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Camille Leung
County of San Mateo
455 County Center, 2nd Floor
Redwood City, CA 94063

RE: Draft Environmental Impact Report (DEIR) for Big Wave Wellness Center and Office Park

Dear Ms. Leung:

Thank you for the opportunity to comment on the Big Wave DEIR. Staff has performed a preliminary review of the DEIR and offers the following comments. The proposed project is complex and the DEIR is extensive, so we understand that some of our comments may already be addressed. We look forward to working with the County and applicants on our questions throughout the CEQA and coastal development permit (CDP) process. We may have additional comments as we learn more about the project.

Jurisdiction

The proposed project is located on two parcels that appear to contain historic tidelands that are in the Coastal Commission's original permit jurisdiction. Therefore, the proposed project may require a CDP from the Coastal Commission if there is development in the historic tidelands, in addition to a CDP from the County of San Mateo, which is appealable to the Commission. The standard of review for the County's CDP is the San Mateo County certified Local Coastal Program (LCP) and the public access and recreation policies of the Coastal Act (Coastal Act Section 30604), and the standard of review for a Coastal Commission permit would be the California Coastal Act. We suggest that we meet with the County and the applicants to discuss potential processing of the CDP for those portions of the project that our in our original jurisdiction.

The following comments focus on evaluating the proposed project's impacts on coastal resources and its conformance with the LCP and the Coastal Act, as relevant. We strongly recommend that these issues be fully addressed either in a revised DEIR, or in the final EIR, and appropriately factored into the County's coastal development review for this project.

Project Description

The DEIR describes the project as affordable housing, but it does not explain in what way the project will be considered affordable or whether restrictions would be used to ensure that the proposed level of affordability is maintained. If the proposal includes affordable housing, the

EIR should include this information so that it can be evaluated for conformance with the certified LCP.

Land Use

The EIR should provide an analysis of the Wellness Center's consistency with the certified LCP's Waterfront zoning regulations. The DEIR considers the Wellness Center a sanitarium, which may be allowed pursuant to section 6500(d)3 of the zoning regulations. However, this section states that a sanitarium may only be allowed "when found to be necessary for the public health, safety, convenience or welfare." The EIR should provide analysis of the project's consistency with this regulation.

Also, the proposed community center and residential and commercial uses proposed as part of the project do not appear to be consistent with the Waterfront zoning district, which is intended primarily for marine-related industrial uses; commercial uses are not listed as allowed uses in the District, and the only allowed recreational uses are required to be marine-related and/or outdoor facilities. As such, the proposed project may require an amendment to the LCP, if these land uses are to be considered at this location.

Traffic and Public Access

The EIR should provide an analysis of the traffic impacts of the project on roadway segments, in addition to the analysis of impacts to intersections. This should include an analysis of impacts to segments of Highways 1 and 92, which is necessary to determine the project's consistency with policies of the LCP and the Coastal Act. LUP Policy 2.49 describes level of service (LOS) D as acceptable during commuter peak periods and LOS E as acceptable during recreation peak periods. In addition, Coastal Act section 30211 requires that development not interfere with public access. The EIR should address the potential direct and cumulative impacts of new traffic demand on public access and highway capacity in the Midcoast.

Mitigation Measure TRANS-1 may require construction of a signal at the intersection of Highway 1 and Cypress Avenue. The DEIR does not analyze the potential impacts of this signal on the flow of traffic along Highway 1. These impacts should be analyzed in the EIR and this analysis is necessary to determine the project's consistency with applicable Coastal Act and LCP policies.

The EIR should describe how the proposed project conforms to Coastal Act policy 30210 which requires maximum public access to be provided. For example, the EIR should include a map showing how the proposed trails are related to existing and planned pedestrian and bicycle access in the area and trails to and along the shoreline.

The applicant proposes an exception to the County's parking requirements so that it can provide a reduced number of parking spaces. A reduction in parking spaces could result in users of the proposed development without a place to park, which could negatively impact nearby roads and nearby public parking areas. The DEIR provides a variety of options for mitigating the impacts of the reduced spaces, including increasing public transit, extending the trail system, and

requiring that a portion of the parking spaces be reserved for energy efficient vehicles. The DEIR does not, however, include an analysis of the feasibility or the impacts of these potential mitigation measures. For example, increasing public transit may be economically infeasible, extending the trail system may not be effective at reducing the number of cars needing access to the site, and restricting the parking spaces further may exacerbate the problem of limited parking. The EIR should evaluate the impacts of reduced parking for consistency with the public access and recreation policies of the Coastal Act, and should evaluate the impacts of the proposed mitigation options.

