C0442010

REPORT

CIVIL ENGINEERING SERVICES
GAVIOTA STATE PARK
BOAT LAUNCH AND RETRIEVAL FACILITY ASSESSMENT

For

STATE OF CALIFORNIA
DEPARTMENT OF PARKS & RECREATION
CHANNEL COAST DISTRICT
MAY, 2005

NORTHEAST ENGINEERS & CONSULTANTS, INC.
1792 TAMARIN AVENUE
VENTURA, CA 93003

1.0 Executive Summary

Northeast Engineers & Consultants, Inc. (NE&C) was hired by the State of California Department of Parks & Recreation (CA-DPR) to provide a mechanical and operational condition assessment of the boat launch and retrieval facility located at the Gaviota State Beach.

NE&C found the facility to be very exposed (used in waves reaching 5 feet in height) warranting a previously assigned factor of safety of 2.0 that reduced the original lifting capacity from 4-tons to 2. With boat launching facilities in such short supply within the Channel Coast Region, the Gaviota Boat Hoist sees high frequency use throughout the year. Overuse has led to numerous breakdowns and equipment failures. The current Stahl chain hoist has been problematic and unreliable. Operations are monitored by CA-DPR staff only 20% of the time, leaving untrained boaters access to the facility without any knowledge of standard operational procedures and safety guidelines. Unfortunately, it has been reported and witnessed that people disregard even the most fundamental rules due to either their lack of experience or ignorance. Seeing that the hoist services vessels upwards of 2-tons, simple neglect and lack of knowledge could quite possibly lead to serious physical injury.

NE&C recommends CA-DPR replace the current hoist with a Columbus McKinnon (CM) Powerstar 5-Ton 2-speed double-reeved chain hoist with integrated motorized trolley system. The CM Powerstar Hoist is known to be the largest and most rugged hoists available in the marketplace most commonly selected for industrial applications where downtime is to be avoided at all cost. Although the hoist has a 5-ton capacity, the overall facility will continue to be limited to 2-tons. The only way to increase this capacity will be to retrofit the pier's pile foundation, deck and hoist to manage a total load of 6-tons in order to support a 3-ton vessel while continuing to respect the 2.0 factor of safety due to extreme wave conditions. In addition to mechanical improvements, NE&C recommends that CA-DPR monitor all hoist activities starting immediately up until the majority of the public is sufficiently trained in the use of the facility. Utilizing the hoist volunteer group can reduce the burden of such monitoring. In addition to monitoring, CA-DPR needs to adopt various items including improved signage, procedures and safety regulations, and reconfiguration of the electrical system. In an effort to properly protect the facility from unauthorized use and vandalism NE&C has recommended CA-DPR also consider purchasing a card reader and closed circuit surveillance system.

It is believed that by implementing the recommended improvements to the facility and operation, the Gaviota State Beach Boat Hoist will be able to safely and securely continue servicing boaters along the Southern and Central California Coast for years to come.

2.0 BACKGROUND

2.1 Project Location

Gaviota State Park is located along California's Channel Coast, 15 miles east of Point Conception and 33 miles west of Santa Barbara. The Park receives over 127,000 visitors annually, who come to Gaviota to enjoy the Park's numerous offerings including hiking, camping, boating, fishing, surfing and swimming. The Park is comprised of miles of undeveloped shoreline, orientated in an east-west direction, primarily consisting of rocky bluffs with a small sandy beach immediately east of the 570-foot pile supported public access pier. Gaviota's close proximity to Point Conception makes it susceptible to a variety of weather patterns stemming from the Northern Pacific Ocean. Based on the Site's location and orientation, the Park is left exposed to the predominant winter swells that originate from the northwest, west and southwest directions. The Park experiences more calm conditions during the summer months, when the Channel Islands protect the Park from the predominant summer swells that originate from the south.

2.2 Project Background

The State of California Department of Parks & Recreation (CA-DPR) manages the facilities at Gaviota State Park including a jib crane (boat hoist) located at the end of its public access pier. Use of the hoist is open to the public during Park hours seven days a week year-round. Due to the undeveloped nature of this section of coast and the extreme wave climate, alternate public-access boat launching facilities in this region are limited to a 5-ton hoist located 25 miles to the east at Goleta Beach County Park and a boat ramp located approximately 80 miles to the north at San Luis Obispo. The boat hoist at Goleta Beach County Park is solely operated on weekends by the staff of Santa Barbara County. With a limited number of public access points to launch boats in this region, the Gaviota Hoist is a heavily used facility totaling over 800 boaters per year.

In 2000, CA-DPR made significant improvements to its boat launching facility in response to the Park experiencing extensive damage from winter storms that occurred two years earlier. The improvements to the facility included rebuilding portions of the pier, its pile foundation and replacing the jib crane with one manufactured by Industrial Crane Equipment. The new crane assembly included a 4-ton Shaw Box electric wire rope hoist that was later replaced with a Stahl ST5 electric chain hoist to address service issues including fraying and twisting of the cable believed to be caused by the Site's exposure to wind, waves and swells.

Later the same year (circa 2000), CA-DPR reduced the crane's rated capacity from 4 tons to 3 tons in order to avoid more restrictive Cal/OSHA regulations that apply to cranes rated higher than 3 tons in capacity, including special certification for operators and equipment. The report noted the design capacity of the improvements to the pier and jib crane assembly back in 2000 were limited to a total load capacity of 4 tons with no additional consideration for dynamic loads associated with environmental forces caused

by wind and swells. With the hoist known to be used in wave conditions reaching Sea State 4 (5-8 feet in wave height), a factor of safety of 2.0 was implemented that reduced the weight of the largest vessel lifted by the boat hoist from 4 tons to 2 tons. Although the stated capacity was reduced immediately using various signage, the reduction in capacity was later enforced by engaging a mechanical (not electrical) slip clutch to prevent over-use (it was determined that individuals were ignoring the stated rating).

3.0 CONDITIONS ASSESSMENT

3.1 Hoist Mechanical Equipment

The jib crane responsible for lifting boats at the Gaviota pier is comprised of several components including the pedestal, crane arm, hoist motor, trolley motor and rotational motor. CA-DPR performs monthly maintenance and inspection of the hoist including lubricating the chain and arm; checking the electrical system and replacing various switches/wiring when necessary. Since the time the current Stahl ST5 Chain Hoist had been installed, CA-DPR has been frustrated with the hoist including its slow speed (16 feet per minute), its unreliability and its uniqueness (making it difficult to obtain replacement parts easily). Although Stahl is manufactured in Europe like many hoist manufacturers, its parts are more difficult to find in the United States requiring parts be special ordered from oversees where shipping via container has been found to be necessary. With shipping via container potentially delaying shipment for several months at a time, CA-DPR has used local machine shops to specially fabricate hoist components for a premium in order to avoid lengthy shutdowns of the hoist.

Since the time the hoist capacity had been reduced to 2 tons, CA-DPR has noticed a reduction in service visits and fees required to maintain the hoist compared with previous years. It should be noted that the exclusion of boats over two tons is not likely responsible in itself for the improvement in the reliability of the hoist but is more likely due to avoiding the combination of boats weighing over 2 tons while permitting the hoist to be used with maximum wave conditions reaching Sea State 4.

Based on the recent inspection and numerous service appointments conducted by JD Crane over the years, the crane pedestal, crane arm and rotational motor are believed to be in good structural shape with minimal signs of wear including maintenance needs and corrosion.

