ATTACHMENT C

Appendix D. Reduced Buffer Analysis for Harbor House off-site septic system replacement project, ELK, CA

Mendocino County Coastal Zoning Code, Table 4. Sec. 20.496.020 ESHA -- Development Criteria.
(A) Buffer Areas. *A buffer area shall be established adjacent to all environmentally sensitive habitat areas. The purpose of this buffer area shall be to provide for a sufficient area to protect the environmentally sensitive habitat from degradation resulting from future developments and shall be compatible with the continuance of such habitat areas.* The project consists of placement of underground septic system infrastructure in the vicinity of special status plant communities including willow and riparian areas. Septic pipes would be directionally bored within the existing Highway One right of way, and would be trenched on private property where a new septic leach field would be constructed. Project components occur within 100 feet of sensitive areas, including directional boring and underground septic pipe placement within the highway right of way approximately 20 feet from willow riparian areas at the closest point, directional boring and underground septic pipe placement within the highway right of way approximately 50 feet from coastal bluff morning glory (*Calystegia purpurata* ssp. *purpurata*) and 80 feet from bulrush wetlands at the closest point, and underground septic pipeline trenching and septic pipe placement approximately 50 feet from grazed rush potential wetlands.
(1) Width. *The width of the buffer area shall be a minimum of one hundred (100) feet, unless an applicant can demonstrate, after consultation and agreement with the California Department of Fish and Game, and County Planning staff, that one hundred (100) feet is not necessary to protect the resources of that particular habitat area from possible significant disruption caused by the proposed development. The buffer area shall be measured from the outside edge of the Environmentally Sensitive Habitat Areas and shall not be less than fifty (50) feet in width. New land division shall not be allowed which will create new parcels entirely within a buffer area. Developments permitted within a buffer area shall generally be the same as those uses permitted in the adjacent Environmentally Sensitive Habitat Area.* Based on the analysis below, due to the type and scale of development proposed, sensitivity of ESHAs, and other elements as discussed, the 50 foot minimum buffer area is recommended. *Standards for determining the appropriate width of the buffer area are as follows:*
(1a) Biological Significance of Adjacent Lands. *Lands adjacent to a wetland, stream, or riparian habitat area vary in the degree to which they are functionally related to these habitat areas. Functional relationships may exist if species associated with such areas spend a significant portion of their life cycle on adjacent lands. The degree of significance depends upon the habitat requirements of the species in the habitat area (e.g., nesting, feeding, breeding, or resting).* *Where a significant functional relationship exists, the land supporting this relationship shall also be considered to be part of the ESHA, and the buffer zone shall be measured from the edge of these lands and be sufficiently wide to protect these functional relationships. Where no significant functional relationships exist, the buffer shall be measured from the edge of the wetland, stream, or riparian habitat that is adjacent to the proposed development.* No functional relationships are noted between sensitive areas and the project impact areas. Project impact areas include the paved roadway, ruderal areas, non-native grassland, and areas of coyote brush scrub. Vegetation communities between impact areas and sensitive areas include grazed grassland, ruderal areas, and landscaped areas.

