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Assignment

WALL SECTION AND DETAIL I

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CONTENTS

INTRODUCTION

This section entails questions and answers in the form sketches and writing for sections that discusses wall sectioning basics on how to show the section based on the cutting plane. Different types of sections are shown for varied reasons and when to have detailed diagrams for the areas that can't be picked up based on the size of the structure and the scale that is said to be used.

Drawing sections, as with every drawing is a step by step process and various factors do influence the size of the section to be drawn such as sheet size, how vast the project and so forth.

Several types of sections are to be drawn whether it is foundation section, floor joist or slab section, roof framing section and wall section. Alongside those necessary sections materials type and size should be annotated properly and clearly.

CHAPTER 36- Sectioning Basics

Question 36–1 What is a full section?

Full sections are the views that result from passing the cutting plane through the entire structure.

Question 36–2 When could a partial section be used?

Partial section can be used when showing construction materials for a specific area such as roof, wall, floor.

Question 36–3 What is a stock detail, and when would it be used?

Stock details are details of items that remain the same such as footing detail. They are used for saving time so that drafters don't need to relabel every time.

Question 36–4 From which drawings does a drafter get the needed information to draw a section?

The drawing information a drafter needs to have to draw a section are the floor plan and roof plan.

Question 36–5 What is the most common scale for drawing full sections?

The most common scale for drawing full sections is 1/4"=1'-0" (1:50).

Question 36–6 What factors influence the scale of a detail?

Factors that influence the scale of a detail are size of drawing sheet, size of project to be drawn, purpose and placement of sections.

Question 36–7 What is a cutting plane, and how does it relate to a section?

Cutting plane are lines that show the location of a cut made for the purpose of creating sectional views, cutting plane lines are placed on floor plan, foundation plan and other areas that need to construction detail.

Question 36–8 In which directions should the arrows on a cutting plane be pointing?

The arrows on a cutting plane should be pointing in the direction of what to be shown in the sectional view.

Question 36–9 What type of section might be drawn at a scale of 1/8" = 1'−0"?

The type of section might be drawn at a scale of 1/8" = 1'−0" is to show the shape of the project that require less detailing.

Question 36–10 What factors influence the choice of scale for the section?

Factors influence the choice of scale for the section are purpose of the section, size of the project, size of drawing sheet and the placement of the section.

CHAPTER 37- Section Layout

Question 37–1 Define the following terms:

a. Rafter- is the incline structural member of a roof system designed to support roof loads.

b. Truss- It is a prefabricated or job built construction member formed of triangular shapes used to support roof of floor loads over long spans.

c. Ceiling joist- is the horizontal member of the roof is used to resist the outward spread of the rafters and to provide a surface on which to mount the finished ceiling.

d. Collar tie- is a horizontal tie between rafters near ridge to help resist the tendency of the rafters to separate.

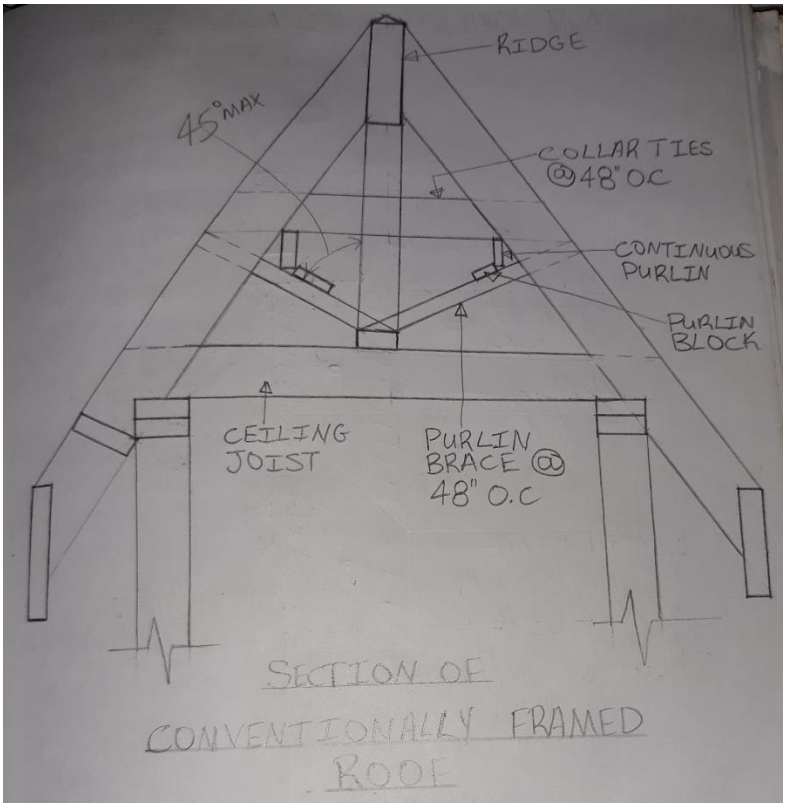
e. Jack stud- is a wall member that is cut shorter than other studs to allow for an opening such as a window.

f. Rim joist- is a joist at the perimeter of a structure that runs parallel to the other floor joist.

g. Chord- is the upper and lower members of a truss that are supported by the web.

h. Sheathing- is a covering material placed over walls, floors, and roofs that serves as a backing for finishing materials.

Question 37–2 On a blank sheet of paper, sketch a section view of a conventionally framed roof showing all interior supports.



