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Office of the President

TO MEMBERS OF THE COMMITTEE ON GROUNDS AND BUILDINGS:

ACTION ITEM

For Meeting of July 16, 2013

APPROVAL OF THE BUDGET AND APPROVAL OF EXTERNAL FINANCING, NIMITZ MARINE FACILITY BERTHING WHARF AND PIER REPLACEMENT, SAN DIEGO CAMPUS

EXECUTIVE SUMMARY

The Nimitz Marine Facility Berthing Wharf and Pier Replacement (Project) is for replacement of the existing 18,250 square foot pier and 9,517 square foot wharf at Scripps Institution of Oceanography's Nimitz Marine Facility in Point Loma with a pier of similar size and a wharf of approximately 770 additional square feet. The replacement pier and wharf would closely match the outlines of the existing structures and would include new mooring and fendering systems. The Project scope also includes reconstruction of the existing shoreline revetment, a new structural cut-off wall beneath the top of the slope, new site improvements including paving and storm water management features, and upgrade and replacement of the necessary utilities.

Scripps Institution of Oceanography (SIO) is a department of the University of California, San Diego (UCSD). The pier and wharf infrastructure at Nimitz Marine Facility (MarFac) constitutes a unique, world-class research facility that supports a broad range of research vessels and shipboard research conducted by scientists from SIO and many other national and international institutions funded by many different agencies. The MarFac wharf and pier enable research activities that are diverse and dynamic, ranging from mobilizing scientific parties aboard ships, conducting heavy-lift operations to providing support infrastructure where large oceanographic instruments can be fabricated, maintained, and tested. All of these activities have significant benefit to the research enterprise at SIO, and require unique port infrastructure found together only at marine facilities dedicated to scientific research.

The existing pier and wharf, both more than 40 years old, have reached the end of their service life and have suffered degradation that significantly impacts their structural capacity. Construction of the proposed Project would begin in April 2014 with completion scheduled for December 2015.

Because the pier and wharf are located off campus in Point Loma, this Project was not included in the UCSD Long Range Development Plan and Physical Design Framework and, therefore, is not eligible to receive budget approval in the delegated process. The Regents are being asked to:

(1) approve the Project budget of $25,053,000 to be funded from indirect cost recovery and campus funds ($9,840,000), external financing of an already-issued Century Bond for the campus ($8,013,000), State funds ($5 million), and Nimitz Marine Facility reserves ($2.2 million); and (2) approve external financing ($8,013,000). The campus is exploring fundraising options for this Project, including gift and grant opportunities.

RECOMMENDATION

The President recommends that the Committee on Grounds and Buildings recommend to the Regents that:

1. The 2013-14 Budget for Capital Improvements and the Capital Improvement Program be amended to include the following project:

   San Diego: Nimitz Marine Facility Berthing Wharf and Pier Replacement – preliminary plans, working drawings, and construction – $25,053,000 to be funded from indirect cost recovery and campus funds ($9,840,000), external financing ($8,013,000), State funds ($5 million), and Nimitz Marine Facility reserves ($2.2 million). Any future non-State funding may be used to reduce the costs for this project pending the receipt of federal or State resources and/or gift funding.

2. The scope of the Nimitz Marine Facility Berthing Wharf and Pier Replacement (Project) shall be to replace the pier and wharf at the Nimitz Marine Facility, and replace and upgrade the necessary utilities, including electrical, telecommunications, fire alarm, potable water, compressed air and wastewater, and storm water management.

3. The President be authorized to obtain external financing not to exceed $8,013,000 for the Project. The President shall require that:

   A. Interest only, based on the amount drawn down, shall be paid on the outstanding balance during the construction period.

   B. As long as the debt is outstanding, general revenues from the San Diego campus shall be maintained in amounts sufficient to pay the debt service and to meet the related requirements of the authorized financing.

