

Introduction

The MPA requires a project specific BIM Execution Plan (BIMxP) to be developed using this MPA BIM Execution Plan Template. This template documents the project information, roles and responsibilities, tools and communication protocols. The BIMxP also facilitates the identification of BIM specific Lean Conditions of Satisfaction (CoS), aligned BIM Uses, and LOD. This activity is facilitated by a lean value mapping exercise for overall project Conditions of Satisfaction. BIM use is a response to the project CoS, and a method of fulfilling project requirements utilizing BIM. The BIMxP is a living document, and will be accessible, referenced, and updated throughout the project. It is part of the final deliverables of the project. It is the responsibility of the BIM Manager to coordinate the updating and use of this template.

Goal of the BIMxP:

The goal of the BIMxP is to align Lean CoS goals with BIM Uses, and then determine the most effective BIM development strategy to support the project decision process, and the most efficient modeling effort for Lean project execution.

Participants:

The design team, the prime BIM Manager and BIM team members, the MPA project manager (PM), the MPA Design Technologies Integration Group (DTIG) Manager, and other project stakeholders.

BIMxP Contents:

INTRODUCTION & DATA STANDARDS - Project standards, definitions and abbreviations used in projects and the pull down menus in the BIMxP. This section provides the team standards for the project.

SECTION 1. PROJECT INFORMATION - Project Information, BIM Execution Plan Approval Signatures, and Contacts

This section provides project name, number, contacts. Project Names and Numbers will be supplied by MPA. Any additional information considered relevant by the PM may be added in this section.

SECTION 2. COLLABORATION PROCEDURES - Meetings, Activities, IT Infrastructure, & Model Submissions

This section provides the strategic and technical procedures for BIM collaboration. This includes model strategy and sharing procedures, model infrastructure, and model submissions. This information is the primary responsibility of the prime BIM Manager in conjunction with the Discipline BIM coordinators. The Model Submission is a jointly reviewed (MPA and BIM Manager) time table for model submissions to MPA for project review. There are three mandatory model submissions during a project, Criteria Definition Model, Design Intent Model Handover, and the Final Submission of the As-Built and Record Model. Other project specific model reviews and deliveries may be documented in this section. Confirm naming of project phases (i.e., 30-60-90)

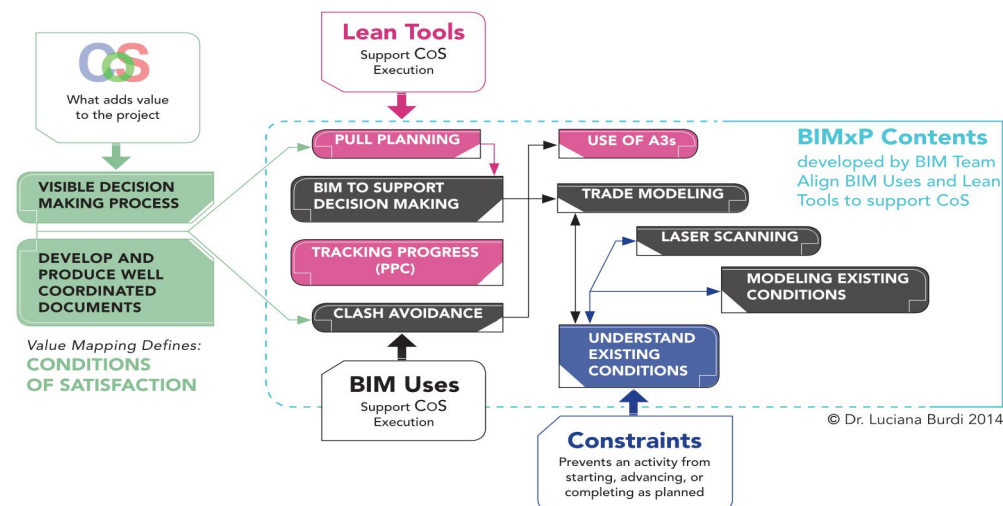
SECTION 3. - BIM CONDITIONS of SATISFACTION (CoS)

The MPA PM or a Lean Facilitator will work with the team and stakeholders to define the project Conditions of Satisfaction. Aligned to these project goals will be BIM specific CoS and BIM actions for execution on the project. This alignment from overall project goals to specific BIM modeling defines the value stream and the Lean BIM process for a project. The prime BIM Manager participates in the CoS meeting and use Section 3 to identify the BIM CoS and activities that add value to the project. The BIM Uses are divided into broad project categories. Not all BIM Uses are applicable to a project. The team will review the automatically identified BIM Uses and rank the priority and final selection.

SECTION 4. - MODEL PROGRESSION - Model Progression, BIM Use Execution, Responsible Parties, and LOD

The Model Progression Worksheet documents the roles and responsibilities, model development, BIM Use execution, and the LOD of model elements. The LOD is a tracking mechanism for MPA. The LOD for elements will be defined at the beginning of each phase and support the highest requirements of the BIM uses to be executed during that phase. At the end of the phase the MPA DTIG manager will review the LOD development and BIM Use execution to determine model progress and adherence to schedule.

