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Th23c

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To: Commissioners and Interested Persons

From: Dan Carl, Central Coast District Director
Jeannine Manna, Central Coast Coastal Planner

Subject: STAFF REPORT ADDENDUM for Th23c
Application 3-12-055 (East Cliff Drive-Twin Lakes State Beach Improvements)

As described in the staff report for the above-referenced item, the East Cliff Drive-Twin Lakes State Beach Improvement project is at its core a major public recreational access enhancement project that is sorely needed at Twin Lakes State Beach. Staff has worked very closely with Santa Cruz County and other interested parties for many years to help ensure that the project both meets its public recreational access objectives and adheres to Coastal Act/LCP requirements. Most recently, there has been much discussion regarding the proposed project's use of some 10,000 cubic yards of sand behind the seawall component of the project, and whether that was appropriate under the Coastal Act. Staff's recommendation in the staff report (dated prepared July 26, 2013) was to require that the sand instead be distributed in front of the seawall, and that a different source and/or material (such as fill soil) be used behind the seawall for this purpose. The primary purpose of this addendum is to modify that portion of the staff recommendation to allow that aspect of the project to be constructed as proposed by the County. In addition, this addendum modifies the way in which the term of the recommended approval would be structured, timing it not explicitly to twenty years but rather to the length of time that the public improvements remain present in this area and continue to warrant protection.

Use of Sand

Staff has evaluated the materials prepared by the County on this question, and has concluded that in this case, given the unique facts presented here, the County's proposal to encase the sand is appropriate for a number of reasons. First, the seawall component of the project is being constructed in such a way as to provide an integral ADA path to the public beach at all sand levels, and to include integral informal seating areas along the seaward edge of the seawall. To accomplish this, and to capture enough space for the recreational improvements atop the wall, the seawall is moved seaward from the edge of the roadway and sloped in such a way as to encase an area that is currently occupied by beach sand during primarily summer conditions. Thus, the project does not explicitly involve "mining" of beach sand as much as it involves constructing the armoring structure/public access amenity around this sandy beach area near the current road edge. In these circumstances, the structure is not unlike the way a boardwalk or hard surface trail on a beach covers an area of sand that is then no longer able to be used for recreation as sand, although public recreation is still taking place on top of the structure. This project is

therefore appropriately conceptualized as a trade-off between different types of recreational access (i.e., the summertime sandy beach area being topped with recreational trails, seating, and related amenities) where, at project completion, there will have been minimal use of sand seaward of the footprint of the seawall and recreational improvement.

Second, the Santa Cruz Harbor's dredge program annually deposits some 276,000 cubic yards of sand on average on Twin Lakes State Beach as beach nourishment,¹ a portion of which makes up the sand in question. Approximately 10,000 cubic yards is a relatively small percentage of such operations and is confined to the area of the seawall/improvement area footprint (and not 'sand mining' from the beach otherwise).

Third, the County estimates that some 570 truckloads would be necessary to import a similar amount of sand or fill from an outside source. The Coastal Act requires minimization of energy consumption and vehicle miles travelled, and adding 570 truck trips would not minimize energy consumption or vehicle miles traveled. These truck trips would also create an adverse effect on greenhouse gas emissions and contribute to global climate change and its attendant impacts. Allowing for the sand to be encased here in the context described above allows for this impact to be avoided entirely.

Fourth, the sand in this case is intended to serve an important water quality filtration and treatment function. In fact, the area behind the seawall has been designed as a low impact development (LID) BMP to improve the water quality of runoff flowing from the road area to Twin Lakes State Beach and ultimately the Monterey Bay National Marine Sanctuary. Currently, the existing roadway does not contain adequate drainage or water quality facilities, and untreated and unfiltered storm water makes its way directly to the beach area, including via sheet flow directly off the road. The proposed project includes four new drainage inlet filtration structures behind the seawall, where the encased sandy area is intended to serve as a primary filtration system to filter pollutants from runoff before it makes its way seaward. The use of such sandy material is integral to the water quality benefit associated with the project, which could be lost or significantly reduced if different material were used behind the seawall.

Fifth, if the sand supply impacts calculation were to include the approximately 10,000 cubic yards as part of the proposed project, then the estimated sand supply impact due to the proposed project would jump from 3,055 cubic yards to 13,315 cubic yards,² and the in lieu fee calculation would increase from a range of \$76,375-\$152,750 to a range of \$332,875-\$665,570,³ increasing the need for mitigation by roughly a quarter to a half a million dollars.⁴ The County is spending some \$4.5 million on the public improvements associated with this project, and thus the County's project results in significantly more public improvement benefit than the cost of mitigation, and thus the proposal to encase the sand is adequately mitigated in that respect.

Finally, the project represents a significant use of local funds, some \$4.5 million, for improvements at a State Beach. The County is obviously showing a great commitment to

¹ As averaged between 1997 and 2013. Yearly totals have varied between a low of 160,000 cubic yards to a high of 457,000 cubic yards.

² See sand supply impacts discussion in the staff report beginning on page 26.

³ Based on a range of \$25 to \$50 for delivered beach quality sand (see staff report page 27).

⁴ An increase of \$256,500 to \$512,820 at either end of the range.

enhancing and facilitating public recreational access to and along the shoreline, including at a State Park unit where state funds for such purposes are limited. As indicated in the staff report, Twin Lakes State Beach is the most highly used beach in all of unincorporated Santa Cruz County, and it currently lacks the type of public recreational amenities that are being provided as part of the proposed project. Through this project, Santa Cruz County is continuing its strong commitment to providing public recreational access amenities, as it has through other public recreational access enhancement projects, such as its projects at Pleasure Point, the Hook, 26th Avenue, Lake Avenue, Portola Drive, etc..

Thus, and for all these reasons attributable to this project and this context, the staff recommendation is modified to allow the project to encase the sand as proposed by the County (see below).

Twenty-year term

The staff report identifies a twenty-year term for the authorization of the project, including as a means of appropriately addressing uncertainties regarding the length of time the shoreline protection will exist without major repairs or replacement and to address the changing and somewhat uncertain nature of decisions related to shoreline armoring, such as the state of the art for design of such devices, sea level rise and other physical changes, legislative change, or new judicial determinations. There have, however, been concerns raised that a twenty-year term may not be the appropriate way to address such uncertainties, including in relation to both armoring design lifetimes and the lifetimes of development being protected by the armoring, as well as concerns that this condition could cause significant investments of staff and permittee time and resources to process additional authorizations when the twenty years is over. In addition, as a public improvement project, the issues associated with the twenty-year term are different here because the impacts and benefits in a case like this all accrue to the public (as distinguished, for example, from a private armoring project where the benefits accrue to the private landowner, but the public is faced with the costs of loss of beach, beach sand, etc.). In a case like this, the term of the authorization is better tied to the period of time within which the public improvements continue to exist and provide public use and enjoyment. If, for whatever reason, that were to cease to be the case, then the rationale for allowing the armoring would also no longer be present. Thus, the staff recommendation is modified to address these future uncertainties through this latter mechanism. Similarly, project impacts continue to be mitigated by these same public improvements over time, and can be appropriately accounted for in that context moving forward.

Thus, the staff report dated prepared July 26, 2013 is modified as shown below (where applicable, text in underline format indicates text to be added, and text in ~~striketrough~~ format indicates text to be deleted):

1. Modify the summary of the staff recommendation on page 2 as follows:

...The impacts to sand supply from the proposed armoring would equate to a loss to the system of approximately 13,315 cubic yards of sand over a coastal development permit (CDP) term of 20 years, which includes the proposed use of 10,260 cubic yards of beach sand as construction backfill in the MSE. Staff proposes conditioning the CDP to remove the use of native beach sand in MSE construction, which would minimize the impacts to sand supply, as directed by the Coastal Act, reducing the sand supply impacts to 3,055 cubic yards of sand. The use of the

10,000 cubic yards of sand to be encased in the project is approvable in this case because it represents a use of sand in the footprint of the seawall/improvements (the beach area is still being used for public recreation, just not public beach recreation); it is part of the seawall's design which includes a sloped wall and ADA paths with access features in the wall itself, and a recreational trail atop it; it is a small amount of the sand typically dredged and deposited on the beach at Twin Lakes; it would avoid the need for some 570 truck trips to bring in materials to occupy the same space in the project area behind the seawall (avoiding associated greenhouse gas emissions and attendant impacts); it provides an important water quality benefit; and it can be appropriately mitigated by the significant public improvement benefit associated with the project. The project itself overall represents a major \$4.5 million public improvement project, and the significant public access amenities that are proposed to be included in the project, including those incorporated into the MSE, would mitigate for the ~~remaining~~ impacts to sand supply. Staff ~~also~~ proposes conditioning the CDP to tie the authorization of the seawall to the length of time when the public improvements continue to exist and provide public use and enjoyment, including with respect to the way in which these improvements mitigate for project impacts, with a 20-year approval and required monitoring and maintenance of the project to ensure long-term structural stability and public viewshed protection. Therefore, the proposed project, as conditioned, would protect existing structures in danger from erosion, mitigate for impacts to sand supply, and ensure long-term stability consistent with shoreline protection and hazards policies of the Coastal Act.

2. Delete special conditions 1d and 1e on pages 5 and 6 as follows:

~~(d) **Fill material.** The origin of all fill materials shall be specified in the revised project plans. No fill material used for coastal bluff protection shall be composed of native beach sand excavated from the project site or dredged from the harbor. PRIOR TO ISSUANCE OF THE PERMIT, and consistent with Special Condition 5, the Permittee shall submit to the Executive Director for review and approval a revised Drainage Plan that demonstrates that the proposed fill material would be integrated into the project design in a manner that protects water quality, including as required by Special Condition 5.~~

~~(e) **Sand Placement.** All beach quality sand that is excavated for construction purposes must be reused for beach nourishment at the project site. The project plans shall illustrate the location where such sand will be deposited on the beach.~~

3. Modify special condition 6 on page 10 as follows:

~~6. Twenty Year Length of Armoring Approval. This coastal development permit authorizes the approved armoring for twenty years from the date of approval (i.e., until August 15, 2033). If the Permittee intends to keep the approved armoring in place after August 15, 2033, then the Permittee shall apply for a new coastal permit authorization to allow the approved armoring (including, as applicable, any potential modifications to it desired by the Permittee). Provided the application is received before the twenty year permit expiration, the expiration date shall be automatically extended until the time the Commission acts on the application. until the time when the public improvements inland of and incorporated into the seawall are no longer present or no longer require armoring. At such time, the Permittee shall submit a complete coastal~~

development permit amendment application to the Coastal Commission to remove the approved armoring and to appropriately restore the affected area.

4. Modify special condition 10(i) on page 12 as follows:

(i) Duration of Covered Maintenance. Future maintenance under this CDP is allowed subject to the above terms throughout the length of the armoring approval (see Special Condition 6) subject to Executive Director review and approval every ten-years to verify that there are not changed circumstances associated with such maintenance that necessitate re-review. It is the Permittee's responsibility to request Executive Director approval prior to the end of each ten-year maintenance period (i.e., with the first period running through ~~until~~ August 15, 2023). Maintenance can be carried out beyond August 15, 2023 (and beyond subsequent ten-year periods) if the Permittee requests an extension prior to ~~that date~~ the end of each ten-year maintenance period and if the Executive Director extends the maintenance term in writing. The intent of this permit is to allow for 105-year extensions of the maintenance term for as long as the seawall remains authorized unless there are changed circumstances that may affect the consistency of this maintenance authorization with the policies of Chapter 3 of the Coastal Act and thus warrant a re-review of this permit. The Permittee shall maintain the permitted armoring in its approved state. No expansion or enlargement of the permitted armoring is allowed.

5. Modify sand use and impacts findings beginning on page 25 as follows:

Use of Native Beach Sand for MSE Construction

In addition to the impacts to shoreline sand supply discussed above, the project also proposes to use native beach sand in the construction of the MSE structure. During construction, the project proposes to excavate and reuse approximately 10,260 cubic yards of beach sand at the project site. In this case, given that the area of the seawall and recreational improvements is the same as the area of the summertime beach, the use of such sand is probably best understood as encasing an area that is currently occupied by beach sand during summer conditions.⁵ The use of native beach sand in the construction of the MSE structure is inconsistent with Coastal Act policy 30235, as it does not eliminate or minimize impacts to shoreline sand supply. Rather, it exacerbates such impacts. In this case, substantially. The project, as proposed, would remove 10,260 cubic yards of sand and use it for backfill behind the proposed seawall. Together with the other identified sand impacts, this increasesing impacts to shoreline sand supply discussed above to a total of 13,315 cubic yards of sand. The sand removed for construction of the MSE would no longer have the potential to contribute to beach sand at the project site, or subsequent sites downcoast.

The Applicant ~~argues~~ states that such use of sand is appropriate in this case, including because the amount of sand to be used is 3.6% of the average annual amount of sand added to Twin

⁵ The seawall component of the project is being constructed in such a way as to provide an integral ADA path to the public beach at all sand levels, and to include integral informal seating areas along the seaward edge of the seawall. To accomplish this, and to capture enough space for the recreational improvements atop the wall, the seawall is moved seaward from the edge of the roadway and sloped in such a way as to encase an area that is currently occupied by beach sand during primarily summer conditions. Thus, the project does not explicitly involve "mining" of beach sand as much as it involves constructing the armoring structure/public access amenity around this sandy beach area.

*Lakes State Beach through dredging and 0.3% of the total amount of sand moved by littoral drift over a 10 year period. The Applicant also ~~argues~~ states that since the amount of sand dredged each year can vary by 300,000 cubic yards, the one-time variation of 10,260 cubic yards is insignificant as compared to the larger overall natural annual variation (see Applicant's sand supply analysis in **Exhibit 9**). Lastly, the Applicant estimates that 570 truckloads would be necessary to import the 10,260 cubic yards from an outside source. The Applicant proposes to encase and use the beach sand area as a means to reduce the greenhouse house emissions associated with the project by eliminating the need for these additional truckloads. The Commission does not concur. It has not been the Commission's practice to allow the use of native beach sand as construction materials because beach sand is part of the shoreline sand supply system, and its use is directly contrary to the basic premise of Section 30235, which identifies eliminating impacts to sand supply as the first choice, and then mitigation for unavoidable impacts after that. It is not clear how the use of over 10,000 cubic yards of beach sand can be found consistent with Section 30235.*

~~In addition, w~~With respect to the Applicant's ~~argument~~ statement that the 10,260 cubic yards of sand is an inconsequential amount of sand given the degree of sand that is placed on this beach from dredging episodes, it is important to understand the dredging and beach nourishment context at this location. ~~does not address the Section 30235 requirement or the nature of the dredging in relation to the sand supply system. In terms of the latter, w~~When the Harbor was first installed, it deprived downcoast beaches, including this segment of Twin Lakes State Beach, of sand. Over time, the beach on the upcoast side of the jetty grew to be a very large beach; the jetty acting as a groin of sorts that collected the sand that would have otherwise moved downcoast. Currently, that jetty "groin" is essentially fully charged, and sand in the littoral cell either bypasses the jetty and/or "sinks" into it. Because the amount of sand that is transported in the Santa Cruz littoral cell is estimated at roughly 300,000 cubic yards of sand annually, the dredging roughly serves to mimic what would have been the case absent the Harbor. In other words, the system is near a natural equilibrium with the dredging and beach nourishment, ~~and it is not appropriate to reduce that system by some 10,000 cubic yards to satisfy a construction materials need. This is also the case because~~ In addition, the sand placed on Twin Lakes is not placed there just for Twin Lakes State Beach, but rather it is also placed to move the sand that gets trapped in the Harbor to this beach, so that it can continue downcoast and help to nourish downcoast beaches as well.

As opposed to using the roughly 10,000 cubic yards of sand as proposed, o~~One~~ option that the Applicant was advised to look into was whether inner Harbor sediments that are also dredged could be used for the necessary backfill. These inner Harbor sediments are generally of a significantly lower sand quality than that taken from the jetty mouth, and thus its use for beach nourishment is more limited. In fact, the Port District's dredging CDP strictly limits the amount of such materials that can be placed on the beach, and limits the times when they can be placed. It is possible that the use of such materials could serve the Applicant's purpose, as well as the Port District's need. However, it is not clear that these materials would be available at the same time as the project would be constructed, and this may make use of such materials infeasible.

In this case, and for this set of facts, the County's proposal to encase the sand is appropriate for a number of reasons. First, the seawall component of the project is being constructed in such a way as to provide an integral ADA path to the public beach at all sand levels, and to include

integral informal seating areas along the seaward edge of the seawall. To accomplish this, and to capture enough space for the recreational improvements atop the wall, the seawall is moved seaward from the edge of the roadway and sloped in such a way as to encase an area that is currently occupied by beach sand during primarily summer conditions. Thus, the project does not explicitly involve “mining” of beach sand as much as it involves constructing the armoring structure/public access amenity around this sandy beach area. In these circumstances, the structure is not unlike the way a boardwalk or hard surface trail on a beach covers an area of sand that is then no longer able to be used for recreation as sand, although public recreation is still taking place on top of the structure. This project is therefore appropriately conceptualized as a trade-off between different types of recreational access (i.e., the summertime sandy beach area being topped with recreational trails, seating, and related amenities) where, at project completion, there will have been minimal use of sand seaward of the footprint of the seawall and recreational improvement.

Second, the Santa Cruz Harbor’s dredge program annually deposits some 276,000 cubic yards of sand on average on Twin Lakes State Beach as beach nourishment,⁶ a portion of which makes up the sand in question. Approximately 10,000 cubic yards is a relatively small percentage of such operations and is confined to the area of the seawall/improvement area footprint (and is not ‘sand mining’ from the beach otherwise).

Third, as indicated the County estimates that some 570 truckloads would be necessary to import a similar amount of sand or fill from an outside source. Coastal Act Section 30253(d) requires minimization of energy consumption and vehicle miles travelled, and adding 570 truck trips would not minimize energy consumption or vehicle miles traveled. These truck trips would also create an adverse effect on greenhouse gas emissions and contribute to global climate change and its attendant impacts. Allowing for the sand to be encased here in the context described above allows for this impact to be avoided entirely.

Fourth, the sand in this case is intended to serve an important water quality filtration and treatment function. In fact, the area behind the seawall has been designed as a low impact development (LID) BMP to improve the water quality of runoff flowing from the road area to Twin Lakes State Beach and ultimately the Monterey Bay National Marine Sanctuary (see also marine resources section below). Currently, the existing roadway does not contain adequate drainage or water quality facilities, and storm water makes its way directly to the beach area, including via sheet flow directly off the road. The proposed project includes four new drainage inlet filtration structures behind the seawall, where the encased sandy area is intended to serve as a primary filtration system to filter pollutants from runoff before it makes its way seaward. The use of such sandy material is integral to the water quality benefit associated with the project, which could be lost or reduced if different material were used behind the seawall.

Fifth, if the sand supply impacts calculation were to include the approximately 10,000 cubic yards as part of the proposed project (see beach and sand supply impacts conclusion section below), then the estimated sand supply impact due to the proposed project would jump from 3,055 cubic yards to 13,315 cubic yards, and the in lieu fee calculation would increase from a range of \$76,375-\$152,750 to a range of \$332,875-\$665,570, increasing the need for mitigation

⁶ Between 1997 and 2013. Yearly totals have varied between a low of 160,000 cubic yards to a high of 457,000 cubic yards.

by roughly a quarter to a half a million dollars.⁷ The County is spending some \$4.5 million on the public improvements associated with this project, and thus the County's project results in significantly more public improvement benefit than the cost of such mitigation, and thus the proposal to encase the sand is adequately mitigated in that respect.

Finally, the project represents a significant use of local funds, some \$4.5 million, for improvements at a State Beach. The County is obviously showing a great commitment to enhancing and facilitating public recreational access to and along the shoreline, including at a State Park unit where state funds for such purposes are limited. As indicated previously, Twin Lakes State Beach is the most highly used beach in all of unincorporated Santa Cruz County, and lacks the type of public recreational access amenities that are being provided as part of the proposed project. Through this project, Santa Cruz County is continuing its strong commitment to providing public recreational access amenities, as it has through other public recreational access enhancement projects, such as its projects at Pleasure Point, the Hook, 26th Avenue, Lake Avenue, Portola Drive, etc..

~~In short, however well intentioned, including in terms of reducing the need to truck in fill materials, at the most basic level such use of beach sand as easily accessible construction material is inappropriate under Section 30235 and must be eliminated from the project. Therefore, **Special Condition 1** has been incorporated to require the Applicant to submit final revised project plans that would remove the use of native beach sand from the construction of the MSE. In addition, any beach quality sand excavated from the project site through construction would be spread back on to Twin Lakes State Beach, as required by **Special Condition 1**.~~

Thus, and for all these reasons attributable to this project and this context, the County's proposed use of the sand can be found consistent with the Coastal Act.

Beach and Sand Supply Impacts Conclusion

~~The proposed project, as modified to eliminate native beach sand as a construction material, would result in quantifiable shoreline sand supply impacts. There would be beach sand loss due to: 1) placement of a coastal bluff protection structure onto approximately 1,500 square feet of sandy area (equating to 1,500 cubic yards when converted for volume); 2) fixing of the back beach location, resulting in the loss of 1,000 square feet of sandy beach (50 square feet/ 20 years) that would have been created over the 20-year life of the structure (equating to 1,000 cubic yards per 20 years when converted for volume); and; 3) retention of 555 cubic yards of sand over the 20-year life of the proposed project, and; 4) 10,260 cubic yards of encased behind the seawall (as discussed above). The total cubic yard calculation is 13,315 3,055 over twenty years. If these impacts were to be mitigated through a beach nourishment effort, the impacts would be comparable to the deposition of 11,760 1,500 cubic yards of beach quality sand at the start of the project (attributable to the encroachment area and the encased sand), and about 77.75 cubic yards of beach-quality sand yearly for twenty years (attributable to retention of sand otherwise).~~

...

As an alternative mitigation mechanism, the Commission oftentimes uses an in-lieu fee when in-

⁷ An increase of \$256,500 to \$512,820 at either end of the range.

kind mitigation of impacts is not available.⁸ In situations where ongoing sand replenishment or other appropriate mitigation programs are not yet in place, the in-lieu mitigation fee is deposited into an account until such time as an appropriate program is developed, and the fees can then be used to offset the designated impacts. When mitigation funds are pooled in this way for multiple projects in a certain area, the cumulative impacts can also be better addressed inasmuch as the pooled resources can sometimes provide for a greater mitigation impact than a series of smaller mitigations based on individual impacts and fees. Based on an estimated range of costs for beach quality sand in this vicinity ranging from \$25 to \$50 per cubic yard delivered (or possibly more, including if an appropriate sand source can even be identified), an in-lieu fee in this case would range from about \$ 332,875 ~~76,375~~ to \$665,750 ~~152,750~~.⁹

With respect to using beach access improvements to offset impacts, such mitigation is typically applied by the Commission to public agencies that manage shoreline recreational areas and/or beaches.¹⁰ The project's shoreline sand supply impacts translate directly into degradation of public access to and along the beach, particularly because construction affects nourishment of the beach. As such, shoreline sand supply mitigation targeted toward these access impacts is appropriate in this case. And fortunately, the proposed project in and of itself is providing public access improvements intended to help mitigate the impacts to shoreline sand supply from construction of the coastal bluff protection. The improvements would provide better access for vehicles, bicyclists, and pedestrians and offer year-round ADA access to the site. The project would contribute to public access enhancement through the \$4.5 million public access and recreation project, including recreational trails, benches, stairs, and ADA accessible pathways built into the structure, in addition to ensuring the stability and longevity of the public recreational access improvements associated with and along the roadway. ~~If the project were to use native beach sand in the construction of the MSE, significantly increasing the impacts to shoreline sand supply, then it may be more appropriate to apply the in lieu fee or beach nourishment option to mitigate for these additional sand supply impacts. However, as described above, and as required though **Special Condition 1**, the revised project plans must remove the use of native beach sand from the project plans.~~ Therefore, the impacts to shoreline sand supply can be mitigated in this case by the proposed public access improvements, including: the improved vehicle road, pedestrian access paths, bicycle lanes, pedestrian crosswalks, formal public parking spaces, traffic circle with a visitor drop off area, bench seating, interpretive signage, bicycle racks, and stairs and access ramps to provide ADA access to the beach through the year (see also Public Access and Recreation finding below for further discussion). In addition, given the public improvement nature of the project as a whole, it will continue to mitigate such impacts so long as these same improvements remain present, and the length of authorization is tied directly to same (see Special Condition 6).

Thus, as conditioned, the project satisfies the Coastal Act Section 30235 requirements regarding mitigation for sand supply impacts, and thus also meets all Section 30235 tests for allowing such armoring.

⁸ See, for example, CDP 3-10-044 (Crest Apartments), CDP 3-09-029 (Rusconi), and A-3-SCO-06-006 (Willmott).

⁹ Based on 3,055 cubic yards of such sand purchased today for \$25 per cubic yard (\$332,875 ~~76,375~~) or \$50 per cubic yard (\$665,750 ~~152,750~~).

¹⁰ For example, as recently required with respect to recreational access improvements along the Pleasure Point shoreline area of Santa Cruz County as part of the Commission's approval of a seawall fronting East Cliff Drive (CDPs A-3-SCO-07-015 and 3-07-019, approved December 13, 2007).

6. Modify duration of authorization findings beginning on page 23 as follows:

...Thus, a ~~twenty-year~~ shorter horizon might better accounts for the fact that the structure hasn't been designed to provide that type of protection for the fifty year estimated life of the armoring structure, and may provides an appropriate interim juncture at which to evaluate its effectiveness at that point as well.

The other factor that is appropriate to consider when identifying a particular horizon for armoring in an approval is the changing and somewhat uncertain nature of the context affecting coastal development decisions regarding armoring (including due to legislative change, judicial determinations, etc.). A ~~twenty-year~~ shorter period might better anticipates such potential changes and uncertainties. For these reasons, the Commission uses a design life of 20 years for the proposed armoring in these findings, and implements the 20 year period through Special Condition 6.

In many past cases, the Commission has addressed such uncertainties through identifying a twenty-year term for the authorization of projects. There have, however, been concerns raised that a twenty-year term may not be the appropriate way to address such uncertainties, including in relation to both armoring design lifetimes and the lifetimes of development being protected by the armoring, as well as concerns that this condition could cause significant investments of staff and permittee time and resources to process additional authorizations when the twenty years is over. In addition, as a public improvement project, the issues associated with the twenty-year term are different here because the impacts and benefits in a case like this all accrue to the public (as distinguished, for example, from a private armoring project where the benefits accrue to the private landowner, but the public is faced with the costs of loss of beach, beach sand, etc.). In a case like this, the term of the authorization is better tied to the period of time within which the public improvements continue to exist and provide public use and enjoyment. If, for whatever reason, that were to cease to be the case, then the rationale for allowing the armoring would also no longer be present. Thus, the Commission ties the length of this authorization to the time when the public improvements inland of and incorporated into the seawall are no longer present or no longer require armoring (see Special Condition 6).

7. Delete paragraph on pages 28 and 29 as follows:

To ensure that this project does not prejudice future shoreline planning options, including with respect to changing and uncertain circumstances that may ultimately change policy and other coastal development decisions (including not only climate change and sea level rise, but also due to legislative change, judicial determinations, etc.), this approval is conditioned for a twenty-year period. It has been the Commission's experience that shoreline armoring, particularly in such a high hazard area as this project, tends to be augmented, replaced, and/or substantially changed within about twenty years. The intent of the twenty-year authorization is to recognize this time frame reality, and also to allow for an appropriate reassessment of continued armoring at that time in light of what may be differing circumstances than are present today. Of course it is possible that physical circumstances as well as local and/or statewide policies and priorities regarding shoreline armoring are significantly unchanged from today, in which case the Applicant would likely have the same right to the armoring that it has today. If, however, the baseline context for considering armoring is different in 20 years — much as the Commission's direction on armoring has changed over the past twenty years as more information and better

~~understanding has been gained regarding such projects—the twenty year authorization will allow the Commission to assess alternatives to the coastal bluff protection in 20 years.~~

8. Modify public access and recreation findings starting on page 30 as follows:

However, as discussed in the geological conditions and hazards section above, shoreline structures can have a variety of negative impacts on coastal resources including adverse effects on beaches and sand supply, which ultimately result in the loss of the beach and associated impacts to public access. The proposed project's impact to sand supply, and ultimately to public access, would result in a loss of some 13,315 ~~3,055~~ cubic yards of sand. Therefore there are direct impacts from beach area loss and indirect impacts (e.g., loss of sand to the system overall, loss of beach ambience, and loss of natural aesthetics) at the project site.

The direct and indirect impacts of the coastal protection would be mitigated through its design. As designed the MSE structure would incorporate pathways, stairs, and benches within the structure that would improve access at ~~the project site~~ this public beach year round as the sand levels fluctuate. While the project would encapsulate approximately 10,000 cubic yards of sand, the area covered up by the seawall/public improvements will continue to be able to be used for public recreational activities, due to the incorporated pathways, stairs, benches, and other related amenities. The coastal protection is not consistent with Coastal Act requirements to protect public views to and along the coast, but it is being proposed to minimize such inconsistencies through design elements to mimic also visually compatible with the surrounding area and mimics the natural bluff shape and color of Purisma Formation (see visual resources section below) minimizing impacts to the site's aesthetic values. While the project would remove 13,315 ~~3,055~~ cubic yards of sand from the system (see prior geologic conditions and hazards section), the public access and recreation improvements gained by this project are enough to mitigate these impacts, and such public improvements will continue to mitigate such impacts so long as these same improvements remain present (and the length of authorization is tied directly to same – see Special Condition 6).

~~The project's proposed use of native beach sand in the construction of the MSE would result in additional impacts to shoreline sand supply and public access and recreation that could not be mitigated in full by the proposed access improvements. Removal of an additional 10,260 cubic yards of sand from the system would require supplemental mitigation in the form of an in lieu fee, beach nourishment, or additional enhanced public access improvements (whether on or offsite). Therefore, this project has been required to submit revised project plans removing the use of native beach sand in MSE construction through **Special Condition 1**. In addition, as detailed in the preceding finding, this approval is valid for 20 years, and this time frame ensures that the public access context, including potential changes and uncertainties associated with it over time, can be appropriately reassessed at that time (see **Special Condition 6**).~~

9. Modify marine resources findings starting on page 32 as follows:

The removal of invasive non-native ruderal vegetation including iceplant along the coastal bluff and the planting of native species would improve habitat values of the site. As mentioned in the project description, the existing roadway does not contain adequate drainage or water quality facilities. The proposed MSE would incorporate Low Impact Development (LID) measures which

would improve the water quality of runoff flowing from the road and sidewalks to Twin Lakes State beach and Monterey Bay. The LID measures proposed would be incorporated into the MSE structure and would include four new drainage inlet filtration structures which would serve as a secondary filtration system to filter pollutants from runoff through coarse sand and gravel before conveying the water to underlying soils (**Exhibit 8**). The use of the sandy material behind the seawall is an important and integral component of such filtration BMP, and thus serves an important water quality function.

