



**Kick-Off Meeting Questionnaire**

<b>Project Name</b>	---
<b>Project Number</b>	---
<b>Conference #</b>	---
<b>Subject</b>	BIM Kick-Off Meeting
<b>Date / Time</b>	Month Day, Year @ Time
<b>Location</b>	---
<b>Attendees</b>	Owner: --- Architect: --- General Contractor: --- Mechanical Engineer: ---

Contact Information	
Project Managers (add others as required): <ul style="list-style-type: none"> <li>a. Architect email: telephone:</li> <li>b. Structural email: telephone:</li> <li>c. Mechanical email: telephone:</li> <li>d. Electrical email: telephone:</li> <li>e. Contractor email: telephone:</li> </ul>	<ul style="list-style-type: none"> <li>a.</li> <li>b.</li> <li>c.</li> <li>d.</li> <li>e.</li> </ul>
BIM Leads or Managers (add others as required): <ul style="list-style-type: none"> <li>a. Architect email: telephone:</li> <li>b. Structural email: telephone:</li> <li>c. Mechanical email: telephone:</li> <li>d. Electrical email: telephone:</li> <li>e. Contractor email: telephone:</li> </ul>	<ul style="list-style-type: none"> <li>a.</li> <li>b.</li> <li>c.</li> <li>d.</li> <li>e.</li> </ul>



## **Discussion Topics**

1. Key Contacts – (fill out contact information on page 1)
2. Team capabilities – (identify each team member's BIM capabilities)
3. Project Program, Milestones and Key Dates – (deliverables and scope)
4. Key Project Requirements – (key project requirements)
5. BIM Goals and Objectives – (how and why BIM will be used on the project)
6. BIM Uses – (identify potential uses during Precon and Construction)
7. BIM Execution
  - a. Modelling Scope – (each discipline identifies what elements to be modeled)
  - b. Model Schedule – (what model elements are required, and when)
  - c. LOD Definitions – (what level of development is required)
8. Collaborative Workflow – (flow of information between all trades)
  - a. *Model Exchange*: (how models are shared/uploaded)
  - b. *Coordination*: Clash Detection and Resolution)
  - c. *Communication*: Meeting Schedules, Screen sharing, RFI's
9. Software and other IT – (required technology infrastructure)
10. Model Structure – (map out what 'The Model' looks like)
11. Structured Information
  - a. *Coordinates and Control Models*
  - b. *Naming Conventions*
  - c. *Materials*
12. Quality Assurance – (how to maintain a high standard of models and data consistency)



**Workgroup Meeting Notes**

<b>Project Name</b>	---
<b>Project Number</b>	---
<b>Conference #</b>	---
<b>Subject</b>	Design-Assist Workgroup Meeting
<b>Date / Time</b>	Month Day, Year @ Time
<b>Location</b>	---
<b>Attendees</b>	Owner: --- Architect: --- General Contractor: --- Mechanical Engineer: ---

**Current Status Update**

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**Outstanding Information Requirements**

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**General Information**

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**New Trend Items**

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**Old Action Items**

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**New Action Items**

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The minutes above reflect decisions and agreements made collectively at this meeting. All attendees are to review these minutes carefully and are to be prepared to answer any questions at the next meeting. All corrections and/or additions to these minutes must be sent in writing within 72 hours of receipt or the minutes will stand as recorded.

*Next meeting is tentatively scheduled for Month Day, Year*



## ***Model Based Layout Best Practices – Establishing Control and Model Origin***

### **Design/Pre-Con Phase**

- The first thing you will want to do is establish control on the site, control can be set by a surveyor. Surveyors typically rely on the State Plan Coordinate System, which is preferred.
- Once control is set the coordinates can then be shared in many ways, it can be via PDF, CAD file, or a list of coordinates.
- Now that site control has been established, a shared Coordinate System within the model has to be created to position the model to the site. Establishing a shared Coordinate System is essential for doing layout, without it the BIM/CAD Model information cannot be referenced to the physical job site.
- If you are working with A/E BIM/CAD Model information work with them on establishing a shared Coordinate System. The goal is to have a consistent shared Coordinate System across all models to ensure an efficient multi-trade coordination of models throughout design and construction.
- The benefit to having A/E and construction models in the same coordinate system is that spot coordinates can be provided where linear dimensions might not be applicable. An example might be a multifaceted building layout where gridlines are in a radius pattern.
- Discuss with A/E the importance of elements generated in their BIM/CAD Models reflect real-world scale. For example, framed walls objects shown in BIM/CAD Model need to reflect sizes called out in plans.
- Identify what the A/E requirements and/or tolerances are as it relates to level of detail of their BIM/CAD Model information. There are times where line work is used to supplement 3D information and as design models evolve the line work or dimension string tied to it does not get updated providing conflicting information.

### **Construction Phase**

- Prior to any construction activities taking place, have a third party survey company establish horizontal and vertical control on-site at the points designated by general contractor that correlate with construction logistics.
- Two points is the minimum the total station requires to function but having three or more control points gives you more control because it allows you to check angles and distances.
- Have the layout subcontractor and Project Superintendent be on-site when third party is establishing control. This will ensure everyone understands where all control points are located and how they were generated.
- Coordinate your control points with construction activities and you will avoid wiping critical control points throughout duration of job.
- Once control is established onsite, have layout sub verify control points provided and tighten control if necessary. Do not accept controls for layout without proper verification.
- After control points are verified, protect them and/or place concrete around control points to ensure they will not move or be wiped out during construction logistics. Additional control points can then be generated onsite if necessary.
- Shoot long on control and work close to your total station. If you have the choice to use two control points that are 50' apart and two control points that are 200' apart use the longest set.
- Do not shoot past your control set up. If your control points used are only 200' apart you should not layout or store points past 200' from the total station.
- When using the Reference Point routine to set up, try and use at least three points and 90 to 120 degrees of angle.