

# ATPL-1050: CONSTRUCTION DRAWINGS

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## Cuyahoga Community College

### Viewing: ATPL-1050 : Construction Drawings

**Board of Trustees:**

2012-06-28

**Academic Term:**

Spring 2019

**Subject Code**

ATPL - Applied Ind Tech - Plumbers

**Course Number:**

1050

**Title:**

Construction Drawings

**Catalog Description:**

Covers residential blueprint reading as applied to mechanical and architectural trades. Includes sections explaining the use of various plans (site, foundation, floor) with building sections and details.

**Credit Hour(s):**

2

**Lecture Hour(s):**

2

## Requisites

**Prerequisite and Corequisite**

Departmental approval: admission to Plumber's apprenticeship program.

**Methods of Evaluation:**

1. Quizzes
2. Tests
3. Class participation

**Course Content Outline:****COURSE OUTLINE**

1. A. Purpose of construction plans
  - a. A. Convey information
    - i. 1. Abbreviations
    - ii. 2. Symbols
      1. a. Material
      2. b. Fixtures
    - iii. 3. Conventions
      1. a. Architectural
      2. b. Structural
      3. c. Mechanical
      4. d. Electrical
  - b. B. Site information
    - i. 1. Utility locations
    - ii. 2. Terrain aspects
      1. a. Contours
      2. b. Drainage
  - c. C. Construction details

- i. 1. Building dimensions
- ii. 2. Room sizes
- iii. 3. Specifications
- d. D. Construction drawing sheets
  - i. 1. Architectural
    - 1. a. Sections
    - 2. b. Details
    - 3. c. Plans
    - 4. d. Elevations
  - ii. 2. Structural
  - iii. 3. Mechanical
  - iv. 4. Electrical

II. Site plan

1. A. Lines

- a. 1. Property
- b. 2. Contour
- c. 3. Building
- d. B. Utilities
  - i. 1. Water
  - ii. 2. Electrical
  - iii. 3. Storm water
  - iv. 4. Sanitary
- v. C. Property stakes

- 1. 1. Hub
- 2. 2. Point of beginning
- 3. D. Utility easement
  - a. 1. Set back
  - b. 2. Purpose

III. Plans and building information

1. A. Foundation Plan

- a. 1. Mechanical locations
- b. 2. Wall construction
- c. 3. Concrete, masonry and steel
- d. 4. Beams and beam pockets
- e. 5. Joist direction
- f. B. Floor plans
  - i. 1. Room locations
  - ii. 2. Measurements
  - iii. 3. Fixture requirements
  - iv. 4. Mechanical considerations
  - v. 5. Doors and windows
- vi. C. Roof plans
  - 1. 1. Roof type
  - 2. 2. Slopes

IV. Elevation drawings

1. A. Exterior

- a. 1. Roof slope
- b. 2. Materials
- c. 3. Projections
- d. 4. Finishes
- e. 5. Appendages
- f. B. Interior
  - i. 1. Kitchen
    - 1. a. Cabinets
    - 2. b. Counters
    - 3. c. Miscellaneous
  - 4. 2. Bathroom fixtures and counters
  - 5. 3. Special features

- V. Sections
  - A. Types
    - 1. Transverse
    - 2. Longitudinal
    - 3. Typical
  - B. Notations
  - C. Construction information
    - 1. Foundation
      - a. Wall construction
      - b. Footing requirements
      - c. Reinforcing steel
    - 2. Walls
      - a. Thickness
      - b. Finishes
      - c. Insulation requirements
    - 3. Floor
      - a. Sill assembly
      - b. Anchorage
      - c. Joist sizes
      - d. Subfloor and finishes
    - 4. Roof construction
      - a. Field cut rafters
      - b. Trusses
      - c. Overhangs
      - d. Bracing
- VI. Details
  - A. Specifications
    - 1. Material requirements
    - 2. Installation
  - B. Intersections
    - 1. Wall to ceiling
    - 2. Fixture to floor
    - 3. Floor to foundation
    - 4. Roof connections
  - C. General connections
  - D. Rough and finish openings
  - E. Trims, Hand rails and masonry
    - 1. Moldings
      - a. Base
      - b. Wainscot
      - c. Crown
      - d. Plumbing fixture trims
    - 2. Balustrades
    - 3. Fireplace
    - 4. Miscellaneous
  - F. Structural
    - 1. Beam to column
    - 2. Anchors
    - 3. Reinforcing steel

## Resources

Procter, T. *Printreading for Residential construction*. 5th. Orlando Park, Illinois, 2000.

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Procter,T. *Building Trades*. 3rd. Homewood, Illinois, 2000.

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Kubba,S. *Printreading*. 4th. New York, New York, 2008.

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Carpenters International Training Fund CITF. *Printreading*. 1st. Las Vegas, Nevada United CITF, 2005.

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**Resources Other**

- [www.constructionclasses.com/blueprint/blueprint\\_syllabus.htm](http://www.constructionclasses.com/blueprint/blueprint_syllabus.htm)
- [www.workforcedevelopment.com/fundamentals/blueprint.html](http://www.workforcedevelopment.com/fundamentals/blueprint.html)

Top of page

Key: 613