~~As mentioned above, the Commission is not supportive of the project's proposed use of native beach sand in the construction of the MSE. The use of 10,260 cubic yards of native beach sand would impact the sand supply at the project site and subsequent sites where the sand would move throughout the littoral cell including downcoast beaches. To reduce these potential impacts to marine resources, **Special Condition 1** has been included requiring that the Applicant revise the project plans to remove the use of native beach sand within the MSE. Pursuant to **Special Condition 1**, the Applicant may use other sand or gravel for the fill material, or may use an alternative type of fill material for the project. However, since the use of a different material may affect the water filtration as designed, **Special Condition 1** requires that the Applicant submit an updated Drainage Plan, illustrating that the alternative fill material would be utilized in a manner that would protect water quality, as originally proposed. Further, as required by **Special Condition 1**, beach quality native beach sand excavated from the project area must be placed on the beach, and any placement below the MHTL may require additional approvals from Finally, marine resources include the area seaward of East Cliff Drive associated with the jurisdictions of the State Lands Commission (SLC) and Monterey Bay National Marine Sanctuary (MBNMS). Therefore, the project is conditioned to require review and approval (if necessary) from the SLC and the MBNMS (**Special Condition 9**).~~

TR 23C

DISCLOSURE OF EX PARTE COMMUNICATIONS

Name or description of project:

Twin Lakes Seawall and Public Recreational Access Improvements

Date and time of receipt of communication:

June 10, 2013, 1pm

Location of communication:

Santa Cruz

Type of communication:

In person meeting

Person(s) in attendance at time of communication:

Neal Coonerty, Betsey Lynberg, Allison Endert, Andy Schiffrin

Person(s) receiving communication:

Carole Groom

Detailed substantive description of the content of communication:

Project representatives provided an overview of the above-referenced project using a Powerpoint presentation and other documents previously provided to staff. I then received a site tour. Topics discussed included the project's purpose, its history, its characteristics, and its current standing with the Coastal Commission. Applicants are hopeful the project's Commission hearing will occur in July or August.

Date: ~~6-11-13~~ 6-7-13

Signature of Commissioner: Carole Groom

RECEIVED

AUG 12 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

Tha3c

EXParte
August 6
2:00 pm
Telephone

Supervisor Neil Coonerty
Santa Cruz County

Application No. 3-12-055 (Santa Cruz County Department of Public Works)
RE: Twin Lakes Beach

Discussed two issues:

1. Armoring is needed to provide support for the road and infrastructure for the road.
2. Use of native sand will save spending funds on 10,000 cubic yards of sand as well as not having 570 truck loads of sand being driven to Santa Cruz.

Carole Groom

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AUG 12 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

Tha 3c



County of Santa Cruz

BOARD OF SUPERVISORS

701 OCEAN STREET, SUITE 500, SANTA CRUZ, CA 95060-4069
(831) 454-2200 • FAX: (831) 454-3262 TDD: (831) 454-2123

JOHN LEOPOLD
FIRST DISTRICT

ZACH FRIEND
SECOND DISTRICT

NEAL COONERTY
THIRD DISTRICT

GREG CAPUT
FOURTH DISTRICT

BRUCE MCPHERSON
FIFTH DISTRICT

RECEIVED

August 10, 2013

AUG 09 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105

RE: TWIN LAKES BEACHFRONT COAST ACTION PROJECT – ITEM 23C

Dear Members of the Commission:

I am writing in support of the County of Santa Cruz proposal to improve access to Twin Lakes Beach. The proposed project is critical to enhance access to this wonderful beach and improve safety for pedestrians, bicyclists, and the motoring public as they enjoy our beautiful coastline.

In 2009, the County held a series of inclusive community meetings to determine how to spend our redevelopment funds. Over 500 people participated in the process, which resulted in a 5-year plan that included goals set by the community. One of the five primary goals of the plan was to ensure safe routes for walking and biking. In a public hearing with another 250 people in attendance, over 100 people spoke in favor of the plan and it was unanimously adopted by our Board of Supervisors.

In 2011, when redevelopment was slated for elimination by the State, our Board held well attended public meetings that included hundreds of residents. With limited funds available, our Board prioritized access to the Twin Lakes State Beachfront and improvements for pedestrians and bicyclists as one of our top projects. Our staff was resourceful in ensuring that money was available for the planning and construction of this project, and we have recently received word from the State Finance Department that these funds are still available for this project.

The community is grateful for the positive staff report included with this item. The recognition of the Coastal Act values that can be met with this project is great and dovetails nicely with the priorities adopted by our community through our planning process. The requirement to spend additional funds to truck in sand poses some problems that would likely kill this project if adopted by your commission.

August 10, 2013
Page 2

My colleague, Supervisor Neal Coonerty, has already contacted members of the Commission to explain why this amount of sand is an insignificant loss to the beach over the lifetime of this project. He has requested noted coastal scientist Dr. Gary Griggs to weigh in with his own well-informed opinion of the impact this project will have to the actual amount of sand displaced by this project. I am aware that Supervisor Coonerty has also made a reasonable case for assessing mitigation fees if necessary to ensure approval of this project.

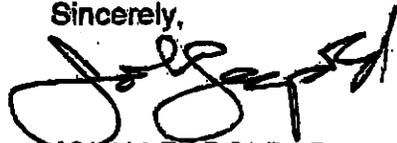
As a member of the Santa Cruz County Board of Supervisors whose district includes most of the redevelopment area, I can tell you that many projects went unfunded in our final project prioritization. With each project approved, we are being held to strict budgets because the County has very little resources outside this final allotment of redevelopment funds to complete these projects. Creating a condition that could cost hundreds of thousands dollars will place this project in great jeopardy. We may not be able to use these funds for anything else and it would be a loss of resources for other critical projects in our community.

I value our partnership with the Coastal Commission. Working together, we have created some wonderful new amenities that have demonstrably added to the coastal access on the east side of Santa Cruz. The work that you helped us complete at Pleasure Point has truly opened this area to thousands of new beachgoers and has strengthened the community through an ability to enjoy the coast in new ways. Our County's investment of millions of public dollars to help do the same at Twin Lakes State Beach helps create a great legacy for future generations to enjoy our coast.

I ask that we continue to work collaboratively to ensure that we can complete this project. I urge you to support the Twin Lakes Beachfront Coast Action Project without condition #1(d) so we can accomplish our shared goal of increasing access to our coast with significant but limited funds available for this project.

Thank you for your consideration.

Sincerely,



JOHN LEOPOLD, Supervisor
First District

JL:ted

1933A1

Th23c

Chapman, Diana@Coastal

From: Manna, Jeannine@Coastal
Sent: Wednesday, August 07, 2013 11:29 AM
To: Chapman, Diana@Coastal
Subject: FW: Twin Lakes Coastal Access - item 23C

RECEIVED

AUG 07 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

Twin Lakes correspondence for the DD report.

From: Neal Coonerty [<mailto:BDS031@co.santa-cruz.ca.us>]
Sent: Tuesday, August 06, 2013 3:38 PM
To: 'mvargas@miconstruct.com'
Cc: Manna, Jeannine@Coastal
Subject: Twin Lakes Coastal Access - item 23C

Dear Commissioner Vargas,

I'm writing regarding the Twin Lakes Beachfront Coastal Access Project in Santa Cruz County, which is item 23c on the August 15th agenda of the Coastal Commission.

This project will significantly improve coastal access for all visitors to Twin Lakes State Beach, including pedestrians, bicyclists, vehicles and people with disabilities access.

As you may know, the staff report is largely supportive of the proposal due to the significant public coastal access benefits this project provides.

The one concern is special condition 1(d), which would require the importation of 10,260 cubic yards of sand to be used as fill, rather than allowing the one-time use of dredged sand.

The amount of sand proposed to be used as fill by the project is approximately 0.3% of the total amount of sand moved by littoral drift over a ten year period. Gary Griggs, a noted geologist, has stated that this amount is insignificant.

It is worth noting that the Santa Cruz Harbor's dredging operation deposits an average volume of 276,000 cubic yards of sand on Twin Lakes State Beach each year.

The commission staff report recommended that the coastal access improvements to the State beach provided by the project be considered sufficient mitigation for the non-fill portion of the sand lost as a result of the project (3,055 cu. yds.) rather than imposing a mitigation fee. It seems just as reasonable to consider the County's financial commitment to the project as sufficient mitigation for the fill sand as well. Using the Commission's formula for determining an in-lieu mitigation fee, the total fee for the 13,315 cubic yards of fill and non-fill sand loss would range from \$332,875 to \$665,750. Santa Cruz County has committed \$4.5 million dollars to this project's coastal access improvements, which is substantially greater than even the highest mitigation fee estimate.

I recently had a good meeting with Commissioner Brennan who mentioned you have also taken an interest in sand issues and suggested I contact you at this e-mail address.

Given that this project will significantly improve public access to Twin Lakes State Beach for all visitors including pedestrians, bicyclists, people with disabilities, I would urge the Commission to allow the use of a small amount of dredged sand in this unique situation where the goal and effect of the project is to improve coastal access and where an

existing dredging operation deposits sand on this popular State Beach. In addition, as mentioned above, the coastal access benefits this project provides and the significant county financial contribution towards improving coastal access at a State Beach should be considered mitigation for the small amount of sand used by the project.

I hope you will support the staff's recommendation with the deletion of special condition #1(d).

I would very much appreciate the opportunity to speak to you about this project. Would you be available for a phone conversation some time before the meeting? I would greatly appreciate it if you could suggest a time that we could talk about this.

Thank you for your time.

Sincerely,

Neal Coonerty
Third District Supervisor
Santa Cruz County
(831) 454-2200 (office)
(831) 818-2325 (cell)

Tha3c

California Coastal Commission
Dan Carl

TWIN LAKES BEACH IMPROVEMENT PLAN

Re: Restaurant employees using Beach parking; Removal of public shower

Dear Mr. Carl,

Several months ago I hand wrote a letter to the Coastal Commission regarding this issue. For years beach goers have to compete with restaurant employees for beach parking spaces.

The Live Oak Parking Permit Program probably was established for beach goers not restaurant employees. On a daily basis, including holidays and weekends, the Crow's Nest and Palomar employees consistently park on the street instead of the parking lot where they work.

Employees of those two restaurants and other Harbor businesses comprise at least 50% of the cars parked on the harbor side of Lake Ave., the end of 5th and 6th Ave. as well as the inland side of East Cliff Dr. Several waiters and waitresses even park along the beach side on a regular basis as well, in direct competition with beach goers.

It is very frustrating when I want to play volleyball at Harbor Beach and find that there is no where to park, especially when I see employees walk to or from their cars wearing their black aprons or work outfits. Apparently, they instruct their employees to not park on the harbor property showing no respect for the beach or the general public.

Also, when the O'Neill building was rebuilt, a public shower near the volley ball courts was removed. A public shower for your feet only was installed adjacent to the road, outside the Palomar. It is absolutely inadequate for volleyball players, beach goers. Please require installation of a normal height shower for the public.

These concerns should be addressed whether the new improvements are done or not.

Linda Silva, Aptos

Linda Silva
Aptos CA

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AUG 07 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

M23c

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AUG 02 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

July 31, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express my support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As a long time cyclist and Santa Cruz resident I have been hit by a car in this very location due to the design of this roadway that creates user conflicts. Adding bike lanes and a pedestrian path will drastically improve the safety and accessibility of this area.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year especially those using sustainable, active transportation.

I urge you to support this project.

Sincerely,



Piet Canin
Santa Cruz County resident



EcologyAction

Innovation • Partnership • Community

Tha3c

July 31, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

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AUG 02 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express Ecology Action's support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

Ecology Action is a state-wide environmental non-profit working in Santa Cruz county to promote active and sustainable transportation as some 50% of the county's greenhouse gases are generated by the transportation sector. Adding bike lanes and a pedestrian path will drastically improve the safety and accessibility of this area therefore increasing sustainable transportation.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year especially those using sustainable, active transportation.

I urge you to support this project.

Sincerely,

Jim Murphy
CEO
Ecology Action

Th23c

Ms. Manna,

A quick note to add my voice to those who are fully supportive of the Twin Lakes Beach Project before the commission. The long-standing needs in that area for appropriate beach access, parking, and other low-impact improvements appears to be consistent with the spirit and letter of the Coastal Act and the County of Santa Cruz's Local Coastal Plan.

As a former legislator from this area, and one who is 100% in support of strong implementation of the Coastal Act, I believe that our local coastal resources will be well protected, and beach access appropriately enhanced by this project.

Thank you.

FRED KEELEY
Treasurer
County of Santa Cruz

Former Speaker pro Tempore
California State Assembly

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AUG 01 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

Th23c



County of Santa Cruz

DEPARTMENT OF PUBLIC WORKS
PARKS, OPEN SPACE, AND CULTURAL SERVICES DIVISION

979 17TH AVENUE, SANTA CRUZ, CA 95062

(831) 454-7901 FAX: (831) 454-7940 TDD: (831) 454-7977

JOHN J. PRESLEIGH
DIRECTOR OF PUBLIC WORKS

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July 24, 2013

JUL 26 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

CALIFORNIA COASTAL COMMISSION
725 Front Street, No. 300
Santa Cruz, CA 95060

SUBJECT: LETTER OF SUPPORT FOR THE TWIN LAKES BEACHFRONT COASTAL
PUBLIC ENHANCEMENT PROJECT

Dear Commissioners:

The Santa Cruz County Parks and Recreation Commission strongly supports the Twin Lakes Beachfront Project, as it is an important Coastal Public Access Enhancement Project. This project will provide year-round access to the Twin Lakes State and Harbor Beaches in the Live Oak area of Santa Cruz County. These beaches receive over 500,000 visitors a year! Without this project, year-round access is limited due to low winter sand and winter scour conditions. Also, currently, there are public safety and environmental issues created by conflicts between pedestrians, bicycles, and cars as there are no walkways, no bike lanes, no beach drop-off safety zones, inadequate room for boats on trailers, and cars routinely park on the sand.

The project will improve existing seasonal coastal access and will provide year-round coastal access with the development of landscaped multi-modal and accessible pedestrian walkways, a ramp, and stairs to the Twin Lakes and Harbor beaches. These improvements will be constructed within a sculpted bluff protection structure designed to mimic the native geologic formations and respond to the fluctuating sand conditions. Landscaping will utilize native and drought tolerant plantings. These improvements will implement the Monterey Bay National Marine Sanctuary Scenic Trail and the California Coastal Access Trail. The project will address public safety, environmental, and scenic concerns by the addition of: bike lanes, traffic circulation improvements, a beach drop-off zone, organized parking located off the beach, and the enhancement of storm water and scenic qualities through incorporation of Low Impact Development practices, landscaping, and the removal of rip-rap.

Also, interpretive signage will be provided for the Monterey Bay National Scenic Trail and to also describe the historical use of horse-drawn trolleys, street-cars, and steam engines by locals and tourists alike to access the Twin Lakes and Harbor Beaches in the late 1800s and early 1900s. Scenic qualities of the traffic circle, located on East Cliff Drive at the intersection of 5th Avenue and the entrance to the lower Santa Cruz Harbor, will also be enhanced by landscaping and the placement of a public art piece. The public art piece will depict two native pelicans in flight.

Based on these many important public benefits, the Santa Cruz County Parks and Recreation Commission requests your approval of this important Coastal Public Access Enhancement Project.

Yours truly,

A handwritten signature in black ink, appearing to read 'S. Bennett', written over a horizontal line.

STEVEN BENNETT, CHAIR
Santa Cruz County Parks
and Recreation Commission

SLH:mh



Th 23c

RECEIVED
JUL 26 2013
CALIFORNIA
COASTAL COMMISSION

County of Santa Cruz

BOARD OF SUPERVISORS

701 OCEAN STREET, SUITE 500, SANTA CRUZ, CA 95060-4069
(831) 454-2200 • FAX: (831) 454-3262 TDD: (831) 454-2123

JOHN LEOPOLD
FIRST DISTRICT

ZACH FRIEND
SECOND DISTRICT

NEAL COONERTY
THIRD DISTRICT

GREG CAPUT
FOURTH DISTRICT

BRUCE MCPHERSON
FIFTH DISTRICT

July 23, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: TWIN LAKES BEACHFRONT COASTAL PUBLIC ACCESS PROJECT

Dear Chair Shallenberger and Members of the Commission:

I am writing to express my strong support for the Twin Lakes Beachfront project and to urge you to approve this important coastal access project.

This project falls within the district I represent on the Santa Cruz Board of Supervisors and I have worked extensively with community members, stakeholders, and regulators on this project for more than six years.

This project is important because it will drastically improve public access to Twin Lakes State Beach. Twin Lakes State Beach currently serves approximately 500,000 visitors per year, has no bike lanes or pedestrian path, and the parking is completely disorganized, with cars often parking in deep sand. This project would provide bike lanes, a pedestrian path, organized parking off the sand, and ADA access to the beach, all while preserving the natural character of this popular beach.

The current conditions in this area lead to frequent conflicts between cars, bikes, and pedestrians. This proposed project, which has resulted from years of community dialogue, will dramatically improve the safety and accessibility of this area.

This project is in line with the Coastal Act and the County has worked in close consultation with Coastal Commission staff as this project has moved forward.

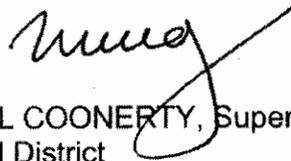
This is a unique project where a local government is proposing to spend millions of dollars improving access to a State beach. The improvements this project provides will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year—both residents and visitors alike.

July 23, 2013
Page 2

I urge you to support this project.

If you have any questions about this project, please don't hesitate to call me at 831-454-2200.

Sincerely,

A handwritten signature in black ink, appearing to read "Neal Coonerty", written over a printed name and title.

NEAL COONERTY, Supervisor
Third District

NC:ted

1510H3

Tha3c

CALIFORNIA
COASTAL COMMISSION

JUL 24 2013

RECEIVED



July 19, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I'm writing to express Friends of Santa Cruz State Parks' strong support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

This project is a great opportunity to improve the safety and accessibility of Twin Lakes State Beach and will benefit the hundreds of thousands of people who visit each year.

I urge you to support this project.

Sincerely,

Bonny Hawley, Executive Director
Friends of Santa Cruz State Parks

Cc: Chet Bardo, State Parks
Kirk Lingenfelter, State Parks
Supervisor Neal Coonerty



TH23C

July 21, 2013

From:
Joyce M. Wrenn
2655 East Cliff Drive
Santa Cruz, CA 95062

RECEIVED
JUL 24 2013
CALIFORNIA
COASTAL COMMISSION

To:
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, Ca 94105

**Re: Twin Lakes Beachfront Coastal Public Access Project; Santa Cruz, CA
95062**

Attn: Jeannine Manna

Dear Coastal Commissioners,
This project is coming before you in mid-August. It is necessary both for improved beach access for the general community as well as the safe movement of pedestrians, bicyclists, and automobile drivers who use the adjoining roadway. I have lived here 13 years and have watched the deplorable state for our citizens to get to and from this heavily used beach. The plan coming before you will address these issues. It has my strong support. Please approve!
Sincerely,



Joyce M. Wrenn

Th23c

California Coastal Commission

45 Fremont Street, Suite 2000

San Francisco, Ca 94105

Attn: Jeannine Manna

RECEIVED
CALIFORNIA COASTAL COMMISSION
JUL 24 2013

Re: Twin Lakes Beachfront Coastal Public Access Project; Santa Cruz, Ca.95062

Dear Coastal Commissioners:

I am writing to express my strong support for the Twin Lakes Beachfront project.

From my second story balcony-, I can observe the Twin Lakes State Beach area from the round about (East Cliff Dr.) to the Schwan Lake Bridge, unobstructed, and beyond. I have seen two automobiles go over the embankment in front of our home (requiring police, fire and medic departments to assist. I have witnessed many, many automobiles requiring Rossi Towing Service to pull them from sinking in the sand along the beach area.

There is no bike path along the beach, there is no designated parking, thus vehicles (including RV's) park where ever and how ever they can find space. The results are traffic moving in both direction, people on bikes singular or in groups of ten or more. Young families with children older folks all trying to find ingress and egress to the beach which is a serious accident waiting to happen. The volume becomes greater during the summer months and weekends all year.

I urge you to support this project.

Respectfully yours,



Augustus P. Gregory

2655 E. Cliff Dr.

Santa Cruz, Ca. 95062

Email: GusGreg@yahoo.com

Phone: 831-475-0817

TH23C

RECEIVED
JUL 22 2013
CALIFORNIA
COASTAL COMMISSION

Tax Preparer

820 Bay Avenue, Ste 132
Capitola, CA 95010-2165

Telephone: 831-479-9111

Dantaxprep@gmail.com

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Ste 2000
San Francisco, CA 94105

RE: Twin Lakes Beachfront Public Access Project

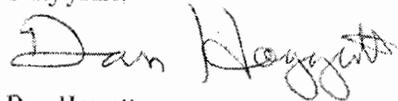
Dear Coastal Commissioners:

As a local resident and avid cyclist, I cycle or walk past this popular beach once a week on average. I have seen cars stuck in the sand of the beach simply because they pulled off the blacktop to be out of the flow of traffic. On two occasions this year someone opened a car door directly into my cycling path, nearly causing an accident. Frequently cars stop in the traffic lane to discharge passengers including small children, creating a chain of frustrated drivers. Some of these frustrated people then make rash decisions to pass the stopped vehicles by going into the lane against oncoming traffic. I also see people parking several blocks away from the beach and then walking along the street with no walk lanes and very narrow shoulders to get to the beach.

All these incidents can be observed on almost any weekend and often during the week in the summer months. The beach is popular because it is on the lee side of the yacht harbor jetty and thus provides a gentler ocean experience for young children than many other beaches in our County where the ocean is more suited to surfers due to the open sea and greater wave action.

I urge you to approve this project for bicycle lanes and pedestrian walkways as a step toward addressing the greater problem of too many vehicles trying to deliver and collect people at a very popular beach with extremely limited public parking.

Truly yours,



Dan Hoggatt

JV Th23c

RECEIVED

JUL 22 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

Tom Burns & Eileen Leary
1225 Scholl Lane
Santa Cruz, CA. 95062

July 18, 2013

California Coastal Commission
725 Front Street, Suite 300
Santa Cruz, CA. 95060
Attn: Jeannine Manna

Subject: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

We are writing to express our strong support for the Twin Lakes Beachfront project.

The benefits of this project are numerous -- safe pedestrian access to and through the beach area; safe bike access; formalized parking; and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

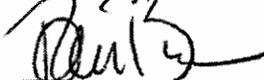
As frequent visitors and neighbors of Twin Lakes State Beach we are keenly aware of the frequent conflicts between cars, bikes and pedestrians in this area. In addition to the resulting accidents, we have witnessed cars attempting to drive onto the beach, cars falling off the shore edge (in the winter time), and total traffic gridlock. This proposed project, which has resulted from years of community dialogue and compromise, will dramatically improve all of these problems.

Our only regret is that there is not adequate financing to extend the project further on East Cliff Drive to 12th Avenue, completing the last link to allow for continuous bike and pedestrian access to and through the area.

The improvements this project will benefit large numbers of people who visit Twin Lakes State Beach each year -- residents and visitors alike.

We strongly urge you to support this project.

Sincerely,


Tom Burns


Eileen Leary

CALIFORNIA COASTAL COMMISSION

CENTRAL COAST AND NORTH CENTRAL COAST DISTRICT OFFICES
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STAFF REPORT: CDP HEARING

Application Number: 3-12-055

Applicant: Santa Cruz County Department of Public Works-Parks Division

Project Location: Along the coastal bluff adjacent to East Cliff Drive and within the East Cliff Drive public right-of-way between 5th and 7th Avenue in the Live Oak area of Santa Cruz County.

Project Description: Construct approximately 500 linear feet of coastal bluff protection containing stairs and access ramps to Twin Lakes State Beach.

Staff Recommendation: Approval with Conditions.

SUMMARY OF STAFF RECOMMENDATION

The Santa Cruz County Department of Public Works Parks Division proposes to install public access improvements and construct coastal bluff protection along East Cliff Drive between 5th and 7th Avenues in the Live Oak beach area of Santa Cruz County. The only portion of the project before the Commission is approval of the coastal bluff protection and associated stairs and ramps. The public access improvements, including improved pedestrian access paths and crosswalks, bicycle lanes and racks, formal public parking spaces, an improved traffic circle with a visitor drop off area, bench seating, and interpretive signage, is within the County's coastal permitting jurisdiction and has already been approved by the County.

3-12-055 (East Cliff Drive-Twin Lakes State Beach Improvements)

The coastal bluff protection would be constructed along approximately 500-linear-feet of bluff in the form of mechanical stabilized earth (MSE) fill and a faux-bluff concrete seawall, including integral stairs and access ramps to provide ADA access to Twin Lakes State Beach year-round. The proposed armoring is intended to protect existing structures including the road, utilities, and public access currently at the site located within 5-40 feet of the bluff edge, and to ensure the stability and longevity of the public access improvements. The project site is exposed to a long-term average annual erosion rate of approximately 0.1 feet per year in addition to erosion caused by large episodic events from severe winter storms which can cause 5-10 feet of bluff erosion in one year.

Other structural and non-structural protective alternatives were considered, but were dismissed due to infeasibility or conflicts with other Coastal Act policies. Specifically, relocation of the improvements is restricted by inland residential development to the north of East Cliff Drive and limited by the public right of way boundaries. Relocation further inland would result in a loss or reduction in public access through this highly utilized section of the coast, which provides recreational opportunities to approximately one million visitors a year, more than any other beach in unincorporated Santa Cruz County. Other structural alternatives considered, such as a monolithic cast-in-place concrete structure, would have a greater impact on beach access during construction, would not accommodate the ADA access ramps to Twin Lakes State Beach, and would appear decidedly unnatural. The impacts to sand supply from the proposed armoring would equate to a loss to the system of approximately 13,315 cubic yards of sand over a coastal development permit (CDP) term of 20 years, which includes the proposed use of 10,260 cubic yards of beach sand as construction backfill in the MSE. Staff proposes conditioning the CDP to remove the use of native beach sand in MSE construction, which would minimize the impacts to sand supply, as directed by the Coastal Act, reducing the sand supply impacts to 3,055 cubic yards of sand. The project itself overall represents a major public improvement project, and the significant public access amenities that are proposed to be included in the project would mitigate for the remaining impacts to sand supply. Staff also proposes conditioning the CDP with a 20-year approval and required monitoring and maintenance of the project to ensure long-term structural stability and public viewshed protection. Therefore, the proposed project, as conditioned, would protect existing structures in danger from erosion, mitigate for impacts to sand supply, and ensure long-term stability consistent with shoreline protection and hazards policies of the Coastal Act.

The proposed project would significantly improve public access and recreational opportunities along this portion of East Cliff Drive by improving traffic circulation and public access amenities for vehicles, pedestrians, and bicyclists, and ensuring the stability and longevity of the improvements. The coastal bluff protection has been designed to mimic the underlying Purisma Formation bedrock, minimizing visual impacts when it is exposed. The proposed project would also incorporate Low Impact Development (LID) measures which would improve the water quality of runoff flowing from the road and sidewalks to Twin Lakes State Beach and the offshore Monterey Bay National Marine Sanctuary. Staff is also recommending conditions to require construction best management practices and mitigation measures that would minimize impacts to marine resources and public access as well.

Therefore, as conditioned, the project is consistent with the Coastal Act, and staff recommends **approval** of the CDP. The motion is found on page 4 below.

TABLE OF CONTENTS

| | |
|--|-----------|
| I. MOTION AND RESOLUTION | 4 |
| II. STANDARD CONDITIONS..... | 4 |
| III.SPECIAL CONDITIONS | 5 |
| IV.FINDINGS AND DECLARATIONS | 13 |
| A. PROJECT DESCRIPTION..... | 13 |
| B. STANDARD OF REVIEW | 15 |
| C. GEOLOGICAL CONDITIONS AND HAZARDS..... | 15 |
| D. PUBLIC ACCESS AND RECREATION | 29 |
| E. MARINE RESOURCES..... | 31 |
| F. VISUAL RESOURCES..... | 33 |
| G. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) | 34 |

APPENDICES

Appendix A – Substantive File Documents

EXHIBITS

- Exhibit 1 – Project Vicinity Map
- Exhibit 2 – Existing and Proposed Development
- Exhibit 3 – Project Site Plans
- Exhibit 4 – El Nino Severe Winter Storm Event Photos
- Exhibit 5 – 1961 Aerial, Pre-Harbor Construction
- Exhibit 6 – 1964 Twin Lakes State Beach Shoreline Position
- Exhibit 7 – Coastal Protection Alternatives Comparison
- Exhibit 8 – Storm Drain Infiltration Detail
- Exhibit 9 – Applicant’s Sand Supply Evaluation
- Exhibit 10 – Commissioner Ex Parte
- Exhibit 11 – Correspondence

I. MOTION AND RESOLUTION

Staff recommends that the Commission, after public hearing, **approve** a coastal development permit for the proposed development. To implement this recommendation, staff recommends a **YES** vote on the following motion. Passage of this motion will result in approval of the CDP as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

***Motion:** I move that the Commission approve Coastal Development Permit Number 3-12-055 pursuant to the staff recommendation, and I recommend a yes vote.*

***Resolution to Approve CDP:** The Commission hereby approves Coastal Development Permit Number 3-12-055 and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.*

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Revised Final Plans.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Permittee shall submit two sets of Revised Final Plans to the Executive Director for review and approval. The Revised Final Plans shall be substantially in conformance with the plans submitted to the Coastal Commission, but shall show the following changes and clarifications to the project:
 - (a) **Concrete Surfacing.** Surfaces shall be of similar or better visual quality to the best examples of concrete surfacing in the project area (e.g., Pleasure Point). The color, texture, and undulations of the coastal protection surface shall be maintained throughout the life of the structure. PRIOR TO COMMENCEMENT OF FINISH CONCRETE SURFACING, the Permittee shall submit to the Executive Director for review and approval the qualifications of the contractor who will perform the finish concrete work, including photos of similar completed projects. Finish concrete work shall not commence until the Executive Director has approved of the finish concrete contractor. The Permittee shall undertake development in accordance with the approved plan.
 - (b) **Drainage.** All drainage and related elements within the sculpted concrete shall be camouflaged (e.g., randomly spaced, hidden with overhanging or otherwise protruding sculpted concrete, etc.) so as to be hidden from view and/or inconspicuous as seen from the top of the bluffs and the beach.
 - (c) **Landscaping.** All landscaping in the project area shall be non-invasive, native to the Live Oak Santa Cruz County bluff area, and bluff species capable of trailing vegetation that can screen the top of the coastal protection (e.g., Carmel creeper, *Ceanothus griseus* var. *horizontalis*). Such plants shall be included at the top edge of the armoring structure to provide as much screening of the armoring as possible. All invasive and non-native species in the project area, including iceplant, shall be removed and shall not be allowed to persist. The plans shall include certification from a licensed landscape professional experienced with native species indicating that all plant species to be used are native and non-invasive. All plants shall be replaced as necessary to maintain the approved vegetation over the life of the project. The landscaping plan shall be implemented immediately following completion of the armoring, and all plantings shall be kept in good growing condition and replaced as necessary to maintain some visual screening of the armoring over the life of the project.
 - (d) **Fill material.** The origin of all fill materials shall be specified in the revised project plans. No fill material used for coastal bluff protection shall be composed of native beach sand excavated from the project site or dredged from the harbor. PRIOR TO ISSUANCE OF THE PERMIT, and consistent with Special Condition 5, the Permittee shall submit to the Executive Director for review and approval a revised Drainage Plan that demonstrates that the proposed fill material would be integrated into the project design in a manner that protects water quality, including as required by Special Condition 5.
 - (e) **Sand Placement.** All beach quality sand that is excavated for construction purposes must

be reused for beach nourishment at the project site. The project plans shall illustrate the location where such sand will be deposited on the beach.

