ABSTRACT

TITLE:	Sustainable House for Engagement and Discovery (Shed)
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ABSTRACT: Ian Hensler, Cassie Seaney, Matt Kleinert, Sam Emerson, Noah Garcia, Michael Bixenmann, Kody Salcido The Sustainable House for Engagement and Discovery (SHED) project constructed a new garden storage building (gardenhouse), as well as researched and detailed a new suitable geodesic dome greenhouse for the Fort Lewis College Environmental Center (EC). These new campus structures and site layout address on-campus food production, composting, and EC operations associated with the center's campus garden, orchard, and sustainability initiatives. Current EC facilities at the on-campus garden site are limited in terms of size (for both food production and tool storage), control (inadequate thermal regulation in greenhouse, lack of weather protection for woodchips used in campus composting operations, and rodent infestation of all facilities), and utility (accommodation of woodchip deliveries, compost maturation, and curing of vegetables). All issues are addressed through the new structures and site design. This project went through an extensive design iterations in which the SHED team coordinated with the FLC Physical Plant Services (PPS) and EC in order to determine the site, materials, and layout of the structure. A professional structural engineer assisted in the analysis of the structure's integrity, while a licensed architect helped the SHED team to ensure the building would meet all applicable codes. These include building standards from ASTM, ACI, ASCE, AWPA, and IBC as well as the Americans with Disabilities Act. Fort Lewis' architectural standards also had to be met by the design. This design phase ultimately created a schematic design package detailing the building as well as its materials which was used to receive a construction permit after its code compliance had been reviewed. Construction began in March 2016, and is still ongoing.