AIA® Document E202™ – 2008

Building Information Modeling Protocol Exhibit

This Exhibit is incorporated into the accompanying agreement (the "Agreement") dated the day of in the year
(In words, indicate day, month and year.)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

BETWEEN:
(Name, address and contact information, including electronic addresses)

AND:
(Name, address and contact information, including electronic addresses)

for the following Project:
(Name and location or address)

TABLE OF ARTICLES

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 This Exhibit establishes the protocols, expected levels of development, and authorized uses of Building Information Models on this Project and assigns specific responsibility for the development of each Model Element to a defined Level of Development at each Project phase. Where a provision in this Exhibit conflicts with a provision in the Agreement into which this Exhibit is incorporated, the provision in this Exhibit will prevail.

§ 1.1.1 The parties agree to incorporate this Exhibit by reference into any other agreement for services or construction for the Project.

§ 1.2 Definitions

§ 1.2.1 **Building Information Model.** A Building Information Model(s) is a digital representation of the physical and functional characteristics of the Project and is referred to in this Exhibit as the "Model(s)," which term may be used herein to describe a Model Element, a single Model or multiple Models used in the aggregate. "Building Information Modeling" means the process and technology used to create the Model.

§ 1.2.2 **Level of Development.** The Level(s) of Development (LOD) describes the level of completeness to which a Model Element is developed.

§ 1.2.3 **Model Element.** A Model Element is a portion of the Building Information Model representing a component, system or assembly within a building or building site. For the purposes of this Exhibit, Model Elements are represented by the Construction Specifications Institute (CSI) UniFormat™ classification system in the Model Element Table at Section 4.3.

§ 1.2.4 **Model Element Author.** The Model Element Author is the party responsible for developing the content of a specific Model Element to the LOD required for a particular phase of the Project. Model Element Authors are identified in the Model Element Table at Section 4.3.

§ 1.2.5 **Model User.** The Model User refers to any individual or entity authorized to use the Model on the Project, such as for analysis, estimating or scheduling.

ARTICLE 2 PROTOCOL

§ 2.1 Coordination and Conflicts

Where conflicts are found in the Model, regardless of the phase of the Project or LOD, the discovering party shall promptly notify the Model Element Author(s). Upon such notification, the Model Element Author(s) shall act promptly to mitigate the conflict.

§ 2.2 Model Ownership

In contributing content to the Model, the Model Element Author does not convey any ownership right in the content provided or in the software used to generate the content. Unless otherwise granted in a separate license, any subsequent Model Element Author's and Model User's right to use, modify, or further transmit the Model is specifically limited to the design and construction of the Project, and nothing contained in this Exhibit conveys any other right to use the Model for another purpose.

§ 2.3 Model Requirements

§ 2.3.1 **Model Standard.** The Model shall be developed in accordance with the following standard, if any:
(Set forth below object naming conventions, graphic standards, common symbology, etc., or state an applicable standard, such as the National Building Information Model Standards (NBIMS).)

§ 2.3.2 **File Format(s).** Models shall be delivered in the following format(s) as appropriate to the use of the Model:

Use of Model	Required File Format(s)

§ 2.4 Model Management

§ 2.4.1 The requirements for managing the Model include, but are not limited to, the duties set forth below in this Section 2.4. The Architect will manage the Model from the inception of the Project. If the responsibility for Model management will be assigned to another party at a particular phase of the Project, indicate below the identity of the party that will assume that responsibility, and the phase at which that party will assume those responsibilities.

Responsible Party	Project Phase

§ 2.4.2 **Initial Responsibilities.** The party responsible for managing the Model shall facilitate the establishment of protocols for the following:

.1 Model origin, coordinate system, and units
.2 File storage location(s)
.3 Processes for transferring and accessing Model files
.4 Clash detection
.5 Access rights
.6 Other protocols:
(Insert additional protocols below.)

