

## **Architectural Drafting Project**

### **Challenge:**

You have been hired as an architect to create working drawings of a single-family home for your client. The home must reflect the wants and needs of the client as well as meet building code requirements and standard drafting practices.

### **Investigation:**

Research 3 homes on the Internet and explain how they will and how they won't reflect the wants and needs of the client. Pick the floor plan which best suits the client's wants and needs.

### **AutoCAD Drawings:**

Based on your chosen floor plan, create a detailed floor plan, typical cross section and stair detail.

Your drawings must include the following items:

#### **Floor Plan Information:**

- Position and size of interior and exterior walls
- Room names
- Building and wall dimensions
- Door and window location and size
- Plumbing fixtures
- Stair location and direction
- Roof truss spacing and direction note
- Carbon monoxide detectors and smoke alarms
- Attic access
- Cutting plane line
- Tile and wall hatching
- Title and total sf.
- Boarder and title block with company logo, title, date, drawn by and scale.

#### **Typical Cross Section Information:**

- Floor to ceiling heights
- Footing, concrete slab, foundation wall, sill plate, floor, exterior wall, interior wall, ceiling, roof/eaves and beam/post descriptions
- Insulation values
- Weeping tile location
- Foundation wall projection above grade (dimension)
- Grade line

- Roof overhang dimension and slope
- Concrete, insulation, gravel and ground hatching
- Title
- Boarder and title block with company logo, title, date, drawn by and scale.

**Stair Detail:**

- Stair, basement floor and main floor structure
- Floor to ceiling, floor thickness, stairwell opening, minimum headroom 6'-5", tread rise and tread run dimensions
- Stair calculations showing total rise, number of treads and risers, tread rise, tread run and total run (show your work)
- Stairwell opening calculations (show your work)
- Title
- Boarder and title block with company logo, title, date, drawn by and scale.

**Evaluation:**

Your project will be marked using the following criteria:

**Investigation:**

- Internet research *15 Marks*

**Floor Plan /50:**

- Professionalism: Boarder, title block, formatting and appearance *5 Marks*
- Completeness (Includes required items) *20 Marks*
- Meets client profile *15 Marks*
- Follows drafting principles *10 Marks*

**Typical Cross Section /40:**

- Professionalism: Boarder, title block, formatting and appearance *5 Marks*
- Completeness (Includes required items) *20 Marks*
- Follows drafting principles *15 Marks*

**Stair Detail /30:**

- Professionalism: Boarder, title block, formatting and appearance *5 Marks*
- Completeness (Includes required items) *15 Marks*
- Accuracy of stair and stairwell calculations *10 Marks*