All requirements above and all requirements of the approved Revised Final Plans shall be enforceable components of this coastal development permit. The Permittee shall undertake development in accordance with this condition and the approved Revised Final Plans.

2. Construction Plan. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT the Permittee shall submit two sets of a Construction Plan to the Executive Director for review and approval. The Construction Plan shall, at a minimum, include the following:

(a) Construction Areas. The Construction Plan shall identify the specific location of all construction areas, all staging areas, all storage areas, all construction access corridors (to the construction site and staging areas), and all public pedestrian access corridors. All such areas within which construction activities and/or staging are to take place shall be minimized in order to minimize construction encroachment on all publicly available pathways, beach, and beach access points, to have the least impact on public access.

(b) Construction Methods and Timing. The Construction Plan shall specify the construction methods to be used, including all methods to be used to keep the construction areas separated from public recreational use areas (including using the space available on the blufftop portions of the project area for staging, storage, and construction activities to the maximum extent feasible provided it does not significantly adversely affect public access, and including using unobtrusive fencing (or equivalent measures) to delineate construction areas), and including all methods to be used to protect Monterey Bay. All erosion control/water quality best management practices to be implemented during construction and their location shall be noted.

(c) Construction Requirements. The Construction Plan shall include the following construction requirements specified by written notes on the Construction Plan. Minor adjustments to the following construction requirements may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources.

- All work shall take place during daylight hours, and lighting of the beach area is prohibited.
- Construction work or equipment operations shall not be conducted below the mean high tide line unless tidal waters have receded from the authorized work areas.
- Grading of intertidal areas is prohibited, except removal of existing concrete, rip-rap, and rubble is allowed in these areas.
- Only rubber-tired construction vehicles are allowed on the beach, except track vehicles may be used if the Executive Director determines that they are required to safely carry out construction. When transiting on the beach, all such vehicles shall remain as close to the bluff edge as possible and avoid contact with ocean waters.
- All construction materials and equipment placed seaward of the bluffs during daylight

construction hours shall be stored beyond the reach of tidal waters. All construction materials and equipment shall be removed in their entirety from these areas by sunset each day that work occurs, except for erosion and sediment controls and/or construction area boundary fencing where such controls and/or fencing are placed as close to the toe of the coastal protection/bluff as possible, and are minimized in their extent.

- Construction (including but not limited to construction activities, and materials and/or equipment storage) is prohibited outside of the defined construction, staging, and storage areas.
- No work shall occur during weekends and/or the summer peak months (i.e., from the Saturday of Memorial Day weekend through Labor Day, inclusive) unless, due to extenuating circumstances (such as tidal issues or other environmental concerns), the Executive Director authorizes such work.
- Equipment washing, servicing, and refueling shall not take place on the beach, and shall only be allowed at a designated inland location as noted on the Plan. Appropriate best management practices shall be used to ensure that no spills of petroleum products or other chemicals take place during these activities.
- The construction site shall maintain good construction site housekeeping controls and procedures (e.g., clean up all leaks, drips, and other spills immediately; keep materials covered and out of the rain, including covering exposed piles of soil and wastes; dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather; remove all construction debris from the beach; etc.).
- All erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each workday. At a minimum, silt fences, or equivalent apparatus, shall be installed at the perimeter of the construction site to prevent construction-related runoff and/or sediment from entering into Monterey Bay.
- All public recreational use areas and all beach access points impacted by construction activities shall be restored to their pre-construction condition or better within three days of completion of construction. Any native materials impacted shall be filtered as necessary to remove all construction debris.
- The Permittee shall notify planning staff of the Coastal Commission's Central Coast District Office at least three working days in advance of commencement of construction or maintenance activities, and immediately upon completion of construction or maintenance activities.

All requirements above and all requirements of the approved Construction Plan shall be enforceable components of this coastal development permit. The Permittee shall undertake development in accordance with this condition and the approved Construction Plan.

3. Construction Site Documents & Construction Coordinator. DURING ALL CONSTRUCTION:

- (a) **Construction Site Documents.** Copies of the signed coastal development permit and the approved Construction Plan shall be maintained in a conspicuous location at the construction job site at all times, and such copies shall be available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the coastal development permit and the approved Construction Plan, and the public review requirements applicable to them, prior to commencement of construction.
- (b) **Construction Coordinator.** A construction coordinator shall be designated to be contacted during construction should questions arise regarding the construction (in case of both regular inquiries and emergencies), and the coordinator's contact information (i.e., address, phone numbers, etc.) including, at a minimum, a telephone number that will be made available 24 hours a day for the duration of construction, shall be conspicuously posted at the job site where such contact information is readily visible from public viewing areas, along with an indication that the construction coordinator should be contacted in the case of questions regarding the construction (in case of both regular inquiries and emergencies). The construction coordinator shall record the name, phone number, and nature of all complaints received regarding the construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

4. Storm Water Pollution Prevention Plan. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Permittee shall submit two sets of a final Storm Water Pollution Prevention Plan (SWPPP) to the Executive Director for review and approval. Minor adjustments to the following requirements may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources. The final SWPPP shall include provisions for all of the following:

- (a) **Sedimentation Controlled.** Runoff from the project site shall not increase sedimentation in coastal waters post-construction. During construction, runoff from the project site shall not increase sedimentation in coastal waters beyond what is allowable under the final Water Quality Certification approved for the project by the Regional Water Quality Control Board.
- (b) **Pollutants Controlled.** Runoff from the project site shall not result in pollutants entering coastal waters during construction or post-construction.
- (c) **BMPs.** Best Management Practices (BMPs) shall be used to prevent the entry of polluted stormwater runoff into coastal waters during construction and post-construction, including use of relevant BMPs as detailed in the current California Storm Water Quality Best Management Handbooks (<http://www.cabmphandbooks.com>).
- (d) **Spill Measures.** An on-site spill prevention and control response program, consisting of BMPs for the storage of clean-up materials, training, designation of responsible individuals, and reporting protocols to the appropriate public and emergency services agencies in the event of a spill, shall be implemented at the project to capture and clean-up any accidental or other releases of oil, grease, fuels, lubricants, or other hazardous materials, including to avoid them entering coastal waters or wetlands.

- (e) **BMP Schedule.** A schedule for installation and maintenance of appropriate construction source-control BMPs to prevent entry of stormwater runoff into the construction site and prevent excavated materials from entering runoff leaving the construction site.

All requirements above and all requirements of the approved SWPPP shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved SWPPP.

- 5. **Water Quality Management Plan.** PRIOR TO THE ISSUANCE OF A COASTAL DEVELOPMENT PERMIT the Permittee shall submit two sets of a Water Quality Management Plan (WQMP) for the post-construction project site to the Executive Director for review and approval. The WQMP shall be prepared by a licensed water quality professional, and shall include plans, descriptions, and supporting calculations. The WQMP shall be in substantial conformance with the Drainage Report prepared by RRM Design Group dated July 18, 2011. Minor adjustments to the following requirements may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources. In addition to the specifications above, the plan shall be in substantial conformance with the following requirements:

- (a) **BMPs.** The WQMP shall incorporate appropriate structural and non-structural Best Management Practices (BMPs) (site design, source control and treatment control) into the development, designed to reduce, to the maximum extent practicable, the volume, velocity and pollutant load of stormwater and dry weather flows leaving the project area;
- (b) **Irrigation/Fertilizers.** Irrigation and the use of fertilizers and other landscaping chemicals shall be minimized through the use of low-maintenance landscaping and efficient irrigation technology or systems;
- (c) **Post-Construction Criteria.** Post-construction structural BMPs (or suites of BMPs) used for water quality treatment shall be designed to treat, infiltrate or filter the amount of stormwater runoff produced by all storms up to the 95% percentile, 24-hour storm event for volume-based BMPs, and shall not create conditions that exceed pre-project peak flows for the 2-10 year storm events;
- (d) **Maintenance Required.** All BMPs shall be designed, installed, and maintained for the life of the project in accordance with well-recognized and accepted design principles and guidelines, such as those contained in the California Stormwater Quality Association Best Management Practice Manuals;
- (e) **Minimum Maintenance Schedule.** At a minimum, all BMP traps/separators and/or filters shall be inspected and cleaned/repaired or otherwise maintained in accordance with the following schedule: (1) prior to the start of the winter storm season, no later than October 15th each year, (2) monthly thereafter for the duration of the rainy season (October 15th -April 30), and cleaned/maintained as necessary based on inspection and, (3) as needed throughout the dry season;

(f) Proper Disposal. Debris and other water pollutants removed from structural BMP(s) during clean out shall be contained and disposed of in a proper manner;

(g) Manufacturer's Specifications. It is the permittee's responsibility to maintain the drainage system and the associated structures and BMPs according to manufacturer's specifications.

All requirements above and all requirements of the approved WQMP shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved WQMP.

- 6. Twenty-Year Approval.** This coastal development permit authorizes the approved armoring for twenty years from the date of approval (i.e., until August 15, 2033). If the Permittee intends to keep the approved armoring in place after August 15, 2033, then the Permittee shall apply for a new coastal permit authorization to allow the approved armoring (including, as applicable, any potential modifications to it desired by the Permittee). Provided the application is received before the twenty-year permit expiration, the expiration date shall be automatically extended until the time the Commission acts on the application.
- 7. Other Agency Approval.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Permittee shall submit to the Executive Director for review a copy of the Monterey Bay National Marine Sanctuary (MBNMS) and State Lands Commission (SLC) authorizations for the approved project, or evidence that no MBNMS/SLC authorizations are necessary. Any changes to the approved project required by the MBNMS or SLC shall be reported to the Executive Director. No changes to the approved project shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.
- 8. As-Built Plans.** WITHIN 90 DAYS OF COMPLETION OF CONSTRUCTION, or within such additional time as the Executive Director may grant for good cause, the Permittee shall submit two copies of As-Built Plans for Executive Director review and approval showing all development authorized by this CDP in relation to development located within 100 feet of the bluff edge extending from 5th Avenue to 7th Avenue. The As-Built Plans shall be substantially consistent with the approved Revised Final Plans project plans (see **Special Condition 1**). The As-Built Plans shall include a graphic scale and all elevation(s) shall be described in relation to National Geodetic Vertical Datum (NGVD). The As-Built Plans shall include color photographs (in hard copy and jpg format) that clearly show the as-built project and the area between 5th and 7th Avenues along East Cliff Drive, and that are accompanied by a site plan that notes the location of each photographic viewpoint and the date and time of each photograph. At a minimum, the photographs shall be from a sufficient number of upcoast, downcoast, inland and seaward viewpoints as to provide complete photographic coverage of the permitted project at this location.
- 9. Monitoring and Reporting.** The Permittee shall ensure that the condition and performance of the approved as-built project is regularly monitored, including that the armoring and all related components must be regularly monitored by a licensed civil engineer with experience in coastal structures and processes. Such monitoring evaluation shall at a minimum address

whether any significant weathering or damage has occurred that would adversely impact future performance, and identify any structural damage requiring repair to maintain the approved as-built project in its approved and/or required state. Monitoring reports prepared by a licensed civil engineer with experience in coastal structures and processes, and covering the above-described evaluations, shall be submitted to the Executive Director for review and approval at five year intervals by May 1st of each fifth year (with the first report due May 1, 2018, and subsequent reports due May 1, 2023, May 1, 2028, May 1, 2033, and longer, if the CDP expiration date is extended) for as long as the approved project exists at these locations. The reports shall identify the existing configuration and condition of the armoring and all other approved project components, shall recommend actions necessary to maintain these projects in their approved and/or required state, and shall include photographs taken from each of the same vantage points required in the As-Built Plans with the date and time of the photographs and the location of each photographic viewpoint noted on a site plan. Actions necessary to maintain the approved project in a structurally sound manner and its approved state shall be implemented within 30 days of Executive Director approval, unless a different time frame for implementation is identified by the Executive Director.

10. Future Maintenance Authorized. This coastal development permit authorizes future armoring maintenance and repair subject to the following:

- (a) **Maintenance.** “Maintenance and repair,” as it is understood in this special condition, means development that would otherwise require a coastal development permit whose purpose is to maintain the coastal bluff protection and all related components in their approved state.
- (b) **Other Agency Approvals.** The Permittee acknowledges that this maintenance condition does not obviate the need to obtain authorization from other agencies for any future maintenance and/or repair episodes.
- (c) **Maintenance Notification.** At least 30 days prior to commencing any maintenance event, the Permittee shall notify, in writing, planning staff of the Coastal Commission’s Central Coast District Office. The notification shall include: a detailed description of the maintenance event proposed; any plans, engineering and/or geology reports describing the event; a construction plan that complies with all aspects of the approved construction plan as described above; identification of a construction coordinator and his/her contact information (i.e., address, phone numbers, etc.) as described above; other agency authorizations; and any other supporting documentation (as necessary) describing the maintenance event. The maintenance event shall not commence until the Permittee has been informed by planning staff of the Coastal Commission’s Central Coast District Office that the maintenance event complies with this CDP. If the Permittee has not been given a verbal response or sent a written response within 30 days of the notification being received in the Central Coast District Office, the maintenance event shall be authorized as if planning staff affirmatively indicated that the event complies with this CDP. The notification shall clearly indicate that the maintenance event is proposed pursuant to this CDP, and that the lack of a response to the notification within 30 days constitutes approval of it as specified in the permit. Absence of such description in the notification shall negate the automatic approval provisions of this condition. In the event of an emergency requiring immediate maintenance, the notification of such emergency episode

shall be made as soon as possible, and shall (in addition to the foregoing information) clearly describe the nature of the emergency.

- (d) **Maintenance Coordination.** Maintenance events shall, to the degree feasible, be coordinated with other maintenance events proposed in the immediate vicinity with the goal being to limit coastal resource impacts, including the length of time that construction occurs in and around the beach and bluff area and beach access points. As such, the Permittee shall make reasonable efforts to coordinate the Permittee's maintenance events with other adjacent events, including adjusting maintenance event scheduling as directed by planning staff of the Coastal Commission's Central Coast District Office.
- (e) **Construction Site Documents and Construction Coordinator.** All requirements set forth in **Special Condition 3** above ("Construction Site Documents & Construction Coordinator") shall apply to any maintenance event.
- (f) **Restoration.** The Permittee shall restore all beach and rocky shore platform areas and all access points impacted by maintenance activities to their pre-construction condition or better at the conclusion of any maintenance event. Any native materials impacted shall be filtered as necessary to remove all construction debris from the area within three days of completion of construction. The Permittee shall notify planning staff of the Coastal Commission's Central Coast District Office upon completion of restoration activities to arrange for a site visit to verify that all restoration activities are complete. If planning staff identifies additional reasonable measures necessary to restore the affected area, such measures shall be implemented as quickly as reasonably possible.
- (g) **Noncompliance with CDPs.** If the Permittee is not in compliance with the terms and conditions of any Coastal Commission coastal development permits or other coastal authorizations that apply to the project area at the time that a maintenance event is proposed, then the maintenance event that might otherwise be allowed by the terms of this future maintenance condition shall not be allowed by this condition until the Permittee is in full compliance with those terms and conditions.
- (h) **Emergency.** In addition to the emergency provisions set forth in subsection (c) above, nothing in this condition shall serve to waive any Permittee rights that may exist in cases of emergency pursuant to Coastal Act Section 30611, Coastal Act Section 30624, and Subchapter 4 of Chapter 5 of Title 14, Division 5.5, of the California Code of Regulations (Permits for Approval of Emergency Work).
- (i) **Duration of Covered Maintenance.** Future maintenance under this CDP is allowed subject to the above terms until August 15, 2023. Maintenance can be carried out beyond August 15, 2023 if the Permittee requests an extension prior to that date and if the Executive Director extends the maintenance term in writing. The intent of this permit is to allow for 5-year extensions of the maintenance term for as long as the seawall remains authorized unless there are changed circumstances that may affect the consistency of this maintenance authorization with the policies of Chapter 3 of the Coastal Act and thus warrant a re-review of this permit. The Permittee shall maintain the permitted armoring in its approved state. No expansion or enlargement of the permitted armoring is allowed.

11. Assumption of Risk, Waiver of Liability and Indemnity. By acceptance of this permit, the Permittee acknowledges and agrees, on behalf of itself and all successors and assigns: (i) that the site is subject to hazards from episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunami, tidal scour, coastal flooding, and the interaction of same; (ii) to assume the risks to the Permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

IV. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

Project Location

The proposed project is located along the coastal bluff adjacent to East Cliff Drive and within the East Cliff Drive public right of way between 5th and 7th Avenues in the unincorporated Live Oak coastal area of Santa Cruz County (**Exhibit 1**). The Live Oak coastal area is well known for excellent public access opportunities for beach area residents, other Live Oak residents, other Santa Cruz County residents, and visitors to the area. Walking, biking, viewing, skimboarding, bodysurfing, surfing, fishing, sunbathing, and more are all among the range of recreational activities possible along the Live Oak shoreline. In addition, Live Oak also provides a number of different coastal environments including sandy beaches, rocky tidal areas, blufftop terraces, and coastal lagoons. The portion of the Live Oak shoreline within the project area consists of the Santa Cruz Yacht Harbor and associated Harbor Beach and Twin Lakes State Beach. Twin Lakes State Beach and the Harbor Beach provide a sandy beach environment with favorable wave and water conditions suitable for many activities including swimming, surfing, sunbathing, and volleyball. The segment of East Cliff Drive passing through this segment of shoreline is used by residents and visitors to access the Harbor, residential properties, and Twin Lakes State Beach and is also used as a scenic route along Monterey Bay, resulting in high traffic conditions. The California Coastal Trail (CCT), including its Monterey Bay Sanctuary Scenic Trail component, extends directly through the project site. The project site is heavily used throughout the year, bringing in about a million visitors annually; the most of any beach area in all of unincorporated Santa Cruz County.

Currently, public access along this area of East Cliff Drive is limited to two vehicle travel lanes without formal parking, bicycle lanes, sidewalks, or ADA access (see figure A in **Exhibit 2** for an aerial photo of the existing site context). The limited improvements within this segment of East Cliff Drive results in traffic circulation problems for vehicles, bicyclists, and pedestrians. There is formal parking within the adjacent Harbor parking lot, but cars typically park informally and continuously along the south side of East Cliff Drive, including on unpaved, sandy areas. In

addition, the roadway does not contain adequate drainage or water quality facilities. All of these issues conspire against maximizing public recreational access, which is particularly problematic given the presence of the CCT and the significant amount of public use of the area.

The coastal bluffs in this area are subject to erosion from wave action, large ocean storm events, rainfall, runoff, natural weathering, and earthquakes. Bluff erosion at the project site occurs at a natural long-term average annual erosion rate and as the result of large episodic events. The coastal bluff at the project site is composed of terrace deposits consisting of fill, native soil, and sand on top of Purisma Formation bedrock. The majority of the coastal bluff is protected by the adjacent sandy beach when sand elevations are high (as is more typical during summertime) but it is largely exposed when sand elevations are low (as is more typical during wintertime, when significant storms are much more prevalent). The elevation of the sand at the project site fluctuates throughout the year and varies depending on the season, intensity and duration of winter storm events, amount of beach nourishment (typically some 269,000 cubic yards of sand per year dredged from Santa Cruz Harbor), and the depth of the underlying bedrock. The annual beach nourishment at the project site, which has been occurring since 1965, has slowed the natural long-term annual bluff erosion rate. However, the site is still subject to significant bluff erosion and failure during episodic events resulting from large storms, including El Nino storms, when the sand levels are low and the underlying bluffs are exposed to direct wave action. A 100-foot long section of the project site is currently protected by rip-rap installed after the 1982 and 1998 El Nino storms which resulted in significant bluff erosion (**Exhibit 4**). Installation of this rip-rap and ongoing maintenance is covered under coastal development permit (CDP) A-80-038, CDP 3-11-059 and waiver 3-11-057-W issued by the Commission. East Cliff Drive and the existing utilities under the road are within 5 to 40 feet of the bluff edge.

Project Description

The proposed project is to construct approximately 500-linear feet of armoring along East Cliff Drive between 5th and 7th Avenues, including stairs and access ramps built into the armoring to provide ADA access to the beach throughout the year. The armoring would include mechanical stabilized earth (MSE) backfill and a faux bluff concrete seawall structure. The MSE would consist of stacked layers of sand wrapped in geotextile fabric for stability. This would then be covered with reinforced concrete, and topped with a faux rock finish. The reinforced concrete would be tied back into the reinforced soil layers and keyed into the bedrock to ensure stability of the structure. The MSE would include weep holes to convey groundwater through the armoring towards the beach and Monterey Bay under conditions of saturation and at times when overtopping occurs. The project has also incorporated drainage inlet filtration structures within the MSE designed to filter and treat runoff (see **Exhibit 2** for photos/simulations of the existing and proposed development and **Exhibit 3** for the project plans).

The associated project in the County's CDP jurisdiction involves construction of public access improvements that would include realignment of the roadway, improved pedestrian access paths along the road with connectivity to the surrounding recreational amenities, bicycle lanes, pedestrian crosswalks, formal public parking spaces, an improved traffic circle at the harbor entrance with a visitor drop off area, bench seating, interpretive signage, and bicycle racks. The Applicant is proposing that this portion of the project constitute mitigation for the impacts of the shoreline armoring portion of the project that is subject to the Commission's CDP review.

B. STANDARD OF REVIEW

The East Cliff Drive improvements portion of the project is located within Santa Cruz County's CDP jurisdiction area. The armoring itself is located in the Commission retained CDP jurisdiction area, and thus the standard of review for this proposed armoring project is the Coastal Act. The County already approved a CDP for the East Cliff Drive improvements (Santa Cruz County CDP 111134). The Applicant has indicated that the portion of the project approved by the County is proposed as mitigation for some of the effects of the proposed armoring structure. Thus, those improvements are tied to this project, but only in terms of their mitigation value.

C. GEOLOGICAL CONDITIONS AND HAZARDS

Coastal Act Section 30235 addresses the use of shoreline protective devices:

30235. Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

Coastal Act Section 30253 addresses the need to ensure long-term structural integrity, minimize future risk, and to avoid landform altering protective measures in the future. Section 30253 provides, in part:

Section 30253. New development shall do all of the following:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

Consistency Analysis

Coastal Act Section 30235 acknowledges that seawalls, revetments, cliff retaining walls, groins and other such structural or "hard" methods designed to forestall erosion also alter natural landforms and natural shoreline processes. Accordingly, with the exception of coastal-dependent uses, Section 30235 limits the construction of shoreline protective works to those required to protect existing structures or public beaches in danger from erosion. The Coastal Act provides these limitations because shoreline structures can have a variety of negative impacts on coastal resources, including adverse effects on sand supply, public access, coastal views, natural landforms, and overall shoreline beach dynamics on and off site, ultimately resulting in the loss of beaches.

Under Coastal Act Section 30235, a shoreline structure may be approved if: (1) there is an existing structure; (2) the existing structure is in danger from erosion; (3) shoreline-altering construction is required to protect the existing endangered structure; and (4) the required protection is designed to eliminate or mitigate its adverse impacts on shoreline sand supply. The first three questions relate to whether the proposed armoring is necessary, while the fourth question applies to mitigating some of the impacts from it.

Existing Structure to be Protected

For the purposes of shoreline protective structures, the Coastal Act distinguishes between development that is allowed shoreline armoring, and development that is not. Under Section 30253, new development is to be designed, sited, and built to allow the natural process of erosion to occur without creating a need for a shoreline protective device. Coastal development permittees for new shorefront development are thus making a commitment to the public (through the approved action of the Commission, and its local government counterparts) that, in return for building their project, the public will not lose public beach access, offshore recreational access, sand supply, visual resources, and natural landforms, and that the public will not be held responsible for any future stability problems.

In addition, the Commission has generally interpreted Section 30235 to apply only to existing principal structures. The Commission must always consider the specifics of each individual project, but has generally found that accessory structures (such as patios, decks, gazebos, stairways, etc.) are not required to be protected under Section 30235, or can be protected from erosion by relocation or other means that do not involve shoreline armoring. The Commission has also at times in the past permitted at grade structures within geologic setback areas recognizing that they are expendable and capable of being removed rather than requiring a protective device that would alter natural landforms and processes along bluffs, cliffs, and beaches.

In this case, the coastal bluff protection proposed as part of the project would protect the existing road, utilities, and public access currently at the site and ensure the stability and longevity of the proposed public access improvements. The existing development currently at the site includes approximately 0.1 miles of roadway, cable and phone lines above ground, and water, sewer, and gas lines under the roadway within the public right-of-way. All of the development currently at the site was constructed or in use prior to CDP requirements in 1972 (Proposition 20, The Coastal Initiative) and 1976 (The Coastal Act). Therefore, the existing road and utilities are existing structures eligible for protection under the Coastal Act.

Thus, the existing utilities and road, including in relation to its use as a public recreational access facility, are existing structures for purposes of Section 30235.

Danger from Erosion

The Coastal Act allows shoreline armoring to protect existing structures in danger from erosion, but it does not define the term “in danger.” There is a certain amount of risk involved in maintaining development along a California coastline that is actively eroding and can be directly subject to violent storms, large waves, flooding, earthquakes, and other coastal hazards. These risks can be exacerbated by such factors as sea level rise and localized geography that can focus storm energy at particular stretches of coastline. As a result, some would say that all development along the immediate California coastline is in a certain amount of “danger.” It is a

matter of the degree of threat that distinguishes between danger that represents an ordinary and acceptable risk, and danger that requires shoreline armoring per 30235. Lacking Coastal Act definition, the Commission's long practice has been to evaluate the immediacy of any threat in order to make a determination as to whether an existing structure is "in danger." While each case is evaluated based upon its own particular set of facts, the Commission has generally interpreted "in danger" to mean that an existing structure would be unsafe to use/occupy within the next two or three storm season cycles (generally, the next few years) if nothing were to be done (i.e., in the no project alternative).

The coastal bluff at the project site is composed of terrace deposits consisting of fill, native soil, and sand which sit on top of Purisima Formation bedrock. The terrace deposits range in depth from 0-15 feet and the surface of the bedrock can be found under the terrace deposits at depths of 4 feet to 15 feet under the existing roadway (see Sections 8.1 and 8.2 of **Exhibit 3**). The height of the exposed coastal bluff varies throughout the year as the level of beach sand fluctuates as a factor of the amount of beach nourishment and the length and intensity of storm events and the ocean's ebb and flow (see **Exhibit 4** for photos of the coastal bluff during storm events and **Exhibit 2** for photos of the site when sand levels are high).

The construction of Santa Cruz Harbor in 1964 disrupted the natural flow and deposition of sand at the project site. Prior to the Harbor's construction, Woods Cove (which became the Harbor) was an estuarine lagoon system fronted by a sandy beach. After the Harbor was constructed, two jetties effectively blocked the majority of nearshore sand transport extending generally from upcoast to downcoast within the Santa Cruz Littoral System, supplied by the San Lorenzo River and littoral drift from the northwest (see **Exhibit 5** for an aerial photograph of the project area in 1961 prior to the construction of the harbor).

Prior to harbor construction, the overall annual bluff erosion rate west and east of the harbor was estimated at 0.66 feet per year. When the harbor was constructed, sand began to accumulate west (i.e., upcoast) of the jetty, widening the upcoast beach (the Seabright State Beach unit of Twin Lakes State Beach), and also between the jetties, reducing the amount of sand making its way to Twin Lakes State Beach and other beaches further downcoast. **Exhibit 6** illustrates the approximate position of the shoreline at Twin Lakes State Beach during winter storm events after harbor construction in 1964. In order to keep the harbor channel open, the Harbor's annual dredging program was initiated in 1965, dredging approximately 269,000 cubic yards of sand per year from between the jetties and depositing it onto Twin Lakes State Beach, generally in an area downcoast of the project site. From there, the materials make their way into the shoreline sand transport system downcoast toward Capitola. The accumulation of sand west of the jetty and the beach nourishment occurring at Twin Lakes State Beach helped to reduce the overall annual bluff erosion rate for this area from 0.66 feet per year to 0.16 feet per year. Therefore, the placement of sand from the Harbor's annual dredging program appears to help to protect the coastal bluff at Twin Lakes State Beach from eroding throughout the winter months.

Even with the annual beach nourishment, the coastal bluff at the project site can also experience greater rates of erosion from large episodic events, including El Nino storms. El Nino storm events, which produce higher sea levels, wave heights, and rainfall, have been known to remove all of the sand placed from dredging in a few hours, exposing the bluff to direct wave action. These severe storm events can result in episodic bluff erosion rates of 5-10 feet per year. Historical photographs of the project site show the extent of the sand depletion at the project site

during severe El Nino winter storms (see **Exhibit 4**). These photographs illustrate the depletion of sand, exposed bedrock and overtopping that can occur at the project site even with beach nourishment. Further, the portion of East Cliff Drive near the s-turn after Assembly Avenue (i.e., the downcoast edge of the project area) that experienced large episodic erosion during the 1983 El Nino storm required the installation a 100-foot long section of rip-rap to protect East Cliff Drive. Other storms, including El Nino storms of 1998, have resulted in sand depletion and further erosion of the bluff in close proximity to East Cliff Drive.