   C. The general credit of the Regents shall not be pledged.

4. The President be authorized to execute all documents necessary in connection with the above.

BACKGROUND

UCSD Scripps Institution of Oceanography (SIO) manages five major oceanographic research vessels and platforms that are home-ported at Nimitz Marine Facility (MarFac), located in the San Diego Bay. These vessels and MarFac are large shared-use facilities managed by SIO as part of the University-National Oceanographic Laboratory System (UNOLS). UNOLS is an organization of sixty-one academic oceanographic institutions and national laboratories working with federal agencies to ensure broad access to modern, well-operated research vessels and facilities required to support vigorous research in the ocean, earth, and climate sciences. MarFac is the home port for SIO-operated vessels, and regularly supports UNOLS and other vessels operated by other institutions and federal agencies. Ocean scientists at UCSD and other UC campuses rely on MarFac's unique pier, wharf and associated infrastructure for operational support, which is available nowhere else, directly related to federally-funded research.

Over the past five years, SIO ships have averaged, among the four research vessels, the equivalent of more than 930 funded research days in a year. This constitutes 21 percent of the total number of ship days funded aboard all academic research vessels within the UNOLS. Funding for these programs comes primarily from federal agencies, notably the National Science Foundation and the Office of Naval Research. The two Global Class Scripps vessels, *Roger Revelle* and *Melville*, range worldwide and routinely undertake expeditions lasting up to 60 days; the vessels *New Horizon* and *Robert Gordon Sproul* focus on the deep ocean, shelves, and nearshore environments of the eastern Pacific and along the California coast.

In addition to vessels operated by SIO, MarFac regularly hosts research vessels from other institutions and federal agencies. Reciprocal sharing of port facilities is encouraged within UNOLS in order to maximize the use of federally-supported research infrastructure, an arrangement that benefits UC scientists, SIO research vessels, and federal funding agencies. The kind of research conducted at and facilitated by the pier and wharf is as diverse as oceanography itself. The research programs conducted aboard SIO research vessels from MarFac during 2012 included studies of marine ecosystems, microbiology, marine mammals, geohazards assessment, marine pharmacology, plate tectonics, seismology, paleoceanography, ocean acoustics, physical oceanography, ocean chemistry, climate change, the development of new sensor technologies, and many other programs.

Project Drivers

Expeditionary oceanography requires specialized facilities to enable scientists to embark on research missions in an effective, efficient, and safe manner. On average, more than 90 unique deep-sea research missions embark from MarFac each year. The embarking and disembarking activities involve loading and unloading at the wharf.

The pier and wharf at MarFac are essential elements in the research enterprise, and provide the following functions that are critical to the needs of research scientists:

- Secure mooring for research vessels when in port, maintained so that water depths are appropriate for research vessels that have hull-mounted instruments beneath the keel;

- Essential utility services for vessels when alongside (potable water, sewage, electricity, telephone);

- High bandwidth data connections to link ships to the internet;

- Safe and secure gangways for personnel transfers;

- Access for trucks that deliver heavy loads of scientific equipment, food, fuel, ship's stores, and machinery required for each research cruise;

- Space to accommodate pre-and post-cruise set-up and reconfiguration of shipboard laboratories;

- Heavy-lift capabilities enabling scientists to configure their instrumentation prior to deployment, including use of a mobile crane with a lift capability of 120 tons;

- Lay-down areas, critical for the fabrication, maintenance, and mobilization of sampling systems (such as conductivity, temperature, and depth), dredges, sonars, net trawls, remotely operated vehicles (ROVs), and other research instrumentation deployed at sea;

- Proximity to repair facilities specializing in scientific research (MarFac's machine shop and marine technical support personnel and laboratories).

A Survey Condition Report issued by consulting engineers in July 2009 noted significant deterioration of the cast in-place pile caps, characterized by spalling of the concrete cap faces and horizontal cracking that extends across the entire width of most pile caps. The Survey Condition Report noted the following specific findings:

- Approximately 57 percent of wharf and pier pile caps are significantly deteriorated;

- The majority of the fender system and hanging steel structures are significantly deteriorated;

- Nine mooring fixture foundations are deteriorated with less than their designed capacity;

- Portions of the wharf bull rail are damaged or significantly deteriorated;

- The load-carrying capacity of the pier was downgraded from 600 pounds per square foot to 120 pounds per square foot.

In order to meet ambitious UNOLS ship schedules, the pier facilities must be structurally adequate to support the cranes, forklifts, and trucks required to safely and rapidly mobilize scientific equipment. Repairs and maintenance of the pier and wharf have been undertaken to address cracking and spalling of concrete observed on pile caps, replacement of fender piles, repair of cracked foundations of bollards and bits, and repair of concrete decking and the adjacent asphalt apron. The wharf was originally completed in 1965 and extended in 1973 at the same time the pier was completed. Both were designed and constructed with a forty-year service life expectancy and, as such, have provided good service in excess of expected service life. Last year, urgent maintenance was required to repair twelve fender piles at the pier.