ATTACHMENT C

Mendocino County Coastal Zoning Code, Table 4. Sec. 20.496.020 ESHA -- Development Criteria.
(1b) Sensitivity of Species to Disturbance. *The width of the buffer zone shall be based, in part, on the distance necessary to ensure that the most sensitive species of plants and animals will not be disturbed significantly by the permitted development. Such a determination shall be based on the following after consultation with the Department of Fish and Game or others with similar expertise:* *(1b-i) Nesting, feeding, breeding, resting, or other habitat requirements of both resident and migratory fish and wildlife species;* *(1b-ii) An assessment of the short-term and long-term adaptability of various species to human disturbance;* *(1b-iii) An assessment of the impact and activity levels of the proposed development on the resource.* Special status coastal bluff morning glory (*Calystegia purpurata* ssp. *saxicola*) individuals were found within disturbed ruderal areas along the roadside. These areas are regularly disturbed and maintained by Caltrans, including mowing on at least an annual basis. Coastal bluff morning glory has also been observed in other disturbed, mowed areas. For this reason, this special status plant is not considered very sensitive to disturbance and may actually benefit from the removal of competing vegetation and through seed dispersal during mowing.
(1c) Susceptibility of Parcel to Erosion. *The width of the buffer zone shall be based, in part, on an assessment of the slope, soils, impervious surface coverage, runoff characteristics, and vegetative cover of the parcel and to what degree the development will change the potential for erosion. A sufficient buffer to allow for the interception of any additional material eroded as a result of the proposed development should be provided.* The project will not result in above ground structures, and therefore does not have potential for erosion impacts from stormwater runoff. Temporary impacts resulting from soil disturbance during construction should be prevented by the use of soils stabilization and sediment control measures as outlined in the Water Pollution Control Program for the project.
(1d) Use of Natural Topographic Features to Locate Development. *Hills and bluffs adjacent to ESHA's shall be used, where feasible, to buffer habitat areas. Where otherwise permitted, development should be located on the sides of hills away from ESHA's. Similarly, bluff faces should not be developed, but shall be included in the buffer zone.* To the extent feasible, development will occur in flat areas within the existing paved roadway.
(1e) Use of Existing Cultural Features to Locate Buffer Zones. *Cultural features (e.g., roads and dikes) shall be used, where feasible, to buffer habitat areas. Where feasible, development shall be located on the side of roads, dikes, irrigation canals, flood control channels, etc., away from the ESHA.* To the extent feasible, underground septic pipe placement borings will occur within the existing paved highway right of way.
(1f) Lot Configuration and Location of Existing Development. *Where an existing subdivision or other development is largely built-out and the buildings are a uniform distance from a habitat area, at least that same distance shall be required as a buffer zone for any new development permitted. However, if that distance is less than one hundred (100) feet, additional mitigation measures (e.g., planting of native vegetation) shall be provided to ensure additional protection. Where development is proposed in an area that is largely undeveloped, the widest and most protective buffer zone feasible shall be required.* Utility placement commonly occurs within utility easements defined within the highway and other road right of ways.

ATTACHMENT C

Mendocino County Coastal Zoning Code, Table 4. Sec. 20.496.020 ESHA -- Development Criteria.
(1g) Type and Scale of Development Proposed. *The type and scale of the proposed development will, to a large degree, determine the size of the buffer zone necessary to protect the ESHA. Such evaluations shall be made on a case-by-case basis depending upon the resources involved, the degree to which adjacent lands are already developed, and the type of development already existing in the area.* Development is limited to necessary underground septic structures required for the continued safe disposal of wastewater associated with the Harbor House. Developments will be limited to underground structures, and will be limited in size to that which is deemed necessary by the Division of Environmental Health to properly locate and treat wastewater. There is a low potential for detrimental impacts to resource areas due to the type and scale of development.
(2) Configuration. *The buffer area shall be measured from the nearest outside edge of the ESHA (e.g., for a wetland from the landward edge of the wetland; for a stream from the landward edge of riparian vegetation or the top of the bluff).* The distance is measured from the landward edge of wetlands and landward edge of riparian and other sensitive vegetation.
(3) Land Division. *New subdivisions or boundary line adjustments shall not be allowed which will create or provide for new parcels entirely within a buffer area.* No new subdivisions or boundary line adjustments are proposed.

(4) Permitted Development. *Development permitted within the buffer area shall comply at a minimum with the following standards:*
(4a) Development shall be compatible with the continuance of the adjacent habitat area by maintaining the functional capacity, their ability to be self-sustaining and maintain natural species diversity. The 2” septic pvc pipe force main will be encased within a 6’ pvc pipe encasing to provide protection against leakage. An additional 2” pvc pipe will be placed within the same casing in order to provide a backup for the original force main. The project has been designed to provide protection to resource areas over time.
(4b) Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel. No feasible location for the replacement septic field exists on the subject property. The proposed location is the only identified feasible option.