3.2 Hoist Operations

The Gaviota Boat Hoist operations is actively monitored by CA-DPR Lifeguard Staff from June through August and monitored by an organized group of volunteers on weekends from March through November. Monitoring hoist activities typically includes checking vessel size, inspecting slings, assessing environmental conditions, inspecting vessel equipment, collecting “Vessel Hoist Services Use Agreement and Waiver” from each user and monitoring the user when operating the hoist. CA-DPR estimates staff and volunteers monitor approximately 20% of all boats that use the facility.

Situated at an exposed location, the facility is vulnerable to swells ranging between 1-3 feet in wave height on a fairly regular basis. Over the years, experienced users have become familiar enough with the hoist and the surrounding environmental conditions to safely use the hoist in waves reaching 5 feet in significant wave height (crest-trough measurement that is defined as the average height of the highest one-third of the waves in

a wave train) without incident. An experienced operator will be aware how to time the initial lifting or final decent of a boat taking into account the hoist hook speed and the periodic nature of the oncoming swell pattern in the immediate lifting area. Proper launching technique during periods of increased swell size requires the operator to lower a vessel to the water level within the wave trough, without having contact with a succeeding crest while suspended. This timing essentially avoids an unnecessary shock load on the boat and hoist that would otherwise be experienced should timing be other than ideal.

In an effort to monitor wave action at the hoist while managing the plethora of other park responsibilities, CA-DPR has developed a working correlation between the offshore wave data measured off Point Conception and the local wave heights in the hoist area off Gaviota Pier. Each day CA-DPR briefly reviews the swells recorded by the Harvest Buoy via the Internet (http://facs.scripps.edu/surf/harvest.html) and conducts a site visit at Gaviota Pier should offshore swells originating between 210 and 285 degrees magnetic north be found to reach 15 feet in height. The facility is closed if CA-DPR confirms that local waves at the hoist to be 5 feet or more in wave height.

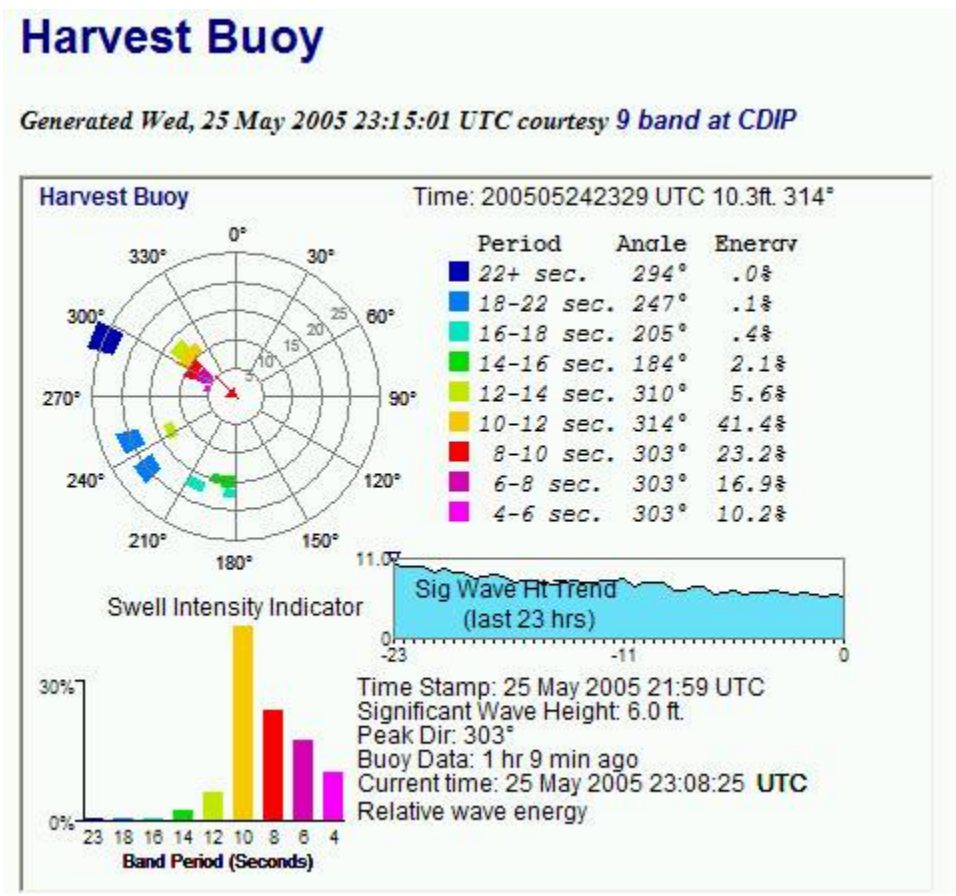

Figure 3-1: Sample screen of wave data available online
Courtesy of Scripps Research Institute

During times when the hoist is open and not monitored, the public is expected to use the hoist based on the 'honor system' including filling out waivers, knowledge of launching protocol and correct equipment. Due to the lack of security at the hoist, it has been reported that many infrequent users fail to follow CA-DPR's Hoist Launching Procedures and Safety Requirements including but not limited to improper use of slings, uncertified slings and placing passengers in the vessel when lifted by the hoist. Although no significant accidents have been reported at the hoist, it is believed that they have occurred but not reported in order to avoid punishment for self-preservation and/or the preservation of the current hoist protocol (a significant injury would force CA-DPR to consider stricter launching policies)

Due to a historically significant amount of rainfall during the contract period, there were limited opportunities for Northeast Engineers & Consultants, Inc. (NE&C) to personally witness the public's 'typical' use of the boat launch facility. On Sunday May 1, 2005, NE&C spent time at the facility to observe unmonitored launching activities. During the launching witnessed, the boater failed to comply with several previously identified CA-DPR safety considerations including failing to position the trolley over the hook/lifting point, no tag lines were attached to boat, the person sat in the boat while suspended over the water and the engine was started before it was lowered into water. The boat was successfully placed in the water with no injuries however the hoist was unnecessarily abused by the misalignment of the trolley and a variety of hazards could have been avoided had the users followed a few fundamental safety guidelines. For reference, the boater stated he uses the hoist approximately 6 times per year.

Figure 3-2: Example of improper use of hoist (person in vessel while suspended)

3.3 Hoist Electrical Equipment

During the initial site visit on February 8, 2005, NE&C noted a variety of potential electrical issues with the current facility that warranted further assessment by a qualified electrical engineer. On March 31, 2005, Lawrence Lundeen P.E. (of Lundeen & Arnold, Electrical Engineers) inspected the facility, and found the current electrical system to be

in fair condition but identified a few problems that should be addressed when the hoist undergoes its next major servicing.

Corrosion:

The marine environment is extremely caustic to structures located on the coast; especially those constructed with various metals that are susceptible to corrosion. The current condition of the system show signs of corrosion including rust found on switch enclosures (NEMA Type 3R), conduit and junction boxes that are made from materials that are not suitable to the marine environment. Examples of severe corrosion found at the facility include a piece of conduit leading into the junction box for the retractable staircase (Figure 3-3) and the Crane Disconnect enclosure is substantially corroded (Figure 3-4).

Figure 3-3: Example of corroded conduit

Figure 3-4: Example of corroded crane disconnect enclosure

System Configuration:

In general, the current configuration of the electrical system is unorganized and has limited safeguards, making for a potentially confusing and unsafe environment for the public and staff responsible for the maintenance of the equipment. The first thing that is noticed in the vicinity of the boat launching area is the presence of seven (7) separate electrical cabinets along the pier.