The pier and wharf will continue to deteriorate resulting in diminishing capacity that will eliminate SIO's ability to support its ships. The pier would be unable to support heavy equipment (trucks, cranes, forklifts) required to service vessels within about five years. The diminished capacity currently prevents some equipment from accessing the pier and wharf, and with continued deterioration all access would be prohibited. Deterioration of the pier and wharf fendering systems (which protect both the pier and ships from damage during mooring) increases the likelihood of damage to a vessel while berthed alongside.

Replacement of the pier and wharf is needed for SIO to serve as home port for *R/V Sally Ride*, a new $88 million ocean-class research vessel which was awarded to SIO by the Office of Naval Research following a high-profile national competition. A key element of SIO winning the proposal was its history of outstanding shore support at MarFac. The *R/V Sally Ride* vessel is scheduled for delivery in early 2015, and will be accommodated at another pier temporarily until the proposed Project is completed in late 2015. (See Attachment 1 for information regarding alternatives considered.)

Losing the ability to service the research vessels at MarFac would have significant consequences. The pier, wharf, and landside facilities support research activity that brings in approximately $32 million each year in revenue, and this funding would be jeopardized if the pier and wharf were not replaced. Without the ability to fuel, provision, mobilize, or maintain research vessels at the MarFac pier, SIO could not support the scientists who rely on these vessels for their research. A decision not to restore the pier to design-load handling capacity would require refueling, cargo handling, and resupply operations to take place at more costly commercial facilities elsewhere.

PROJECT DESCRIPTION

The new pier and wharf would closely match the outlines of the existing structures and the coverage area over water would remain unchanged. The existing pier is 365 feet long, 50 feet wide, and comprises 18,250 square feet of area. The replacement pier would remain the same. The existing wharf is 307 feet long, 31 feet wide, and comprises 9,517 square feet of area. The new wharf would be 307 feet long, 33.5 feet wide, and comprise 10,285 square feet of area. The wharf would be moved closer to shore by 2.5 feet in order to adjust the face of the new structural revetment shoreline to achieve the required water depth at the face of the wharf. The new revetment shoreline would include a sub-grade concrete cut-off wall structure at the top of the slope to mitigate soils liquefaction in the event of a seismic event. The new pier and wharf would

be pile supported and have a concrete deck and would be designed for a 50-year service life. New mooring and fendering systems would be provided. The height of both the wharf and the pier would be increased in order to allow for predicted progressive sea level rise. No dredging is proposed as part of the Project.

The site layout would provide lay-down areas for the staging of equipment and goods, and allow safe access for required support vehicles and other equipment including mobile truck cranes, forklifts, and fuel trucks. The Project would also replace an existing San Diego Gas and Electric metering station, all campus 12kV distribution equipment, the medium voltage transformer, and 480V switchboard serving buildings. A new substation would be provided for the wharf and pier. In addition, shore power connections on the new wharf and pier would be installed; telephone, data, and fire alarm services would be extended; and site lighting would be added for security purposes at certain locations.

The replacement of the pier and wharf would provide a facility to support current and future operations at MarFac. The proposed Project would incorporate the following:

- Adequate structural integrity for vertical and horizontal loads;
- Secure moorings for multiple vessels and flexibility in mooring arrangements;
- Improved fender systems to provide greater flexibility for mooring and to absorb berthing energy from ships with varying hull shapes safely;
- Upgraded utilities to provide for cold-iron berthing (the procedure for supplying electrical power from shore-side sources to a ship at berth to power auxiliary engines) and other hotel services simultaneously for multiple vessels; and
- Improved seismic performance for the pier and wharf.

Maintenance dredging would not be required for the wharf and pier replacement; however, to anticipate long-term operational needs, the proposed Project would be designed such that future dredging and expansion are not precluded. The proposed Project includes in-water excavation to repair the rock shore protection and regrade the existing slope to provide erosion control and sufficient water depth at the face of the wharf.

