MEMORANDUM

TOWN OF PORTOLA VALLEY

TO: Architectural and Site Control Commission

FROM: Carol Borck, Planning Technician

DATE: March 27, 2009

RE: 123 Main Street, Sustainable Building Checklist Review

The project proposes construction of a new 6,666 sf residence with 3,443 sf basement, detached garage, and pool. The existing structure will be deconstructed and there are plans to salvage and reuse much of the roof decking and interior millwork, both of which are heart redwood. This reclaimed lumber will be remilled on site and used for some interior paneling, shelving, cabinets, and trim in the new residence. In addition to using reclaimed lumber, engineered lumber for the floor, framing, headers, and fascias will contribute to reduced consumption of wood and traditional lumber. A durable, 40-year asphalt comp roof and fiber cement siding are also proposed.

Water and energy efficiency are major focal points in the design of the new home. A geothermal system will be constructed to heat and cool the residence. The project architect estimates that the system will have approximately 10 holes at 20 feet apart located in the southwestern open area of the property. The system will fuel the hot water heaters and use heat exchangers for the heating and cooling of the home. Equipment will be located in the basement of the house and the home will be multi-zoned for climate control. For insulation, recycled cotton is being considered with floors and walls spec'd at R-21 or greater and ceilings/roof at R-38, exceeding State requirements. Some interior lighting will be LED and occupancy sensors will be installed in utility and laundry rooms, closets, bathrooms, and most of the spaces in the lower level. All appliances will be energy star rated, the pool deck will be used as a heat sink and have radiant piping for pool heating, and an 8.5 KW solar photovoltaic system is currently planned. The project will pre-plumb for future gray water usage in landscaping and the project team is investigating the possibility of rainwater harvesting.

A healthier indoor living environment will be supported by the use of no-VOC paint and low/no VOC finishes and materials. It is likely that some of the floors will be covered in linseed oil-based materials or cork. Recycled content countertops, cabinets, etc. will also be considered and specified later.

The project architect affirmed the usefulness of the green building checklist in assisting them in organizing initial thoughts on green design. The property owner, Mr. John Smith, has been interested in incorporating various sustainable strategies into his project from the initial stages of design development. Mr. Smith is particularly interested in alternative energy technology and green solutions in general. The project team will be investigating sustainable and green issues and options throughout the design process.