The main stainless steel electrical cabinet (4’x 2’x 1’) houses disconnect switches, starters, timer and transformer for boom swing and hoist trolley, and a transformer for miscellaneous power and lighting components. Although the stainless steel cabinet supports a majority of the launching facility’s functions, the panel does not have a single disconnect to de-energize all the components in the electrical cabinet. With the absence of a local disconnect, personnel working on the hoist may not properly shut off the hoist

in order to avoid walking 500+ feet each way between the hoist and the disconnect located on shore. An additional issue with the current wiring is that the shore-based power disconnect that CA-DPR uses to shutoff the hoist from operation (during maintenance or significant storm/swell events) also shuts off the lights on the pier.

Servicing the hoist has other challenges including the controllers for the hoist and trolley motors are located on the crane arm instead of in the control panel. When either motor is being serviced, the technician needs to climb a 20+ foot ladder to access the controllers that could otherwise be easily accessible should they be relocated to the main electrical cabinet.

3.4 Hoist and Pier Structural Integrity

Based on the report prepared by Fairweather Pacific, LLC, the pier and crane foundation that support the current boat launch facility were originally designed to support a total static-rated load of 4 tons. The structural components of the pier foundation appeared to be in excellent condition during a brief/limited visual inspection while walking down the access ramp with no significant cracks, abrasions or splits noted.

4.0 RECOMMENDATIONS

4.1 Hoist Mechanical Improvements

The most notable improvement to the overall facility that will achieve the CA-DPR's goal to improve the facility's reliability to launch and retrieve boats would be to replace the current Stahl hoist with a CM hoist unit that includes an integrated trolley system. The CM Powerstar hoist, manufactured by Columbus McKinnon, is known to be the largest and most rugged of hoists available in the marketplace most commonly selected for industrial applications where downtime is to be avoided at all cost.

Summary of Hoist Manufacturer Selected

The CM Powerstar series features several components viewed as being critical to the longevity including all gearing and mechanical components are manufactured from hardened forged steel or heat-treated aluminum alloy. In addition, CM Powerstar hoists include a closed gearing system that employs self-lubricating bearings and a sealed oil bath power train reservoir to ensure limited maintenance.

The CM Powerstar hoist includes an integrated trolley system that allows the user to adjust the location of the hoist along the crane boom in order to make it easier to center the vessel pickup point under the hoist. Trolley systems run off a separate motor, which is contained within the hoist enclosure. As a safety precaution, the travel of the hoist trolley should be limited to the outer half of the crane boom in order to prevent items lifted from getting too close in proximity to the hoist pedestal.

Hoist Load Rating

The rated load of a crane is the maximum load that can be achieved under normal working conditions stated by the hoist/crane manufacturer. The safe working load on the other hand takes into consideration the training and experience of the operators, the types and weight of loads being lifted, weather conditions, and the longevity of the crane itself. Taking into account the worst wave conditions deemed acceptable by CA-DPR during launching/retrieving as well as the capacity of the pile foundation responsible for supporting the boat hoist, NE&C believes the factor of safety of 2.0 initiated by Fairweather Pacific LLC to be appropriate. Applying the factor of safety of 2.0 reduces the hoist working load capacity to 2 tons or 4,000 pounds.

Should CA-DPR consider increasing the hoist working load capacity above 2 tons, several conditions would have to be addressed. Increasing the working load capacity to 3 tons would still require a factor of safety of 2.0 be applied dictating the hoist, pier and all related supporting components be replaced or updated to manage a maximum load of 6 tons. At this time it is unclear if the entire area under the launching facility would need to be updated including the installation of additional bearing piles, batter piles and bracing for the pile foundation or if the deck of the pier could be simply improved in

order to distribute the necessary loads from the hoist's pedestal base to the pier's lower structural elements without overstressing any of the structural members in the process. Such construction could potentially cost several hundred thousand dollars however the scope of work and therefore the cost of construction will be unable to be determined until the pier is more-closely analyzed. A waterfront structural engineering firm, such as Northeast Engineers & Consultants, Inc., can perform such a structural analysis where the pier structure is replicated within a 3D structural analysis program based on the conditions of the pier (including actual dimensions, sizes and properties of members and connection types). Successful completion of the model will then permit the engineer the ability to determine the maximum load capacity of the indeterminate structure in its current state. Once the existing structure is analyzed, the engineer will be able to develop solutions to portions of the structure found to be the weakest points and improve them as needed meanwhile analyzing the behavioral response of the overall structure to such changes.

Hoist Hook Speed

A considerable amount of time and effort was spent researching hoists available in the marketplace with specific focus on available hook speeds. As noted previously, hook speed is critical to any exposed facility since the faster the boat can be placed in or removed from the water, the less likely an oncoming swell will hit the vessel that could result in a shock load to the boat slings, hoist and pier (refer to Section 3.2). Several crane manufactures contacted attributed unnecessary shock loads to the majority of hoist breakdowns and believed hook speed and training is the best way to avoid hoist failures.

In general, wire rope systems are much faster (the original wire rope system installed at Gaviota had a hook speed of 36 fpm) than conventional chain systems (the current system achieves approximately 16 fpm) however research found the benefits of chain systems outweighed those of the wire rope equivalent system. Wire rope systems typically require more space to accommodate the large spool that the cable wraps around while the hoist is lifting or lowering its load. Due to the extreme wave climate the facility is permitted to operate in, surging loads acting on the cable will lead to overwrapping (i.e. wire rope crossing itself) on the spool forcing unwanted facility closings and repairs. Although most wire rope systems include wire guide devices to prevent such problems from occurring, the guide is not designed for loads associated with 5-foot waves and will fail if overloaded. In addition, wire rope is more prone to wear after constant loading/unloading and typically needs to be replaced once it shows signs of excessive wear including fraying, kinking and corrosion.

Corrosion Resistance

Due to the corrosive nature of the saltwater environment it is crucial to weatherproof the jib hoist, including the hoist assembly, in order to prevent corrosion of the mechanical system. Most hoists available in the marketplace are not weatherproofed which requires the new assembly be sent to a corrosion specialist prior to installation to disassemble,

sandblast and coat with an epoxy-based paint or powder coat all applicable mechanical gearing/components. This step will ensure the durability of the mechanical performance of the installed hoist over its service life. During the initial servicing, it is recommended that the hoist enclosures and housings be coated with an epoxy-based barrier paint or replaced with non-corrosive (canvas) covers.

Though consultation with JD Crane, the current rotational motor is in good working condition and only needs a custom cover over the rotation motor (located over the crane arm) to protect the motor from the elements. In addition to the noted improvements to the hoist and trolley assembly, CA-DPR should consider the reapplication of a cold-tar epoxy over the jib pedestal and crane arm every few years to ensure the hoist's steel members are adequately protected from the elements.

Hoist Recommendation

The best hoist preferred for the Gaviota Park facility was the **CM Powerstar 5-Ton 2-speed double-reeved chain hoist with integrated motorized trolley system**. Based on the pricing provided by JD Crane, the 5-ton hoist is a more heavy-duty unit with the same hook speed (24 fpm high/8 fpm low) as the 4-ton unit for a marginally higher cost. Although the 6-Ton hoist unit may seem more appropriate should CA-DPR ultimately consider upgrading the entire facility to a 3-Ton working load capacity, the 6-Ton unit's slower hook speed (20 fpm/7 fpm) is not favorable. When ordering, additional chain for the hoist will be necessary to account for a 45 foot lifting distance needed to accommodate crafts lifted at low tide during calm conditions. The current control buttons for the hoist can be retrofitted to accept new ascend and descend buttons that include two (2) contacts that will support the use of the dual speed motor in both directions. As mentioned previously in this section, special arrangements will need to be made with an area corrosion specialist to prepare the hoist for the seawater environment between the time the unit is received from the manufacturer and is installed. CA-DPR Staff should continue to regularly maintain the improved hoist consistent with past efforts.

