

# Assignment: 1 (BIM)

## Project levels (elevations)

The client and the architect have developed the following guidelines to meet the project program requirements:

Levels	Number	Floor to floor
Lunchroom	1	10'
Labs	maximum allowed	14'
Offices	½ lab floors	10'
Classrooms	= lab floors	10'
Library	1	14'
Assembly/docking	1	16'
Mechanical cellar	1	10'

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## Framing plan

After you have created your levels and grid plan, develop a framing plan on a typical level. Create your framing plan in Revit and dimension the spanning between the grid intersections. Use the spanning chart to select the appropriate beam for that span, based on the dimensions between supports. If your beam is on an exterior surface, use the edge column in the chart. For all interior sizing use the interior column.

	W wide flange shape		
Maximum span	interior		Edge
36'-6"	18x86		21x68
36'	18x71		21x50
34'	18x55		21x44
32'	18x46		18x86
30'	18x35		18x71
28'	16x40		18x55
26'	14x61		18x46
24'	14x38		18x35
20'	12x26		16x40
15'	10x26		14x61

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## Process:

1. Use the CD project document started last class
2. Calculate and draft the levels required in a elevation drawing
3. Use the buildings footprint slab to start the building grid system.
4. Referred to your zoning analysis to find the maximum number of floors allowable
5. Use a setback wall locations to develop your grid
6. Complete the structural grid based on the guidelines provided
7. Set up a framing plan view
8. Dimension the beams you need
9. Use the dimensions as spans to generate and identify the W wide flange shapes you need
10. Select the W wide flange shapes in your Revit model to complete the framing plan
11. Post following PDF or JPEG's to blackboard "Assignment 1 (BIM) levels-grid-framing"
  - a. An elevation showing the project levels
  - b. A plan showing the grid lines and dimensions
  - c. A typical framing plan
12. Add a description to your post