Rushmore Plaza Civic Center Arena Expansion

Exhibit C – Collaboration Requirements

Introduction:

The goals of this agreement are to:

- Involve the Parties early in the Project;
- Create alignment of the Parties toward common goals;
- Create a culture of cooperation among the Parties;
- Create an open environment for sharing information;
- Integrate leadership and decision making;
- Integrate operation, design and construction knowledge;
- Facilitate construction of the Project virtually, before construction of the Project physically, through the use of Building Information Modeling ("BIM") tools and Virtual Design and Construction technologies for design and construction planning, with a focus on:
  - Reducing redundancy, latency and conflicts,
  - Ensuring quality of documentation for construction readiness
  - Improving efficiency, coordination, means and methods, and,
  - Increasing opportunities for the use of pre-fabrication and off-site Construction where possible.

1. Perkins+Will and Mortenson, in the effort to establish a collaborative digital approach on the project, will define the Project's Building Information Model (BIM) and Virtual Design and Construction requirements for the project. The resulting BIM Project Execution Plan (PxP) document will reference a specification for the Model Element Author (MEA) and Level of Development (LOD) requirements for the Project. As such, these two documents, BIM PxP and the MEA & LOD Specification, will establish the required BIM deliverables on the project. The BIM PxP will be a living document and will continue to develop throughout the course of the project. It will be maintained and updated throughout the project by the primary leaders of BIM/VDC utilization of Perkins+Will and Mortenson.

2. Key members of the project—Architect, Design Consultants, Mortenson and Trade Partner teams—will develop this BIM PxP to understand each party’s responsibilities and how they intend to use BIM and VDC technology on the project, and how the BIM scope will be divided among different parties. This plan will include an implementation strategy for meeting the project's BIM requirements with a unified approach. The utilization of 3D modeling technology on this project will have the highest rate of success when all parties adhere to the procedures, guidelines and scope definitions described herein. Mortenson and Perkins+Will agree to do
so, and to require their respective subcontractors and sub-consultants that will be required to model some or all of their work to do so.

3. The Design Team will make available all or portions of the Revit 3D Design Models, or at any other time reasonably requested by Construction Manager, Architect will transmit the Design Models, as .rvt and as .dwg files exported from the .rvt files to the Construction Manager, in the most current working Revit format. Architect will provide the information in other file formats that are available for export within the most current working Revit format as are reasonably requested by Construction Manager to support inoperability between software platforms. The LOD will specifically define the completeness of the Design Model at the various stages of the Project and will be coordinated with the corresponding scopes of work to be included in the 2D drawings at the agreed upon milestones. Mortenson will create a Construction Model that is the equivalent of shop drawings and other information useful to construction. The Construction Model consists of data imported from a Design Model and/or from a Fabrication Model. Fabrication Model is a 3D model provided by a subcontractor or trade partner containing the 3D geometry used to construct actual building components. The BIM PxP will reflect the above when developed.

Scopes required to be modeled by the Design Team to a Level Of Development 300 include, but are not limited to structural steel shapes, enclosure design, architecture, mechanical, electrical, plumbing, fire protection, (MEPFP) design, structural cast-in-place and precast concrete design as agreed upon in the BIM PxP. Other digital modeling design elements including, but not limited to, site, civil, safety and security, controls, fire alarms, building automation and other systems will also be provided in conformance with the agreed upon BIM PxP.

4. At the various stages in the development of the design, the content of the Design Model will be consistent with the two dimensional plans and specifications at such time as and to the extent Contractor is entitled to rely on the two dimensional plans and specifications. At such time(s) as any Construction Documents are issued or updated by the design team, any information in the Design Model that is also contained in the Construction Documents will be consistent with the information in the Construction Documents. Architect and Construction Manager acknowledge and agree that any models exchanged by Architect, and Construction Manager during the design phase (including the Preliminary Design Models), represent work-in-progress and as such, are in the developmental stage, may not be dimensionally accurate, are subject to change throughout the design phase, and may not contain all of the elements required for complete Construction Documents. Architect, Owner and Construction Manager use such models at their own risk, and release each other from any and all claims arising out of such use, and neither party may rely on such in-progress models for any purpose. The Architect acknowledges that, consistent with this paragraph, Mortenson will use information from the Design Model for the construction of the Project, with the understanding that the Contract Documents supersede the Design Model.

5. There will be proactive, early engagement of Mechanical, Electrical, Plumbing and Fire Protection (MEPFP), Steel Structure, Enclosure, Structural Concrete, Precast and Vertical Transportation Trade Partners. If the Parties agree as part of the procurement plan and subsequent BIM Execution Plan development, the MEPFP contractor will furnish models during the design phase and that information from its models will be used in preparation of the Construction Documents, all as further defined in the MEA & LOD Specification.
6. In order to facilitate BIM collaboration on individual and shared models across offices, Mortenson and the Architect contemplate the use of a cloud-based work sharing software, accessible from anywhere with an internet connection. Instead of the Central file residing on a Local Network Fileserver, it will be hosted in the cloud. Individual users can continue to work locally similarly to the traditional process while synchronization happens between the local computers and the cloud service. Due the often large number of geographically distributed stakeholders, scope splits, and incremental hand-offs, Perkins+Will and Mortenson may consider leveraging this service across all disciplines during both the design and construction phase of the Project. Managing of the work sharing software will be discussed and agreed up in the BIM PxP.

7. Mortenson will provide a web based Project Management System for the Project for Design Team and Mortenson collaboration and file sharing. Specifically, this system will be used by both parties as the exclusive project tool for the transmittal and response to Requests for Information (RFI’s) and Submittals. The Design Team will use Mortenson’s Project Management System during preconstruction and construction phases. For Day to Day consultant coordination and Owner Correspondence Perkins+Will will use its internal software for file transferring.

8. At the conclusion of the project, as part of the project close-out phase, the Design Team will provide the owner with the BIM developed to the level as indicated by the contract. The Design Team will update the BIM to include construction changes documented through RFI, ASI, Addendum and Bulletin.. The Design Team is not responsible for incorporating construction changes which are undocumented or are the result of Mortenson’s means and methods of construction. Record Drawings will be based on and created from the Revit Model and delivered as agreed upon in the Standard Form of Agreement Between Owner and Architect.

9. At the conclusion of the project, as part of the project close-out phase, Mortenson will provide the owner with the BIM developed to the level as indicated by the contract. Mortenson will update the BIM to include changes documented by the Design Team and reflect the field conditions as informed by the means and methods of construction and deliver this as an As-Built Model. As-Built Drawings will be based on and created from the As-Built Model and delivered in Revit format (.rvt)