Modern Methods of Construction
Construction – a 21st Century Industry?
AGENDA

- MMC – What Is It? Why not more?
- PCL’s Approach
- Case Studies / Lessons Learned
- Steps for MMC success
- Taking BIM Beyond The Model
- The Future Of MMC
MMC DEFINITION:

“A construction process that can encompass the use of composite new and traditional materials and components often with extensive factory produced sub-assembly sections and components. This may be in combination with accelerated on-site assembly methods”

Zurich Insurance
MMC – WHY NOT MORE?

- Seen as domain of extremes
  - Single trade
  - Full modular buildings

- This misses huge portions of work
PCL PMC MANDATE

What do we HAVE to do on site?

How can we find a way to do everything else off-site?
LOOK FOR THE POTENTIAL

- Any individual component or multiple component assembly that has the ability to be:
  - Assembled away from the final location
  - Ahead of time
  - Delivered to site complete, JIT
HOW BIM HELPS

- To maximize the off-site work we need:
  - To break down the project
  - More accurate data
  - Common information
  - Automation
CASE STUDY

- St Joseph’s Hospital, Hamilton, Ontario
CASE STUDY

- Surrey Pre-trial Facility, Surrey, BC
CASE STUDY

- Humber River Hospital
CASE STUDY

- Simple stuff!
STEPS FOR MMC SUCCESS

- Look for opportunities early
- Open, collaborative communication
- Early design finalization
- Buy-in of all stakeholders

#BIMandPrefab
STAKEHOLDER BUY-IN

- Willingness to not accept the status quo
- May require redistribution of traditional contracting / design relationships
- Everyone needs to see the benefits
MMC is industrializing of the construction process
- Greater use of technology in equipment – CNC etc
- Improved shop floor communication
- Better feedback loop
MMC – THE FUTURE

- MMC is coming whether we like it or not
- Multitude of benefits
- Starting to gain momentum
- Limitless possibilities!
THANK YOU