Water Supply

The DEIR should contain a more thorough analysis of whether public services are adequate to serve the proposed development. LUP policies 1.3, 1.4, 1.16, and 1.18 direct new development to existing urban areas in part to maximize the efficiency of public utilities, and 1.18 specifically requires new development to be concentrated in urban areas by requiring infill development. LUP policy 1.19 goes on to define infill as development of vacant land in urban areas that are served by sewer and water utilities. These policies require development within the urban services area to be served by public utilities. The DEIR should address the public services requirement of the LCP for the project.

To the extent the proposed well may be used as part of a public water supply to the project, LUP policy 2.32 requires that the amount pumped must be limited to a safe yield factor that will not impact water dependent habitats. The EIR should contain such analysis on the impact of the well on water dependent habitats in order to evaluate conformity with this LCP policy.

The Facilities Plan: Draft #2 describes a proposal for a desalination facility, but this facility is not discussed in the DEIR. If a desalination facility is proposed as part of the project, it must be addressed in the EIR.

The DEIR discusses a proposal to use an existing, on-site agricultural well. The EIR should explain the status of the permit authorization for the well and the use for agricultural purposes. Also, the applicant is proposing water treatment to assure the quality of the water in the event that future testing reveals contaminants in the water. The EIR should address the quality of all proposed water sources.

Impact UTIL-8 identifies inconsistencies and unknowns in the estimated potable and recycled water demands of the project. These estimates should be analyzed further, peer-reviewed and then refined to ensure their accuracy, so that the impacts of the project may be fully evaluated.

Finally, the DEIR indicates that the applicant proposes that the project be served in part by Coastside County Water District (CCWD). Any changes to the CCWD service boundary and any temporary or permanent extension of water services outside of its service boundary as defined on January 1, 2003 would require amendments to Coastal Development Permits A-1-HMB-99-20 and A-2-SMC-99-63.

Wastewater

The DEIR states that the Granada Sanitary District's ordinance, which appears to apply to the proposed development, requires properties in the urban area to connect to the public sewer. Although the applicant has not proposed to connect to the public sewer, this alternative may be required by the District. Therefore, the DEIR should evaluate the feasibility of the proposed wastewater disposal system in light of these requirements.

Please see our comments above regarding the sufficiency of the DEIR in evaluating the availability of public services to serve the proposed development. In addition, the EIR should fully evaluate the environmental impacts of the proposed wastewater facility, including the following:

Impact UTIL-4 identifies inadequacies in the proposed leachfield. The applicant should conduct the tests and studies identified on Page IV.N-17, which are necessary to ensure proper design of the leachfield, and the leachfield should be redesigned based on the results of these studies and to remedy the inconsistencies identified on page IV.N-18. The EIR should then evaluate the revised leachfield proposal.

Mitigation Measure UTIL-2(b) would require expansion of the capacity of the public sewer system. Any expansion of public works must comply with the policies of the certified LCP, including the policies of the public works component requiring phased expansion of public works. If this mitigation measure is proposed as part of the project, its feasibility should be fully evaluated in the EIR. For example, the public works policies of the certified LCP require that the sewer system can only be expanded if other public works, such as traffic capacity and water supply, have the capacity to accommodate the increased development that would be facilitated by the sewer expansion.

Aesthetics

The EIR should explain how the project's scale and design are compatible with the surroundings, to evaluate consistency with the visual resources protection policies in the LCP. This analysis should include consideration of nearby development.

While the computer imagery contained in the DEIR is a helpful first step, we recommend that the visual analysis be supplemented with data references, such as photographs of storey poles, which can be field-checked for accuracy.

In addition, the EIR should analyze the visual impacts of the proposed development from the harbor and nearby beaches. It should also analyze the impacts of the proposed accessory structures, including wind turbines and solar panels. For example, would the solar panels produce additional glare that could impact views from higher elevations?

Finally, the DEIR states that no detailed lighting plan has been developed. A detailed lighting plan should be included and evaluated in the EIR, and is necessary to evaluate the consistency of the project with the visual resources policies of the certified LCP and the Coastal Act.