4.2 Operational Improvements

Staffing Improvements

Based on recent observations and past reports, NE&C strongly urges CA-DPR to consider supervising the operation of the Gaviota Hoist full-time using either CA-DPR Staff and/or Hoist Volunteers until such time that CA-DPR is able to implement a hoist-training program for the benefit of public safety. Starting immediately, CA-DPR Staff and Hoist Volunteers should be the only authorized users of the hoist, where those users can access the hoist 7 days a week during Park hours. In order to qualify for 'Volunteer' status, Hoist Volunteers will need to meet the CA-DPR requirements established in a duty statement, including CA-DPR sanctioned Hoist Launching Procedures (Attachment C), Boat Equipment Checklist (Attachment D) and a minimum commitment of hours per year to staff the hoist.

The change in hoist access should be presented to the public as a short-term outreach program to help improve public safety and reduce the unnecessary wear on the hoist. Over time, members of the public who participate in a CA-DPR training program will be issued a keycard that will grant them access to use the hoist unsupervised 7 days per week during Park hours. The CA-DPR training program should include a review of the Hoist Launching Procedures and Boat Equipment Checklist with each certified user completing the launching of his/her boat witnessed by a CA-DPR sanctioned trainer. After keycards have been issued, CA-DPR Staff and Hoist Volunteers will have authority to revoke hoist privileges from those individuals who are found to not follow hoist guidelines, vandalizing the facility, sharing cards with others, etc. Although staffing the hoist operation will be a challenge for CA-DPR and the Hoist Volunteers, it is believed that a large percentage of the frequent users will be issued keycards within the first year and CA-DPR's supervision of the hoist should be able to be significantly reduced within 2-3 years.

Additional Monitoring Considerations

In addition to monitoring wave activity using the Harvest Buoy, CA-DPR should also consider monitoring the National Weather Service broadcasts for marine weather and shut down the hoist during times when there is a Small Craft Warning issued (where winds are expected to reach upward of 28 knots (32 mph)). CA-DPR may also want to consider shutting down the hoist during times when Small Craft Advisories are issued (where winds range between 18-33 knots (21-38 mph)).

CA-DPR Staff will also need to consider the recent deposition of sand extending from the mouth of the Gaviota Creek to the area immediately below the hoist launching area. The sand spit is a recent phenomenon, caused by the excessive discharge of creek and beach sediment from the Creek's flow in response to the extreme weather experienced by the region this past winter. The new sand formation reduces the available water depth during launching and meanwhile forces waves to break in the launching area that would otherwise break outside the launching area closer to shore. Unfortunately both the shallow water depth and breaking waves in the launching area only adds to what is already a challenging site that requires additional CA-DPR monitoring to ensure site conditions are conducive for launching and shutdown the facility if believed otherwise.

Signage Improvements

The process involved with launching a vessel at the Gaviota Facility is complicated. It is important that crucial procedures are posted throughout the facility to make sure users regularly follow those steps to ensure personal safety is always remembered. NE&C has developed suggestions for signage at critical locations throughout the pier facility including the entrance to the pier, the handrail near the hoist, the hoist pedestal and the landing before the steps to the access ramp. Please refer to Addendum E for additional details of the recommended signage.

Launching Improvements

Over the years area boaters have used a variety of bridle systems to launch their vessels from the Gaviota Hoist. Bridle systems were comprised of a variety of materials including chain, rope, wire rope, cable and nylon straps. For the purpose of ensuring all users provide sufficiently-rated and tested bridle systems, NE&C recommends CA-DPR enforce a standardization of bridle systems limited to ANSI-certified nylon straps. In addition to the ease of CA-DPR compliance monitoring (certification tags on straps clearly state load capacity – See Figure 4-1 below), nylon straps can offer a small amount of flexibility where other materials, including the chain for the hoist, will not thereby suppressing any shock load that would otherwise be transferred from the vessel through the remainder of the hoist and pier structure. Where soft-bottom inflatable boats do not have sufficient pickup points to attach a traditional nylon strap bridle/sling, users will need to make a bow basket-sling that is held with additional d-rings to secure the basket in place while the vessel is lifted.

Figure 4-1: Example of nylon sling certification tag

4.3 Electrical Improvements

The proposed electrical system upgrades are closely tied to the proposed hoist upgrades. Several upgrades are being proposed with the objective of streamlining the current system and providing increased levels of safety and security.

Corrosion Mitigation

In order for hoist system to continue to operate, its electrical system needs to be updated to address its vulnerability to corrosion as soon as possible. The current conduits, junction boxes and cabinets show signs of rust along their faces and terminals. In order to protect these items from the corrosive environment, several measures are proposed. The current enclosures should be upgraded to meet the National Electrical Manufacturers Association (NEMA) 4X-Type standards for marine applications. All upgrades will be in accordance with this current standard. Conduit and end fittings should be replaced with aluminum conduit tubing and copper-free aluminum fittings respectively.

System Configuration

The main electrical cabinet should be replaced with a larger unit to allow for most/all of the hoist electrical components to be accessible in one location. This upgrade will help streamline the electrical system and allow for easy access and service within the lifting area. Both the hoist and trolley motor controls should be relocated from their current position, atop the jib arm, to the upgraded cabinet. Last, a new hoist disconnect switch should be installed within the new main cabinet. The disconnect switch upgrade would allow the hoist be shut down during bad weather without affecting lighting or other power. In addition, upgrading the hoist disconnect switch would allow maintenance staff the ability to shut down the hoist locally rather than making several unnecessary trips away from the facility.

Security Improvements

NE&C recommends CA-DPR consider installing a system security into the facility to protect it from unauthorized use and vandalism. Bar code and magnetic strip key card systems are evident for many of us daily in the form of electronic door locks, ATM machines, and credit card kiosks. A similar form of technology, known as proximity readers, has been successfully used at service stations across the country as a way for tagging purchases and payment information without having to physically insert or slide any form of identification including a credit card. The proposed system at Gaviota would be similar in that a user would be issued a proximity key-card with identification information listed on the face (Figure 4-2) that also includes an embedded proximity transmitter. In order to initialize the system, the user would simply wave their key-card in the direction of the reader and the hoist would be active for a limited amount of time. Since the reader is closed to the outside environment, proximity readers are more resistant to corrosion than the above-mentioned systems and are less prone to vandalism.