Project Location

The SIO MarFac facilities are located on the east side of Point Loma in San Diego Bay, just north of the United States Naval Base Point Loma. (See Attachment 2, Project Site Map.) Located on 5.8 acres of waterfront land, the SIO MarFac facilities are in close proximity to the entrance to San Diego Bay. The Project site is divided into three parcels, with the upland 5.8-acre parcel belonging to the Regents of the University of California, the northern submerged land portion between the mean high tide line and a line 300 yards out beyond the low water mark belonging to the State of California, and the southern submerged land portion between the mean

high tide line and a line 300 yards out beyond the low water mark belonging to the United States Navy. The waterfront facilities are comprised of a 365-foot-long pier and a 307-foot-long wharf.

Cost Estimate

Two construction cost estimates were prepared for this Project. The first estimate was prepared by the design consultant during the Detailed Project Program (DPP) phase. The second was an independent estimate prepared by a local berthing pier designer at the conclusion of the DPP phase. The pier designer's estimate was based on current and local market conditions for similar work it has underway. The $25,053,000 Project budget is based on the design consultant's reconciliation of its cost estimate with the estimate prepared by the pier designer.

Schedule

Recommendation of design and environmental approval by the Regents' Committee on Grounds and Buildings is projected for September 2013. Construction of the pier and wharf is estimated to commence in April 2014, with completion in December 2015. SIO intends to operate its research vessels without interruption while the pier construction is underway, using a variety of methods. For instance, SIO will work with funding agencies to position the vessels at forward locations around the world to carry out work efficiently in remote locations away from San Diego. There is a strong precedent for this: R/V *Roger Revelle* recently spent six years continuously away from San Diego, and R/V *Melville* conducted extended remote operations for 32- and 14-month durations since 2008. SIO is also working with venues in San Diego and elsewhere on the West Coast to find berthing space that can support continuous productive operation of these ships, especially focusing on berthing for R/V *Robert Gordon Sproul* and R/V *New Horizon*. SIO will be able to support scientific ship operations during the pier and wharf construction.

The lease terms for both the State Lands Commission parcel and Navy submerged lands parcel will be presented to the Regents' Committee on Finance in separate future actions.

ATTACHMENTS:
Attachment 1: Alternatives Considered
Attachment 2: Project Site Map
Attachment 3: Project Budget
Attachment 4: Funding Plan
Attachment 5: Summary of Financial Feasibility
Attachment 6: Policy Compliance

ATTACHMENT 1

ALTERNATIVES CONSIDERED

The campus considered two alternatives before concluding that the proposed Project would be the best alternative.

1. Repair and modernize the pilings, deck, fendering and utility systems of the existing pier and wharf.

   The July 2009 engineering survey of the MarFac piers considered the cost and likely results of performing specific repairs to items which have failed, including pile caps, pier and wharf decking, the fendering system, crane hardstands, the electrical distribution system, safety equipment, and mooring hardware. Conducting only specific repairs would likely result in degraded performance of some elements of the pier and wharf, such as the fendering system, deck carrying capacity, and ability to withstand high water levels resulting from progressive sea level rise. Other piers and wharfs in San Diego Bay are constructed at least two feet higher than the existing MarFac pier and wharf.

   If only the identified failed elements are repaired, additional repairs likely would be needed within the next 20 years. Existing and planned SIO research vessels have life expectancies greater than 20 years, and therefore would continue to require competent pier and wharf facilities for a longer period than would be made possible by repairing the existing pier and wharf.