(4c) Development shall be sited and designed to prevent impacts which would degrade adjacent habitat areas. The determination of the best site shall include consideration of drainage, access, soil type, vegetation, hydrological characteristics, elevation, topography, and distance from natural stream channels. The term "best site" shall be defined as the site having the least impact on the maintenance of the biological and physical integrity of the buffer strip or critical habitat protection area and on the maintenance of the hydrologic capacity of these areas to pass a one hundred (100) year flood without increased damage to the coastal zone natural environment or human systems. The proposed locations for septic line and field are considered the best option relative to habitat protection and continuance. To the extent feasible, the septic line is to be placed underground within the existing highway right of way. The proposed septic leach field is located in an area that is comprised of non-native grassland and coastal scrub, and is at least 100 feet from any known sensitive areas.
(4d) Development shall be compatible with the continuance of such habitat areas by maintaining their functional capacity and their ability to be self-sustaining and to maintain natural species diversity. The 2" septic pvc pipe force main will be encased within a 6' pvc pipe encasing to provide protection against leakage. An additional 2" pvc pipe will be placed within the same casing in order to provide a backup for the original force main. The project has been designed to provide protection to resource areas over time.
(4e) Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel. Mitigation measures, such as planting riparian vegetation, shall be required to replace the protective values of the buffer area on the parcel, at a minimum ratio of 1:1, which are lost as a result of development under this solution. There is no other feasible location as discussed above. Soil stabilization and sediment control measures are included in the Water Pollution Control Program and if implemented properly should assure that no protective values of the buffer are lost.
(4f) Development shall minimize the following: impervious surfaces, removal of vegetation, amount of bare soil, noise, dust, artificial light, nutrient runoff, air pollution, and human intrusion into the wetland and minimize alteration of natural landforms. The project will not result in impervious surface creation. Measures are recommended in the Biological Scoping Survey Report to prevent human intrusion into sensitive areas during construction, and measures are outlined in the Water Pollution Control Program to assure dust and runoff impacts are minimized during construction, and that soil is stabilized and sedimentation is prevented during and after construction.
(4g) Where riparian vegetation is lost due to development, such vegetation shall be replaced at a minimum ratio of one to one (1:1) to restore the protective values of the buffer area. No riparian vegetation would be lost.
(4h) Aboveground structures shall allow peak surface water flows from a one hundred (100) year flood to pass with no significant impediment. No above ground structures are proposed.
(4i) Hydraulic capacity, subsurface flow patterns, biological diversity, and/or biological or hydrological processes, either terrestrial or aquatic, shall be protected. All hydrology and biologic processes appear to be protected and maintained.

(4j) Priority for drainage conveyance from a development site shall be through the natural stream environment zones, if any exist, in the development area. In the drainage system design report or development plan, the capacity of natural stream environment zones to convey runoff from the completed development shall be evaluated and integrated with the drainage system wherever possible. No structure shall interrupt the flow of groundwater within a buffer strip. Foundations shall be situated with the long axis of interrupted impermeable vertical surfaces oriented parallel to the groundwater flow direction. Piers may be allowed on a case by case basis. The project is not expected to change topography or result in above ground structures. Drainage conveyance should not be impacted by the project.
(4k) If findings are made that the effects of developing an ESHA buffer area may result in significant adverse impacts to the ESHA, mitigation measures will be required as a condition of project approval. Noise barriers, buffer areas in permanent open space, land dedication for erosion control, and wetland restoration, including off-site drainage improvements, may be required as mitigation measures for developments adjacent to environmentally sensitive habitats. (Ord. No. 3785 (part), adopted 1991) With measures as proposed in the Biological Scoping Survey Report and Water Pollution Control Program, the project is not expected to result in significant adverse impacts to sensitive areas.