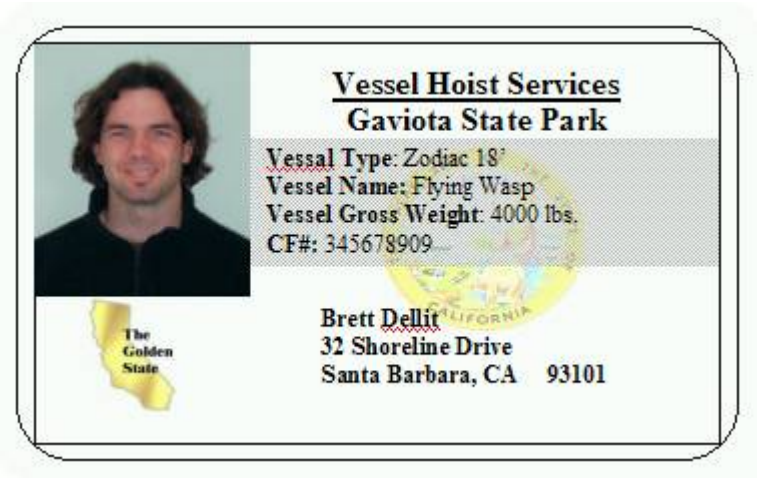

Figure 4-2: Example of Hoist Key-Card

A proximity card system is comprised of a controller, reader, ID card and linking system. The majority of the installation would include the controller and reader be installed within the new (larger) control cabinet and on the crane mast respectively. The remainder of the hardware involves the linking of ID information to an electronic database stored on a personal computer. Depending on distance, the controller can either be wired or linked via a wireless transmitter. The archived information is useful in that it provides a record of those using the hoist. In the event of an emergency or hoist malfunction, the Park has the ability to review the log files to help identify most recent users, including the times each user operated the hoist. Log data could be used to serve a multitude of CA-DPR analysis including multiple entries (launching and retrieval times) could be used to determine those users who safely returned, how often a person uses the facility and how much time each person is on the water. Single entries could be reviewed at the end of each day to help identify any person(s) who failed to return that given day. The total cost of a proximity card reader system including reader, controller, and linking system is approximately $3,000 from ALX Technology (www.alxtechnology.com), excluding the cost of ID cards (ranging from $3-$15 each) and installation.

To add another layer of security to the facility, NE&C recommends that a simple closed-circuit surveillance system be installed on Site. Such a system would provide Park staff a constant record of activity at and around the hoist 24 hours/day 7 days/week. A pole-mounted video camera, enclosed in a weatherproof housing, should be focused on the launching area at all times. Video would be then fed to a Digital Video Recorder (DVR) system, which can store approximately 5-7 days of video storage. The recorded footage could be later reviewed in the event of vandalism, maintenance issues, injury, etc. The total cost of purchasing a video surveillance system including camera, camera housing, and DVR is approximately $2,500 from NuSpectra Multimedia (www.nuspectra.com) excluding installation.

5.0 ADDENDUM

SECTION A: Hoist Mechanical Improvement Quote (Prepared by JD Crane)

SECTION B: Electrical Improvements (Prepared by Lundeen & Arnold)

SECTION C: Hoist Launching Procedures

SECTION D: Staff/Volunteer Procedural Check List

SECTION E: Hoist Signage

SECTION F: Use Agreement/Waiver Form

SECTION G: Trip Itinerary Form

Northeast Engineers & Consultants, Inc.
1792 Tamarin Avenue
Ventura, CA 93003

May 31, 2005

State of California Department of Parks & Recreation
Channel Coast District
1925 Las Virgenes Road
Calabasas, CA 91302
Att: Jean Carr

RE: C0442010 Gaviota Boat Hoist Assessment

Dear Ms. Carr,

Please be aware that Northeast Engineers & Consultants, Inc. (NE&C) subcontracted JD Crane & Hoist, Inc. (JD Crane) to provide supplemental mechanical support services to provide guidance on product selection and pricing for the referenced project.

During its initial efforts, NE&C met with JD Crane on Site on February 8, 2005 and had a limited telephone conversation with a representative on March 23rd to review the project details and scope of work. Over the course of 7+ weeks, NE&C repeatedly attempted to contact JD Crane via telephone, facsimile and email in order to obtain the attached proposal dated May 13, 2005. Immediately after receiving the proposal, NE&C contacted JD Crane later the same day asking for additional information and pricing for services to include herein for CA-DPR consideration. Additional information requested of JD Crane included:

1. Provide Hoist Specifications, recommended options and associated cost for CM Powerstar 4T, 5T and 6T
2. Provide cost for the additional hoist control station
3. Provide cost for new cowling/cover over rotational motor and gear box
4. Provide cost for replacement stainless steel electrical cabinet 1.5 times the size of existing cabinet and relocate hoist & trolley controllers within new cabinet.
5. Provide cost for card reader security system

Unfortunately by the time of this submittal, NE&C did not receive an updated proposal from JD Crane to reflect the additional information noted. NE&C apologizes for any inconvenience.

Very Truly Yours,
Northeast Engineers & Consultants, Inc.

August Kreuzkamp
Chief Waterfront & Coastal Engineer

J.D. Crane & Hoist Inc.

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(562) 529-2460
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Cal/OSHA Lic. #308

May 13, 2005 **Proposal No. 05-0513**

North Eastern Eng.

Attention: Peter / Gus
(401) 849-0810
Fax () –

Subject: **Crane Repairs**

J.D. Crane and Hoist Inc. is pleased to quote the following:

A. Removal and reinstallation of one hoist and trolley.
   1. CM Power Star.
   2. 3 ton electric chain hoist.
   3. 2 – speed hoist with 40 / 13 feet per minute.
   4. 480 volt.
   5. Motorized trolley at 50 feet per minute.
   6. Chain container.
   7. Epoxy coated frame with canvas cover.
   8. Gear box and brake are all sealed.
   9. Canvas cover on trolley motor.

Materials.....$ 16,647.00
Labor.....$ 760.00

1. CM Power Star.
2. 5 ton electric chain hoist.
3. 2 – speed hoist with 24 / 8 feet per minute.
4. 480 volt.
5. Motorized trolley at 50 feet per minute.
6. Chain container.
7. Epoxy coated frame with canvas cover.
8. Gearbox and brake are all sealed.
9. Canvas cover for trolley motor.

Materials.....$ 17,447.00
Labor.....$ 760.00

*** Note- This is the strongest best hoist on the market.**

Terms
Applicable sales tax and freight not included. Quote based on free access to all working areas. Work performed normal business hours 7:00-3:30. Lift equipment additional unless provided by customer. Payment Net 30 days. Quote is valid for 90 days. Please allow 7-10 days for delivery.

Thank you for the opportunity to provide our service to your company. Please feel free to call if you have any questions. Your response will initiate scheduling.

Respectfully,

Todd Guthrie
Operations

GAVIOTA STATE PARK BOAT LIFT

REPORT ON ELECTRICAL CONDITIONS

March 31, 2005

INTRODUCTION

This report has been prepared as requested by Northeast Engineers and Consultants. It is based on observations during a visit to the site on March 30, 2005, and on discussions with Timothy Buckley of Northeast Engineers and Consultants. I have also reviewed the report of the meeting on February 8, 2005, regarding concerns about the hoist.

OBSERVATIONS

The electrical system at the hoist consists of a number of components including the following:

A stainless steel control cabinet containing disconnect switches, starters, a timer and a transformer for mi for boom swing, the hoist trolley, and a transformer for miscellaneous control power and lighting.

A separately mounted disconnect switch for the lift system.

A separately mounted disconnect switch for the retractable steps.

A control station for the lift.

A control station for the retractable steps.

Conduit and boxes for wiring to the various motors and controls.

Lighting fixtures.

PROBLEMS

I find the following problems with the existing electrical system:

1. There is no single disconnect at the main control cabinet that will de-energize all components in the cabinet. The only disconnect switch that will de-energize the entire cabinet is located at the source of power at the restroom building. This creates a hazardous working condition.

2. The controllers for the hoist and trolley motors are on the hoist making access for service difficult.

3. There is no way to shut down the lift operation from the office during high wave conditions. (The feeder switch at the power source cuts off some lights as well as the lift.)

4. Some of the switch enclosures (NEMA Type 3R) are rusting.

5. Some conduit and junction boxes are corroded.

The report of the February 8, 2005, meeting also raised some other problems related to the electrical system such as confusing electrical switches and monitoring use by the public.

