



CD+S - Building Section Vignette

Tips:

- Approach as a graphical solution rather than a true architectural section.
- About reading the program and drawing it accurately, reading comprehension. No extra credit for designed solutions.
- The vignette on the exam should be similar to the practice exam. Large "open to below" space and a two story portion with a hallway.
- Practice and become proficient and efficient with the software, and the behaviors of the objects.
- Put together from the bottom up.
- Determine critical dimensions.

Unique and Helpful tools to the section vignette:

Level layers
Draw Tool
Ortho
Zoom
Sketch
Full Screen Cursor

Steps:

Where to draw the section, above, below, on top of plan?

I find that drawing below the plan worked out best. It allowed me to scroll up the the plan when zoomed in, i had trouble scrolling down when i drew the section above the plan. However you can draw the section where ever you feel comfortable as long as you follow two rules.

Align with "exterior face of section" you have to draw inline with the plan.

Draw the grade line. This is an instant fail item if it it left out

Draw guide lines for the major "exterior/bearing" walls. Zoom in to ensure accurate placement of guide lines. I like to be consistent with placement location, ie always on the "left" side of the wall.

Draw slab on grade. This slab should sit on top of the grade line. draw in roughly and refine later.

Draw footings so they align with exterior and bearing wall guides. These extend from the top of the slab on

grade to the specified frost depth in the program.

Frost depth is determined from Grade Line. There are two recommendations for the footings. The bottom or the top of the footing can be at the frost depth. I felt more comfortable placing the top of the footing at the frost depth, and this is within the acceptable limits of the vignette. However, make sure to keep the depths of the footings consistent and do not exceed these limits

Interior footings should be flush with slab on grade.

Now that you have the footings placed and set you can draw the bearing walls and align them with your guides, we do not know the height of the walls at this time, but this can be easily adjusted later.

Determine the ceiling height from the program. 15' in the lab, and 8'4" on the first floor. The ceiling line has no thickness.

Now we need to determine the clearance needed between the ceiling and the structure.

The program states that we need 8" between ceiling and the duct work. However, we have to determine what the deepest duct in the system is, not just the deepest duct that the section cuts through.

Draw guides (rectangle, circles) to define your clear space. this will be the 8" + the Duct. You now can align the bottom of your structural system to these guides.

Place your joists oriented as the plan indicates. Size is indicated on plan. It is recommended that joist extend 2-4" into walls.

Align joists to the guides on plan.

Repeat for second floor.

Extend parapets per instructions.

Hallway walls have a one hour fire rating, they extend to deck.

Other walls extend through the ceiling 4"

Break ceiling line every time a wall passes through it.

Draw guides for ducts at the cut line and place on plan. These can be located anywhere between the clearance and the bottom of structure. I placed them at the bottom of the structure, be consistent with them and aligned to the plan.

Use information command to verify the size and dimensions of drawn objects.

Disclaimer: These steps have been assembled using best practices for the vignette section. They are not endorsed by NCARB, or do they guarantee a passing score. Use is at your own discretion.