

StormCAD V8i, Storm Sewer Design and Modeling

Course Type: Classroom Learning: Hands-on

Products Covered: StormCAD

Target Audience: Civil Engineer; Civil Engineering Technician; Consultant; Designer; Design Engineer; GIS Specialist; Hydraulics Engineer; Piping Designer; Planner; Plant Engineer; Project Manager; Site Developer

Course Description: This class presents information on hydraulics and hydrology as they apply to the design of storm sewer systems and culverts, as well as instruction on applying the StormCAD software for storm sewer hydraulic design and analysis. StormCAD uses peak flow rational method hydrology with gradually varied flow hydraulics. The class also covers advanced features of the StormCAD program, such as scenario management and exchanging data with databases and other applications. Additionally, the class includes presentations on using CulvertMaster for culvert design and FlowMaster for basic hydraulic calculations. This course material has been developed for the StormCAD V8i platform, Version 08.11.00.34. Modelers currently using versions prior to StormCAD V8i, version 08.11.00.34, are strongly encouraged to consider upgrading today to start taking advantage of the latest features and interoperability advantages of V8i.

Learning Objectives: Attendees will learn to use the latest version of StormCAD to create, analyze, and design complex storm sewer networks with inlet bypass flows and gravity and surcharged pipe flows. They will also gain familiarity with the CulvertMaster and FlowMaster programs. Students will become familiar with industry-standard FHWA and AASHTO design procedures and methodologies.

Course Topics:

- Basic hydraulics theory
- Rational Method hydrology review
- Open-channel hydraulics
- Culvert hydraulics
- Storm sewer design
- Gravity and pressure hydraulic grade line (HGL) analysis
- HGL Profiles
- Gutter and inlet capacity
- Bypass flow
- Diversion structures
- Junction head loss calculations
- Building functional models using existing data
- ModelBuilder

Course Details: **Course Prerequisites:** Some familiarity with storm sewer systems would be helpful.

Learning Units: 16

Display LUs in: hours

Accreditations:

| Organization: | Value: |
|--|------------------|
| Bentley Institute  | 16 Bentley LU |
| Bentley Contact Hours | 14 CONTACT HOURS |