§ 2.4.3 **Ongoing Responsibilities.** The party responsible for managing the Model shall have the following ongoing responsibilities:

.1 Collect incoming Models:
  .1 Coordinate submission and exchange of Models
  .2 Log incoming Models
  .3 Validate that files are complete and usable and in compliance with applicable protocols
  .4 Maintain record copy of each file received
.2 Aggregate Model files and make available for viewing
.3 Perform clash detection in accordance with established protocols and issue periodic clash detection reports
.4 Maintain Model archives and backups
.5 Manage access rights
.6 Follow protocols established in Section 2.4.2

§ 2.4.4 **Model Archives.** The party responsible for Model management as set forth in this Section 2.4 shall produce a Model Archive at the end of each Project phase and shall preserve the Model Archive as a record that may not be altered for any reason.

§ 2.4.4.1 The Model Archive shall consist of two sets of files. The first set shall be a collection of individual Models as received from the Model Element Author(s). The second set of files shall consist of the aggregate of those individual Models in a format suitable for archiving and viewing. The second set shall be saved in the following file format:

§ 2.4.4.2 Additional Model Archive requirements, if any, are as follows:

§ 2.4.4.3 The procedures for storing and preserving the Model upon final completion of the Project are as follows:

§ 2.4.5 Other requirements for Model management, if any, are as follows:
(Describe in detail any other Model management requirements.)

ARTICLE 3 LEVEL OF DEVELOPMENT

§ 3.1 The following LOD descriptions identify the specific content requirements and associated authorized uses for each Model Element at five progressively detailed levels of completeness. Each subsequent LOD builds on the previous level and includes all the characteristics of previous levels. The parties shall utilize the five LOD described below in completing the Model Element Table at Section 4.3, which establishes the required LOD for each Model Element at each phase of the Project.

§ 3.2 LOD 100

§ 3.2.1 **Model Content Requirements.** Overall building massing indicative of area, height, volume, location, and orientation may be modeled in three dimensions or represented by other data.

§ 3.2.2 Authorized Uses

§ 3.2.2.1 **Analysis.** The Model may be analyzed based on volume, area and orientation by application of generalized performance criteria assigned to the representative Model Elements.

§ 3.2.2.2 **Cost Estimating.** The Model may be used to develop a cost estimate based on current area, volume or similar conceptual estimating techniques (e.g., square feet of floor area, condominium unit, hospital bed, etc.).

§ 3.2.2.3 **Schedule.** The Model may be used for project phasing and overall duration.

§ 3.2.2.4 **Other Authorized Uses.** Additional authorized uses of the Model developed to a Level 100, if any, are as follows:

§ 3.3 LOD 200

§ 3.3.1 **Model Content Requirements.** Model Elements are modeled as generalized systems or assemblies with approximate quantities, size, shape, location, and orientation. Non-geometric information may also be attached to Model Elements.

§ 3.3.2 Authorized Uses

§ 3.3.2.1 **Analysis.** The Model may be analyzed for performance of selected systems by application of generalized performance criteria assigned to the representative Model Elements.

§ 3.3.2.2 **Cost Estimating.** The Model may be used to develop cost estimates based on the approximate data provided and conceptual estimating techniques (e.g., volume and quantity of elements or type of system selected).

§ 3.3.2.3 **Schedule.** The Model may be used to show ordered, time-scaled appearance of major elements and systems.

§ 3.3.2.4 **Other Authorized Uses.** Additional authorized uses of the Model developed to a Level 200, if any, are as follows:

§ 3.4 LOD 300

§ 3.4.1 **Model Content Requirements.** Model Elements are modeled as specific assemblies accurate in terms of quantity, size, shape, location, and orientation. Non-geometric information may also be attached to Model Elements.

§ 3.4.2 Authorized Uses

§ 3.4.2.1 **Construction.** Suitable for the generation of traditional construction documents and shop drawings.

§ 3.4.2.2 **Analysis.** The Model may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Elements.

§ 3.4.2.3 **Cost Estimating.** The Model may be used to develop cost estimates based on the specific data provided and conceptual estimating techniques.