Although the long-term annual erosion rate of the bluff has been reduced over time, including due to the harbor's annual dredging program, historical evidence as discussed above suggests a high potential at the site for bluff failure through large episodic events (such as El Nino storms which occur on average every four years). As illustrated by **Exhibit 4**, there is already the potential for bluff failure that would result in impacts to existing structures when large storms remove the sand from the beach exposing the bluff to direct wave action. In this case, one episodic event occurring within the next few years could result in damage to the existing road, utilities, and public access (and the proposed access improvements) which are located within 5 to 40 feet of the bluff edge.

The danger from erosion at the project site is high, and a single event could lead to loss of the road and utilities. Therefore, the Commission concludes that the existing road and utilities are existing structures in danger from erosion for purposes of Section 30235.

Feasible Protection Alternatives to a Shoreline Structure

The third Section 30235 test that must be met is that the proposed armoring must be “required” to protect the existing threatened structure. In other words, shoreline armoring can be permitted if it is the only feasible alternative capable of protecting the structure.¹ When read in tandem with other applicable Coastal Act policies cited in these findings, this Coastal Act Section 30235 evaluation is often conceptualized as a search for the least environmentally damaging feasible alternative that can serve to protect existing endangered structures. Other alternatives typically considered include: the “no project” alternative; abandonment of threatened structures; relocation of threatened structures; sand replenishment programs; drainage and vegetation measures on the blufftop; and combinations of each.

The Applicant prepared an alternatives analysis for the proposed project, and each of the possible alternatives is discussed briefly below.

No Project Alternative: Future episodic erosion events, such as those associated with El Nino storms, would result in additional bluff recession and damage to the existing road and utilities. Such impacts would be exacerbated by ongoing longer term erosion. In addition, the Applicant has no control over dredging/nourishment operations of the Port District, and if these operations were changed in some way (such as different deposit locations, different times/frequencies, etc., including due to changes in priorities, funding, etc.), the long-term annual erosion rate of the bluff could change, as could the effect of episodic events, potentially contributing to additional

¹ Coastal Act Section 30108 defines feasibility as follows: “Feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

bluff erosion and impacts to existing endangered structures. The effect overall would be expected to be a loss of at least a portion of the road and utilities, potential relocation of utilities inland, and loss of utility overall for the East Cliff Drive corridor. As such, the project area, which is highly used by visitors and residents for public access and recreation, would have even less public recreational access utility than is even currently the case. Ongoing problems (such as informal parking blocking views to Monterey Bay from East Cliff Drive and runoff from the road flowing unfiltered/untreated to the beach and into Monterey Bay) would only be further exacerbated. The loss of road and utility infrastructure, including the road's support of public access and recreation in this area, and continued impacts to visual and water resources in the project area under the no project alternative would be inconsistent with other Coastal Act policies, and is not considered a less environmentally damaging feasible alternative in this case.

Relocation: Although there is significant public right-of-way on the inland side of the road, inland residential development still limits potential relocation of the road and utilities further inland. In addition, at either end of the project area, there is little to no right-of-way available within which to move road and utility infrastructure. In fact, it appears likely that the road would need to be constricted or closed at the downcoast end of the project area where the road bends inland, as opposed to being moved in this area, as there is no right-of-way space available. Any relocation that could be accomplished would result in a loss of parking and public access to this section of the coast, would result in reduction and/or loss of access to the Harbor (as this road segment provides the only direct entrance to Harbor businesses and boat launching etc. from downcoast). There are also steeper slopes north of East Cliff Drive and shifting the road further in this direction would likely require retaining walls and grading of 6th and Assembly Avenues to connect to local street elevations. Further, any improvements made, even if further inland, would still be at risk from large storm events, in combination with ongoing erosion, that could result in episodic bluff failure or other dangers, which would also be exacerbated if the harbor dredging operations were disrupted in the future. Further, relocation inland is better conceptualized as increasing the useful life of whatever setback can be created, but it is unlikely on its own to protect such related facilities for long. Such options could also be economically infeasible. Therefore, relocation does not adequately protect existing endangered structures, would lead to its own significant impacts in the project area, and is not considered a less environmentally damaging feasible alternative in this case.

Beach Nourishment: As discussed above, there is an existing beach nourishment program at the project site. The existing program has deposited between 160,000 to 457,000 cubic yards of sand onto Twin Lakes State Beach annually. The amount of sand dredged and placed on Twin Lakes State Beach is dependent on the amount of sand that made its way into the channel between the Harbor jetties from sand moving through the littoral cell and from variations in terrestrial sources of sand. In addition, the amount of dredged material deposited on the beach is limited by the content of the material. As outlined in the Harbor's dredging permit (CDP 3-10-023), only dredged material which has greater than 80% sand can be deposited onto the dry beach or into the nearshore environment at the Harbor Beach and Twin Lakes State Beach. Therefore, depending on annual conditions, there may not be enough beach quality sand available to nourish Twin Lakes State Beach at a level that would protect the existing structures. Further, additional beach nourishment would not be any more effective against large episodic El Nino events which can remove nourished sand in a few hours. Further, unless beach nourishment operations change, the main location for dredged materials is actually downcoast of the project area, and these

materials then primarily move into the littoral cell and downcoast, away from the project area. The only exception is when these materials are moved (via bulldozer) from the deposit point to this location, which has its own issues (including occupying the majority of the most popular beach in unincorporated Santa Cruz County), or when the offshore dredge outfall is used, which is a very limited amount of the time in relation to overall dredging operations. Of course, additional beach nourishment could be pursued from outside sources, but there is no formal program, nor the specter of such formal program on the horizon, for this area, and it is unlikely that one could be brought online any time in the near future. Even if it could, such a program would also need to be funded at significant cost. Therefore, beach nourishment does not adequately protect existing endangered structures, could lead to its own significant impacts in the project area, and is not considered a less environmentally damaging feasible alternative in this case.

Soil, vegetation, and improved drainage: Due to the site conditions, the use of soil and vegetation and drainage improvements to help stabilize the bluffs would be insufficient at protecting the existing structures from the wave impact and overtopping resulting from high intensity storm events. There is simply not enough space to be able to create a more stable setback area through such measures alone. Of course, such options could and should be a permutation of any of the potential alternatives, but on their own would be insufficient to protect endangered structures in this case. Therefore, this alternative is not considered a less environmentally damaging feasible alternative in this case.

Thus, in this case, “soft” alternatives to the proposed project are not less environmentally damaging feasible alternatives, and hard armoring alternatives must be considered.

Armoring alternatives: Eight armoring alternatives were evaluated for the project site based on constructability, impact on the road and beach during construction, ability to accommodate storm drainage infiltration/retention, whether the structure required a foundation on the bedrock, ability to accommodate a natural sculptured slope, relative cost, and ability of the structure to provide coastal access during and after construction. These eight alternatives included: monolithic cast-in-place concrete structure, cast-in-place retaining wall, pre-case caisson, cement deep soil mixing (CDSM), combination CDSM and concrete caisson, combination CDSM and cast-in-place structure, rip rap revetment, and mechanically stabilized earth. **Exhibit 7** details how each structure was evaluated against the criteria listed above. As described below, the Applicant chose the mechanically stabilized earth (MSE) protective structure alternative as the least environmentally damaging feasible alternative. The other alternatives were not preferred as they had greater impacts to public access during construction, did not offer the potential for public access amenities constructed within the structure, and would have resulted in greater impacts to visual resources.

Mechanically Stabilized Earth (MSE) Protective Structure (Preferred alternative): The MSE structure uses layers of sand within geotextile fabric, covered with a reinforced concrete layer tied back into the reinforced soil, and faced with a faux rock finish. For this alternative, the majority of the excavation would occur within the footprint of the roadway or walkway improvements and would therefore have only minor impacts on public access. The MSE option also offers enhanced storm water retention and infiltration. The Applicant selected this as the chosen alternative as it would minimize costs, visual impacts, and impacts to public access, while protecting existing structures and public access amenities, improve treatment of water

entering Monterey Bay, and allow for ADA access of the beach year-round.

As discussed above, other alternative options are not feasible nor preferred under the Coastal Act, and the proposed coastal protection is required to protect the existing structures that support public access and recreation at the project site. Thus, the project meets the third test of Section 30235 of the Coastal Act.

Sand Supply Impacts

The fourth test of Section 30235 that must be met in order to allow Commission approval is that shoreline structures must be designed to eliminate or mitigate adverse impacts to local shoreline sand supply.

Shoreline Processes

Beach sand material comes to the shoreline from inland areas, carried by rivers and streams; from offshore deposits, carried by waves; and from coastal dunes and bluffs, becoming beach material when the bluffs or dunes lose material due to wave attack, landslides, surface erosion, gullyng, et cetera. Coastal dunes are almost entirely beach sand, and wind and wave action often provide an ongoing mix and exchange of material between beaches and dunes. Many coastal bluffs are marine terraces – ancient beaches which formed when land and sea levels differed from current conditions. Since the marine terraces were once beaches, much of the material in the terraces is often beach-quality sand or cobble, and is a valuable contribution to the littoral system when it is added to the beach. While beaches can become marine terraces over geologic time, the normal exchange of material between beaches and bluffs is for bluff erosion to provide beach material. Bluff retreat and erosion is a natural process resulting from many different factors such as erosion by wave action causing cave formation, enlargement and eventual collapse of caves, saturation of the bluff soil from groundwater causing the bluff to slough off, and natural bluff deterioration. When the back-beach or bluff is protected by a shoreline protective device, the natural exchange of material either between the beach and dune or from the bluff to the beach will be interrupted and, if the shoreline is eroding, there will be a measurable loss of material to the beach. Since sand and larger grain material are the most important material for beach formation, only the sand portion of the bluff or dune material is quantified as sandy beach material.

These natural shoreline processes affecting the formation and retention of sandy beaches can be significantly altered by the construction of shoreline armoring structures because bluff retreat is one of several ways that beach quality sand is added to the shoreline, and is also one of the critical factors associated with beach creation/retention. Bluff retreat and erosion are natural processes that result from the many different factors described above. Shoreline armoring directly impedes these natural processes.

Some of the effects of engineered armoring structures on the beach (such as scour, end effects and modification to the beach profile) are temporary or are difficult to distinguish from all the other actions that modify the shoreline. Others are more qualitative (e.g., impacts to the character of the shoreline and visual quality). Some of the effects that a shoreline structure may have on natural shoreline processes can be quantified, however, including: (1) the loss of the beach area on which the structure is located; (2) the long-term loss of beach that will result when the back-beach location is fixed on an eroding shoreline; and (3) the amount of material that would have

been supplied to the beach if the back-beach or bluff were to erode naturally.²

Encroachment on the Beach

Shoreline protective devices are all physical structures that occupy space. When a shoreline protective device is placed on a beach area, the underlying beach area cannot be used as beach. This generally results in a loss of public access as well as a loss of sand and/or areas from which sand generating materials can be derived. The area where the structure is placed will be altered from the time the protective device is constructed, and the extent or area occupied by the device will remain the same over time, until the structure is removed or moved from its initial location, or in the case of a revetment, as it spreads seaward over time. The beach area located beneath a shoreline protective device, referred to as the encroachment area, is the area of the structure's footprint.

Using the Commission's long-standing methodology, the proposed project would cover an area of sandstone and beach area that would otherwise contribute to the local sand supply, and/or that would otherwise be occupied by sand part of the year. In this case, the proposed shoreline protection would cover approximately 1,500 square feet of sandy area. The loss of a square-foot of beach area can be roughly converted to the volume of sand that would be required to nourish an equivalent area of beach. There is a rough rule of thumb that it takes between 1 to 1.5 cubic yards of sand to establish 1 square foot of dry beach through nourishment.³ The Commission has not been able to establish an actual conversion factor for the Twin Lakes vicinity. Using a 1.0 conversion factor, which is the low end of this range (i.e., the low end of the spectrum of values typically assumed by coastal engineers), a conservative estimate of the cubic yard of sand equivalent of 1,500 square feet of beach coverage by the protective device can be calculated. Based on this conversion factor, the sand volume equivalent for the direct loss of beach due to encroachment by the coastal protection would be 1,500 cubic yards of sand.

Fixing the back beach

Where the shoreline is eroding and armoring is installed, the armoring will eventually define the boundary between the sea and the upland. On an eroding shoreline, a beach will exist between the shoreline/waterline and the bluff as long as sand is available to form a beach. As bluff erosion proceeds, the profile of the beach also retreats and the beach area migrates inland with the bluff. This process stops, however, when the backshore is fronted by a hard protective structure such as a revetment or a seawall. While the shoreline on either side of the armor continues to retreat, shoreline in front of the armor eventually stops at the armoring. The beach

² The sand supply impact refers to the way in which the project impacts creation and maintenance of beach sand. Although this ultimately translates into beach impacts in this case, the discussion here is focused on the first part of the equation and the way in which the proposed project would impact sand supply processes.

³ This conversion value is based on the regional beach and nearshore profiles, and overall characteristics. When there is not regional data to better quantify this value, it is often assumed to be between 1 and 1.5, the basis being that to build a beach seaward one foot, there must be enough sand to provide a one-foot wedge of sand through the entire region of onshore-offshore transport. If the range of reversible sediment movement is from -30 feet msl to +10 feet msl, then a one-foot beach addition must be added for the full range from -30 to +10 feet, or 40 feet total. This 40-foot by 1-foot square parallelogram could be built with 1.5 cubic yards of sand (40 cubic feet divided by 27 cubic feet per cubic yard). If the range of reversible sediment transport is 27 feet, it will take 1 cubic yard of sand to rebuild one square foot of beach; if the range of reversible sediment transport is larger than 40 feet, it will take more than 1.5 cubic yards of sand to rebuild one square-foot of beach.

area will narrow, being squeezed between the moving shoreline and the fixed backshore. Eventually, there will be no available dry beach area and the shoreline will be fixed at the base of the structure. In the case of an eroding shoreline, this represents the loss of a beach as a direct result of the armor.

In addition, sea level has been rising slightly for many years. There is a growing body of evidence that there has been an increase in global temperature and that acceleration in the rate of sea level rise can be expected to accompany this increase in temperature (some shoreline experts have indicated that sea level could rise 4.5 to 6 feet by the year 2100⁴). Mean water level affects shoreline erosion several ways, and an increase in the average sea level will exacerbate all these conditions. On the California coast the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore. This, too, leads to loss of the beach as a direct result of the armor as the beach is squeezed between the landward migrating ocean and the fixed backshore.

Such passive erosion impacts can be calculated over the time the proposed armoring is expected to last. In this case, the Applicant indicates that the proposed coastal protection will have a 50-year lifetime over which time such impacts will be in effect. However, it has been the Commission's experience that the accurate expected lifespan of shoreline armoring projects is often substantially less than 50 years due to the need for major maintenance or modifications, or entire redevelopment of an armoring structure within a much shorter timeframe. This wave action can only be expected to be exacerbated by sea level rise over time, with resultant impacts to the strength and integrity of the coastal protection. In other words, despite the Applicant's 50-year projection, it has been the Commission's experience that shoreline armoring tends to be augmented, replaced, and/or substantially changed within about twenty years. This assumption is especially relevant at the proposed project site which has incorporated steel into the project design within the shotcrete, reinforcing wire, and soil nails. The Commission's Senior Coastal Engineer has recommended a shorter project life, including because the steel within the coastal bluff protection could potentially swell, resulting in cracking and splitting long before fifty years, if not properly maintained.

In addition, the Applicant may estimate the life of the structure itself at fifty years, but the Applicant also indicates that the structure is expected to be overtopped during the course of that time during high wave and significant storm events, including as a result of anticipated sea level rise. Although the frequency and severity of such events will dictate to what degree such overtopping is problematic in relation to protecting road, utility, and related structures, it provides an indication that the "life" of the structure in terms of its ability to protect structures from such events in such scenario is significantly less than fifty years. Thus, a twenty year horizon better accounts for the fact that the structure hasn't been designed to provide that type of protection for the fifty year estimated life of the armoring structure, and provides an appropriate interim juncture at which to evaluate its effectiveness at that point as well.

⁴ The California Climate Action Team has evaluated possible sea level rise for the California coast and, based on several of the Intergovernmental Panel on Climate Change (IPCC) scenarios, projected sea level rise up to 1.4 meters (4.5 feet) by 2100. These projections are in line with 2007 projections by Stefan Rahmstorf ("A Semi-Empirical Approach to Projecting Future Sea-Level Rise", *Science*; Vol 315, 368 – 370. Research by Pfeffer et al. ("Kinematic Constraints on Glacier Contributions to 21st-Century Sea-Level Rise", *Science*, Vol, 321, 1340 – 1343) that projects up to 2 meters of sea level rise by 2100.

The other factor that is appropriate to consider when identifying a particular horizon for armoring in an approval is the changing and somewhat uncertain nature of the context affecting coastal development decisions regarding armoring (including due to legislative change, judicial determinations, etc.). A twenty-year period better anticipates such potential changes and uncertainties. For these reasons, the Commission uses a design life of 20 years for the proposed armoring in these findings, and implements the 20-year period through **Special Condition 6**.

The Commission has established a methodology for calculating passive erosion, or the long-term loss of beach due to fixing the back beach. This impact is equivalent to the footprint of the bluff area that would have become beach due to erosion and is equal to the long-term erosion rate multiplied by the width of property that has been fixed by a resistant shoreline protective device.⁵ For purposes of determining the impacts from fixing the back beach, it is assumed that new beach area would result from landward retreat of the bluff. The area affected by passive erosion at the project site can be approximated as a 500-foot-long bluff. The Applicant's geotechnical consultant estimated the average bluff recession for the site at 0.1 feet per year. Therefore the impacts from fixing the back beach would be the annual loss of 50 square feet per year of beach at the site. Over the 20-year permit horizon, this would result in a loss of 1,000 square feet of beach that would have been created from the site if the back beach had not been fixed by the proposed armoring. Using the beach-area to beach-volume conversion discussed above, this would be equivalent to a loss over twenty years of 1,000 cubic yards of beach quality sand at the project site that can be attributed to fixing of the back beach.

Retention of Potential Beach Material

If natural erosion were allowed to continue (absent the proposed armoring), some amount of beach material would be added from the bluffs to the beach at this location, as well as the larger sand supply system. The volume of total material that would have gone into the sand supply system over the lifetime of the shoreline structure would be the volume of material between (a) the likely future bluff face location with shoreline protection; and (b) the likely future bluff location without shoreline protection. Since the main concern is with the sand component of this bluff material, the total material lost must be multiplied by the percentage of bluff material which is beach sand, giving the total amount of sand which would have been supplied to the littoral system for beach deposition if the proposed device were not installed. The Commission has established a methodology for identifying this impact.⁶ The Applicant's consultants conducted

⁵ The area of beach lost due to long-term erosion (A_w) is equal to the long-term average annual erosion rate (R) times the number of years that the back-beach or bluff will be fixed (L) times the width of the property that will be protected (W). This can be expressed by the following equation: $A_w = R \times L \times W$. The annual loss of beach area can be expressed as $A_w' = R \times W$.

⁶ The equation is $V_b = (S \times W \times L) \times [(R \times h_s) + (1/2h_u \times (R + (R_{cu} - R_{cs})))]/27$. Where: V_b is the volume of beach material that would have been supplied to the beach if natural erosion continued (this is equivalent to the long-term reduction in the supply of bluff material to the beach resulting from the structure); S is the fraction of beach quality material in the bluff material; W is the width of property to be armored; L is the design life of structure (50 years assumed per ACOE, though its lifetime can also be considered indefinite) or, if assumed a value of 1, an annual amount is calculated; R is the long term average annual erosion rate; h_s is the height of the shoreline structure; h_u is the height of the unprotected upper bluff; R_{cu} is the predicted rate of retreat of the crest of the bluff during the period that the shoreline structure would be in place, assuming no bluff protection were installed (this value can be assumed to be the same as R unless the Applicant provides site-specific geotechnical information supporting a different value); R_{cs} is the predicted rate of retreat of the crest of the bluff, during the period that the coastal bluff protection would be in place, assuming the bluff protection has been installed (this value will be assumed to be zero

analyses using the Commission's methodology and determined that the amount of beach quality sand retained by the proposed armoring over a 20-year horizon would be 555 cubic yards of sand, a figure which the Commission's Senior Coastal Engineer agrees is appropriate in this case.

Use of Native Beach Sand for MSE Construction

In addition to the impacts to shoreline sand supply discussed above, the project also proposes to use native beach sand in the construction of the MSE structure. During construction, the project proposes to excavate and reuse approximately 10,260 cubic yards of beach sand at the project site. The use of native beach sand in the construction of the MSE structure is inconsistent with Coastal Act policy 30235, as it does not eliminate or minimize impacts to shoreline sand supply. Rather, it exacerbates such impacts. In this case, substantially. The project, as proposed, would remove 10,260 cubic yards of sand and use it for backfill behind the proposed seawall, increasing impacts to shoreline sand supply discussed above to a total of 13,315 cubic yards of sand. The sand removed for construction of the MSE would no longer have the potential to contribute to beach sand at the project site, or subsequent sites downcoast.

The Applicant argues that such use of sand is appropriate in this case, including because the amount of sand to be used is 3.6% of the average annual amount of sand added to Twin Lakes State Beach through dredging and 0.3% of the total amount of sand moved by littoral drift over a 10 year period. The Applicant also argues that since the amount of sand dredged each year can vary by 300,000 cubic yards, the one-time variation of 10,260 cubic yards is insignificant as compared to the larger overall natural annual variation (see Applicant's sand supply analysis in **Exhibit 9**). The Commission does not concur. It has not been the Commission's practice to allow the use of native beach sand as construction materials because beach sand is part of the shoreline sand supply system, and its use is directly contrary to the basic premise of Section 30235, which identifies eliminating impacts to sand supply as the first choice, and then mitigation for unavoidable impacts after that. It is not clear how the use of over 10,000 cubic yards of beach sand can be found consistent with Section 30235.

In addition, with respect to the Applicant's argument that the 10,260 cubic yards of sand is an inconsequential amount of sand given the degree of sand that is placed on this beach from dredging episodes, does not address the Section 30235 requirement or the nature of the dredging in relation to the sand supply system. In terms of the latter, when the Harbor was first installed, it deprived downcoast beaches, including this segment of Twin Lakes State Beach, of sand. Over time, the beach on the upcoast side of the jetty grew to be a very large beach; the jetty acting as a groin of sorts that collected the sand that would have otherwise moved downcoast. Currently, that jetty "groin" is essentially fully charged, and sand in the littoral cell either bypasses the jetty and/or "sinks" into it. Because the amount of sand that is transported in the Santa Cruz littoral cell is estimated at roughly 300,000 cubic yards of sand annually, the dredging roughly serves to mimic what would have been the case absent the Harbor. In other words, the system is near a natural equilibrium with the dredging and beach nourishment, and it is not appropriate to reduce that system by some 10,000 cubic yards to satisfy a construction materials need. This is also the

unless the Applicant provides site-specific geotechnical information supporting a different value); and divide by 27 (since the dimensions and retreat rates are given in feet and volume of sand is usually given in cubic yards, the total volume of sand must be divided by 27 to provide this volume in cubic yards, rather than cubic feet).

case because the sand placed on Twin Lakes is not placed there just for Twin Lakes State Beach, but rather it is also placed to move the sand that gets trapped in the Harbor to this beach, so that it can continue downcoast and help to nourish downcoast beaches as well.

One option that the Applicant was advised to look into was whether inner Harbor sediments that are also dredged could be used for the necessary backfill. These inner Harbor sediments are generally of a significantly lower sand quality than that taken from the jetty mouth, and thus its use for beach nourishment is more limited. In fact, the Port District's dredging CDP strictly limits the amount of such materials that can be placed on the beach, and limits the times when they can be placed. It is possible that the use of such materials could serve the Applicant's purpose, as well as the Port District's need.

In short, however well intentioned, including in terms of reducing the need to truck in fill materials, at the most basic level such use of beach sand as easily accessible construction material is inappropriate under Section 30235 and must be eliminated from the project. Therefore, **Special Condition 1** has been incorporated to require the Applicant to submit final revised project plans that would remove the use of native beach sand from the construction of the MSE. In addition, any beach quality sand excavated from the project site through construction would be spread back on to Twin Lakes State Beach, as required by **Special Condition 1**.

Beach and Sand Supply Impacts Conclusion

The proposed project, as modified to eliminate native beach sand as a construction material, would result in quantifiable shoreline sand supply impacts. There would be beach sand loss due to: 1) placement of a coastal bluff protection structure onto approximately 1,500 square feet of sandy area (equating to 1,500 cubic yards when converted for volume); 2) fixing of the back beach location, resulting in the loss of 1,000 square feet of sandy beach (50 square feet/ 20 years) that would have been created over the 20-year life of the structure (equating to 1,000 cubic yards per 20 years when converted for volume), and; 3) retention of 555 cubic yards of sand over the 20-year life of the proposed project. The total cubic yard calculation is 3,055 over twenty years. If these impacts were to be mitigated through a beach nourishment effort, the impacts would be comparable to the deposition of 1,500 cubic yards of beach quality sand at the start of the project, and about 77.75 cubic yards of beach-quality sand yearly for twenty years.

It has proven difficult to identify appropriate mitigation for such impacts. Partly this is because creating an offsetting beach area is not an easy task, and finding appropriate properties that could be set aside to become beach area over time (through natural processes, including erosion) is difficult both due to a lack of such readily available properties and the cost of such coastal real estate more broadly. As a proxy, other types of mitigation typically required by the Commission for such direct sand supply impacts have been in-lieu fees and/or beach nourishment, and in some cases compensatory beach access improvements. With regards to beach nourishment, a formal sand replenishment strategy can introduce an equivalent amount of sandy material back into the system over time to mitigate the loss of sand that would be caused by a protective device over its lifetime. Obviously, such an introduction of sand, if properly planned, can feed into the littoral system to mitigate the impact of the project. However, there is no such formal program available in this area, and the utility of a one time nourishment project from one applicant is unclear without a means of appropriately directing such activities so as to maximize utility for beach creation and retention. In addition, it is not clear how such program could or should

interact and coordinate with the Harbor's dredging program which is not structured to create beach in front of the project area per se so much as it is to help sand get past the jetties and downcoast, as it would if they weren't there.

As an alternative mitigation mechanism, the Commission oftentimes uses an in-lieu fee when in-kind mitigation of impacts is not available.⁷ In situations where ongoing sand replenishment or other appropriate mitigation programs are not yet in place, the in-lieu mitigation fee is deposited into an account until such time as an appropriate program is developed, and the fees can then be used to offset the designated impacts. When mitigation funds are pooled in this way for multiple projects in a certain area, the cumulative impacts can also be better addressed inasmuch as the pooled resources can sometimes provide for a greater mitigation impact than a series of smaller mitigations based on individual impacts and fees. Based on an estimated range of costs for beach quality sand in this vicinity ranging from \$25 to \$50 per cubic yard delivered (or possibly more, including if an appropriate sand source can even be identified), an in-lieu fee in this case would range from about \$76,375 to \$152,750.⁸

With respect to using beach access improvements to offset impacts, such mitigation is typically applied by the Commission to public agencies that manage shoreline recreational areas and/or beaches.⁹ The project's shoreline sand supply impacts translate directly into degradation of public access to and along the beach, particularly because construction affects nourishment of the beach. As such, shoreline sand supply mitigation targeted toward these access impacts is appropriate in this case. And fortunately, the proposed project in and of itself is providing public access improvements intended to help mitigate the impacts to shoreline sand supply from construction of the coastal bluff protection. The improvements would provide better access for vehicles, bicyclists, and pedestrians and offer year-round ADA access to the site. If the project were to use native beach sand in the construction of the MSE, significantly increasing the impacts to shoreline sand supply, then it may be more appropriate to apply the in lieu fee or beach nourishment option to mitigate for these additional sand supply impacts. However, as described above, and as required though **Special Condition 1**, the revised project plans must remove the use of native beach sand from the project plans. Therefore, the impacts to shoreline sand supply can be mitigated in this case by the proposed public access improvements, including: the improved vehicle road, pedestrian access paths, bicycle lanes, pedestrian crosswalks, formal public parking spaces, traffic circle with a visitor drop off area, bench seating, interpretive signage, bicycle racks, and stairs and access ramps to provide ADA access to the beach through the year (see also Public Access and Recreation finding below for further discussion).

Thus, as conditioned, the project satisfies the Coastal Act Section 30235 requirements regarding mitigation for sand supply impacts, and thus also meets all Section 30235 tests for allowing such armoring.

⁷ See, for example, CDP 3-10-044 (Crest Apartments), CDP 3-09-029 (Rusconi), and A-3-SCO-06-006 (Willmott).

⁸ Based on 3,055 cubic yards of such sand purchased today for \$25 per cubic yard (\$76,375) or \$50 per cubic yard (\$152,750).

⁹ For example, as recently required with respect to recreational access improvements along the Pleasure Point shoreline area of Santa Cruz County as part of the Commission's approval of a seawall fronting East Cliff Drive (CDPs A-3-SCO-07-015 and 3-07-019, approved December 13, 2007).

Long-Term Stability, Maintenance, and Risk

Coastal Act Section 30253 requires the project to assure long-term stability and structural integrity, minimize future risk, and avoid additional, more substantial protective measures in the future. For the proposed project, the main Section 30253 concern is assuring long-term stability. This is particularly critical given the dynamic shoreline environment within which the proposed project would be placed. Also critical to the task of ensuring long-term stability, as required by Section 30253, is a formal long-term monitoring and maintenance program. If the proposed armoring were damaged in the future (e.g. as a result of flooding, landsliding, wave action, storms, etc.), it would lead to a degraded public access condition. In addition, such damages could adversely affect nearby beaches by resulting in debris on the beaches and/or creating a hazard to the public using the beaches. Therefore, in order to find the proposed project consistent with Coastal Act Section 30253, the proposed project must be maintained in its approved state. Further, in order to ensure that the Applicant and the Commission know when repairs or maintenance are required, the Applicant must regularly monitor the condition of the subject armoring, particularly after major storm events. Such monitoring will ensure that the Permittee and the Commission are aware of any damage to or weathering of the armoring and can determine whether repairs or other actions are necessary to maintain the armoring and the offsetting access improvements in their approved state before such repairs or actions are undertaken. To assist in such an effort, monitoring plans should provide vertical and horizontal reference distances from armoring structures to surveyed benchmarks for use in future monitoring efforts.

To ensure that the proposed project is installed in compliance with the proposed plans and properly maintained to ensure its long-term structural stability, **Special Conditions 8 and 9** require the submission of as-built plans and a monitoring and maintenance program. Such a program shall provide for evaluation of the condition and performance of the proposed project and overall bluff stability, and shall provide for necessary maintenance, repair, changes or modifications. **Special Condition 10** allows the Applicant to maintain the project in its approved state, subject to the terms and conditions identified by the special conditions. Such future monitoring and maintenance activities will be understood in relation to clear as-built plans that will be submitted by the Applicant.

