

Project Title: Fire Performance of Custom CLT Layups Utilizing Pine from Logs Harvested in Western Forest Restoration Programs

Project Length: 2 years

Abstract: The objective of this proposal is to determine the fire performance of the custom cross-laminated Timber (CLT) layups utilizing ponderosa pine from logs harvested in Western U.S. forest restoration programs and produced by regional CLT manufacturers. Tests will be performed using ASTM E1129 standard protocol on floor and wall assemblies acquired from three CLT manufacturers located in the rthwestern U.S.: Smartlam, Vaagen Brothers and Katterra. Fire testing is required before manufacturers will consider using pine in CLT. The volume of pine in high fire danger areas in the Western U.S. is much grater than that of Douglas-fir and we believe that ponderosa pine lumber can be successfully utilized in CLT panels. This project builds on a previous 2017 Wood Innovation grant (Muszynski et al. Oregon St. University) and complements a related 2018 Wood Innovation submission aimed at development of a demonstration ponderosa pine CLT modular structure. We estimate that as few as 100] modular units a year will lead to utilization of approximately 33 MMBF of pine lumber, and proposed will allow treatment of about 460 additional acres of threatened forestland. At this rate, the harvest and manufacture of the lumber required will retain or create about 9.2 jobs/MMBF, including 57 jobs created directly for the CLT manufacturing (as estimated by Beck Group).