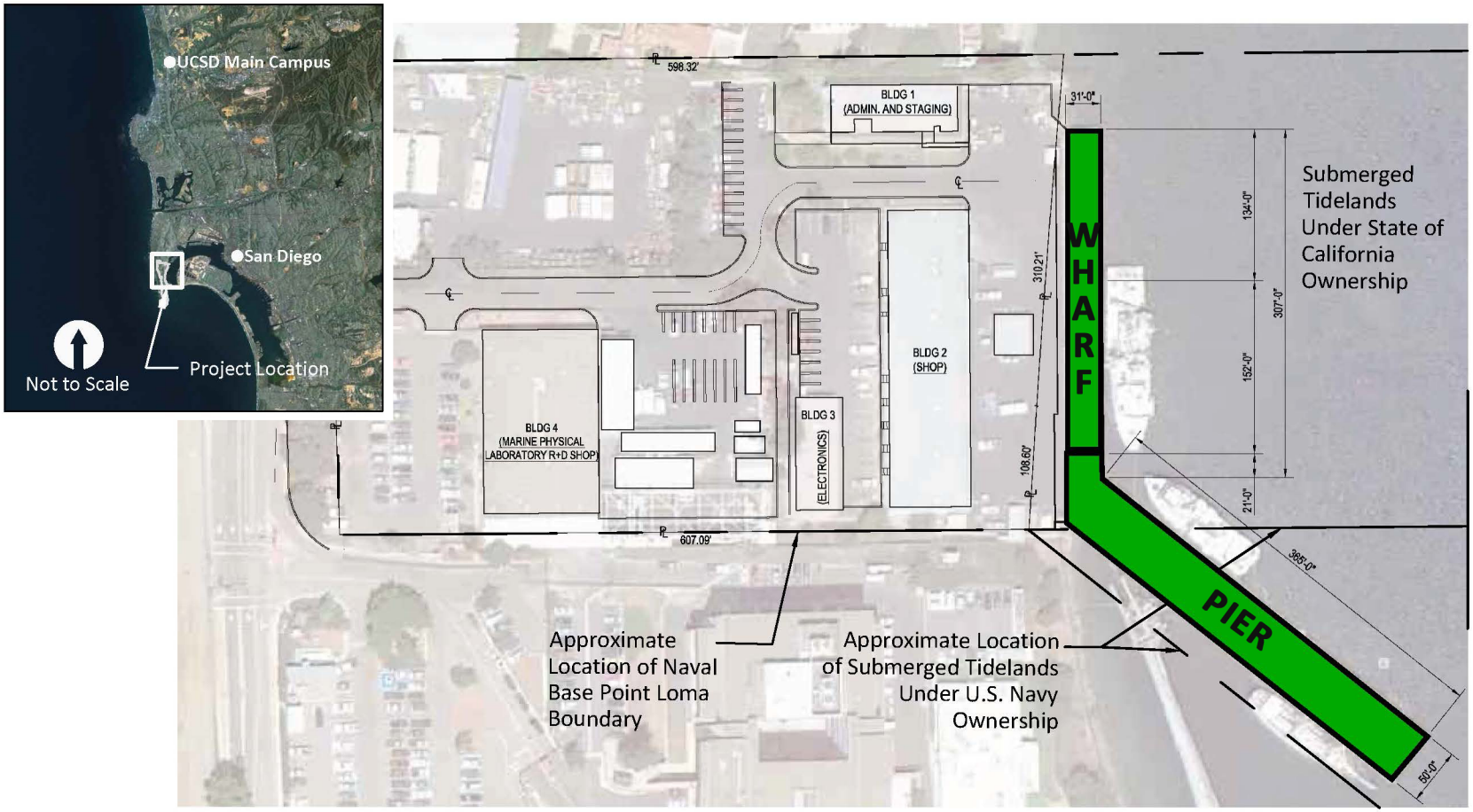
   Because of the nature of the existing failed pier and wharf elements, conducting specific repairs is neither cost-effective nor prudent.

2. Utilize another pier in San Diego to moor the SIO research vessels.

   Specific required characteristics include pier and wharf frontage of at least 870 linear feet to accommodate the four SIO vessels plus the Floating Instrument Platform (*FLIP),* having a minimum water depth alongside of 18 feet, with pier approaches having at least 18-foot depths with a turning basin. The pier needs to be at least 50 feet wide to accommodate heavy lifting, mobilizing, and research activities alongside the vessel. The pier must be constructed to handle 600 pounds per square foot to satisfy Department of Defense and American Association of State Highway and Transportation Officials' recommended capacity for fuel and cargo handling piers. Vessel berths require suitable utilities and telecommunications service, with outlet centers along the pier with quick-connect fittings to supply multiple ships with electrical power, telephone service, fresh water, high-speed internet connectivity, sewer connections, plus the ability to handle slops (dirty, oily waste), waste oil, and hazardous materials. The pier must be able to accommodate deliveries of radioactive materials routinely used in scientific research, and maintain on-site handling facilities for radioactive and hazardous waste, and support the ability for vessels to fuel while alongside. The entire waterfront facility must support security measures commensurate with MARSEC Security Level in accordance with United States Coast Guard regulations.