In terms of recognizing and assuming the hazard risks for shoreline development, the Commission's experience in evaluating proposed developments in areas subject to hazards has been that development has continued to occur despite periodic episodes of heavy storm damage and other such occurrences. Development in such dynamic environments is susceptible to damage due to such long-term and episodic processes. Past occurrences statewide have resulted in public costs (through low interest loans, grants, subsidies, direct assistance, etc.) in the millions of dollars. As a means of allowing continued development in areas subject to these hazards while avoiding placing the economic burden for damages onto the people of the State of California, applicants are regularly required to acknowledge site hazards and agree to waive any claims of liability on the part of the Commission for allowing the development to proceed. Accordingly, this approval is conditioned for the Applicant to assume all risks for developing at this location (see **Special Condition 11**).

To ensure that this project does not prejudice future shoreline planning options, including with respect to changing and uncertain circumstances that may ultimately change policy and other

coastal development decisions (including not only climate change and sea level rise, but also due to legislative change, judicial determinations, etc.), this approval is conditioned for a twenty-year period. It has been the Commission's experience that shoreline armoring, particularly in such a high-hazard area as this project, tends to be augmented, replaced, and/or substantially changed within about twenty years. The intent of the twenty-year authorization is to recognize this time-frame reality, and also to allow for an appropriate reassessment of continued armoring at that time in light of what may be differing circumstances than are present today. Of course it is possible that physical circumstances as well as local and/or statewide policies and priorities regarding shoreline armoring are significantly unchanged from today, in which case the Applicant would likely have the same right to the armoring that it has today. If, however, the baseline context for considering armoring is different in 20 years – much as the Commission's direction on armoring has changed over the past twenty years as more information and better understanding has been gained regarding such projects – the twenty year authorization will allow the Commission to assess alternatives to the coastal bluff protection in 20 years.

Geologic Conditions and Hazards Conclusion

The existing road and utilities are in danger from erosion and require hard armoring to be protected. Conditions are included to ensure that the project will appropriately offset its sand supply impact, and to ensure long term stability. As conditioned, the Commission finds the project consistent with Coastal Act Sections 30235 and 30253.

D. PUBLIC ACCESS AND RECREATION

Coastal Act Section 30604(c) requires that every coastal development permit issued for any development between the nearest public road and the sea “shall include a specific finding that the development is in conformity with the public access and public recreation policies of [Coastal Act] Chapter 3.” The proposed project is located seaward of the first through public road (East Cliff Drive). Coastal Act Sections 30210 through 30213, 30221 and 30223 specifically protect public access and recreation. In particular:

30210. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

30211. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

30213. Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. ...

30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is

already adequately provided for in the area.

30223. *Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

These overlapping policies clearly protect access to and along the shoreline and to offshore waters for public access and recreation purposes, particularly free and low cost access. As mentioned in the project description, this area is visited by approximately one million people a year, thereby providing significant recreational opportunities for residents and visitors. East Cliff Drive is a component of the CCT and the Monterey Bay Sanctuary Scenic Trail. However, the unimproved facilities at the project site result in limited public recreational access utility, traffic circulation problems, visual impacts, and water quality hazards. The project site also does not currently offer year round ADA access to the beach. This project is needed to maintain the public access that currently exists, expand and improve the public access amenities to offset project impacts, and ensure the longevity and stability of the improvements now and into the future.

The proposed project at its core is a public access enhancement project which would facilitate public access to the beach throughout this highly traveled segment of East Cliff Drive as well as between public recreational areas including the Harbor and Twin Lakes State Beach. The proposed project would support public access and recreation along East Cliff Drive by incorporating pedestrian access paths along the road with connectivity to the surrounding recreational amenities, bicycle lanes, pedestrian crosswalks, formal public parking spaces, an improved traffic circle at the harbor entrance with a visitor drop off area, bench seating, interpretive signage, bicycle racks, and stairs and access ramps built into the new coastal protection structures to provide ADA access to the beach throughout the year. The latter is an unusual twist on incorporating access into such armoring structure as it is designed to function as a trail to the beach area that works no matter the sand level. In addition, the undulations in the surface of the armoring are going to be constructed in such a way as to facilitate seating areas that also will become available when sand levels dip below them, further enhancing public access. The improvements would provide safer, easier, and ADA accessible access to the Harbor Beach and Twin Lakes State Beach as well as improve recreational access throughout this popular area for all users. The proposed access improvements are also part of the Monterey Bay National Marine Sanctuary Scenic Trail and the California Coastal Trail, and would contribute to a larger overall network of pedestrian and bicycle trails through the region and the State.

However, as discussed in the geological conditions and hazards section above, shoreline structures can have a variety of negative impacts on coastal resources including adverse effects on beaches and sand supply, which ultimately result in the loss of the beach and associated impacts to public access. The proposed project's impact to sand supply, and ultimately to public access, would result in a loss of some 3,055 cubic yards of sand. Therefore there are direct impacts from beach area loss and indirect impacts (e.g., loss of sand to the system overall, loss of beach ambience, and loss of natural aesthetics) at the project site.

The indirect impacts of the coastal protection would be mitigated through its design. As designed the MSE structure would incorporate pathways, stairs, and benches within the structure that would improve access at the project site year round as the sand levels fluctuate. The coastal protection is also visually compatible with the surrounding area and mimics the natural bluff shape and color of Purisma Formation (see visual resources section below) minimizing impacts

to the site's aesthetic values. While the project would remove 3,055 cubic yards of sand from the system, the public access and recreation improvements gained by this project are enough to mitigate these impacts.

The project's proposed use of native beach sand in the construction of the MSE would result in additional impacts to shoreline sand supply and public access and recreation that could not be mitigated in full by the proposed access improvements. Removal of an additional 10,260 cubic yards of sand from the system would require supplemental mitigation in the form of an in lieu fee, beach nourishment, or additional enhanced public access improvements (whether on or offsite). Therefore, this project has been required to submit revised project plans removing the use of native beach sand in MSE construction through **Special Condition 1**. In addition, as detailed in the preceding finding, this approval is valid for 20-years, and this time frame ensures that the public access context, including potential changes and uncertainties associated with it over time, can be appropriately reassessed at that time (see **Special Condition 6**).

Finally, with respect to construction impacts, this project will: require the movement of large equipment, workers, materials, and supplies in and around the shoreline area and public access points; include large equipment operations in these areas; result in the loss of public access use areas to a construction zone; and generally intrude and negatively impact the aesthetics, ambiance, serenity, and safety of the recreational experience at these locations. These public recreational use impacts have been (through the Applicant's proposed BMPs) and can be mitigated through construction parameters that limit the area of construction, limit the times when work can take place (to avoid both weekends and peak summer use months when recreational use is highest), clearly fence off the minimum construction area necessary, keep equipment out of coastal waters, require off-beach equipment and material storage during non-construction times, clearly delineate and avoid to the maximum extent feasible public use areas, and restore all affected public access areas at the conclusion of construction. In addition, one travel lane along East Cliff Drive would be maintained open at all times to ease traffic impacts and allow for the passage of emergency vehicles. A construction plan is required to implement these measures (see **Special Condition 2**). In addition, to provide maximum information to the beach-going public during all construction, the Applicant must maintain copies of the CDP and approved plans available for public review at the construction sites, as well as provide a construction coordinator whose contact information is posted at the sites to respond to any problems and/or inquiries that might arise (see **Special Condition 3**).

In conclusion, provided the new public access improvements are appropriately installed and maintained in their approved state and made available for maximum public access, the access is maintained, and the approval includes a twenty-year horizon, these mitigations can appropriately offset the public recreational access impacts associated with the proposed project. As conditioned, the project is consistent with the Coastal Act access and recreation policies cited above.

E. MARINE RESOURCES

The Coastal Act protects the marine resources and habitat offshore of this site. Coastal Act Sections 30230 and 30231 provide:

***Section 30230.** Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

***Section 30231.** The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

The removal of invasive non-native ruderal vegetation including iceplant along the coastal bluff and the planting of native species would improve habitat values of the site. As mentioned in the project description, the existing roadway does not contain adequate drainage or water quality facilities. The proposed MSE would incorporate Low Impact Development (LID) measures which would improve the water quality of runoff flowing from the road and sidewalks to Twin Lakes State beach and Monterey Bay. The LID measures proposed would be incorporated into the MSE structure and would include four new drainage inlet filtration structures which would serve as a secondary filtration system to filter pollutants from runoff through coarse sand and gravel before conveying the water to underlying soils (**Exhibit 8**).

As mentioned above, the Commission is not supportive of the project's proposed use of native beach sand in the construction of the MSE. The use of 10,260 cubic yards of native beach sand would impact the sand supply at the project site and subsequent sites where the sand would move throughout the littoral cell including downcoast beaches. To reduce these potential impacts to marine resources, **Special Condition 1** has been included requiring that the Applicant revise the project plans to remove the use of native beach sand within the MSE. Pursuant to **Special Condition 1**, the Applicant may use other sand or gravel for the fill material, or may use an alternative type of fill material for the project. However, since the use of a different material may affect the water filtration as designed, **Special Condition 1** requires that the Applicant submit an updated Drainage Plan, illustrating that the alternative fill material would be utilized in a manner that would protect water quality, as originally proposed. Further, as required by **Special Condition 1**, beach quality native beach sand excavated from the project area must be placed on the beach, and any placement below the MHTL may require additional approvals from State Lands Commission (SLC) and Monterey Bay National Marine Sanctuary (MBNMS). Therefore, the project is conditioned to require review and approval (if necessary) from the SLC and the MBNMS (**Special Condition 9**).

The proposed project plans and special conditions include construction methods typically required by the Commission to protect water quality and marine resources during construction of the coastal bluff protection, including maintaining good construction site housekeeping controls and procedures, the use of appropriate erosion and sediment controls, a prohibition on equipment washing, refueling, or servicing on the beach, etc. (**Special Condition 2**). To further protect

marine resources and offshore habitat, **Special Condition 3** requires construction documents to be kept at the site for inspection, and also requires a construction coordinator to be available to respond to any inquiries that arise during construction. Lastly, the project has been conditioned to submit a final storm water pollution prevention plan and water quality management plan to ensure coastal waters are protected during and after construction (**Special Conditions 4 and 5**). As conditioned, the project is consistent with Coastal Act Sections 30230 and 30231 regarding protection of marine resources and offshore habitats.

F. VISUAL RESOURCES

Coastal Act Section 30251 states:

Section 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

The project has been designed to minimize grading and therefore no views to the beach of Monterey Bay from East Cliff Drive would be impacted by the proposed project. As mentioned above, tree removal would be minimized and the area would be revegetated with native species, improving the naturalistic and scenic character of the area. The MSE armoring would mostly be located under natural beach levels during summer conditions and would mostly be more visible when the sand is pulled off the beach during winter conditions and storms. Visual impacts of the MSE when exposed have been minimized by the design that would blend with the natural Purisma Formation bedrock, including texturing, contouring, and coloring to mimic the natural bluff face (**Exhibit 2**). Currently, views to Monterey Bay from East Cliff Drive are often blocked by the informal parking which occurs continuously along the edge of the beach. By creating more organized parking with gaps between spaces, views of Monterey Bay from East Cliff Drive would be improved.

The MSE includes drain pipes, or weep holes, through which water collected in the area behind the coastal bluff protection would drain. Even in successfully camouflaged bluff protection, drain pipes and weep holes can detract from the illusion and lessen the value of the camouflage mitigation. In addition, over time, as drainage from the weep holes begins to stain the concrete at the outlets in a similar equidistant pattern, such unnatural appearance is only heightened. Such impacts would be inconsistent with the Coastal Act visual resource policies cited above. However, there are several ways of addressing these issues that could be used to achieve Coastal Act consistency. **Special Condition 1** requires that the weep holes be randomly placed, and the weep holes and drain pipe outlets camouflaged to offset their visual impact. Since the MSE would be covered by sand during much of the year, the visual impacts from the coastal protection and weep holes would be further minimized.

Temporary visual impacts during construction would occur, and would be minimized through best management practices as required by **Special Condition 2**. Overall, as conditioned, the proposed project would improve the public viewshed as seen from the ocean, the beach, and East Cliff Drive. As conditioned, the Commission finds the project consistent with the above-cited Coastal Act public viewshed policies.

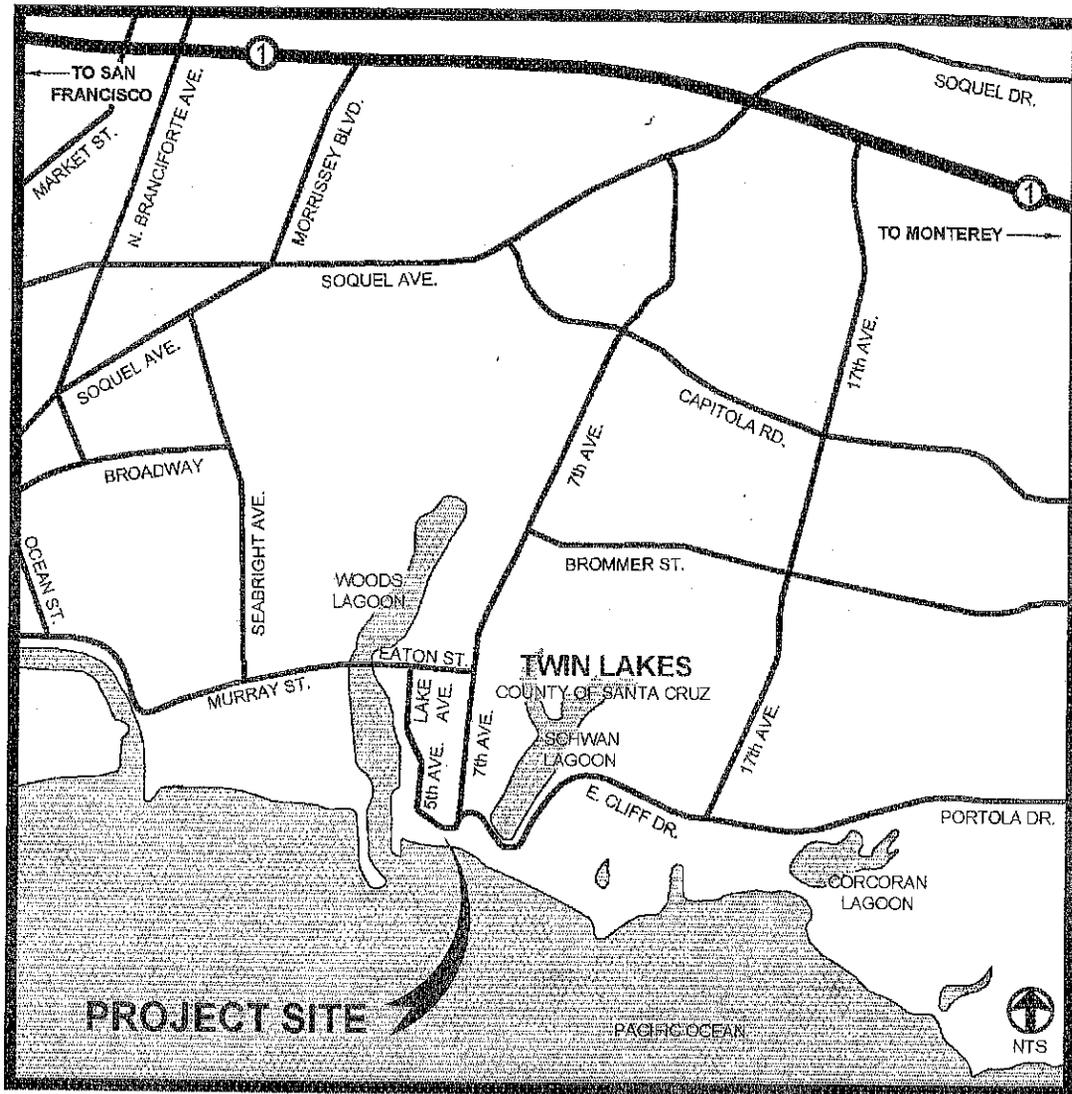
G. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect that the activity may have on the environment.

Santa Cruz County, acting as the CEQA lead agency, adopted a Mitigated Negative Declaration for the proposed project on November 7, 2012. The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. The preceding coastal development permit findings discuss the relevant coastal resource issues with the proposal, and the permit conditions identify appropriate modifications to avoid and/or lessen any potential for adverse impacts to said resources. All public comments received to date have been addressed in the findings above, which are incorporated herein in their entirety by reference.

As such, there are no additional feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse environmental effects which approval of the proposed project, as conditioned, would have on the environment within the meaning of CEQA. Thus, if so conditioned, the proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A)

1. *Drainage Report for Public Right-of-Way and Road Improvements for East Cliff Drive at Twin Lakes Beachfront*, rrmdesigngroup, July 19, 2011.
2. *Project Summary and Design Review Materials*, rrmdesigngroup, November 16, 2012.
3. *Twin Lakes Beachfront Improvements Conceptual Design of Coastline Protection Structures*, Halcrow, Inc., August 2011.
4. *Twin Lakes Beachfront Project. Application 3-12-05 Santa Cruz County's Response to Coastal Commission's Incompleteness Determination Letter*, County of Santa Cruz, April 4, 2013.
5. *Update Geotechnical and Coastal Engineering Investigation for the Twin Lakes Beachfront Project*, Haro, Kasunich and Associates, Inc, June 2009.

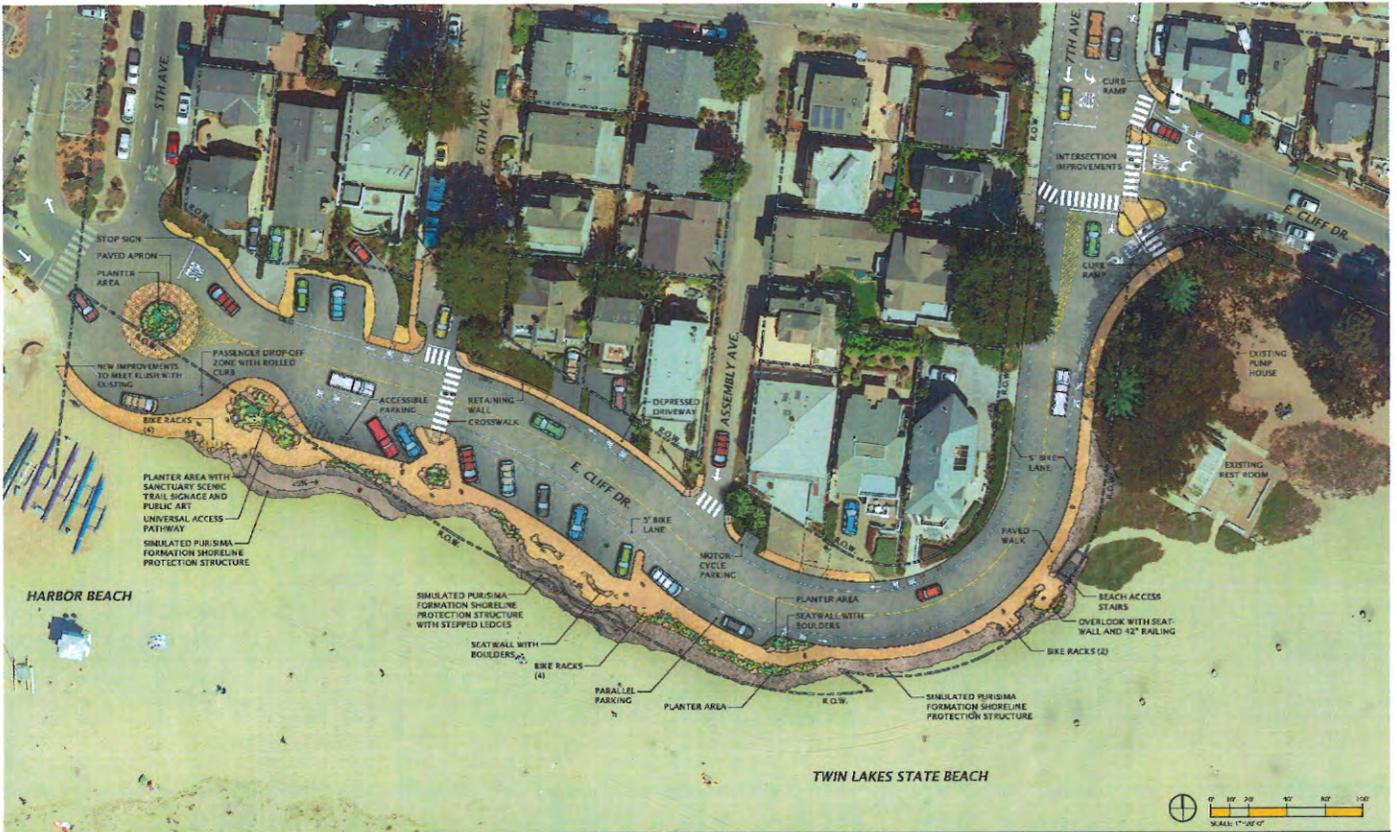


VICINITY MAP

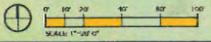
NOT TO SCALE



Figure A: Existing Development



**ILLUSTRATIVE SITE PLAN
PUBLIC RIGHT-OF-WAY AND ROAD IMPROVEMENTS FOR E. CLIFF DR. AT TWIN LAKES BEACH FRONT**



rm design group
and consultants
November 2012

View 1
Looking east from O'Neil Building



Existing (June 29, 2010 at 2:00pm)

View 1
Looking east from O'Neil Building



Proposed

View 2
Looking north-east from beach



Existing (June 29, 2010 at 2:00pm)

View 2
Looking north-east from beach



Proposed

View 3
Looking west from beach



Existing (April 6, 2010 at 1:45pm)

View 3
Looking west from beach



Proposed

NOTE: REMOVAL OF EXISTING TREES:
 1. EXISTING TREE NUMBER AND ASSOCIATED NUMBER
 PER AIRBORNE PHOTO INTERPRETIVE SET REPORT
 FOR RETAINED INFORMATION (RELATIVE TO TREE)

EXISTING TREE SUMMARY

| TREE # | COMMON NAME | ACTION |
|--------|---------------|------------------------|
| 1 | BUCKEYE | PROTECT IN PLACE |
| 2 | ELM | PROTECT IN PLACE |
| 3 | BUCKEYE | PROTECT IN PLACE |
| 4 | MORNING GLORY | PROTECT IN PLACE |
| 5 | WYOMING | PROTECT IN PLACE |
| 6 | BANANA | PROTECT IN PLACE |
| 7 | YUCCA | RELOCATE WITH IN PLACE |
| 8 | WINDMILL PALM | RELOCATE WITH IN PLACE |
| 9 | WINDMILL PALM | RELOCATE WITH IN PLACE |

PROJECT SUMMARY TABLE

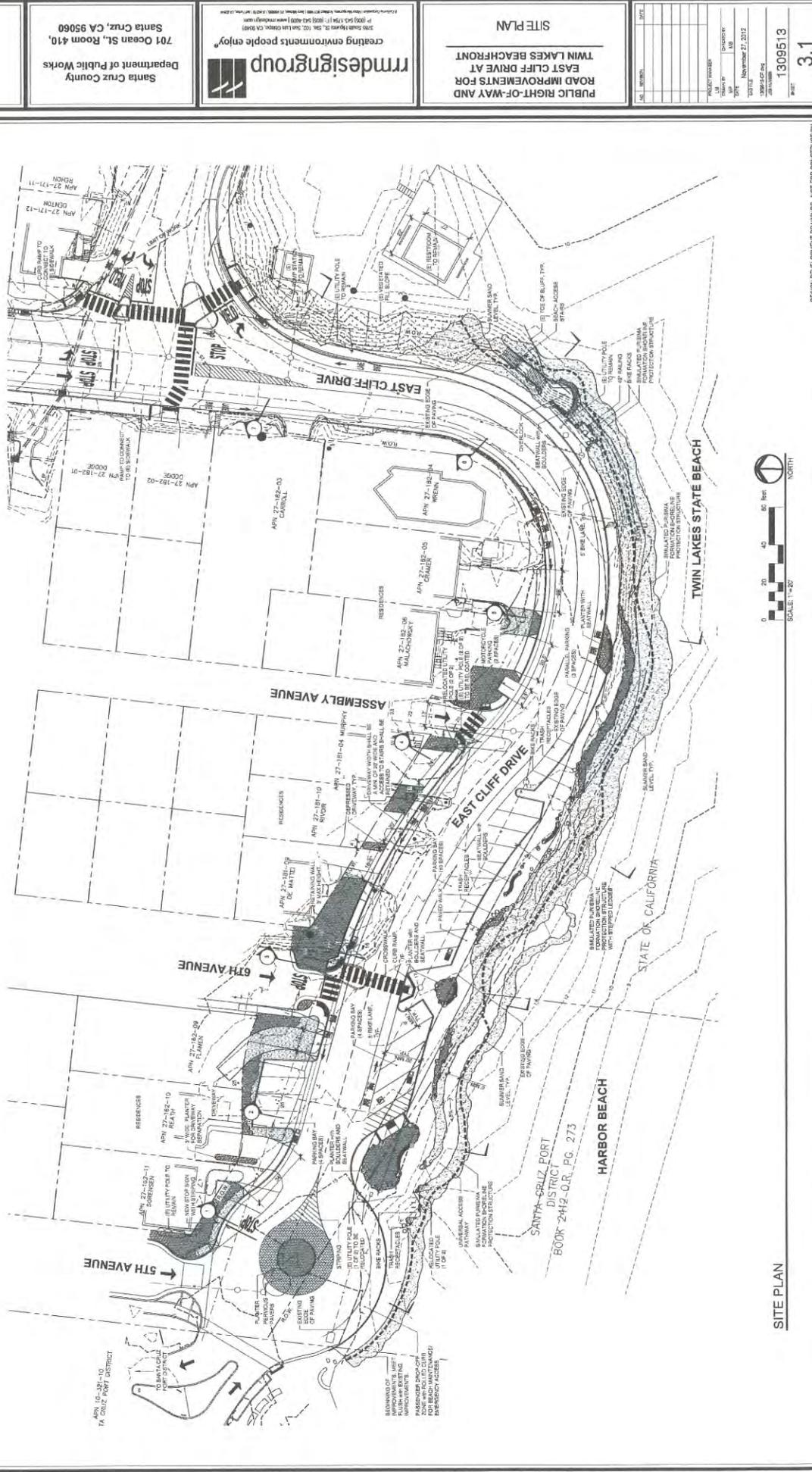
| ITEM | QUANTITY |
|--|-----------|
| PROJECT AREA | 64,272 SF |
| EXISTING IMPERVIOUS AREA | 44,272 SF |
| PROPOSED IMPERVIOUS AREA | 64,272 SF |
| CUT VOLUMES (WITHIN 10' W) | 1,188 CY |
| FILL VOLUMES (WITHIN 10' W) | 833 CY |
| OVERSIGHT AND RECOMPACT (WITHIN 10' W) | 108 CY |

PARKING SUMMARY

| | |
|---------------------------|----|
| PARKING SPACES | 32 |
| ACCESSIBLE PARKING SPACES | 1 |
| MOTORCYCLE PARKING SPACES | 2 |
| TOTAL PARKING SPACES | 35 |

* DOES NOT INCLUDE LOADING ZONES (SHORT TERM PARKING SPACES)

GENERAL NOTES:
 1. ALL PARKING SPACES ARE TO BE MAINTAINED AND PLANTING INFORMATION SEE SHEET 7.1.
 2. SEE SHEETS 8.1 & 8.2 FOR BTL SECTIONS.



SITE PLAN



Figure 24. View of TLSB to the east after the 1982 winter storms.



Figure 25. View of TLSB to the west after the 1982 winter storms.



Figure 26. Rip-rap repair at the S-turn after the winter 1983 storms.

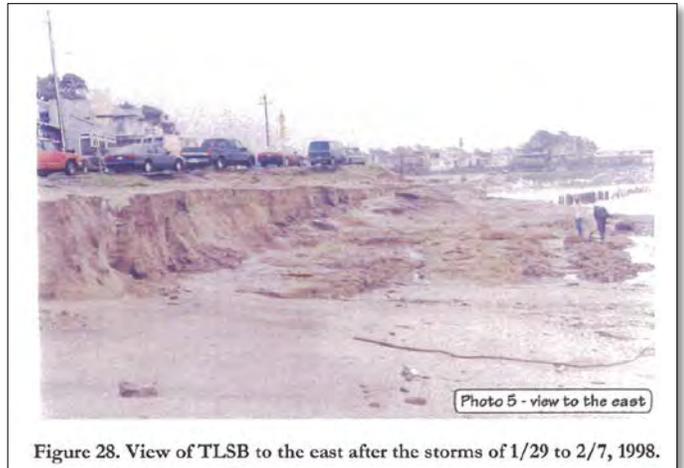


Figure 28. View of TLSB to the east after the storms of 1/29 to 2/7, 1998.

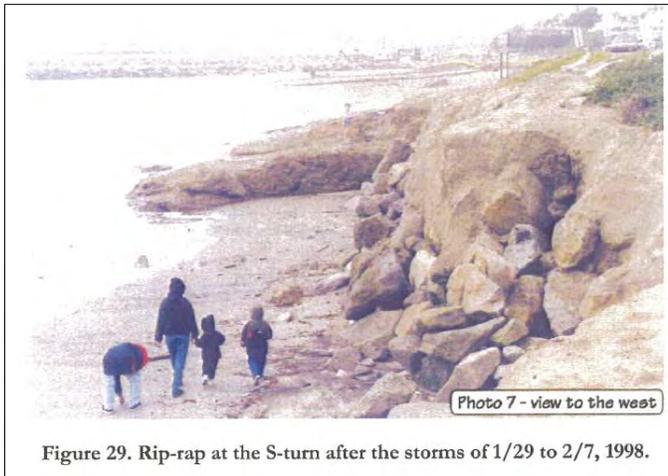


Figure 29. Rip-rap at the S-turn after the storms of 1/29 to 2/7, 1998.

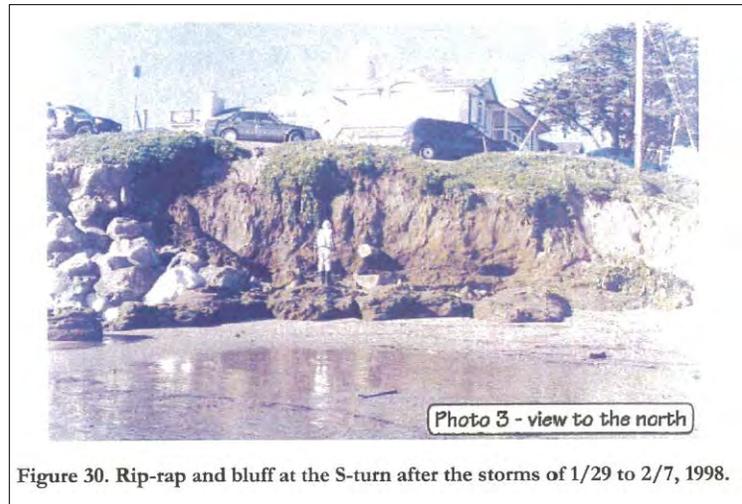


Figure 30. Rip-rap and bluff at the S-turn after the storms of 1/29 to 2/7, 1998.