RECOMMENDATIONS

I recommend the following improvements to the electrical system for the boat lift:

1. Provide a disconnect switch in the vicinity of the lift to shut off all power to the control cabinet.

2. Locate the trolley and hoist controllers in the main control cabinet.

3. Provide a remote control from the office to shut off the lift system without shutting off lights or receptacles.

4. Provide a card key or other key system and provide keys only to users who have been trained to operate the system.

5. Use only materials suitable for the ocean environment when making replacements and improvements. The enclosures should be NEMA 4X type. Conduit and fittings could be rigid PVC conduit, or if this is considered too vulnerable to vandalism, copper-free aluminum fittings and aluminum conduit could be used,

6. I believe the confusion of switches could be alleviated by combining all disconnect switches and controllers into a single cabinet. Public users would only have access to a key system initiating device and the push-button control stations.

Prepared by: Lawrence E. Lundeen, PE
Lundeen & Arnold
Electrical Engineers

Hoist Operational Standards and Procedures

C.1 General Precautions and Safety Guidelines

- Lifting Capacity: 4,000 lbs (2 tons) inclusive of fuel, provisions, and supplies.
- Do not lift loads over people.
- Do not use hoist to lift, support or transport people.
- Do not leave a suspended load unattended.
- Do not operate hoist unless the load is centered under hoist.
- Only trained users specifically authorized by CA-DPR are permitted to operate the hoist.
- All users (supervised or otherwise) must sign the Vessel Hoist Services Use Agreement Form and submit a Trip Itinerary Form prior to launching.
- Only vessels with properly affixed CF numbers, current registration tags and required safety equipment may launch into State waters.
- No crane operations shall be permitted when wave heights exceed 5 feet, during Small Craft Advisories or when deemed unsafe by State Park Employees.
- Minimum of two (2) persons are required to launch or recover a vessel.
- No vehicles are to be driven on pier. Trailer dollies only.
- ANSI Certified nylon slings only (confirm free from fraying, chafing and dry rot).
- Boats must be rigged with lift eyes deemed structurally sufficient to lift the vessel.
- Weather and sea conditions change rapidly. Actively monitor weather advisories and be prepared to delay or abort your trip if dangerous conditions develop. Unsafe conditions can result in the closer of the hoist.

For Emergencies

- Contact 911 for immediate assistance
- Contact Park office at (805) 968-1711

Report any maintenance or vandalism concerns

- Contact Park office at (805) 123-4567
- Hoist Volunteers at (805) 968-1711

C.1 General Precautions and Safety Guidelines (cont.)

Vessels launching from the Gaviota Hoist are required to have the minimum safety equipment including:

- A PFD in working condition for each passenger
- Audible distress signals (horn or whistle)
- Visual distress signals/ flares (with valid expiration dates)
- Paddle
- VHF Radio
- Anchor with adequate rode
  Fire extinguisher (with valid expiration dates)

You are responsible for knowing the provisions of California boating law, and being in compliance with its requirements for your particular situation. Larger vessels and those with inboard engines have additional requirements. You may pick up a free copy of the State boating regulations handbook at any DMV office. Ask at the park entrance situation for available booklets.

C.2 Launching Procedure

A. Staging

1. Upon arriving, follow arrows on pavement to staging area in parking lot.
    a. The staging area in the main parking lot provides a place to prepare for launching while maintaining your first come, first serve sequence.
    b. From the staging area, you can see if there is adequate space to relocate to the pier without overcrowding the launch area. Space permitting, you may proceed to the foot of the pier for further staging.

2. The following should be considered when making preliminary equipment check within staging area
    a. Check that transom plug has been inserted and sits tightly within drain hole.
    b. Make sure engine is running properly.
    c. Make preliminary check of all lifting equipment and fittings.
    d. Check lifting slings, verifying that they are free from fraying, dry rot, and that the attachment hooks are secure to the webbing.
    e. Detach trailer tie-down straps.
    f. Check fittings at pickup points for any structural wear and tear.

3. Complete and submit *Trip Itinerary Form.*

4. Consult marine weather forecasts for the Channel Coast Region via VHF, National Weather Service, etc.

5. Note weather conditions at pier (i.e. swell heights/ period, wind speed/ direction).

C.2 Launch Procedure (cont.)

B. Preparing for Launch

1. Detach trailer from vehicle.
2. Maneuver trailer adjacent to hoist structure using trailer dolly.
3. Attach lifting slings to pickup points (make sure hook latch is fully closed and not supporting any part of the load).
4. Attach tag lines at bow and stern.

C. Operating Hoist

1. Attach slings to hook making sure that they are free from twists or snags.
2. Adjust trolley/ hoist to be centered over vessel.
3. Take up slack in the hoist chain, allowing the craft to lift slightly from its trailer. Make adjustments to sling length to account for balance of the craft.
4. Once craft is balanced, begin upward lift until bottom of craft is above hand railing. As a safety precaution never allow any persons under a suspended craft.
5. Rotate crane towards railing, stopping rotation once craft is fully extended from pier and parallel to the handrail.
6. Lower craft until hook becomes slack within its slings.
7. Board vessel, start engine, detach hook and motor away from pier. When departing from the lower landing, avoid interference with fishing lines by heading straight away from pier rather than traveling alongside.
8. Return hoist to its original position.

C.2 Launch Procedure (cont.)

D. Departing

1. Remove slings from craft.

2. Remove trailer from launch area, return to the foot of the pier, re-attach to your vehicle, and relocate to the main parking lot.

5. When departing from the lower landing, avoid interference with fishing lines by heading straight away from pier rather than traveling alongside.

C.3 Retrieval Procedure

1. Approach lower landing with caution. Avoid traveling alongside pier in order to prevent interference with fishing lines

2. Retrieve trailer and relocate it adjacent to the crane. Lower hook.

   * Note that the craft is within a trough for the above procedural step in order to allow for enough chain slack to prevent shock loading

3. Attach tag lines and hook. Turn off engine and disembark from vessel.

4. Begin raising the craft during a wave trough, without pausing, until the hull is above the elevation of the highest wave crest

5. Continue to raise craft until the hull is above the hand railing and rotate boom until craft is located above the trailer

6. Maneuver crane trolley to a position where the craft is in line vertically with the trailer

7. Lower craft to an elevation slightly above trailer, make adjustments with trolley and jib angle as to provide that the craft sits properly in its trailer bunks

8. Lower until chain is slack and disconnect hook from slings

9. Relocate trailer from pier in a timely fashion

C.4 Dynamic Conditions Launch Procedure

One of the most crucial concerns facing the safety and durability of the hoist and all its components involves the dynamic factors unique to Gaviota State Park. The boat launching facility at Gaviota is rare considering it provides for the launch and retrieval of public watercraft in a highly exposed location. Most, if not all, similar public launching facilities are situated within protected harbors and bays, free from dynamic factors such as swell and long fetched wind currents.

It is essential to be aware of local weather conditions while operating the hoist. In addition to the launching procedure outlined in section C.2, the following is provides guidelines for the safe launch and retrieval during periods of increased swell (up to 5 feet).

