

CE 201, Fall 2017

In-Class Assignment: Interpreting Construction Engineering Drawings: 110th Cascade Project

Instructions:

- **Work in project teams**
- **Answer the following questions in this word document**
- **Submit answers to Canvas by the end of class; one document per team.**

Project Team Member Names:

Team Number: _____ **CCE SECTION:** _____

Student Name: _____ **Student Name:** _____

Student Name: _____

Navigating Sheet Sets

Seattle Public Utilities: 110th Cascade Project, Construction Drawings

<http://www.seattle.gov/util/EnvironmentConservation/Projects/GreenStormwaterInfrastructure/CompletedGSIProjects/index.htm>

Follow the link above to the Seattle Public Utilities 110th Cascade Project. Open and review the 110th Cascade Project Resource Brochure. Then open the Construction plans.

1. How many sheets are in this sheet set?
2. Examine the sheets' title blocks. Where do the sheet titles appear? What is the title of Sheet 8? (Note: the sheet title is not the same as the project name).

Sheet 1: Take a moment to examine the notes regarding "Detail and Section Referencing"

3. *Move to Sheet 4.*
 - a. On what sheet can I find the **detail** of a QUICK COUPLING VALVE?
 - b. What should a contractor provide to assist in locating a QUICK COUPLING VALVE?
 - c. The QUICK COUPLING VALVE detail calls for a piece of #4 rebar. What do you think is the purpose of this rebar?
 - d. What is the scale of the QUICK COUPLING VALVE detail?
 - e. List all sheets including QUICK COUPLING VALVES.

4. *Move to Sheet 12. Take a moment to examine the CUTTING PLANE LINES on the WIER WALL AREA detail (at the top of the page).*
 - a. What is a weir?
 - b. On what sheets can I find drawings that include WIER WALL AREAs?
 - c. Considering both Sheet 12, and the sheets you mentioned in 4a. In what general direction (N, S, E, or W) would I be facing to see a WIER WALL AREA in the view of SECTION B-B?
 - d. Continuing with question 4b, relative to the direction of water flow; am I facing UPSTREAM or DOWNSTREAM?
 - e. The weir wall's FLOW CONTROL PLATE has an orifice. What is the diameter of the orifice of the weir wall located at STATION 4+22.8?
5. Sheet 7 provides a plan and profile view. What information does each view provide to the construction engineer? List and describe five major items for the plan view and five major items for the profile view.
6. What is the design intent of this project? List and discuss five devices that are being implemented to support the design intent of this project. In your discussion describe how the device works to support the design objectives of the project.