Figure 21. TLSB in December 1961 prior to harbor construction, Griggs (1976).

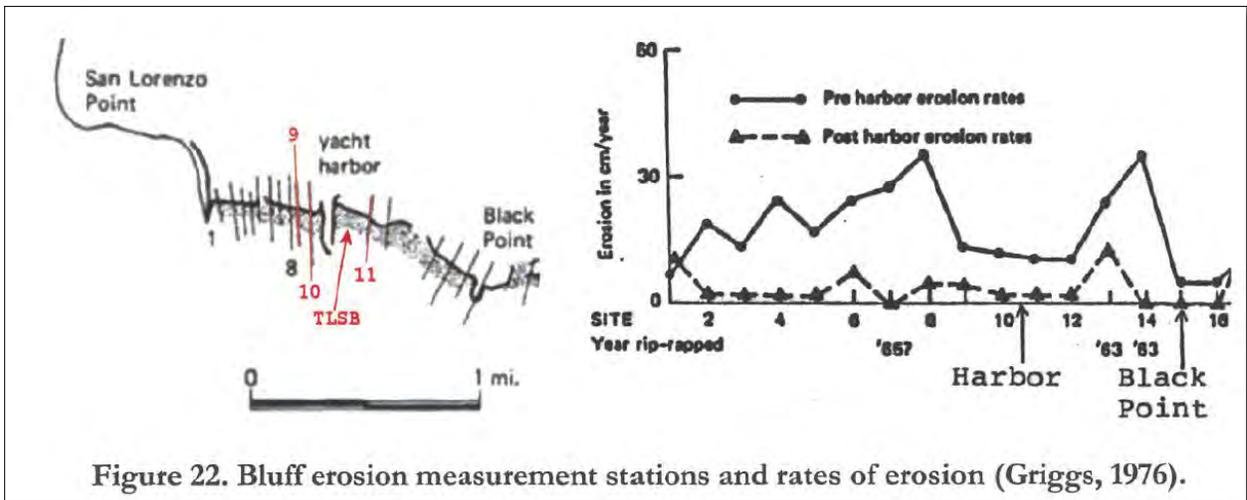


Figure 22. Bluff erosion measurement stations and rates of erosion (Griggs, 1976).

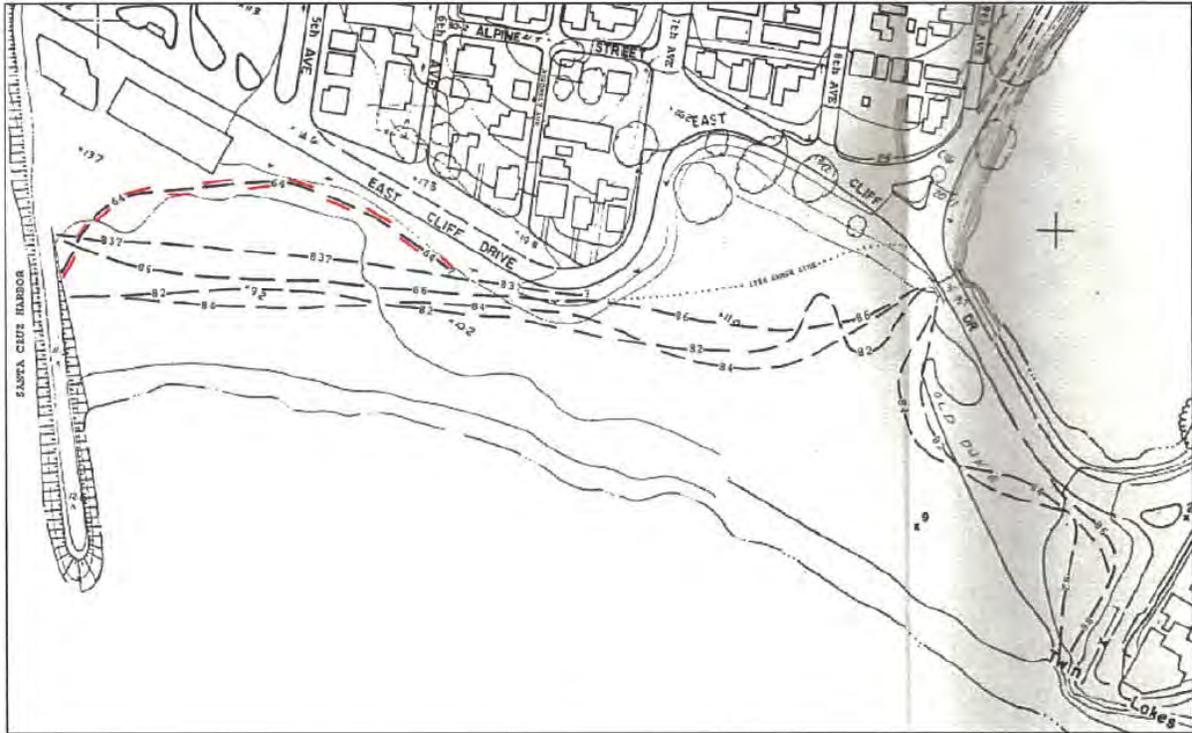
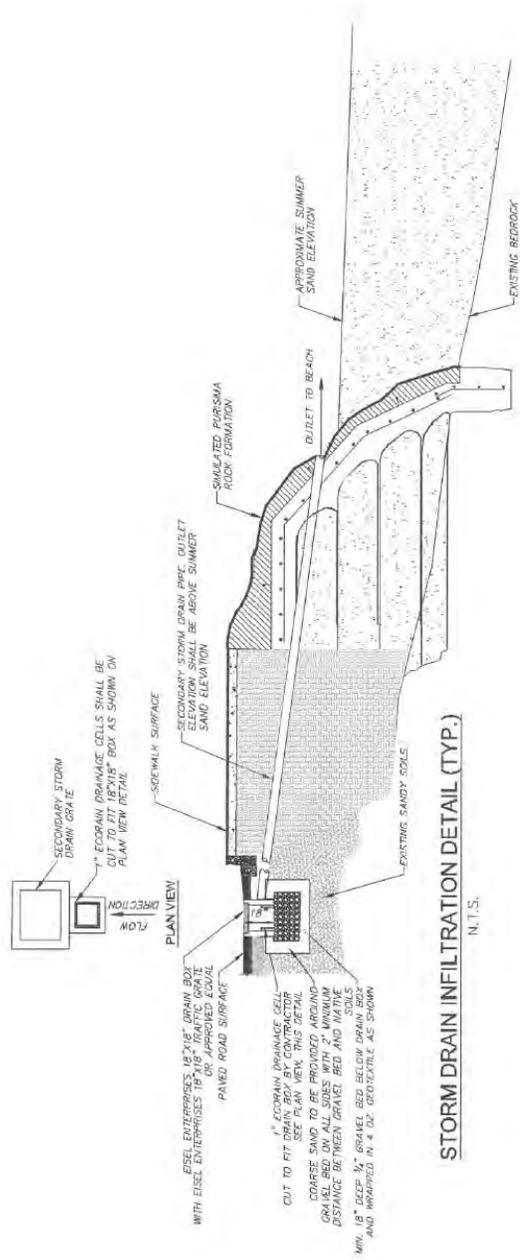


Figure 23. Shoreline position at TLSB for selected winter storms after harbor construction, 1964 (double dashed line) non-nourished beach shoreline.

Table 7. Comparison structures/structural systems alternatives.

| Alternative | Description | Constructability | Impact on Public Access During Construction | | Accommodate Storm Drainage Infiltration/Retention | Require Foundation on Bedrock | Accommodate "Natural" Sculptured "Look" | Relative Cost 1-10 | Additional Comments |
|-------------|--|---|--|---|---|--|--|--------------------|---|
| | | | Impact on Road | Impact on Beach | | | | | |
| 1 | Monolithic Cast-in-Place Concrete Structure | Requires excavation and/or winter eroded beach profile. Longer on-site construction period. Labor intensive, formwork and finishing. | Temporary impact during formwork and concrete delivery. | Project site will have to be fenced for a longer period, access restricted during forming and concrete placement and finishing. | Can be incorporated into design similar to caissons. | Yes | Could be applied on vertical surfaces. | 6 | Monolithic structure for stairs or ramp. More workers on site due to labor-intensive forming/finishing will require parking. |
| 2 | Cast-in-Place Concrete Retaining Wall | Requires excavation and/or winter eroded beach profile. Longer on-site construction period. | Temporary impact during formwork and concrete delivery. Construction of caissons is off-site. On-site impact is reduced. | Site fenced for a longer period, access restricted during forming and concrete placement and finishing. Construction of caissons is off-site. On-site impact is reduced. | Not good practice to retain storm drainage behind retaining walls. | Yes | Could be applied on vertical surfaces. | 5 | More workers on site due to labor-intensive forming/finishing will require parking. |
| 3 | Pre-Cast Caisson | Requires excavation and/or winter eroded beach profile. Caissons can be standardized for cost effective construction at casting yard. | Least time of impact compared with other alternatives. Large crane on road. Longer impact on road/traffic during installation. | Construction of caissons is off-site. On-site impact is reduced. | Gravel filled caissons will accommodate storm drainage infiltration/retention. | Yes | Can be applied to form terraced or sloping surface. | 5 | |
| 4 | Cement Deep Soil Mixing (CDSM) | Requires summer sand level in place. Requires specialized construction equipment. May need temporary platform for drilling on slope. Accommodates variable sand level, minimizes excavation. | Large drilling equipment on road. Construction of caissons is off-site. On-site impact is reduced. | Minimal impact on beach access. | Not ready. | CDSM drilled to bedrock. | Can be applied to form terraced or sloping surface. More difficult to attach in field, requires deeper anchors and more anchors due to weak material. | 7 | Will generate waste drilling product. |
| 5 | Combination CDSM and Concrete Caisson | Requires specialized construction equipment. May need temporary platform for drilling on slope. Accommodates variable sand level, minimizes excavation. | Construction of caissons is off-site. On-site impact is reduced. | Construction of caissons is off-site. On-site impact is reduced. | Gravel filled caissons will accommodate storm drainage infiltration/retention. Less volume of retention than all caisson solution because caissons are smaller for this alternative. | CDSM drilled to bedrock, Caissons founded on CDSM. | Can be applied to form terraced or sloping surface. | 8 | Will generate waste drilling product. |
| 6 | Combination CDSM and Cast-in-Place Structure | Accommodates variable sand level, minimizes excavation. May need temporary platform for drilling on slope. | Similar but reduced impact compared with all CDSM alternative. | Construction of caissons is off-site. On-site impact is reduced. | Gravel filled caissons will accommodate storm drainage infiltration/retention. Less volume of retention than all caisson solution because caissons are smaller for this alternative. | CDSM panels are built to a specified depth, can penetrate down to bedrock, eliminates need to excavate down to bedrock | Can be applied to form terraced or sloping surface. | 9 | Will generate waste drilling product. |
| 7 | Rip-Rap Revetment | Requires some excavation. | Cranes will affect road during rock placement. | Will impact back of beach during excavation for revetment replacement. | No retention. | No | No | 3 | County has stockpile of rock in storage, and could re-use some of the existing rock at the beach. |
| 8 | Mechanically Stabilized Earth | Requires somewhat more excavation than the caisson alternative, but the excavated soil is used to reconstruct the embankment with the geotextile fabric. | Minimal. | Will impact back of beach during excavation. | Not good practice to retain storm drainage behind retaining walls. | Yes | Yes | 3 | |



STORM DRAIN INFILTRATION DETAIL (TYP.)

N.T.S.

Gary B. Griggs
Registered Geologist/Certified Engineering Geologist
321 Alta Avenue, Santa Cruz, California 95060
(831) 332-9318; E-mail: griggs@ucsc.edu

June 21, 2013

Neal Coonerty
Supervisor County of Santa Cruz
701 Ocean Street, Room 500
Santa Cruz, California 95060

RE: Twin Lakes Beachfront Project

Neal,

As you requested, I am providing input on the Twin Lakes Beachfront Improvement Project, specifically the proposal to use approximately 10,000 yds³ of sand from Twin Lakes Beach to backfill the proposed bluff stabilization structure. I have worked along the Santa Cruz coastline for 45 years, and have studied the harbor and its dredging history, littoral transport rates, seasonal changes in beaches, bluff erosion, as well as storm impacts, so believe I understand this section of coastline reasonably well.

In order to assess any potential impact or the significance of using 10,000 yds³ of Twin Lakes Beach sand behind the proposed structure, it is important to compare this volume of sand to the sand budget and sand transport processes taking place at Twin Lakes. I used several different approaches to put this volume of sand in perspective.

Santa Cruz Harbor Dredging Volumes: As soon as the jetties of the Santa Cruz harbor were constructed in 1963-64, sand began to accumulate upcoast of the west jetty, widening Seabright Beach. As the littoral transport from upcoast began to work its way around the jetty and into the harbor entrance, dredging was initiated (in 1965) in order to keep the entrance channel open. The sand dredged from the harbor was then pumped onto Twin Lakes Beach to continue its path downcoast, ultimately ending up on Monterey Submarine Canyon. Annual dredging has been required ever since, although annual dredging volumes increased as Seabright Beach progressively widened and more sand entered the harbor entrance.

The harbor dredging history has been well documented (Griggs and Johnson, 1976; and Strelow Consulting, 2008). The port district assumed dredging responsibility beginning in 1997 so dredging volumes for the past 16 years are believed to be most representative. During this time period, the volumes of sand dredged have varied from 160,000 to 457,000 yds³ annually, a range of nearly 300,000 yds³. This *range in annual sand volume removed* from the harbor and discharged onto Twin Lakes Beach is 30 times greater than the total volume of sand proposed to be used in the backfill.

The *average annual dredging volume* for the 1997-2013 period is 276,000 yds³. The amount of sand proposed to be used for fill is only 3.6% of the average volume of sand pumped from the harbor entrance onto Twin Lakes Beach each year.

Impact of a Large El Niño Event on Twin Lakes Beach: The coast of California experienced very large El Niños during the winters of 1982-83 and 1997-98. Photographs taken during both winters that show Twin Lakes Beach eroded down to bedrock (see attached photographs). In addition, a United States

Geological Survey geologist, who I was supervising for a MS degree, focused her research on the impact of the 1997-98 event on the beaches of Santa Cruz County. She surveyed ten beaches along the length of the county coastline approximately monthly from October 1997 (before the El Niño event arrived), through the winter months of maximum beach erosion, and then completed her last surveys in October 1998, when conditions had returned to normal. I am attaching the extremes from the beach profiles across Twin Lakes Beach. Beach width was narrowed by 150 feet and the beach lost 10.5 feet in elevation (see photograph) for an approximate total volume loss of 127,000 yds³ for that winter. Despite the removal of this large volume of sand, by October of 1998, due to sand moving back on shore, and the discharge of nearly 400,000 yds³ of sand from harbor dredging, the beach completely recovered and was actually wider in October 1998 than in October 1997. Twin Lakes Beach like all the beaches of Santa Cruz County, undergo large seasonal changes and quickly recover.

The 10,000 yds³ of back beach sand proposed for use behind the protective structure represents 3.3% of the range in annual dredging volumes (300,000 yds³) and 3.6% of the average annual amount of sand added to Twin Lakes Beach through harbor dredging. Over a ten-year period, the volume proposed for fill is 0.3% of the total amount of sand that will be moved by littoral drift along this stretch of shoreline. To reiterate, the 300,000 yds³ range in annual dredged volume is thirty times greater than the 10,000 yds³. It is quite honestly in the background noise and insignificant considering littoral transport rates along this beach.

Considering the very large environmental impacts of transporting 10,000 yds³ of sand to the site from a sand source that is some miles away, the fuel consumption and carbon emissions of about 570 double transfer truck loads being among the most significant, it is my professional opinion that the use of the local beach sand is a far less environmentally disruptive solution and would have no significant or recognizable long-term impacts on Twin Lakes Beach.



Twin Lakes with beach nearly completely eroded, January 1983.



Twin Lakes January 1998 with approximately 10 feet of vertical sand loss, January 1998



Twin Lakes Beach profiles before, during and after 1997-98 El Niño.

I hope this analysis is useful and please don't hesitate to contact me if additional questions arise.

Sincerely,

A handwritten signature in black ink that reads "Gary B. Griggs". The signature is written in a cursive, slightly slanted style.

Gary B. Griggs

References Cited

Griggs, G.B. and Johnson, R.E., 1976. The Effects of the Santa Cruz Small Craft Harbor on Coastal Processes in Northern Monterey Bay, California. *Environmental Geology* 1: 229-312.

Strelow Consulting, 2008. Santa Cruz Harbor Dredge Management Plan. Prepared for Monterey Bay National Marine Sanctuary.

DISCLOSURE OF EX PARTE COMMUNICATIONS

Name or description of project:

Twin Lakes Beach, Santa Cruz

Date and time of receipt of communication:

April 18, 2013; 10:00am

Location of communication:

San Mateo County Board of Supervisors Office, Redwood City

Type of communication:

In person meeting

Person(s) in attendance at time of communication:

Neil Coonerty, Andy Schiffin

Person(s) receiving communication:

Carole Groom

Detailed substantive description of the content of communication:

(Attach a copy of the complete text of any written material received.)

I received an overview of the project covering its specific details, history, and current status with the Coastal Commission. Project applicants are hopeful this item will come before the Commission in August. Outstanding issues include mooring and the use of sand once its removed.

Date: May 7, 2013

Signature of Commissioner: Carole Groom

RECEIVED

MAY 07 2013

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

Manna, Jeannine@Coastal

From: Carl, Dan@Coastal
Sent: Wednesday, July 17, 2013 2:55 PM
To: Manna, Jeannine@Coastal
Subject: FW: Twin Lakes Beachfront Project/Santa Cruz County

Exparte for report exhibits (sans the cl and dc forwards). Let me know if q's

From: Lester, Charles@Coastal
Sent: Wednesday, July 17, 2013 9:37 AM
To: Carl, Dan@Coastal; Cavalleri, Madeline@Coastal
Subject: FW: Twin Lakes Beachfront Project/Santa Cruz County

Charles Lester
Executive Director
California Coastal Commission
www.coastal.ca.gov
45 Fremont Street, Suite 2000
San Francisco, CA 94105
415-904-5202

From: Jana Zimmer [<mailto:zimmerccc@gmail.com>]
Sent: Wednesday, July 17, 2013 9:36 AM
To: Neal Coonerty
Cc: Lester, Charles@Coastal
Subject: Re: Twin Lakes Beachfront Project/Santa Cruz County

Supervisor Coonerty,

I will be out of the country until the eve of the meeting in Santa Cruz, and will not be able to set up a time for any ex partes for the August meeting. However, I will be reviewing staff reports and responses, to the extent i can do so remotely, so you are free to e mail me any additional materials, particularly if there are any concerns with the staff report or if there is any opposition you wish to respond to. Just be sure to copy staff with any material you send to me.

On Wed, Jul 17, 2013 at 9:14 AM, Neal Coonerty <BDS031@co.santa-cruz.ca.us> wrote:

Dear Commissioner Zimmer:

I am writing regarding an important coastal access project that will be heard by the Coastal Commission during the August meeting in Santa Cruz: the Twin Lakes Beachfront Coastal Access Public Improvement project.

This project will drastically improve public access to a very popular State Beach in the unincorporated portion of Santa Cruz County. Twin Lakes State Beach currently serves 500,000 visitors per year and has no bike lanes, no pedestrian path and the parking is completely disorganized, cars often parking in deep sand. This project would provide bike lanes, a pedestrian path, organized parking off the sand and ADA access to the beach all while preserving the natural character of this popular beach.

Santa Cruz County has worked collaboratively with Coastal Commission staff as this project has progressed and the project has strong support from residents, local businesses, and community organizations.

I hope you will take a look at the attached information to learn more about this important project.

I would appreciate the opportunity to speak to you via phone or in person about this project so I will be contacting your office to set up an appointment. Thank you.

Sincerely,

Neal Coonerty, Supervisor

Third District

Santa Cruz County



JOHN J. PRESLEIGH
DIRECTOR OF PUBLIC WORKS

County of Santa Cruz

DEPARTMENT OF PUBLIC WORKS
PARKS, OPEN SPACE, AND CULTURAL SERVICES DIVISION

979 17TH AVENUE, SANTA CRUZ, CA 95062

(831) 454-7901 FAX: (831) 454-7940 TDD: (831) 454-7978

July 24, 2013

CALIFORNIA COASTAL COMMISSION
725 Front Street, No. 300
Santa Cruz, CA 95060

SUBJECT: LETTER OF SUPPORT FOR THE TWIN LAKES BEACHFRONT COASTAL
PUBLIC ENHANCEMENT PROJECT

Dear Commissioners:

The Santa Cruz County Parks and Recreation Commission strongly supports the Twin Lakes Beachfront Project, as it is an important Coastal Public Access Enhancement Project. This project will provide year-round access to the Twin Lakes State and Harbor Beaches in the Live Oak area of Santa Cruz County. These beaches receive over 500,000 visitors a year! Without this project, year-round access is limited due to low winter sand and winter scour conditions. Also, currently, there are public safety and environmental issues created by conflicts between pedestrians, bicycles, and cars as there are no walkways, no bike lanes, no beach drop-off safety zones, inadequate room for boats on trailers, and cars routinely park on the sand.

The project will improve existing seasonal coastal access and will provide year-round coastal access with the development of landscaped multi-modal and accessible pedestrian walkways, a ramp, and stairs to the Twin Lakes and Harbor beaches. These improvements will be constructed within a sculpted bluff protection structure designed to mimic the native geologic formations and respond to the fluctuating sand conditions. Landscaping will utilize native and drought tolerant plantings. These improvements will implement the Monterey Bay National Marine Sanctuary Scenic Trail and the California Coastal Access Trail. The project will address public safety, environmental, and scenic concerns by the addition of: bike lanes, traffic circulation improvements, a beach drop-off zone, organized parking located off the beach, and the enhancement of storm water and scenic qualities through incorporation of Low Impact Development practices, landscaping, and the removal of rip-rap.

Also, interpretive signage will be provided for the Monterey Bay National Scenic Trail and to also describe the historical use of horse-drawn trolleys, street-cars, and steam engines by locals and tourists alike to access the Twin Lakes and Harbor Beaches in the late 1800s and early 1900s. Scenic qualities of the traffic circle, located on East Cliff Drive at the intersection of 5th Avenue and the entrance to the lower Santa Cruz Harbor, will also be enhanced by landscaping and the placement of a public art piece. The public art piece will depict two native pelicans in flight.

Based on these many important public benefits, the Santa Cruz County Parks and Recreation Commission requests your approval of this important Coastal Public Access Enhancement Project.

Yours truly,

A handwritten signature in black ink, appearing to read 'S. Bennett', with a horizontal line extending to the right.

STEVEN BENNETT, CHAIR
Santa Cruz County Parks
and Recreation Commission

SLH:mh

TwinlakesLtr-CCC.doc

Manna, Jeannine@Coastal

From: Allison Endert <BDS036@co.santa-cruz.ca.us>
Sent: Wednesday, July 24, 2013 3:50 PM
To: Manna, Jeannine@Coastal
Subject: FW: Twin Lakes Beachfront Coastal Public Access Project

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jeannine,

Santa Cruz County Parks Commissioner Jim Lang tried to e-mail his letter to you directly, but wasn't able to get it to go through for some reason. He asked me to pass it along to you.

Sincerely,

Allison Endert
County Supervisor's Analyst
Supervisor Neal Coonerty - Third District
831-454-2200

-----Original Message-----

From: bblang@cruzio.com [<mailto:bblang@cruzio.com>]
Sent: Wednesday, July 24, 2013 3:46 PM
To: Allison Endert
Subject: Twin Lakes Beachfront Coastal Public Access Project

July 23, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express my support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year, by providing improved access to this valuable resource.

I urge you to support this project.

Sincerely,

Jim Lang
Santa Cruz County Parks Commissioner



County of Santa Cruz

BOARD OF SUPERVISORS

701 OCEAN STREET, SUITE 500, SANTA CRUZ, CA 95060-4069
(831) 454-2200 • FAX: (831) 454-3262 TDD: (831) 454-2123

JOHN LEOPOLD
FIRST DISTRICT

ZACH FRIEND
SECOND DISTRICT

NEAL COONERTY
THIRD DISTRICT

GREG CAPUT
FOURTH DISTRICT

BRUCE MCPHERSON
FIFTH DISTRICT

July 23, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: TWIN LAKES BEACHFRONT COASTAL PUBLIC ACCESS PROJECT

Dear Chair Shallenberger and Members of the Commission:

I am writing to express my strong support for the Twin Lakes Beachfront project and to urge you to approve this important coastal access project.

This project falls within the district I represent on the Santa Cruz Board of Supervisors and I have worked extensively with community members, stakeholders, and regulators on this project for more than six years.

This project is important because it will drastically improve public access to Twin Lakes State Beach. Twin Lakes State Beach currently serves approximately 500,000 visitors per year, has no bike lanes or pedestrian path, and the parking is completely disorganized, with cars often parking in deep sand. This project would provide bike lanes, a pedestrian path, organized parking off the sand, and ADA access to the beach, all while preserving the natural character of this popular beach.

The current conditions in this area lead to frequent conflicts between cars, bikes, and pedestrians. This proposed project, which has resulted from years of community dialogue, will dramatically improve the safety and accessibility of this area.

This project is in line with the Coastal Act and the County has worked in close consultation with Coastal Commission staff as this project has moved forward.

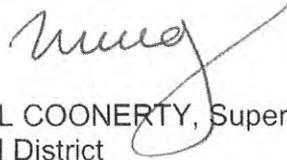
This is a unique project where a local government is proposing to spend millions of dollars improving access to a State beach. The improvements this project provides will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year—both residents and visitors alike.

July 23, 2013
Page 2

I urge you to support this project.

If you have any questions about this project, please don't hesitate to call me at 831-454-2200.

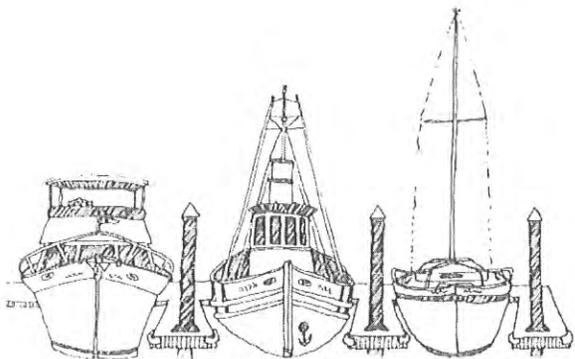
Sincerely,

A handwritten signature in black ink, appearing to read "Neal Coonerty", with a long horizontal stroke extending to the right.

NEAL COONERTY, Supervisor
Third District

NC:ted

1510H3



SANTA CRUZ HARBOR

*Gateway to the Monterey Bay
National Marine Sanctuary*

July 23, 2013

California Coastal Commission
Board of Commissioners
c/o: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

SUBJECT: Twin Lakes Beachfront Coastal Public Access Project

Dear Honorable Commission Members:

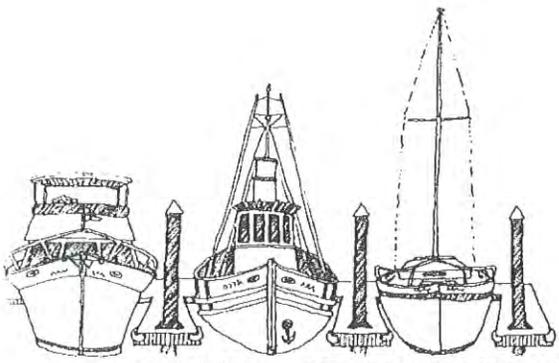
The Santa Cruz Port District Board of Port Commissioners supports the County's proposed Twin Lakes Beachfront Coastal Public Access project.

A portion of the proposed project will be constructed on Harbor Beach, lands owned by the Santa Cruz Port District. Harbor Beach and the adjoining Twin Lakes State Beach are visited by thousands of locals and tourists annually. The project will include needed pedestrian and traffic safety features, while ensuring the Port District can continue its annual entrance dredging and beach nourishment efforts - all of which provide for continuing coastal access for boaters, paddlers and beach-goers.

We encourage the Coastal Commission to approve this long awaited project.

Sincerely,

Stephen Reed
Vice-Chairman, Santa Cruz Port District Commission



SANTA CRUZ HARBOR

*Gateway to the Monterey Bay
National Marine Sanctuary*

July 31, 2012

Ms. Sheila McDaniel, Planner
Santa Cruz County Planning Department
701 Ocean Street, 4th Floor
Santa Cruz, California 95060

Subject: *East Cliff Drive Pedestrian Improvements Phase III*

Dear Ms. McDaniel:

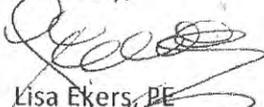
I am writing to express our support for the above-referenced project and encourage the County Planning Department to move it through the permitting process.

Port District staff has been meeting with the County and I am confident that with good communication between the Port District, the County and the construction contractor, any issues related to the construction process will be readily resolved. We also believe that, with some minor operational adjustments, the Port District will be able to comply with the coastal and air quality permit requirements for its ongoing operations following construction of this project. Based on our knowledge of the project, it does not appear that those permits will need to be amended at this time.

The County will need to acquire an easement from the Port District in order to construct the project once the necessary approvals from the County and the Coastal Commission are in place. Negotiations for that easement are expected to produce an agreement between our two agencies that will address any remaining issues.

Please feel free to contact me if you have questions or need any additional information. We look forward to working with the County on this and other future endeavors.

Sincerely,



Lisa Ekers, PE
Port Director

Cc: Supervisor Neal Coonerty
John Presleigh, Director of Public Works



Santa Cruz District
303 Big Tree Park Road
Felton, Ca 95018

October 18, 2012

RE: East Cliff Drive Pedestrian Improvements Phase III, Application No. 111134

Sheila McDaniel
County of Santa Cruz
Planning Department
701 Ocean Street, 4th Floor
Santa Cruz, CA 95060

Dear Commissioners and Ms. McDaniel:

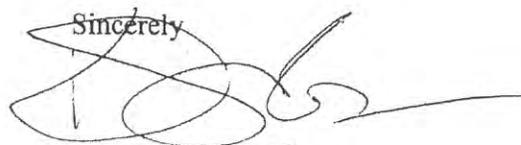
I am writing to express State Parks' support for the East Cliff Drive Pedestrian Improvements also known as the Twin Lakes Beachfront Project.