1. Before transferring trailer/ vessel to the launching area, take several minutes to observe current conditions
    a. Note wave heights; use pilings as reference points
    b. Note swell period; time subsequent wave peaks passing an individual pile
    c. Note wind speed and direction

2. Attach hoist hook to lifting slings

3. Raise craft and rotate jib arm perpendicular to pier rail

4. Lower craft so that it is approximately 5 feet above wave crests

5. Note condition one last time, confirming that period and wave heights are similar to that initially observed

6. As a wave crest passes, begin lowering until craft settles at water level within a wave trough

7. Allow for sufficient slack in the chain

8. Board vessel, start engine, detach hook and motor away from pier. When departing from the lower landing, avoid interference with fishing lines by heading straight away from pier rather than traveling alongside.

Staff/Volunteer Procedural Check List

1. Check/ collect: (#1) *Use Agreement and (#*2) *Itinerary Forms.*

2. Check that the boater's CF # and registration are current and match those listed on the forms collected.

3. Make thorough check of safety equipment:

    - PFD's for each passenger
    - Audible distress signals (check expiration date)
    - Visual distress signals (check expiration date)
    - VHF Radio
    - Anchor with sufficient rode
    - Fire extinguisher

4. Check lifting slings and pickup points, paying close attention to the following:
    a. Check for sling weight certification.
    b. Check slings, paying close attention to signs of fraying, chafing, or dry rot.
    c. Check pickup points for structural integrity (i.e. any sign of looseness in fittings, poor or lack of backing plates, etc).

5. If there is an awaiting vessel to be launched, instruct the launching vessels operator to relocate the trailer while another prepares the vessel for departure.

Hoist Signage

The following figures identify areas where additional information is needed including boat launching procedures and general safety requirements.

GAVIOTA STATE PARK

PRE-LAUNCH PROCEDURE

- NO VEHICLES PERMITTED ON PIER
- IF CRANE IS IN USE, PARK FACING THE SEACLIFF IN SPACES PROVIDED AT FOOT OF PIER
- SPACE AT FOOT OF PIER IS LIMITED TO 2 VEHICLE/ TRAILER RIGS
- 30 MINUTE TIME LIMIT FOR BOAT LUANCH/ RETRIEVAL

FIGURE E-1: Metal sign to be placed atop a 5 ft. post at Pier entrance

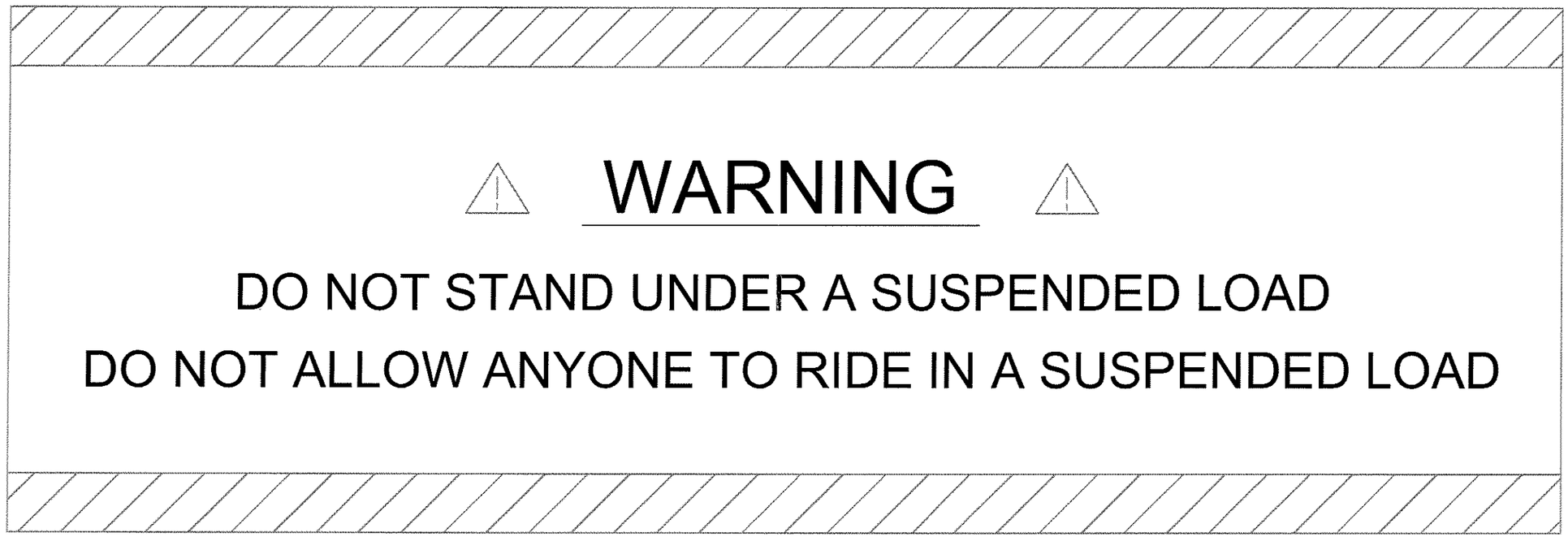

FIGURE E-2: Metallic sticker to be adheared to each side of the crane mast

LAUNCH AREA BOUNDARY

- LAUNCH AREA LOCATED BETWEEN NORTH END OF LANDING STAIRS AND SOUTH END OF LOWERED RAILING

- BOATERS HAVE EXCLUSIVE RIGHTS WITHIN LAUNCH AREA ONLY; BOATERS MUST KEEP CLEAR OF FISHERMEN THROUGHOUT THE REMAINDER OF THE PIER

FIGURE E-3: Metal sign to be fixed to the hand railing in the vicinity of the lifting area

LEAVING AND APPROACHING PIER

AVOID RUNNING ALONGSIDE PIER WHEN APPROACHING/
DEPARTING LAUNCH PLATFORM
IN ORDER TO PREVENT CONTACT WITH FISHING LINES

FIGURE E-4: Metal sign to be fixed to a point at the base of the retractable platform.

IMPORTANT CONTACT INFORMATION

- REPORT AN IMMEDIATE EMERGENCY: 911
- FOR ALL OTHER ISSUES INCLUDING DAMAGE OR MAINTENANCE CONCERNS, PLEASE CONTACT SUPERVISING RANGER AT (805) 968-1711

FIGURE E-5: Metallic sticker to be adheared to each side of the crane mast

GAVIOTA STATE PARK

BOAT HOIST GUIDELINES

- Lifting Capacity: 4,000 lbs (2 tons)
- Only trained users specifically authorized by CA-DPR are permitted to operate the hoist
- No crane operations shall be permitted when wave heights exceed 5 feet, during Small Craft Advisories, or when deemed unsafe by State Park Employees
- Minimum of two (2) persons required to launch or recover a vessel
- Do not operate hoist unless the load is centered under hoist
- Do not use hoist to lift, support or transport people
- Do not lift loads over people

FIGURE E-6: Metallic sticker to be adheared to each side of the crane mast

The following signs (E-7 through E-12) outline General Hoist Guidelines as well as Launching and Retrieval Procedures. It is recommended that they be printed on State Park letterhead and laminated in clear plastic. Placement for this grouping should be in plain view of the hoist control pendent along the hand railing.

