Linear Low Density Polyethylene to include the option of using a PVC liner. The thickness of either liner was increased from 20 mil. to 30 mil. The cross section detail was updated to specify Mirafi 180N on either side of the liner to protect against puncture.

*14. The proposed driveway entrance is shown on the plans with radial curbing. The detail provided on sheet L3.0 for the Reconstructed Brick Driveway Apron Layout does not indicate the use of radial curbing. The applicant should clarify the type of curbing and modify the plans or detail to reflect the correct curbing layout.*

**Response:** The proposed driveway entrance shown on the plans has been updated to reflect the what is shown within Soren Deniords Design Studio's revised Sheet L3.0 - Reconstructed Brick Driveway Apron Layout (Detail 2). Per the City of Portland's Technical Standards Manual – Driveway Apron Layout (I-9) the proposed driveway apron layout does not include curbing. The landscaped island will include vertical curbing per Sheet L.3.0 – Granite Curbing (Detail 7). A 5 ft radius is proposed around the landscaped island.

Acorn Engineering and the project team appreciates the comments provided by Woodward & Curran, and City Staff. Please do not hesitate to contact me with any further questions or comments.

Sincerely,



Will Savage, PE  
Project Manager - Acorn Engineering, Inc.

Attachments:

Soren Deniord Design Studio – Sheets L1 - L3  
Acorn Engineering, Inc. - Sheets C-1 – C-6

Harborview Development, LLC

Page 4

Portland, Maine