Question 37–3 Give the typical sizes of the following materials:

a. Mudsill- 2” x 6”

b. Stud height- 10’-0” (3000mm)

c. Roof sheathing- 1/2” Thick STD

d. Wall sheathing- 5/8” Thick or 1/2” Thick gypsum board

e. Floor decking- 2” x 10” floor joist

f. Underlayment- 3/8” Thick hardboard

Question 37–4 List three common scales for drawing sections, and tell when each is best used.

Three common scales for drawing sections are:

- 3/8” =1’-0” used for floor and foundation cross section
- 1/8” = 1’-0” used mostly for commercial projects such as office and apartment building
- 1/ 4” = 1’-0” used mostly for residential projects.

Question 37–5 List the seven stages of drawing a section.

Seven stages of drawing a section are:

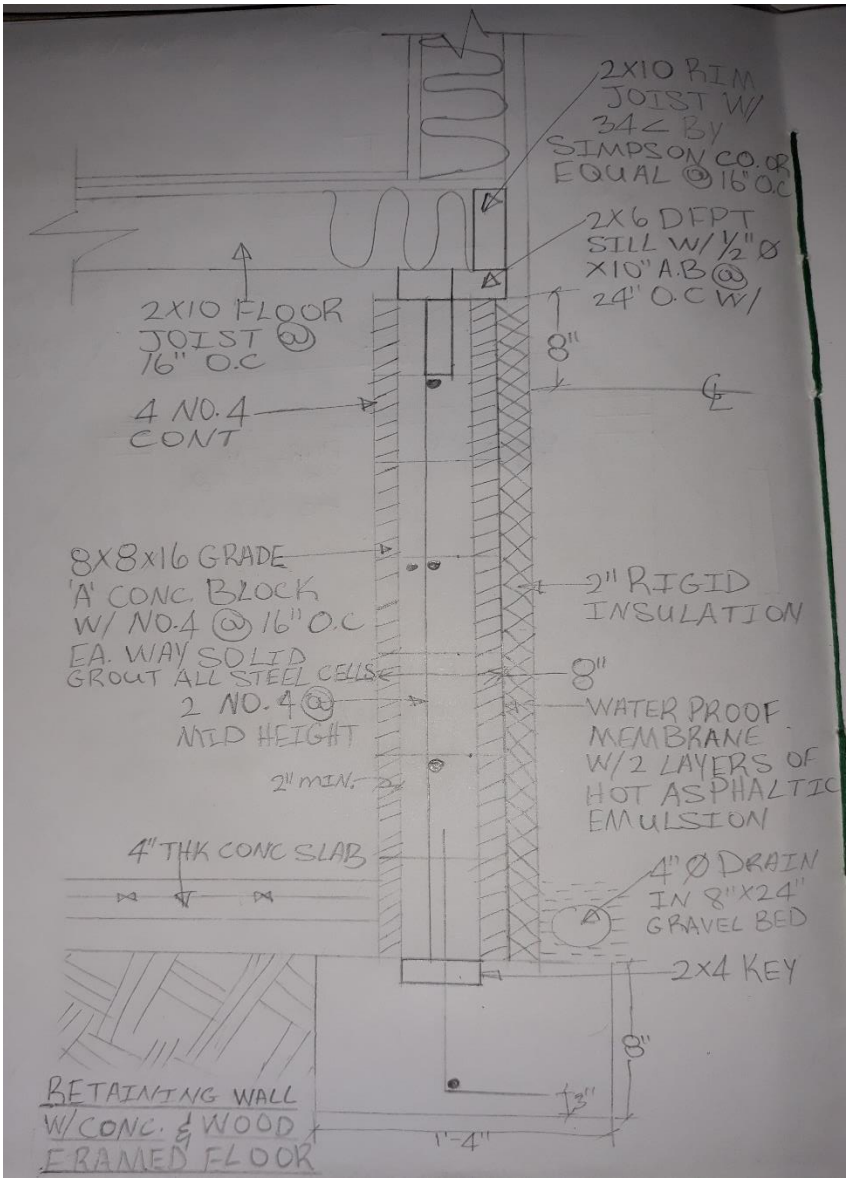
1. Evaluate needs
2. Layout the section
3. Finished- quality lines for structural members only
4. Drawing finishing materials
5. Dimensioning
6. Lettering notes
7. Evaluating work

Question 37–6 List two different types of drawings for which stock details are typically used.

Two different types of drawings for which stock details are typically used are for roof detailing and foundation details.

CHAPTER 38- Alternative Layout Techniques

Question 38–1 Sketch and dimension an exterior footing for a concrete slab supporting two floors.



Question 38–2 What thickness of floor decking is typically used for floors using the post-and-beam method?

2” (50mm) thick is usually used for post-and-beam construction method.

Question 38–3 What type of line quality is used to represent the mudsill?

The type of line quality is used to represent the mudsill are the construction lines.

Question 38–4 How are stem walls represented on the finished drawing?

Stem walls are represented on the finished drawing by using extra bold lines.

Question 38–5 What is the thickness of the vapour barrier used under a crawl space?

The thickness of the vapour barrier used under a crawl space is 0.006 inches (6 mil).

Question 38–6 The top of the concrete slab must be __" above the finished grade.

The top of the concrete slab must be _4_" above the finished grade.

Question 38–7 Basement walls are typically __" wide.

Basement walls are typically _8_" wide.

Question 38–8 What determines the amount of structural steel placed in a retaining wall?

The amount of structural steel placed in a retaining wall is determined by the amount of pressure from soil that pushes against the wall.

Question 38–9 Describe a common blocking pattern that is used to support the top of a concrete retaining wall.

Common blocking pattern that is used to support the top of a concrete retaining wall is by interlocking the blocks as they are being laid.

BIBLIOGRAPHY

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