TERM DESIGN ASSIGNMENT

Draft Document Due: Thursday, 29 May, 2014
Final Document Due: Tuesday, 3 June, 2014

Objectives:
- To integrate hydrologic and soil concerns into the design of urban landscapes
- To practice sizing and configuring of stormwater conveyance and treatment facilities
- To learn and practice drawing conventions related to soils and hydrology
- To learn and practice proactive guidance for successful soils protocols in specification format

As you know, for our Term Design Project we will be working on a stormwater clean-up project for part of South Park that is being designed by JA Brennan's office with Davido Engineering. The project consists of several streets that will treat stormwater runoff before it is discharged into the Lower Duwamish Waterway (LDW), and is adjacent to a habitat restoration project being designed by the Port of Seattle at Terminal 117 (T117). Because of industrial contamination issues, priority has been placed on treating the urban runoff using special deep filtration materials in addition to biofiltration, primarily in streetside raingardens.

Our class will focus on a part of the project, including the drainage area from the top of 16th Ave. S. to the designated outfall on the Lower Duwamish Waterway. In Exercise 6 you reviewed Davido's Stormwater Report and summarized their approach and hydrologic modeling conclusions, while proposing your own multi-functional solution for 16th Ave. S. While Davido's current plan is to pipe the stormwater across the waterfront to its outfall, in Exercise 6 you also proposed a schematic design for the outfall that can further treat the stormwater and possibly serve as a park and/or habitat feature.

For the term project, your team (pair) will develop your Schematic Design into Design Development drawings, including soils specifications.

Submit:
1. DRAWINGS, to "Design Development" (DD) Level (DRAFT DRAWINGS DUE THURSDAY 29 MAY / FINAL DUE TUESDAY 3 JUNE):
   - Plan and section at 1" = 20' indicating overall design approaches and detail callouts for 16th Ave S and the outfall area.
   - Grading plan of ground areas with critical spot elevations and showing subsurface piping.
   - Blow up plans of any areas that you are not able to adequately show at 1" = 20'
   - Details of:
     - Conveyance features, including curb cuts, spillways, overflow structures
     - Bioretention cell section
     - Wetland or other water quality features shown in section.
     - Any other critical details related to the hydrological part of the design

2. SPECIFICATIONS (DUE 3 JUNE WITH FINAL DD DRAWINGS):
   Soil specifications (in Specification format) for:
   - General Landscape soils; and
   - Bioretention soils

Soil specifications should address remediation or replacement of existing soils for both infiltration and horticultural success.
**PROVIDE 29 May and for Redline Review:**

- Design Development (DD) Drawings on one or two 24" x 36" or 11" x 17" sheets, with labels and dimensions on all drawings and details. Be sure to number your details and reference them with callouts on the plan. Your sheet should be professionally drawn (CAD or Illustrator recommended), with a title block giving the project/site title, address, your name, course name and instructors.

- Narrative (Hydrological Report) and Soil Specifications on 8.5" x 11" sheets (Soil Specs for Final)

- Include schematic drawings with DD drawings.

**REQUIREMENTS + DUE DATES RECAP:**
(To receive credit, you must complete and turn in ALL elements listed below.)

**First Draft Due 5/29 - (4 components)**
1. Draft Plan at 1" = 20'
2. Section at 1" = 20'
3. Grading plan
4. Details (min. 4)
5. (Optional) Blow up plans of critical areas

**Final Draft Due 6/3 (3 components)**
1. Soils specifications
2. Revised DD drawings from one or two sheets (plus schematic drawings)
3. Narrative (finalized hydrogeological report)

**RESOURCES:**
T 117 Website:  [www.t117.com](http://www.t117.com)

**Available on the course Catalyst Share space:**
Soils Specifications:
- Building Soil Guidelines and Resources for Implementing Soil Quality and Depth BMP T5.13
- City of Seattle Bioretention Soil Specifications

Base Plan (CAD file)
Base Maps (PDFs)
Conceptual Outfall Design
Aerial Photos