§ 3.4.2.4 **Schedule.** The Model may be used to show ordered, time-scaled appearance of detailed elements and systems.

§ 3.4.2.5 **Other Authorized Uses.** Additional authorized uses of the Model developed to a Level 300, if any, are as follows:

§ 3.5 LOD 400

§ 3.5.1 **Model Content Requirements.** Model Elements are modeled as specific assemblies that are accurate in terms of size, shape, location, quantity, and orientation with complete fabrication, assembly, and detailing information. Non-geometric information may also be attached to Model Elements.

§ 3.5.2 Authorized Uses

§ 3.5.2.1 **Construction.** Model Elements are virtual representations of the proposed element and are suitable for construction.

§ 3.5.2.2 **Analysis.** The Model may be analyzed for performance of approved selected systems based on specific Model Elements.

§ 3.5.2.3 **Cost Estimating.** Costs are based on the actual cost of specific elements at buyout.

§ 3.5.2.4 **Schedule.** The Model may be used to show ordered, time-scaled appearance of detailed specific elements and systems including construction means and methods.

§ 3.5.2.5 **Other Authorized Uses.** Additional authorized uses of the Model developed to a Level 400, if any, are as follows:

§ 3.6 LOD 500

§ 3.6.1 **Model Content Requirements.** Model Elements are modeled as constructed assemblies actual and accurate in terms of size, shape, location, quantity, and orientation. Non-geometric information may also be attached to modeled elements.

§ 3.6.2 Authorized Uses

§ 3.6.2.1 **General Usage.** The Model may be utilized for maintaining, altering, and adding to the Project, but only to the extent consistent with any licenses granted in the Agreement or in a separate licensing agreement.

§ 3.6.2.2 **Other Authorized Uses.** Additional authorized uses of the Model developed to a Level 500, if any, are as follows:

ARTICLE 4 MODEL ELEMENTS

§ 4.1 Reliance on Model Elements

§ 4.1.1 The Model Element Table at Section 4.3 identifies (1) the LOD required for each Model Element at the end of each Project phase, and (2) the Model Element Author responsible for developing the Model Element to the LOD identified. Each Model Element Author's content is intended to be shared with subsequent Model Element Authors and Model Users throughout the course of the Project.

§ 4.1.2 It is understood that while the content of a specific Model Element may include data that exceeds the required LOD identified in Section 4.3 for a particular phase, Model Users and subsequent Model Element Authors may rely on the accuracy and completeness of a Model Element consistent only with the content required for the LOD identified in Section 4.3.

§ 4.1.3 Any use of, or reliance on, a Model Element inconsistent with the LOD indicated in Section 4.3 by subsequent Model Element Authors or Model Users shall be at their sole risk and without liability to the Model Element Author. To the fullest extent permitted by law, subsequent Model Element Authors and Model Users shall indemnify and defend the Model Element Author from and against all claims arising from or related to the subsequent Model Element Author's or Model User's modification to, or unauthorized use of, the Model Element Author's content.

§ 4.2 Table Instructions

§ 4.2.1 The table in Section 4.3 indicates the LOD to which each Model Element Author (MEA) is required to develop the content of the Model Element at the conclusion of each phase of the Project.

§ 4.2.2 Abbreviations for each MEA to be used in the Model Element Table are as follows:
(Provide abbreviations such as "A – Architect," or "C – Contractor.")

§ 4.3 Model Element Table

Identify (1) the LOD required for each Model Element at the end of each phase, and (2) the Model Element Author (MEA) responsible for developing the Model Element to the LOD identified.

Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniFormat™					LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	Note Number (See 4.4)
A SUBSTRUCTURE	A10	Foundations	A1010	Standard Foundations													
			A1020	Special Foundations													
			A1030	Slab on Grade													
	A20	Basement Construction	A2010	Basement Excavation													
			A2020	Basement Walls													
B SHELL	B10	Superstructure	B1010	Floor Construction													
			B1020	Roof Construction													
	B20	Exterior Enclosure	B2010	Exterior Walls													
			B2020	Exterior Windows													
			B2030	Exterior Doors													
	B30	Roofing	B3010	Roof Coverings													
			B3020	Roof Openings													
C INTERIORS	C10	Interior Construction	C1010	Partitions													
			C1020	Interior Doors													
			C1030	Fittings													
	C20	Stairs	C2010	Stair Construction													
			C2020	Stair Finishes													
	C30	Interior Finishes	C3010	Wall Finishes													
			C3020	Floor Finishes													
			C3030	Ceiling Finishes													
D SERVICES	D10	Conveying	D1010	Elevators & Lifts													
			D1020	Escalators & Moving Walks													
			D1030	Other Conveying Systems													
	D20	Plumbing	D2010	Plumbing Fixtures													
			D2020	Domestic Water Distribution													
			D2030	Sanitary Waste													
			D2040	Rain Water Drainage													
			D2090	Other Plumbing Systems													
	D30	HVAC	D3010	Energy Supply													
			D3020	Heat Generating Systems													
			D3030	Cooling Generating Systems													
			D3040	Distribution Systems													
			D3050	Terminal & Package Units													
			D3060	Controls & Instrumentation													
			D3070	Systems Testing & Balancing													
			D3090	Other HVAC Systems & Equipment													
	D40	Fire Protection	D4010	Sprinklers													
			D4020	Standpipes													
			D4030	Fire Protection Specialties													
			D4090	Other Fire Protection Systems													

§ 4.3 Model Element Table

Identify (1) the LOD required for each Model Element at the end of each phase, and (2) the Model Element Author (MEA) responsible for developing the Model Element to the LOD identified.

Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniFormat™					LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	Note Number (See 4.4)
	D50	Electrical	D5010	Electrical Service & Distribution													
			D5020	Lighting and Branch Wiring													
			D5030	Communications & Security													
			D5090	Other Electrical Systems													
E EQUIPMENT & FURNISHINGS	E10	Equipment	E1010	Commercial Equipment													
			E1020	Institutional Equipment													
			E1030	Vehicular Equipment													
			E1090	Other Equipment													
	E20	Furnishings	E2010	Fixed Furnishings													
			E2020	Movable Furnishings													
F SPECIAL CONSTR. & DEMO	F10	Special Construction	F1010	Special Structures													
			F1020	Integrated Construction													
			F1030	Special Construction Systems													
			F1040	Special Facilities													
			F1050	Special Controls & Instrumentation													
	F20	Selective Bldg Demo	F2010	Building Elements Demolition													
			F2020	Hazardous Components Abatement													
G BUILDING SITEWORK	G10	Site Preparation	G1010	Site Clearing													
			G1020	Site Demolition & Relocations													
			G1030	Site Earthwork													
			G1040	Hazardous Waste Remediation													
	G20	Site Improvements	G2010	Roadways													
			G2020	Parking Lots													
			G2030	Pedestrian Paving													
			G2040	Site Development													
			G2050	Landscaping													
	G30	Site Civil/ Mech. Utilities	G3010	Water Supply & Distribution Systems													
			G3020	Sanitary Sewer Systems													
			G3030	Storm Sewer Systems													
			G3040	Heating Distribution													
			G3050	Cooling Distribution													
			G3060	Fuel Distribution													
			G3090	Other Civil/ Mechanical Utilities													
	G40	Site Electrical Utilities	G4010	Electrical Distribution													
			G4020	Site Lighting													
			G4030	Site Communications & Security													
			G4090	Other Electrical Utilities													
	G50	Other Site Construction	G5010	Service Tunnels													
			G5090	Other Site Systems & Equipment													

§ 4.3 Model Element Table

Identify (1) the LOD required for each Model Element at the end of each phase, and (2) the Model Element Author (MEA) responsible for developing the Model Element to the LOD identified.

Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Not Utilizing CSI UniFormat™	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	**Note Number (See 4.4)**

§ 4.4 Model Element Table Notes

Notes:

(List by number shown on table.)