Biological Resources

The DEIR does not include a map that delineates the extent of the California red-legged frog habitat and potential buffers on or adjacent to the project site in relation to the proposed development. The EIR should include a map, which identifies suitable red-legged frog breeding, aestivation, dispersal, foraging and upland habitat, the proposed development and potential buffers. The report should also include the data upon which the map is based.

In addition to red-legged frogs, the DEIR lists the western pond turtle and the San Francisco garter snake as two species with potential to occur within the study area. The report states that the potential for occurrence is low due to the lack of suitable perennial aquatic habitat. However, the DEIR does not address the use of upland habitat for the garter snake or the western pond turtle (as well as red-legged frogs), nor does it adequately address the presence of known populations and/or individuals of these two species. The EIR should address upland habitat and known populations of these three species.

Wetlands

The wetlands delineations should be improved so that they can be used to fully evaluate the impacts of the project on nearby wetlands, and conformity with LCP policies protecting wetlands. The delineations included only OBL and FACW plants as wetland indicators, but these delineations should also include FAC plants as wetland indicators.

In addition, the appendices posted on the County's web site include three copies of WRA's 2001 delineation, none of which include complete, legible copies of the wetland maps. The EIR should include complete, legible copies of the wetlands maps. The EIR should also overlay the boundaries from the various wetlands delineations to allow a more clear evaluation of the potential impacts to wetlands.

The wetland delineation done by WSP has too few sample points and although they apparently examined many soil cores, their locations and characteristics are not mapped or described. The EIR should address these issues.

Wetlands Buffers

The DEIR calls for 100-foot wetland buffers, but due to the project's location adjacent to Pillar Point Marsh, the EIR should consider whether larger buffers may be necessary, depending on the adjacent uses.

On the north parcel: Building D, Lot 1 is shown in the elevation views to be built at ground level and the site plans show that this building will have a finished floor elevation of +21 feet (NGVD). A portion of Building D, Lot 1 will be located immediately adjacent to the 100-foot wetland buffer. Page 60 of the Project Description states that "Grading within the 100-foot buffers from the drainage swale (...) would only be for wetland restoration and in accordance with the restoration plan." The EIR should explain and provide detailed grading plans to show

how the building pad will be elevated to provide a finished floor elevation of +21 feet without any disturbance or grading within the 100-foot wetland buffer.

On the south parcel: Buildings 1 North Stack, 1 South Stack, 2, 3, 4, 5 and 7 are close to the 100-foot wetland buffer. As requested above, the EIR should explain and provide cross-sections to show how the finished floor elevation can be achieved without grading in the 100-foot wetland buffer.

In addition, the fire trail will be located within the 100-foot wetland buffer. How can this be constructed in the buffer without any grading?

Flooding

The EIR should include a copy of the Letter of Map Amendment that is assumed to remove the proposed development site from the identified 100-year floodplain. Also, the applicant should provide confirmation from FEMA or the California Department of Water Resources that this letter is intended to extend to the proposed development site.

The FEMA floodplain maps often overlooked or minimized analysis of ocean flooding risks. Also, many of the existing flood maps were prepared over 25 years ago and ocean flooding conditions have changed. The EIR should provide an analysis of the current potential for a 100-year storm combined with high tide, sea level rise, and an eroded shoreline (both seasonally eroded and eroded over the expected project life) to inundate the proposed development site. Since there is uncertainty surrounding the possible future rise in sea level, this analysis should be undertaken with a range of sea level rise rates (5 mm/yr, 10 mm/yr and 15 mm/yr) and if possible, identify the amount of sea level rise that would result in significant flooding of the proposed development site.

Tsunamis

LUP policies 9.2 and 9.3 apply Section 6326.2 of the zoning regulations to the subject parcels, based on their location in a tsunami inundation area. Section 6326.2 restricts the types of development allowed in tsunami inundation areas and includes additional requirements for residential buildings. The EIR should evaluate the project's consistency with these LCP policies.

The Hydrology and Water Quality section provide a history of local and tele-tsunamis that excludes 1993 to 2009. The EIR should cover some of the more recent events.

