Outline

1. Explore example structural details
2. Discuss building layout design considerations
3. Clarify the interface between site and factory work
Modular Assembly Dimensions

5 1/2" Min

11 1/4" Floor

7 1/4" Ceiling

12 1/2"

11 1/4" Floor

7 1/4" Ceiling

22 1/2"

EXTERIOR

INTERIOR
Example Structural Details - Mateline

**TYPICAL MATELINE AT MODULAR STACK (FACTORY)**

- Sole plate conn per shear wall sched at dbl sided shear wall (spacing for one side of shear wall only), typ
- Stud wall & shthg per plan, typ
- Rim joist per plan, typ
- Edge nailing per shear wall sched, typ
- Flr framing & shthg per plan, typ
- (2) layers GVB per arch, typ
- Site installed sleeper
- Addl nailing & BKG reqd for (3) rows of 2x10 sleeper conn per shear wall sched, typ
- 1 1/4" ply shim, typ
- Shthg strip to match wall shthg

**TYPICAL MATELINE AT MODULAR STACK (SITE-INSTALLED)**

- Gap per arch
- Modular box C
- Modular box D
- Rim joist conn per shear wall sched
- 2x10 sleeper w/ conn per shear wall sched
- Modular box A
- Modular box B
Example Structural Details - Corridor

TYPICAL CORRIDOR AT MODULAR STACK 
(FACTORY)

NOTE: 
CORRIDOR SHEATHING IS SITE-INSTALLED AT CORRIDOR SIDE.

TYPICAL CORRIDOR AT MODULAR STACK 
(SITE-INSTALLED)

NOTE: 
CORRIDOR SHEATHING IS SITE-INSTALLED AT CORRIDOR SIDE.
Example Structural Details – Roof Mateline

**Typical Mateline at Modular Roof (Factory)**

- Grid
- Site installed shingle strip
- Gap per arch
- Rim joist per plan, TYP
- 1 1/4" ply shim, TYP
- Stud wall & shingle per plan, TYP

**Typical Mateline at Modular Roof (Site-Installed)**

- Grid
- Shingle strip w/ diaphragm edge nailing per plan
- Gap per arch
- Modular box A
- Modular box B

Scale: 1" = 1'-0"
Example Structural Details – RTU Curb
Exterior Articulation Options

SHAPE

Most Efficient  Less Efficient  Least Efficient

Bump outs  Jog  Cantilever

PLAN

SECTION

3'-0" Typ
Supporting Structure

DIRECT TO FOUNDATION

• Crawl space on continuous concrete footings
• Concrete mat slab foundation

PODIUM

• Concrete podium transfer slab
• Steel podium with concrete over metal deck
• Precast options such as hollow-core plank are feasible but not typical
Site-Built Structure

SITE BUILT FIRST LEVEL

• Conventional wood framed first floor with modular on top
• Steel, wood, or masonry framing to accommodate local transfer areas
This concludes The American Institute of Architects Continuing Education Systems Course

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