Support activities vital to the operation of research vessels require facilities proximal to the ship berths for the maintenance and preparation of scientific instrumentation as well as ship's machinery. This includes mechanical shops of at least 18,000 square feet alongside the piers, plus electronics and technical laboratories of at least 4,000 square feet, plus marine administration space of 5,000 square feet, and covered storage for sensitive equipment and instrumentation of at least 3,000 square feet, with outside storage and laydown space of one acre or more.

Mooring sites of any kind in San Diego are rare and expensive, and the many critical requirements for mooring research vessels would be difficult or impossible to duplicate elsewhere in San Diego Bay. Using an alternative location to MarFac would result in significantly increased facility rental costs rendering UCSD marine research proposals uncompetitive. Given the unique needs of research vessels coupled with the needs of federally-funded oceanographic research programs, a likely outcome would be the transfer of SIO’s federally-owned vessels to other oceanographic research institutions outside of California. The SIO fleet, and its ideal location in Point Loma, is a foundation of the success of SIO. The cascading effect of these consequences would be the erosion of UCSD's ability to maintain its reputation and excellence in oceanographic research. Due to the specialized nature of the research activities conducted at SIO and the limited availability and accessibility of other piers, utilizing another pier is not a viable alternative.



SOURCE: Aerial imagery from ESRI Basemaps.
HORIZONTAL DATUM: California State Plane, Zone 6, NAD83, U.S. Feet.

0 150
Scale in Feet

Project Site (Existing Configuration)
SIO/UCSD MarFac Berthing Wharf and Pier Replacement

L:\AutoCAD Project Files_Projects\1115-01 UCSD Pier Replacement\110815-01 RP-004 ProjSite.dwg Fig 2
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ATTACHMENT 3

PROJECT BUDGET
CCCI 6074

Cost Category	Amount	% of Total
Site Clearance[(1)]	$2,000,000	8.0
Building (*includes wharf and pier*)	11,270,000	45.0
Exterior Utilities[(2)]	4,000,000	16.0
Site Development[(2)]	1,000,000	4.0
A/E Fees	1,730,000	6.9
Campus Administration	950,000	3.8
Surveys, Tests, Plans	412,000	1.6
Special Items [(3)]	1,220,000	4.9
Interest Expense [(4)]	213,000	0.9
Contingency	2,258,000	9.0
Total	25,053,000	**100%**
Group 2 & 3 Equipment	0	
Total Project	**$25,053,000**	

Statistics	Existing Pier	Replacement Pier	Existing Wharf	Replacement Wharf
Square Feet	18,250	18,250	9,517	10,285
Length (in feet)	365	365	307	307
Width (in feet)	50	50	31	33.5

Comparable Projects:

Below is a comparison of the proposed new pier and wharf with two recent pier projects in San Diego Bay. While the two comparable projects have similar cast-in-place concrete deck construction, the shoreline and water depth conditions vary dramatically at each of the sites. For purposes of establishing a comparison, the information is limited to the comparable aspects – hard construction cost of the wharf and pier. The comparable project costs in the table below do not include demolition of existing wharf and pier, reconstruction of the structural revetment at the shoreline, sub-grade wall, grading, site improvements, and site utilities.

Project (CCCI 6074)	Square Footage	Total Cost[(5)]	Cost per Square Foot
MarFac Wharf and Pier	28,500 SF	$8,275,000	$290/sf
BAE System Pier 4	26,200 SF	$7,179,000	$274/sf
Navy Pier 12	1,755,200 SF	$442,310,400	$252/sf

Notes:

(1) Includes demolition of the existing wharf and pier and structural revetment.
(2) Includes: sub-grade wall, grading, site improvements (paving, storm water), and site utilities. Does not include construction of the wharf and pier.
(3) Special items include Detailed Project Program, environmental documentation, Coastal Commission review, value engineering, hazardous materials survey, and independent seismic review.
(4) Should grant and or gifts be used in lieu of external financing, these funds will not be available in the budget.
(5) Costs are approximate and consist of hard construction cost only.