PROJECT SUCCESS PLAN









DATA STANDARDS - Level of Development (LOD)

The following Data Standards are used or referenced in the MPA BIMxP. Additional information about each standard can be found on the following websites: www.omniclass.org, [AGC LOD https://bimforum.org/lof](https://bimforum.org/lof). Additional Data Requirements for BIM Uses and FM are located within the MPA BIM Guide

LEVEL of DEVELOPMENT - Associated General Contractors (AGC)

The Level of Development (LOD) Specification is a reference that enables practitioners in the AEC Industry to specify and articulate with a high level of clarity the content and reliability of Building Information Models (BIMs) at various stages in the design and construction process. [AGC LOD https://bimforum.org/lof](https://bimforum.org/lof).

LOD Definitions

LOD 100		The Model Element may be graphically represented in the Model with a symbol or other generic representation, but does not satisfy the requirements for LOD 200. Information related to the Model Element (i.e. cost per square foot, tonnage of HVAC, etc.) can be derived from other Model Elements.
LOD 200		The Model Element is graphically represented within the Model as a generic system, object, or assembly with approximate quantities, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.
LOD 300		The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of quantity, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element including finishes, details, reinforcement, and loads.
LOD 350		The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of quantity, size, shape, location, orientation and interfaces with other building elements . Non-graphic information may also be attached to the Model Element.
LOD 400		The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication, assembly, and installation information. Non-graphic information may also be attached to the Model Element.
LOD 500		The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication, assembly, installation information, and represents as-built condition. Non-graphic information may also be attached to the Model Element.

ABBREVIATIONS - Used in MPA Projects / US CAD Standards V5 (Level 1- General Discipline Abbreviations)

Architecture	A	Electrical	E	Mechanical	M	Sub-Con/Shop	SB	Contractor/ Shop Draw	Z
Geotechnical	B	Fire Prot. Eng.	F	Plumbing	P	Specialty Consultant	SC		
Civil	C	General	G	Equipment	Q	Telecom	T		
Commissioning	Cx	Interiors	I	Resource	R	Tenant	Tr		
Process	D	Landscape	L	Structural	S	Survey/Mapping	V		

MASSPORT FACILITIES & PROGRAMS

Facility Abbreviation	Contract Type Abbreviation	Used in MPA Projects	PM Division Designation
Logan International Airport	Construction	Owner	Aviation
Worcester Airport	Design	Project Mgr.	Horizontal
Hanscom Field	Procurement	Con Mgr.	Seaport/Bridge
Maritime	Study/Services	Operations	Vertical
Development	Facility Management	Hazardous	
Agency Wide		DTI BIM Mgr	

Model Exchange				
Information Exchange	One-Time or Periodic	Frequency	Start Date	Method of Transfer
Design Model Exchange	Periodic	Weekly +		
Federated Design Review	Periodic	Weekly +		
Subcontractor Model Exchange	Periodic	Daily +	TBD	BIM 360 Glue
Federated Sub Clash Reports	Periodic	Weekly +	TBD	

Meeting Protocol				
Meeting Type	Phase	Frequency	Participants	Location
BIM Execution Planning	Startup	As Needed	A,M,E,P,S,C,CM	Massport
Design Assist and Coordination Review	Design Development / Construction Documentation	TBD	A,M,E,P,S,C,CM, MEPFP Subs	
MEPFP Coordination	Construction Administration	Weekly	A,M,E,P,S,C,CM, Subs	GoToMeeting
BIM Close Out	Commissioning	As Needed	A,M,E,P,S,C,CM, Subs	

Software for Modeling			
BIM Use	Discipline	Software	Build Number/Service Pack
Site / Civil / Under Ground Utilities	C	Civil 3D	
Architecture Design	A	Revit	
Structure Design	S	Revit	
HVAC Design	M	Revit	
Plumbing Design	P	Revit	
Electrical Design	E	Revit	
Fire Protection Design	FP	Revit	
Structural Fabrication	S-SUB		
HVAC Fabrication	M,MP-SUB		
Plumbing Fabrication	PL-SUB		
Electrical Fabrication	E-SUB		
Fire Protection Fabrication	FP-SUB		
Estimating/QTO	A,S,M,E,P,FP		
Coordination	A,S,M,E,P,FP	BIM 360 / Navisworks	
4D Simulations	A,S		

Model File Naming			
Model Name	Authoring Company	Description/Use	Authoring File Extension
CONTRACT_PROJECTNAME_DISCIPLINE	Consultant		.RVT
			.RVT
			.RVT
			.RVT
PROJECTNAME_DISCIPLINE_LEVEL	Multiple	Subcontractor Model	.RVT, .DWG
PROJECTNAME_DISCIPLINE_FEDERATED	DOC	Construction Coordination Model	.NWF/.NWD

Stakeholder
MPA DTIG (Design Technologies Integration Group)
MPA PM
Others...