Gaviota State Park
Boat Hoist

GENERAL GUIDELINES

- **Maximum vessel weight not to exceed 2-tons. This figure includes all fuel, gear, and provisions.**
- **All users (supervised or otherwise) must sign the appropriate CA-DPR *Use Agreement and Trip Itinerary Forms*.**
- **Only vessels with properly affixed CF numbers, current registration tags and required safety equipment may launch into State waters.**
- **Minimum of two persons required to operate hoist.**
- **Only ANSI/ ASME certified straps in proper working conditions are suitable for lifting vessels at this hoist facility**
- **Do not leave a suspended load unattended.**
- **Maximum time per vessel: 30 minutes.**
- **Report any malfunction, unusual performance or damage of the hoist to Supervising Ranger at (805) 968-1711.**
- **Monitor marine weather broadcasts frequently; the boat hoist will be closed to all vessels in the event of rough seas.**

FIGURE E-7

Staging

1. Upon arriving, follow arrows on pavement to staging area in parking lot.
    a. The staging area in the main parking lot provides a place to prepare for launching while maintaining your first come, first serve sequence.
    b. From the staging area, you can see if there is adequate space to relocate to the pier without overcrowding the launch area. Space permitting, you may proceed to the foot of the pier for further staging.

2. The following should be considered when making preliminary equipment check within staging area
    a. Check that transom plug has been inserted and sits tightly within drain hole.
    b. Make sure engine is running properly.
    c. Make preliminary check of all lifting equipment and fittings.
    d. Check lifting slings, verifying that they are free from fraying, dry rot, and that the attachment hooks are secure to the webbing.
    e. Detach trailer tie-down straps.
    f. Check fittings at pickup points for any structural wear and tear.

3. Complete and submit *Trip Itinerary Form.*

4. Consult marine weather forecasts for the Channel Coast Region via VHF, National Weather Service, etc.

5. Note weather conditions at pier (i.e. swell heights/ period, wind speed/ direction).

FIGURE E-8

Preparing for Launch

1. Detach trailer from vehicle.
2. Maneuver trailer adjacent to hoist structure using trailer dolly.
3. Attach lifting slings to pickup points (make sure hook latch is fully closed and not supporting any part of the load).
4. Attach tag lines at bow and stern.

FIGURE E-9

Operating Hoist

1. Attach slings to hook making sure that they are free from twists or snags.
2. Adjust trolley/ hoist to be centered over vessel.
3. Take up slack in the hoist chain, allowing the craft to lift slightly from its trailer. Make adjustments to sling length to account for balance of the craft.
4. Once craft is balanced, begin upward lift until bottom of craft is above hand railing. As a safety precaution never allow any persons under a suspended craft.
5. Rotate crane towards railing, stopping rotation once craft is fully extended from pier and parallel to the handrail.
6. Lower craft until hook becomes slack within its slings.
7. Detach hook from slings and return hoist to its original position.

FIGURE E-10

Departing

1. Remove slings from craft.

2. Remove trailer from launch area, return to the foot of the pier, re-attach to your vehicle, and relocate to the main parking lot.

3. When departing from the lower landing, avoid interference with fishing lines by heading straight away from pier rather than traveling alongside.

FIGURE E-11

Retrieval Procedure

1. Approach lower landing with caution. Avoid traveling alongside pier in order to prevent interference with fishing lines

2. Retrieve trailer and relocate it adjacent to the crane. Lower hook.

   * Note that the craft is within a trough for the above procedural step in order to allow for enough chain slack to prevent shock loading

3. Attach tag lines and hook. Turn off engine and disembark from vessel.

4. Begin raising the craft during a wave trough, without pausing, until the hull is above the elevation of the highest wave crest

5. Continue to raise craft until the hull is above the hand railing and rotate boom until craft is located above the trailer

6. Maneuver crane trolley to a position where the craft is in line vertically with the trailer

7. Lower craft to an elevation slightly above trailer, make adjustments with trolley and jib angle as to provide that the craft sits properly in its trailer bunks

8. Lower until chain is slack and disconnect hook from slings

9. Relocate trailer from pier in a timely fashion

FIGURE E-12

Gaviota State Park
Vessel Hoist Services Use Agreement Form

OWNER/ OPERATOR INFORMATION:

NAME: _____ ADDRESS: _____ CITY: _____ ZIP: _____

PHONE #: _____ EMERGENCY PHONE CONTACT: _____

VEHICLE MAKE/ MODEL: _____

VEHICLE LICENSE #: _____ TRAILER LICENSE #: _____

EMAIL ADDRESS (hoist status info): _____

VESSEL INFORMATION:

CF#: _____ VESSEL NAME: _____

DESCRIPTION/ SIZE: _____ WEIGHT: _____

VESSEL AND EQUIPMENT WORTHINESS STATEMENT:

FOR HOIST USE:

ALL VESSELS MUST MEET MINIMUM STATE OF CALIFORNIA DEPARTMENT OF BOATING AND WATERWAYS REQUIREMENTS FOR RECREATIONAL WATERCRAFT. BY SIGNING THIS DOCUMENT, I CERTIFY THAT:

1. My vessel current DMV registration including CF numbers and current sticker.
2. My vessel meets all current U.S. Coast Guard requirements for boating safety equipment including, but not limited to: PFD's (for each passenger), proper fire extinguisher, both visual and audible distress signals (flares, horns, whistles, etc.).
3. My vessels "fully loaded" weight included all equipment, fuel, and supplies is less than **2-tons.**
4. My lifting slings are made of heavy-duty nylon, rated to lift my "fully loaded" vessel, free from chafing, fraying, or dry rot.
5. My vessels pickup points are structurally sound with proper backing and weight distribution considerations.
6. I have been trained in the procedural methods of operating the hoist in both ideal and inclement weather.

Waiver of Liability and Indemnity Agreement

I, my deckhands and passengers understand and acknowledge that there are risks associated with the use of the vessel hoist services offered by the California Department of Parks and Recreation. My (our) use of the hoist services is voluntary and based on my (our) independent assessment of all risks, without reliance on representations or advice by employees or representatives of the Department or any other person.

I (we) hereby release, waive, and relinquish all claims and legal action for personal injury, wrongful death, or property damage against the State of California, The Department of Parks and Recreation, its employees, officers, agents, permittees, or assignees arising from the use of the vessel hoist services. I (we) also agree to protect, hold harmless defend and indemnify the State and hold harmless from all claims and legal actions for personal injury, death, or property damage arising from my conduct.

I (we) have read and understand the "Waiver of Liability" and "Indemnity Agreement".

_____ _____
Owner/ Operator's Signature Date

Gaviota State Park Vessel Hoist Services
Trip Itinerary Form

OWNER/ OPERATOR INFORMATION:

NAME: _____ ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

EMERGENCY PHONE CONTACT: _____ PHONE #: _____

VEHICLE MAKE/ MODEL: _____

VEHICLE LICENSE #: _____ TRAILER LICENSE #: _____

EMAIL ADDRESS (hoist status info): _____

VESSEL INFORMATION:

VESSEL NAME: _____ CF#: _____

VESSEL DESCRIPTION: (*color/make/type*)_____

VESSEL SIZE: _____ *ft* VESSEL WEIGHT: _____ *tons*
ONBOARD CELL PHONE #: _____ NUMBER OF PASSENGERS: _____

ACTIVITY: ☐ FISH ☐ SURF ☐ DIVING ☐ OTHER: _____
RETURN DATE: _____ ☐ OVERNIGHT TRIP

Vessels launching from the Gaviota Hoist are required to have the minimum safety equipment including:

- A PFD in working condition for each passenger
- Audible distress signals (horn or whistle)
- Visual distress signals (flares-check expiration date)
- VHF Radio
- Anchor with sufficient rode (chain and line)
- Fire extinguisher (check expiration date)

WARNING!

These waters are dangerous. Weather and sea conditions change rapidly. High velocity offshore winds can appear suddenly. Under these conditions, engine failure can result in being blown to sea. Be prepared with adequate ground tackle and Coast Guard required safety equipment. Only currently registered vessles with all required safety equipment are permitted to launch into State waters.