There is no information in the DEIR about seiching within the Pillar Point Harbor. Since there has been no large tsunamigenic event since completion of the breakwaters, there is little experience with potential harbor seiching during a tsunami. The EIR should address the concerns with seiching, the potential impacts from seiching to the proposed project site and outline a course of analysis for seiching impacts if there are any identified concerns for impacts to the proposed development site from a seiche. The EIR should include direction for the inclusion of sea level rise into this analysis

The recent tsunami inundation maps for San Mateo, http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/SanMateo/Documents/Tsunami_Inundation_MontaraMountain_Quad_SanMateo.pdf, include the entire Big Wave property within the inundation zone. Since none of the finished floor elevations will be above the maximum elevation on site, it would seem that all the proposed buildings would be subject to some inundation and possibly to significant wave impacts during a large tsunami event. Therefore the EIR should include the following:

- The mitigation discussion for tsunami and seiche notes several general measures that can be taken to reduce impacts from these events. The EIR should discuss in detail the mitigation steps that will be taken.

- The EIR should include programs for both tsunami education and tsunami evacuation.

- The EIR should include an analysis of the finished floor elevations that would be necessary to remove the proposed development from tsunami risk.

- If building elevation out of the tsunami risk will not be possible, the EIR should include an analysis of potential currents and wave forces from a tsunami event. This may require detailed modeling of the site for tsunami inundation. The engineer(s) undertaking this analysis should have appropriate experience with tsunami models and analysis of tsunami flows.

- The EIR should identify the engineering efforts that will be taken to insure structural stability during a tsunami event to protect from scour and lateral loads.

- The EIR should also identify the maximum tsunami inundation and flow depths to establish potential vertical evacuation options.

Hydrology

The DEIR acknowledges that the project has the potential to substantially deplete ground water supplies or substantially interfere with ground water recharge. Specifically, by increasing water demand, if that demand is met by groundwater extraction in the Airport aquifer, impacts may occur to the groundwater-fed Pillar Point marsh and/or to other wells drawing on that aquifer. In addition, by reducing the amount of infiltration over the project site, ground water recharge may be reduced.

The calculation of water available for recharge to the aquifer makes several assumptions that are not well constrained or justified. These include the percentage of precipitation that contributes to runoff, and the amount lost to evapotransporation, for existing and the built-out conditions. In addition, the estimate of the amount used for irrigation under current conditions is poorly justified. These numbers should be better constrained before it is possible to make an assessment of the project's potential impact on the aquifer.

Water budget calculations in the DEIR make the assumption that areas of pervious pavement will allow for 100% infiltration, either directly, or through runoff and "microdetention" in the "rain gardens". Given the clayey surface soils at the site, such an assumption must be evaluated carefully. For example, the following information is not provided: 1) The ability of the proposed gravel sub-bed below the pervious pavement to adequately store the design rainfall event; 2) the infiltration capacity of the soils proposed below the sub-bed; or 3) the capacity of the "rain gardens" and other "microdetention" features.

The text of the DEIR indicates that only 10% of the project area would be covered by impervious surfaces; however Tables IV.H-4 and -5 would seem to indicate that nearly 14% is impervious (3 acres out of 21.5).

Water Quality

The proposed project would discharge stormwater into Pillar Point marsh. Although the proposed BMP's may help reduce the potential for water quality impacts, these need to be fully evaluated by a Storm Water Pollution Prevention Plan. Further, Mitigation Measures HYDRO-4 and HYDRO-5 require submittal of drainage and water quality plans prior to issuance of the grading and building permits. However, these plans should be developed sooner, so that they can be evaluated in the EIR. Without these plans, it is not possible to evaluate the project's consistency with LCP policy 7.3 protecting sensitive habitats.

Geology and Soils

The DEIR acknowledges that a final geotechnical investigation will be necessary to evaluate potential impacts and mitigation measures related to a number of geologic and soil-related factors. Commission staff notes, however, that the feasibility of potential mitigation measures and their potential environmental impacts cannot be evaluated until they are identified and proposed, respectively, in such a final geotechnical report. The final geotechnical report should be prepared and evaluated in the EIR. In addition there are some potential impacts that have not been identified in the DEIR. Specifically:

Slope stability and potential impact from offsite mass movement
The DEIR identifies landslides and slope instabilities as geologic hazards that should be evaluated, but indicates that since the site is located neither in an "area of high landslide susceptibility" on the Natural Hazards Map of the County's General Plan nor in a "seismically-induced landslide hazard area" on maps produced by the California Geological Survey that "the probability of seismically-induced landslides and slope instabilities affecting the project site is considered to be remote." Nevertheless, given the amount of grading that would occur in conjunction with the project, the stability of final as well as temporary slopes and stockpiles should be evaluated. Furthermore, the potential for the site to be impacted by offsite mass movement such as landslides or debris flows should be evaluated for consistency with General Plan sections 15.12, 15.19, and 15.20.

