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August 3, 2014

Ryan Cathey
NV5
5217 South State Street, Suite 200
Murray Utah 84107

RE: Fire Flow Requirements

As background for this letter, it must be noted that the developer had previously submitted and had plans approved for the installation of water lines in the project area. The original approval indicated larger water main sizes in some of the areas. The current discussions regarding fire flow resulted from the desire of the developer to reduce these line sizes from 10 inch lines to 8 inch lines. Plans were submitted to the Utah Division of Drinking Water and to Weber County. However, Weber Fire District did not receive these plans until after petitioning through email for the documents. It was also noted on the plans submitted to the County which indicated changes in road grades that the water lines indicated on the plans differed from those on the previously approved plans.

The developer has indicated that the desire to reduce line sizes is due to the concern of stagnant water in the lines and the overall cost of the larger pipe diameters vs. installing the smaller size. We have pointed out in discussion that there may be other consequences of reducing line size, and we feel that it is important to note that by reducing these line sizes, the developer may be restricting themselves on future building types and sizes in the project areas affected by these reductions of line sizes.

Over the past few months there has been an ongoing discussion concerning fire flow requirements for the Powder Mountain area project and specifically related to fire flow for what are indicated at this time to be residential areas. Mr. Cathey and I had several email conversations during May regarding the issue however no solid conclusion had been reached.

The difficulty of determining the required fire flow for the project site is that there are no established building plans to work from, and that the developer has not been able to provide exactly what size and type of structures will be built. The 2012 International Fire Code adopted by the State of Utah with amendments, and also adopted by Weber Fire District (including appendix B) is the primary document driving fire flow requirements. Within this document, table

Chief, David L. Austin - Deputy Chief, Paul Sullivan - Fire Marshal, Brandon Thueson

B105.1 established the minimum fire flow requirement and duration for structures of a given type of construction and size of building. Without these two pieces of information, establishing fire flow becomes difficult as it is a projection of what may be built.

In the past two weeks there has been many phone conversations, emails and in person meetings with Ryan Cathey, Rick Everson, Bob Hart with Division of Drinking Water and Weber County Engineering. There has been an expression of confusion as to whether the District had established fire flow standards for the project. The information that the District currently has been provided indicates that the fire flow should be somewhere between 2000gpm and 1500gpm. There is no documentation that the District previously established fire flow for the project.

Weber Fire District has a difficult tactical situation facing it regarding fire suppression in the project area. This area is in a Wildland interface area and the structures are difficult to get to due to the existing access road. Fire apparatus and personnel responding to fire incidents in this area will be highly dependent upon the water system which is being designed and installed. This water supply will be valuable for not only structure fire suppression but for the Wildland fires in the area. History has proven that once people are introduced into an area, the risk for Wildland fires greatly increases. It is the intent of the Weber Fire District to provide the best possible protection for the developer and future residents of the area.

I have carefully researched through the documents submitted to the County for the project, the water flow report submitted to Division of Drinking Water, NFPA documents, the International Fire Code and the 2006 Utah Wildland Interface Code. All available information was considered in my evaluation of the water and fire flow requirements.

With the information that has been provided to me at this time, I have determined that the fire flow for the project will be as follows:

Lots 5R and 6R: According to the modeling report submitted by NV5, all nodes except node J-105 are able to produce at least 1750 gpm, and in many cases more than this. J-105 is a hydrant node which services two lots. These two lots are lot 5R and 6R. The modeling report indicates that there will be 1,107 gpm available at these two locations. Therefore, these two lots shall be restricted to have structures which meet the following requirements for building type and size:

Lots 5R and 6R Fire Flow and Construction Types and Sizes

Construction Type	Type IA and IB	Type IIA and IIIA	Type IV and VA	Type IIB and IIIB	Type VB	Fire Flow (GPM)	Duration (Hours)
Gross Square Footage	0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1100	2

All other areas of the development:

The fire flow in all other areas of the development shall meet the requirements listed in table

B105.1 of the International Fire Code, unless specifically directed otherwise by the Fire Marshal or Fire Chief.

As the development continues, structure design shall take into consideration the available fire flow in the area and shall not exceed the size (gross square footage as outlined in appendix B of the IFC) for the type of construction of the building.

Allowable Reductions and Increases of Fire Flow:

As allowed by the 2012 International Fire Code, Appendix B section B103 “Modifications”, the Fire Chief and the Fire Marshal are allowed to increase or allow decreases as outlined in appendix B. Weber Fire District reserves this right as given by the Fire Code.

After carefully considering the plans for the development along with the challenges facing firefighting operations in the area of the development, I have determined that there shall be no overall reduction of fire flow granted in the area of the development. Specific situations, for specific buildings may be addressed on a case by case basis, however as stated above, we reserve the right given by the IFC to grant or reject any petition of a reduction of fire flow.

Documentation:

The developer shall prepare a written correspondence to be signed and recorded as part of the development records with Weber County regarding the restrictions of building type and size as outlined above for lots 5R and 6R.

The developer shall provide a written acknowledgment of fire flow requirements as outlined for all other areas of the development and shall agree to follow the outlined requirements.

Sincerely,



Brandon Thueson
Fire Marshal
Weber Fire District

cc.

Chief David Austin, Weber Fire District
Amy Hugie, Legal Counsel Weber Fire District
Utah State Fire Marshal’s Office
Bob Hart, Utah Division of Drinking Water
Weber County Engineering