The project will provide a direct and immediate benefit to the recreating public by enhancing access to Twin Lakes State Beach.

The project will maximize pedestrian access and safety, provide for safe bicycle access, and improve parking and vehicular access. The project will also provide an ADA ramp to facilitate beach access.

These improvements will benefit Twin Lakes State Beach and the hundreds of thousands of people who visit this beach each year.

This project is consistent with the mission of California State Parks and I am pleased to support it.

Sincerely


Chet Bardo
District Superintendent
Santa Cruz District, California State Parks

Manna, Jeannine@Coastal

From: Bob Montague <bob.montague@sbcglobal.net>
Sent: Tuesday, July 23, 2013 3:29 PM
To: Manna, Jeannine@Coastal
Subject: Twin Lakes Beachfront Coastal Public Access Project

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express my support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As an avid bicyclist I am keenly aware of the frequent conflicts between cars, bikes and pedestrians in this area. The current situation is unsafe. Adding bike lanes and a pedestrian path will drastically improve the safety and accessibility of this area.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

I urge you to support this project.

Sincerely,
Bob Montague

Manna, Jeannine@Coastal

From: James Sorensen <james.sorensen101@sbcglobal.net>
Sent: Monday, July 22, 2013 10:27 PM
To: Manna, Jeannine@Coastal
Subject: Twin Lakes Beachfront Coastal Public Access Project

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

Subject: Support For Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

This message is to show my strong support for the Twin Lakes Beachfront Project in Santa Cruz

Increasing public beach use causes increasing congestion and poorer access for emergencies as well as general uses.

Features of this project will greatly improve the public access to the beach by providing a. improved pedestrian passage across East Cliff

Drive, b. better parking arrangement and auto access, and c. bike lanes. Completion of these features will improve safety and benefit the general use and pleasure by the public. These improvements will reduce friction between various uses by vehicles and people of all ages and intentions.

It is my strong and sincere hope that you will each vote to support this Twin Lakes Beach Project.

Yours truly,

James F. Sorensen
2511 East Cliff Drive
Santa Cruz, CA 95065

Manna, Jeannine@Coastal

From: Amelia Conlen <director@peoplepowersc.org>
Sent: Monday, July 22, 2013 12:22 PM
To: Manna, Jeannine@Coastal
Subject: RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners,

On behalf of People Power, I am writing to express my support for the Twin Lakes Beachfront project. We are an advocacy organization that strives to improve conditions for cyclists and pedestrians in Santa Cruz County.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As an avid cyclist I am keenly aware of the frequent conflicts between cars, bikes and pedestrians in this area. Adding bike lanes and a pedestrian path will drastically improve the safety and accessibility of this area.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

I urge you to support this project.

Sincerely,

Amelia Conlen, Director
People Power of Santa Cruz County
703 Pacific Avenue
Santa Cruz, CA 95060
(831) 425-0665
director@peoplepowersc.org
<http://www.peoplepowersc.org/>
<http://www.facebook.com/peoplepowersc>
Twitter: @peoplepowersc

July 19, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I'm writing to express Friends of Santa Cruz State Parks' strong support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

This project is a great opportunity to improve the safety and accessibility of Twin Lakes State Beach and will benefit the hundreds of thousands of people who visit each year.

I urge you to support this project.

Sincerely,

Bonny Hawley, Executive Director
Friends of Santa Cruz State Parks

Cc: Chet Bardo, State Parks
Kirk Lingenfelter, State Parks
Supervisor Neal Coonerty

Manna, Jeannine@Coastal

From: Leo Jed <leojed@gmail.com>
Sent: Monday, July 22, 2013 11:26 AM
To: Manna, Jeannine@Coastal
Subject: Twin Lakes Beachfront Coastal Public Access Project

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express my support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As an avid bicyclist I am keenly aware of the frequent conflicts between cars, bikes and pedestrians in this area. The current situation is unsafe. Adding bike lanes and a pedestrian path will drastically improve the safety and accessibility of this area.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

I urge you to support this project.

Sincerely,

Leo Jed

1

Manna, Jeannine@Coastal

From: Bart Coddington <bikerbart@sbcglobal.net>
Sent: Sunday, July 21, 2013 9:14 PM
To: Manna, Jeannine@Coastal
Cc: Bart Coddington
Subject: Twin Lakes Beachfront Project - Santa Cruz

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express my support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As a member of the Santa Cruz County Cycling Club, We frequently have club rides along the coast. We love our coast and thank the commission for doing what they can to keep it open & safe. I am aware of the frequent conflicts between cars, bikes and pedestrians in this area. The current situation is unsafe. Adding bike lanes and a pedestrian path will drastically improve the safety and accessibility of this area.

These improvements will benefit the tens of thousands of people who visit Twin Lakes State Beach each year.

I urge you to support this project.

Sincerely,
Barton T. Coddington
3025 Arlington Dr
Aptos, CA 95003-3170
831-475-5234



Linda Wilshusen
Planning and Project Management
1115 Live Oak Avenue
Santa Cruz, CA 95062

July 20, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont St., Suite 2000
San Francisco, CA 94105

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I'd like to convey my strong support for the Twin Lakes Beachfront Project in Santa Cruz County. This popular state beach serves over a half-million visitors & local residents year-round.

The project is long overdue. As a local resident of this unincorporated urban area, I frequently walk along Twin Lakes - these days with my grandson - & long-standing unsafe conditions have only become exacerbated over the years by increased automobile, bicycle, & pedestrian traffic & parking demand.

The Twin Lakes Beachfront Project in will provide new, safe, and accessible pedestrian walkways; improved automobile access and parking; safer bike lanes; significantly improved beach access; and a significantly improved visual and aesthetic environment along this heavily used segment of popular Twin Lakes State Beach. It is my understanding that these improvements can all be made within existing public rights-of-way and/or on public property.

Numerous public meetings have been held for more than a decade about the need for and design of this project. There is a huge amount of support in the community for it, demonstrated by a strong consensus in well-attended design-process community meetings. We're all looking forward to a safer & more enjoyable beach experience once this project is completed!

Thank you very much for your consideration of my comments.

Sincerely,

Linda Wilshusen

cc: Supervisors Coonerty & Leopold

July 19, 2013

Mary K. Shallenberger, Chair
California Coastal Commission
45 Fremont Street
Suite 2000
San Francisco, CA 94105-2219

Dear Chair Shallenberger and Commission Members,

I am writing in support of the Twin Lakes Beachfront Access Improvement Project which will be heard by the Coastal Commission during your August 14th-15th meeting in Santa Cruz. Sometimes a picture is worth a thousand words so at the bottom of this letter please see several pictures I took today of the current parking/visitor/bike/pedestrian condition on East Cliff Drive next to the Santa Cruz Harbor. Just consider these picture are not even on a weekend.

As a longtime resident of the Santa Cruz Harbor area I walk along this area many times each month and see the challenges faced by both visitors and residents trying to access the adjacent State Beach, as well as simply trying to park their cars. When the Santa Cruz Harbor was built in 1960 informal roadways such as East Cliff Drive were acceptable given the small population of Santa Cruz (84,000) today the County has 262,000 and this does not even consider the additional millions in the San Francisco Bay Area who visit the Santa Cruz Harbor and its beaches.

The proposed Twin Lakes Beachfront Access Improvement Project was designed through an extensive public participation process and many changes were made to accommodate as many considerations as possible. What is now before your Commission is the result of this long process and I think it is a vast improvement over the conditions you see in the below.

I am not sure how many hundreds of thousands of beach goers visit the beach next to East Cliff Drive, however it must be one of the major warm beaches in Northern California and it is probably one of the few urban beaches where your parking options are so confused.

Please approve the Twin Lakes Beachfront Access Improvement Project it is a worthy project, decades overdue.

Sincerely,



Joe H. Hall



Manna, Jeannine@Coastal

From: RLACA@aol.com
Sent: Friday, July 19, 2013 7:30 AM
To: Manna, Jeannine@Coastal
Cc: rlaca@aol.com; calgary1947@gmail.com
Subject: Twin Lakes Beachfront Coastal Public Access Project

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express my support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As an avid bicyclist I am keenly aware of the frequent conflicts between cars, bikes and pedestrians in this area. The current situation is unsafe. Adding bike lanes and a pedestrian path will drastically improve the safety and accessibility of this area.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

I urge you to support this project.

Sincerely,
Rosemary Anderson

Manna, Jeannine@Coastal

From: Laura Mitchler <lauramitchler@gmail.com>
Sent: Thursday, July 18, 2013 5:58 PM
To: Manna, Jeannine@Coastal
Subject: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express my support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As an avid bicyclist I am keenly aware of the frequent conflicts between cars, bikes and pedestrians in this area. The current situation is unsafe. Adding bike lanes and a pedestrian path will drastically improve the safety and accessibility of this area.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

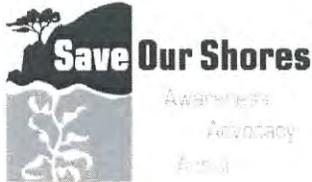
I urge you to support this project.

Sincerely,
Laura Mitchler

Manna, Jeannine@Coastal

From: Grace Voss <gracevoss@sbcglobal.net>
Sent: Thursday, July 18, 2013 5:12 PM
To: Manna, Jeannine@Coastal
Subject: twin lakes bike lanes

dear jeannie...i am an avid bicyclist who lives within a mile of twin lakes state beach...i travel east cliff drive, which adjoins twin lakes state beach, on many occasions with the local bicycle club, the santa cruz county cycling club, and on my own...a bike lane on this busy section of east cliff drive would make travel for both motorists, bicyclists and beach goers so much safer!...currently the road is narrow and, during the summer tourist season especially, it is dangerous for all who venture into this area...please do what you can to make this a safer environment for bicyclists, pedestrians and motorists...thank you! grace



345 Lake Avenue, Suite A
Santa Cruz, CA 95062
831.462.5660
F. 831.462.6070
www.saveourshores.org

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

July 18th, 2013

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

On behalf of Save Our Shores, I am writing to express my strong support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

Save Our Shores hosts multiple beach cleanups at Twin Lakes State Beach every year and we are keenly aware of the frequent conflicts between cars, bikes and pedestrians in this area. The current situation is unsafe and this project is a great opportunity to drastically improve the safety and accessibility of this area.

The improvements this project provides will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

I urge you to support this project.

Sincerely,

Laura Kasa
Executive Director of Save Our Shores

Manna, Jeannine@Coastal

From: Byron and Anne Thomas <bathomas59@pacbell.net>
Sent: Thursday, July 18, 2013 3:32 PM
To: Manna, Jeannine@Coastal
Cc: Byron and Anne Thomas; Myrna Sherman
Subject: Twin Lakes Beachfront project

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

We are writing to express our enthusiastic support for the Twin Lakes Beachfront project in Santa Cruz County, CA.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As avid bicyclists, we are keenly aware of the frequent conflicts between cars, bikes and pedestrians in this area. The current situation is unsafe. Adding bike lanes and a pedestrian path will very significantly improve the safety and accessibility of this area.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

We strongly urge you to support this project.

Sincerely,

Byron and Anne Thomas
Scotts Valley, CA

Byron and Anne Thomas

Manna, Jeannine@Coastal

From: marilyn marzell <marilynmarzell2000@yahoo.com>
Sent: Thursday, July 18, 2013 12:21 PM
To: Manna, Jeannine@Coastal

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express my support for the Twin Lakes Beachfront project. As a cyclist and lover of the coast, I am impressed by the positive nature of the project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As an avid bicyclist I am keenly aware of the frequent conflicts between cars, bikes and pedestrians in this area. The current situation is unsafe. Adding bike lanes and a pedestrian path will drastically improve the safety and accessibility of this area.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

I urge you to support this project.

Sincerely,

Marilyn Marzell
5351 Plateau Dr
Felton, CA 95018

Manna, Jeannine@Coastal

From: Howie (Chaim) Schneider <chaim@mac.com>
Sent: Thursday, July 18, 2013 11:32 AM
To: Manna, Jeannine@Coastal
Subject: Twin Lakes Beachfront Coastal Public Access Project

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

Dear Coastal Commissioners:

I am writing to express my support for the Twin Lakes Beachfront project.

This project will provide an ADA ramp at Twin Lakes State Beach which will make it possible for disabled local residents and visitors to access this wonderful beach safely. This is of great importance to the disabled community! The other important benefits of this project are new, safe and accessible pedestrian walkways; improved automobile access and parking; bike lanes; and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

These improvements will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

I urge you to support this project.

Sincerely,

Howie Schneider, member
Santa Cruz County Commission on Disabilities

Manna, Jeannine@Coastal

From: Myrna Sherman <calgary1947@gmail.com>
Sent: Thursday, July 18, 2013 10:30 AM
To: Manna, Jeannine@Coastal
Cc: Cory Caletti; Grace Voss
Subject: Twin Lakes Beachfront Project= Improved Bicyclist Safety

As a member of the RTC, cycling committee, a board member and Rides Director of the Santa Cruz County Cycling club and an avid cyclist, I would like to lend my support to Twin Lakes Beachfront Project= Improved Bicyclist Safety project.

Thanks,

Myrna Sherman
831-419-1174

-
-
A-

Dear Commissioner:

I am writing regarding an important coastal access project that will be heard by the Coastal Commission during the August meeting in Santa Cruz: the Twin Lakes Beachfront Coastal Access Public Improvement project.

This project will drastically improve public access to a very popular State Beach in the unincorporated portion of Santa Cruz County. Twin Lakes State Beach currently serves 500,000 visitors per year and has no bike lanes, no pedestrian path and the parking is completely disorganized, cars often parking in deep sand. This project would provide bike lanes, a pedestrian path, organized parking off the sand and ADA access to the beach all while preserving the natural character of this popular beach.

Santa Cruz County has worked collaboratively with Coastal Commission staff as this project has progressed and the project has strong support from residents, local businesses, and community organizations.

I hope you will take a look at the attached information to learn more about this important project.

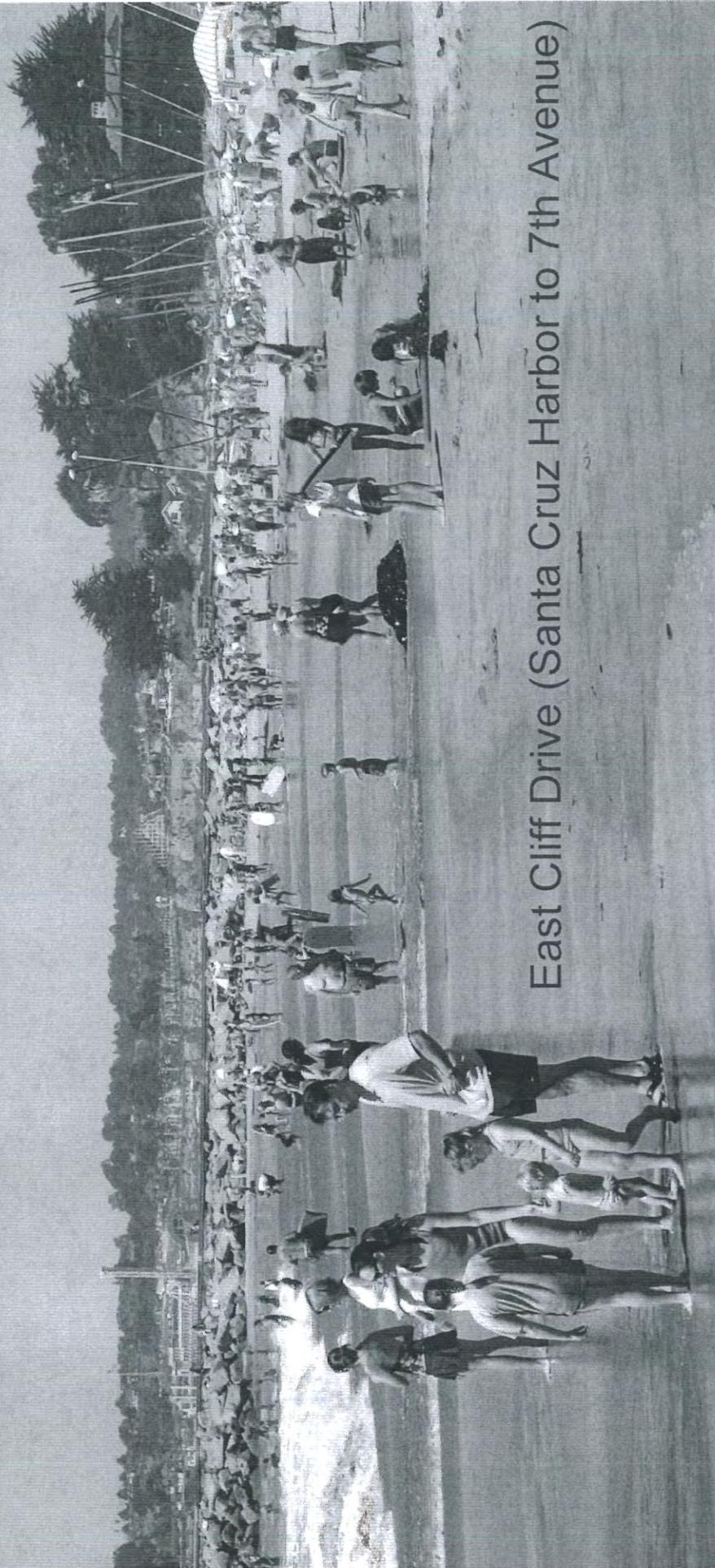
I would appreciate the opportunity to speak to you via phone or in person about this project. Please let me know the best way set up an appointment with you. Thank you.

Sincerely,

Neal Coonerty, Supervisor
Third District
Santa Cruz County
831-454-2200

TWIN LAKES BEACHFRONT PROJECT

A Coastal Public Access Enhancement Project



East Cliff Drive (Santa Cruz Harbor to 7th Avenue)

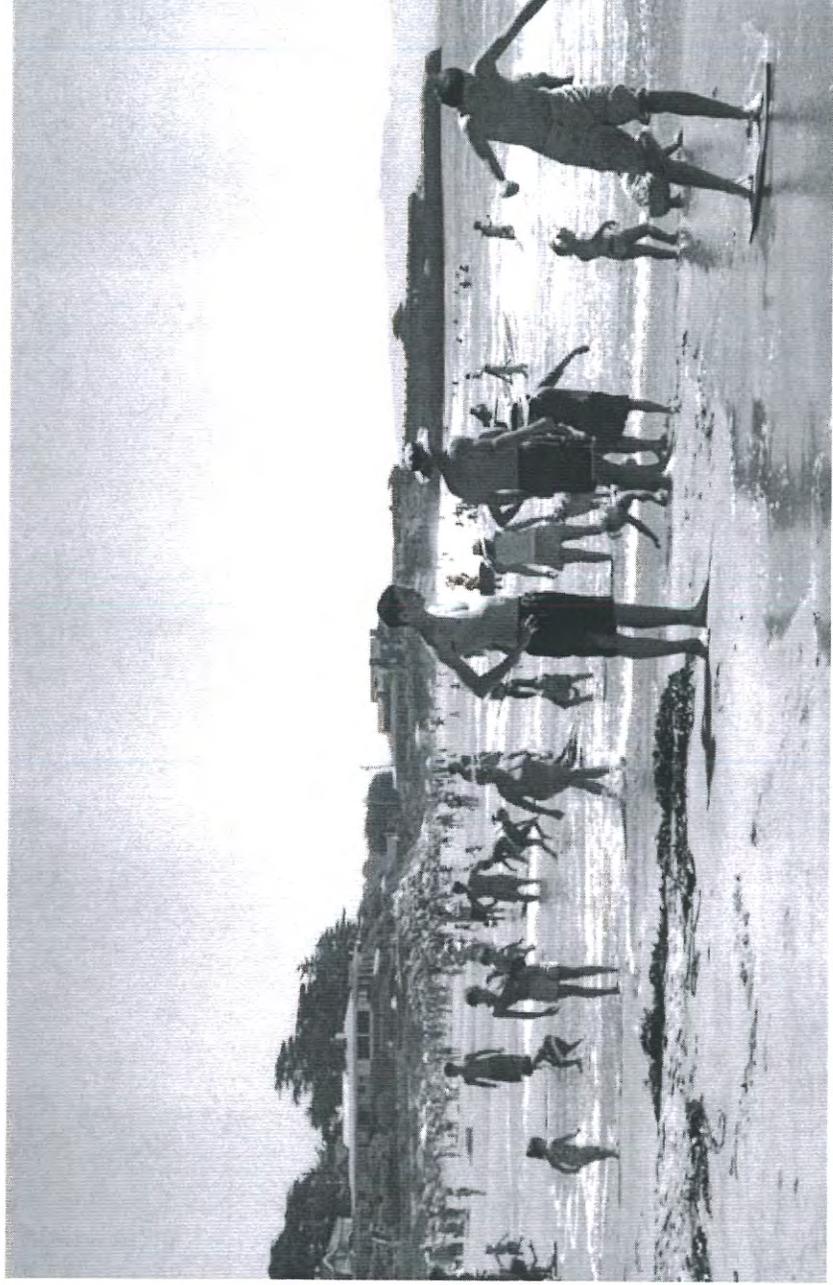


Santa Cruz County Department of Public Works

Why Do We Need This Project?

Existing Conditions:

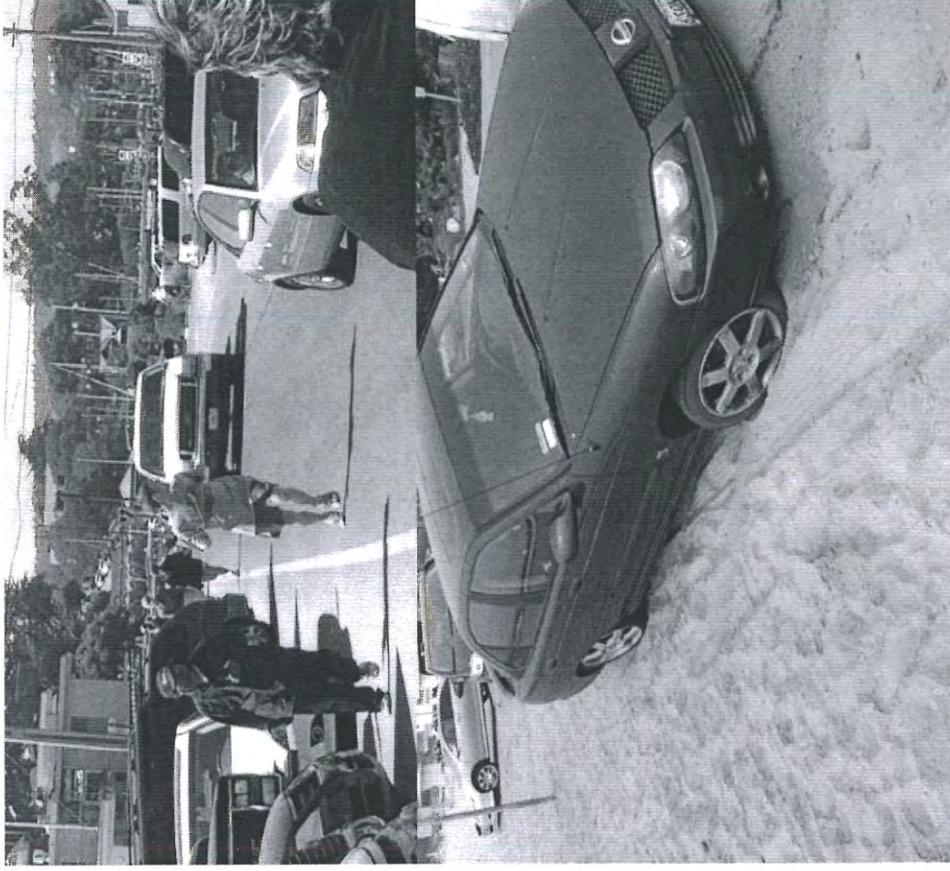
State Parks Estimates that One Half Million People Visit Twin Lakes Beach Annually.



Why Do We Need This Project?

Existing Conditions:

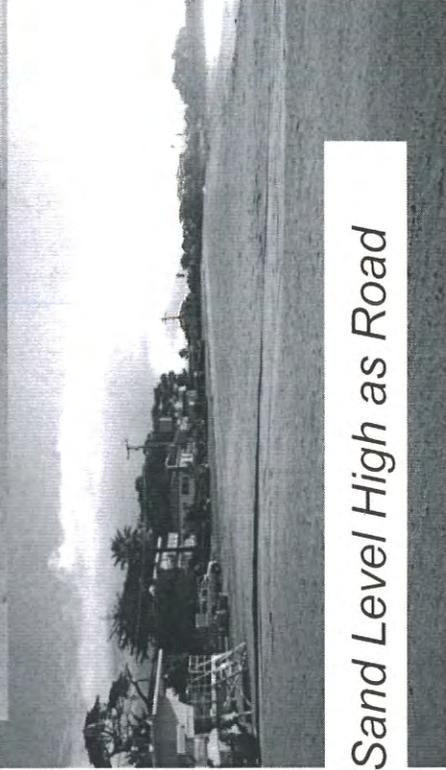
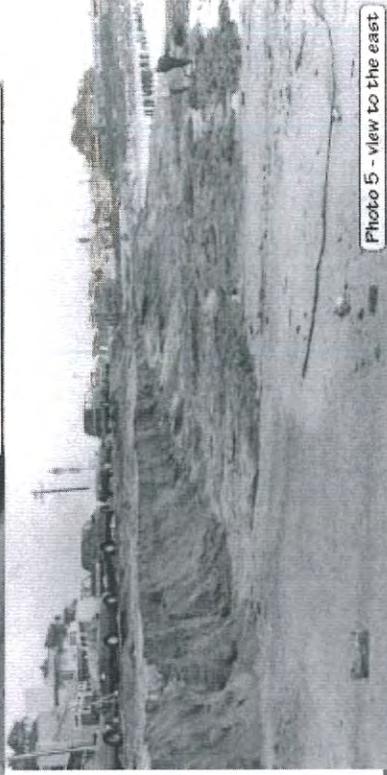
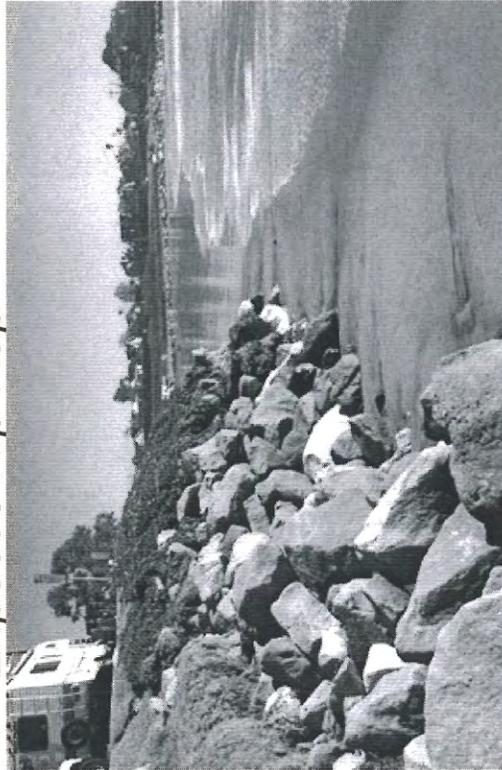
- ❖ *No Walkways- Conflicts with Cars & Pedestrians*
- ❖ *No Bike Lanes- Conflicts Between Cars, Bikes & Pedestrians*
- ❖ *Parking Encroachments Onto Beach*
- ❖ *Vehicular Conflicts – Travel Lanes Too Narrow at Circle*
- ❖ *No Beach Drop-Off Point*



Existing Conditions:

Winter Scour:

- ❖ *Danger to Road & Utilities*
- ❖ *Limits Winter Access*
- ❖ *Exposes Rip-Rap*



Typical Summer: Sand Level High as Road

Twin Lakes Beachfront- A Coastal Public Access Enhancement Project

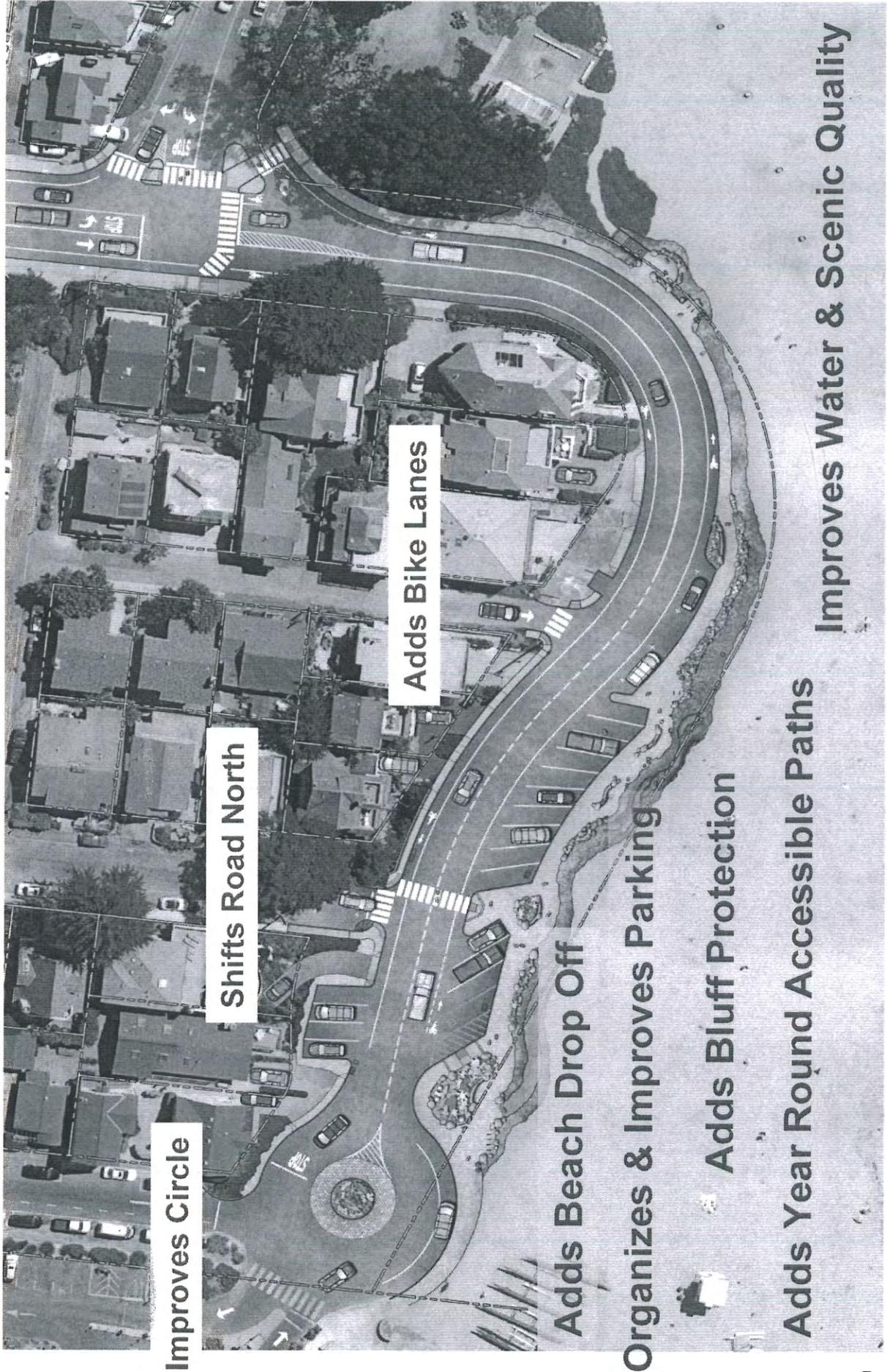
Existing Conditions:

Santa Cruz Harbor is Dredged Annually
Dredged Sand is Used to Nourish Twin Lakes Beach



- ❖ Volumes of Sand Dredged Vary from 160,000 to 457,000 yds³ Annually.
- ❖ Annual Volumes Vary By A Range of Nearly 300,000 yds³.
- ❖ *Average Annual Dredging Volume* for Last 16 Years is 276,000 yds³ & is Placed On or Near Twin Lakes Beach

Proposed Plan:



Improves Circle

Shifts Road North

Adds Bike Lanes

Adds Beach Drop Off

Organizes & Improves Parking

Adds Bluff Protection

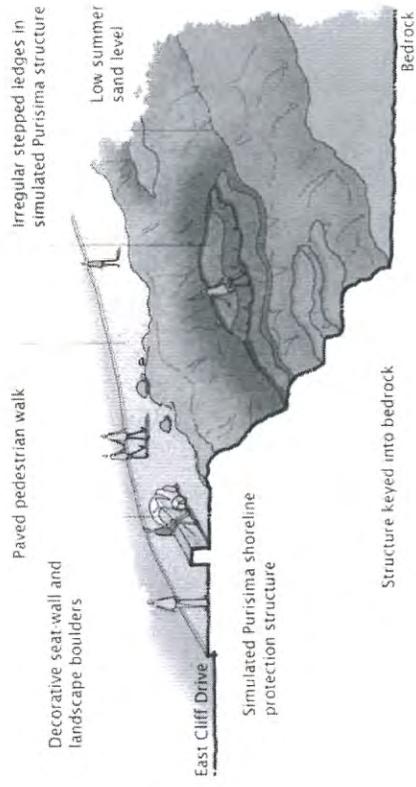
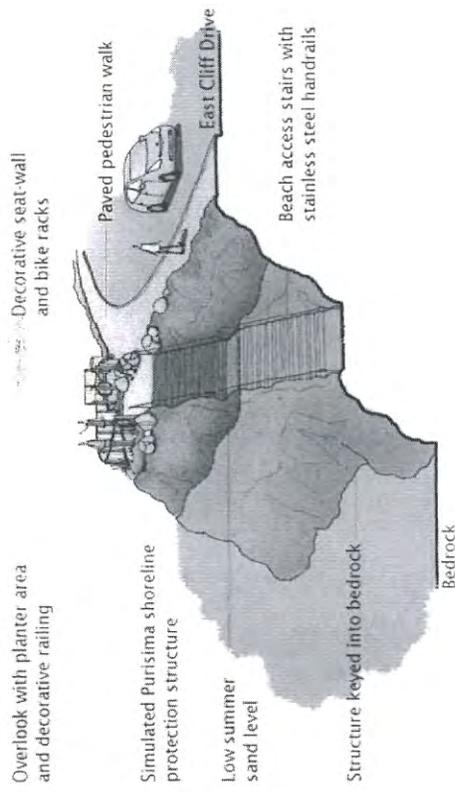
Adds Year Round Accessible Paths

Improves Water & Scenic Quality

Twin Lakes Beachfront- A Coastal Public Access Enhancement Project

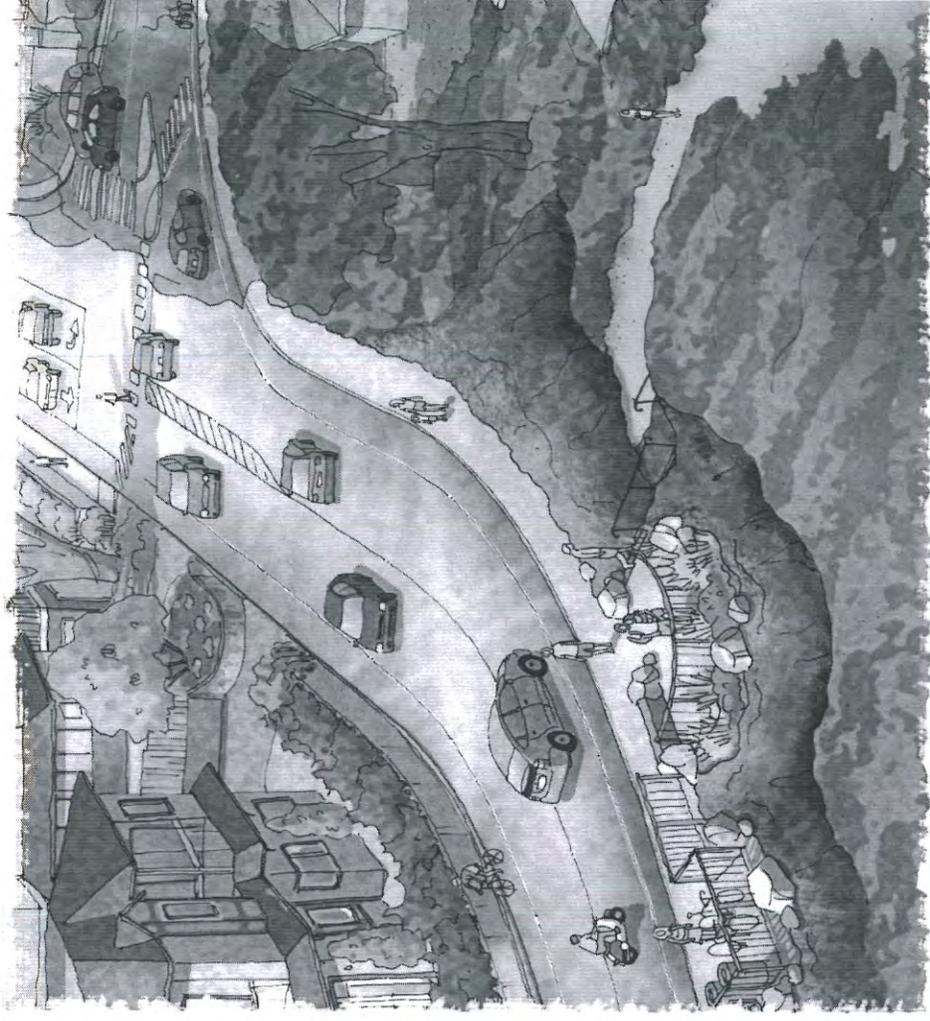
Bluff Protection Designed To:

- ❖ Provide Terraced Access
- ❖ Respond to Changing Sand Elevations with Ramp and Stairs
- ❖ Provide Year Round Access Regardless of Sand Elevation
- ❖ Provide Multi-Modal Access
- ❖ Provide “Accessible Path of Travel” to Beach



Bluff Protection Designed To:

- ❖ Protect Road
- ❖ Protect Utilities
- ❖ Improve Scenic Quality
- ❖ Improve Water Quality
- ❖ Mimic Look of Existing Geologic Formations



Bluff Protection Structure:



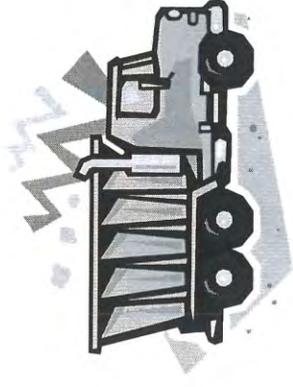
- ❖ Responds to Existing & Future Conditions & Episodic Events

- ❖ Constructed of Dredged Sand Placed & Wrapped in Layers of Geofabric (Mechanical Stabilized Earth (MSE))

- ❖ MSE Covered with Rock Veneer Simulated to Look Like a Natural Purisima Formation

- ❖ Use of Dredged Sand Reduces Construction Carbon Footprint, Traffic Volumes and Related Noise and Dust

- ❖ Use of Dredged Sand Eliminates the Need to Bring in 570 Truck Loads of Sand



Project Proposes to Use:

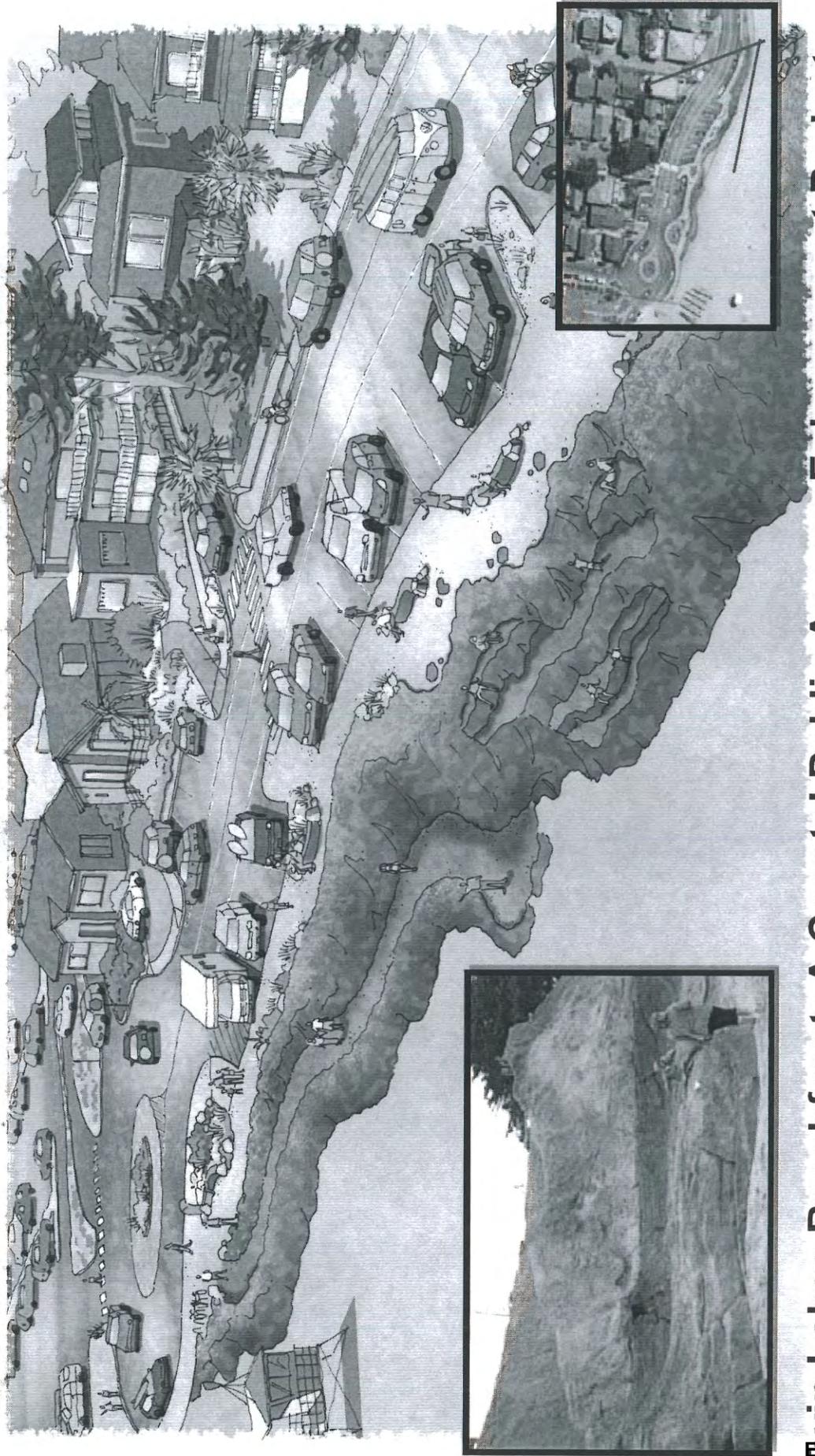


- ❖ **One Time Only-** 10,000 cubic yards of Harbor's Dredged Sand to "Back-Fill" the Bluff Protection Structure.
- ❖ 10,000 cubic yards is Only 3.6% of the Harbor's Average Annual Dredging Volume
- ❖ 10,000 cubic yards is Only 0.3% of the Volume of Dredging Over a Ten Year Period
- ❖ 300,000 cubic yards Range in Annual Dredged Volume is 30 Times Greater than the Project's One Time Only Use of 10,000 cubic yards.

Proposed Plan:

Project Provides Coastal Access During Low Winter Sand Conditions

Bird's Eye View Looking West Down East Cliff Dr.

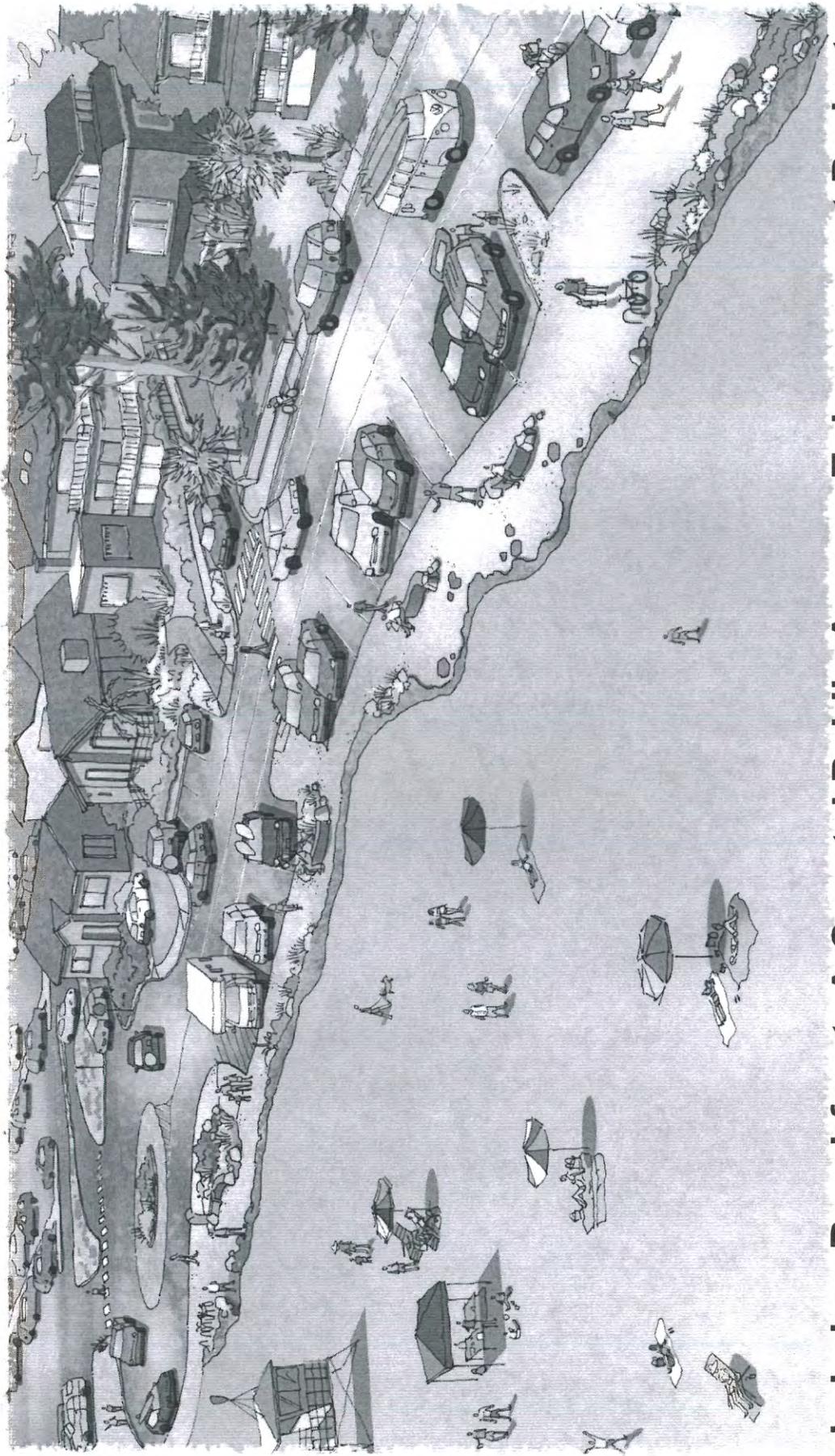


Twin Lakes Beachfront- A Coastal Public Access Enhancement Project

Proposed Plan:

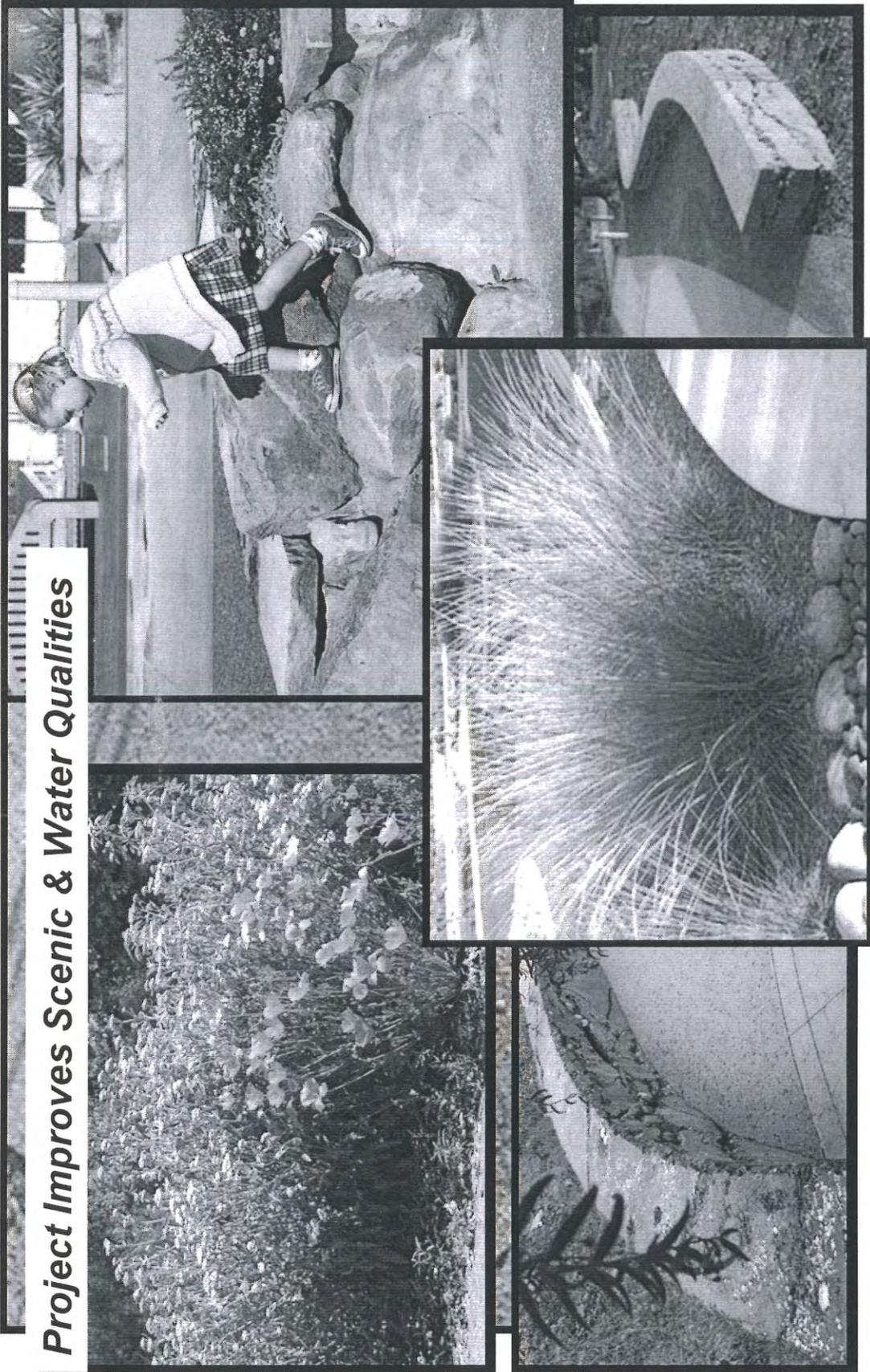
Project Mimics Existing Coastal Access During High Summer Sand Conditions

Bird's Eye View Looking West Down East Cliff Dr.



Twin Lakes Beachfront- A Coastal Public Access Enhancement Project

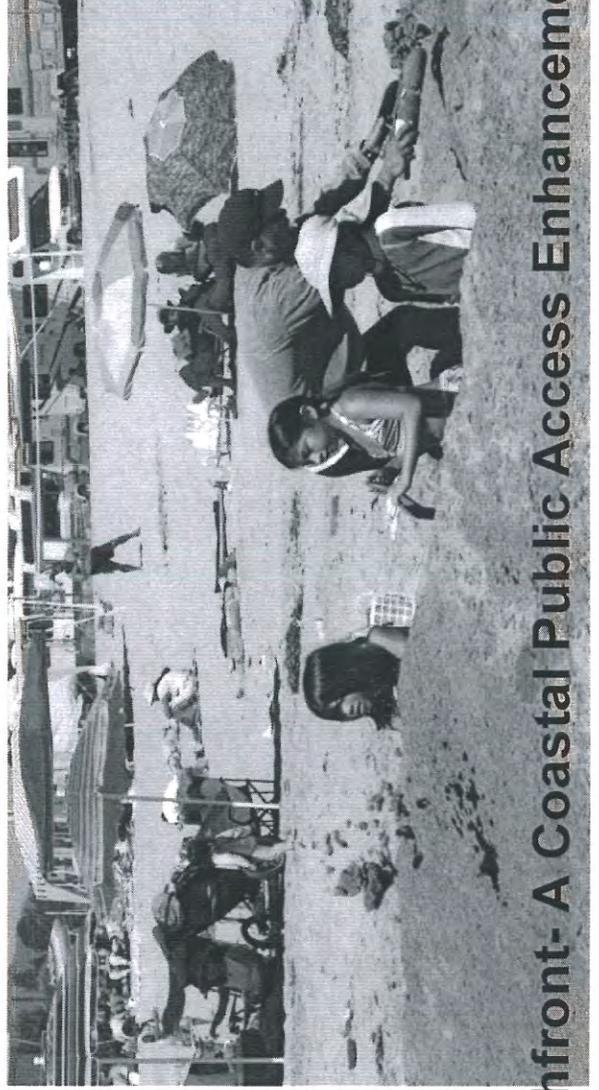
Proposed Plan:



Project Improves Scenic & Water Qualities

Project Benefits:

- ❖ Maximizes Pedestrian Access and Safety
- ❖ Provides Year Round Access
- ❖ Provides for Safe Bicycle Access
- ❖ Improves Parking and Vehicular Circulation
- ❖ Improves Scenic Quality
- ❖ Improves Storm Water Quality



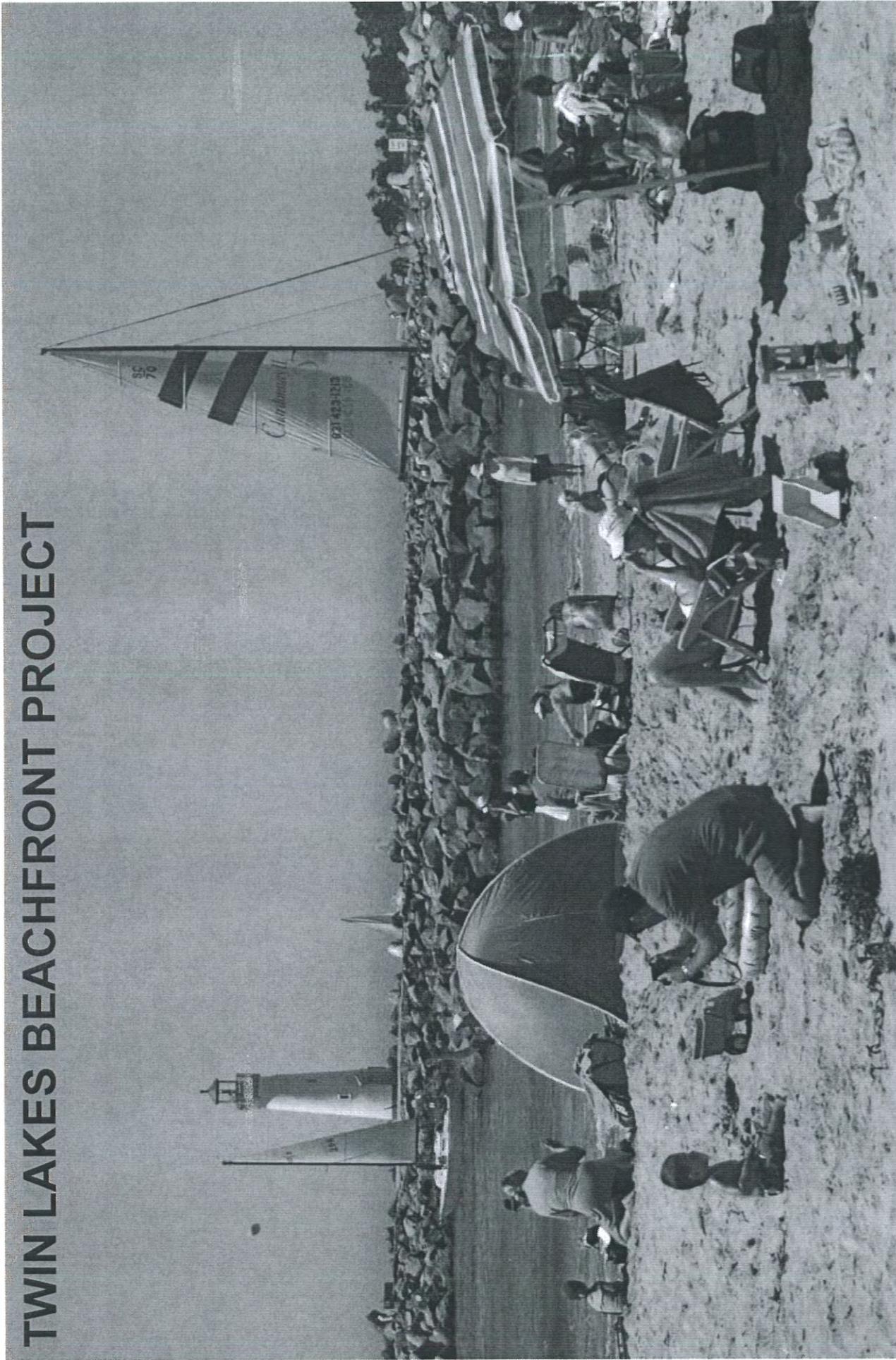
Strong Community Support

Supporters:

- ❖ State Parks
- ❖ County Parks Commission
- ❖ Santa Cruz Port District
- ❖ Santa Cruz County Sheriff's Office
- ❖ Disability Community
- ❖ Bike Advocates
- ❖ Live Oak Community



TWIN LAKES BEACHFRONT PROJECT



A Coastal Public Access Enhancement Project

July 24, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express my strong support for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As a frequent visitor of Twin Lakes State Beach I am keenly aware of the of the frequent conflicts between cars, bikes and pedestrians in this area. The current situation is unsafe and this project is a great opportunity to drastically improve the safety and accessibility of this area.

The improvements this project provides will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

I urge you to support this project.

Sincerely,

Mark M. Deming
1195 Brommer Circle
Santa Cruz, CA 95062

County of



Commission on Disabilities

www.sccod.net

Santa Cruz

701 Ocean Street, Room 30
Santa Cruz, CA 95060
Ph# 831-454-2355 fax 831-454-3463
Commissions@co.santa-cruz.ca.us

July 24, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Jeannine.Manna@coastal.ca.gov

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express support for the Twin Lakes Beachfront project. The Twins Lakes beach and parking improvements have been of great interest to the Commission on Disabilities for over a decade.

The proposed project will provide much needed access to the beach for people with disabilities through new, safe and accessible pedestrian walkways.

This beach access is an obvious benefit but the Coastal Commission may be surprised to learn that parking access -- now a crucial part of the beach improvement plan -- can be even more important. The proposed elongated Disabled Persons (DP) parking spaces will provide the parking that many citizens with disabilities need for while visiting the beach for their specially equipped vans and RVS.

This is a win-win project for the entire community. We heartily support the County of Santa Cruz in its application for Coastal Commission approval.

Sincerely,

Peter G. Heylin
Chair

1ST DISTRICT
J. Daugherty

E. Saldana

2ND DISTRICT
C. Stone

H. Schneider

COMMISSIONERS
3RD DISTRICT
B. Taylor

J. Quigg

4TH DISTRICT
J. Workman-
Cosentino

D. Chauvet

5TH DISTRICT
P. Heylin

N. Keesaw



2222 East Cliff Drive #222
Santa Cruz, CA 95062
831.475.1561
831.462.9188 FAX
oneillseaodyssey.org

July 22, 2013

California Coastal Commission
Attn: Jeannine Manna
45 Fremont Street, Suite 2000
San Francisco, CA 94105

RE: Twin Lakes Beachfront Coastal Public Access Project

Dear Coastal Commissioners:

I am writing to express the strong support of O'Neill Sea Odyssey – a non-profit organization that provides a free ocean science and environmental education program for mostly low-income youth on a boat sailing Monterey Bay - for the Twin Lakes Beachfront project.

The very important benefits of this project are new, safe and accessible pedestrian walkways; bike lanes; improved automobile access and parking; significantly improved beach access and a significantly improved visual and aesthetic environment along this heavily used segment of Twin Lakes State Beach.

As a neighbor of the Twin Lakes beachfront O'Neill Sea Odyssey's staff and Board are keenly aware of the frequent conflicts between cars, bikes and pedestrians in this area. The current situation is unsafe and this project is a great opportunity to drastically improve the safety and accessibility of this area.

The improvements this project provides will benefit the hundreds of thousands of people who visit Twin Lakes State Beach each year.

I urge you to support this project.

Sincerely,

Dan Haifley
Executive Director