Shoreline erosion and retreat
The DEIR does not evaluate the susceptibility of the site to shoreline erosion and retreat. Particularly, in light of the likelihood of an acceleration in the rate of sea level rise, and the concomitant expected increase in bluff erosion rates over historic values, such an analysis should be performed. Recent maps released by the Pacific Institute (e.g., http://www.pacinst.org/reports/sea_level_rise/hazmaps/Montara_Mountain_OE_W.pdf) may serve as a starting point, but site-specific evaluations should be made to comply with General Plan sections 15.12, 15.19, and 15.20.

Seismic hazards
As noted in the DEIR, a portion of the site lies within an Alquist-Priolo Earthquake Fault Zone. Furthermore, all of the site lies very close to the San Gregorio Fault, and is in fact sandwiched between the San Gregorio Fault and an unnamed splay to the northeast. The San Gregorio Fault is mapped as a Type A fault under the California Building Code. The DEIR indicates that since there are no buildings for human habitation planned within the Alquist-Priolo zone, a detailed fault investigation is not required under the Alquist-Priolo Act; the only mitigation measure required is that if any buildings for human habitation are, in the future, planned for this area, then a fault hazard investigation should be performed. Due to the hazard associated with such a setting, however, Commission staff recommends a fault hazard investigation involving trenching, magnetic, or seismic methods before determining that potential fault rupture hazards can be mitigated at the site. This appears to be required by General Plan section 15.20.

The DEIR acknowledges that the subject site is likely to be subject to severe ground shaking over its design life. Siting the CGS estimate of 0.595 g and the ABAG estimates that the site could be subject to a Modified Mercali Intensity of X (corresponding to "very violent" shaking and "extreme damage") from a major earthquake on the San Gregorio or San Andreas Faults, the DEIR nonetheless concludes that by complying with the 2007 CBC design requirements, project impacts related to ground shaking would be less than significant. However, given the proximity to the Type A San Gregorio Fault, this statement is unsupported if near field effects, including directivity and fling, are considered. It appears that General Plan section 15.20 requires a consideration of near field effects to evaluate the impacts that could be associated with ground shaking at the site.

The DEIR acknowledges that seismic-related ground failures, including cyclic densification, liquefaction, lateral spreading, liquefaction-induced ground settlement, and liquefaction surface manifestations are potentially significant impacts. The mitigation measures proposed, however, involve conducting a final geotechnical investigation that will detail potential mitigation measures. A study is not a mitigation measure, however, and Commission staff notes that the feasibility of potential mitigation measures and their potential environmental impacts cannot be evaluated until they are identified and proposed, respectively, in such a final geotechnical report.

Foundation Design, Ground Settlement, and Expansive Soils
Similarly, the DEIR acknowledges that total and differential ground settlement and expansive soils are potentially significant impacts. The mitigation measures proposed, however, involve conducting a final geotechnical investigation that will detail potential mitigation measures. A study is not a mitigation measure, however, and Commission staff notes that the feasibility of

potential mitigation measures and their potential environmental impacts cannot be evaluated until they are identified and proposed, respectively, in such a final geotechnical report.

Conclusion

In summary, the Commission staff requests that the EIR for Big Wave contain the specific environmental information that will be necessary to determine project consistency with applicable LCP and Coastal Act standards. The EIR should provide detailed information regarding impacts on coastal resources, as described above. The EIR should attempt to resolve any potential inconsistencies with these standards by establishing project alternatives which avoid significant adverse environmental impacts and strictly conform to LCP and Coastal Act requirements.

Thank you for the opportunity to comment. If you have any questions, or wish to discuss this project further, please feel free to contact me at (831) 427-4863 or mcavalieri@coastal.ca.gov.

Sincerely,

Madeline Cavalieri
Coastal Planner
North Central Coast District

cc: Scott Holmes