ATTACHMENT 4

FUNDING PLAN

Funding Sources[1]

Project Cost	
External Financing	$8,013,000
Indirect Cost Recovery and campus funds[2]	$9,840,000
State Funds	$5,000,000
Nimitz Marine Facility Reserves	$2,200,000
Total	**$25,053,000**
Funding Schedule	
Preliminary Plans	$1,500,000
Working Drawings	600,000
Construction	22,953,000
Total	**$25,053,000**

Notes:

(1) Any future non-State funding may be used to reduce the costs for this project pending the receipt of federal or state resources and/or gift funding.

(2) Specific fund source for campus funds is from indirect cost recovery on UCSD federal contract and grant activity and any carry forward, one time year-end savings.

ATTACHMENT 5

SUMMARY OF FINANCIAL FEASIBILITY

SAN DIEGO CAMPUS	
Project Name	**Nimitz Marine Facility Berthing Wharf and Pier Replacement**
Project ID	**963990**
Total Estimated Project Costs	**$25,053,000**
Anticipated Interest During Construction	**$213,000**

PROPOSED SOURCES OF FUNDING	
Indirect Cost Recovery and campus funds	**$9,840,000**
External Financing	**$8,013,000**
State Funds	**$5,000,000**
Nimitz Marine Facility Reserves	**$2,200,000**
Total	**$25,053,000**

Fund sources for external financing shall adhere to University policy on repayment for capital projects.

Externally Financed Projects

Long-term external financing assumptions are listed below.

FINANCING ASSUMPTIONS	
Anticipated Repayment Source	**General Revenues of the San Diego campus**
Anticipated Fund Source	**Indirect Cost Recoveries and Campus Funds**
Financial Feasibility Rate	**$8,013,000 – 4.95% taxable Century Bond – 30 years**
First Year of Principal	**2016**
Final Maturity (e.g. 20XX)	**2045**
Term (e.g. 30 years)	**30 years**
Estimated Average Annual Debt Service	**$518,000**

Below are results of the financial feasibility analysis for the proposed project using the campus' Debt Affordability Model. External financing approval requires the campus to meet the debt service to operations benchmark and one of the two other benchmarks for approval. The financial projections take into consideration market conditions, new sources of revenue and all previously approved projects. The corresponding campus Debt Affordability Model has been submitted to Capital Markets Finance at UCOP.

	CAMPUS FINANCING BENCHMARKS	
Measure	**10 Year Projections**	**Approval Threshold**
Debt Service to Operations	**5.1% (max) 2022 (yr)**	**6.0%**
Debt Service Coverage	**3.6x (min) 2022 (yr)**	**1.75x**
Expendable Resources to Debt	**n/a**	**1.00x**

The metrics used to determine financing feasibility are defined below:

Measure	***Definition***
Debt Service to Operations (%)	*Annual Debt Service* / *Total Operating Expenses*
Debt Service Coverage (x)	*Operating Income + Depreciation + Interest* / *Annual Debt Service*
Expendable Resources to Debt (x)	*Expendable Financial Resources (unrestricted net assets + temporarily restricted net assets – net investment in plant)* / *Total Debt Outstanding*

ATTACHMENT 6

POLICY COMPLIANCE

Capital Financial Plan. The Project is included in the *2012-22 Capital Financial Plan* for the San Diego campus.

Environmental Analysis. The proposed Project construction would in part take place on lands owned by the U.S. Navy. For this reason, UCSD is working collaboratively with the Navy to develop a joint National Environmental Policy Act (NEPA)/California Environmental Quality Act (CEQA) document that will serve to support approval actions by both the Navy and UC. In addition, State Lands Commission, which owns land under the wharf, will also rely on the CEQA document for their decision making. Pursuant to NEPA and CEQA as well as the University Procedures for implementation of CEQA, a joint NEPA/CEQA Environmental Assessment/Initial Study is being prepared. The Regents will be asked to consider the environmental document in conjunction with the Project design approval at a future meeting.

Sustainable Practices. The proposed Project would incorporate sustainable design principles, such as those set forth under Leadership in Energy and Environmental Design (LEED) ratings; however, LEED certification is intended primarily for buildings and no LEED category exists for this type of facility. Demolition of existing structures would include a materials reuse program to the extent possible, and recycled materials would be incorporated into the new facility where appropriate. Energy-efficient lighting and water efficiency measures would also be incorporated.

Seismic Safety Policy. This project will comply with the *University of California Seismic Safety Policy* including independent seismic peer review.