

CESPL-EDD-C

22 July 2016

MEMORANDUM FOR: CESPL-PM-N

SUBJECT: 2016 Newport Bay Harbor Structure Condition Inspection

1. The Newport Bay Harbor protective structures were inspected on 15 July 2016 by Chuck Mesa (CESPL-EDD-C), Brandon Whitley (CESPL-EDD), and the undersigned. This was a routine annual inspection in accordance with the coastal navigation structure condition inspection program. The inspection consisted of a walking inspection of the west jetty and east jetty. The purpose was to identify any major and/or significant changes in structural condition that would warrant further investigative action. The observations recorded herein are cursory and general in nature and are not intended to replace the detailed observations, analysis, and conclusions of a comprehensive structure condition inspection. The stationing reported herein is approximate and measured in feet via successive chaining. The inspection was conducted during the period 0910–1150. Tidal elevations ranged from 2.5 to 3.25 ft during the inspection. Oceanographic conditions during the time of the inspection did not hinder inspection operations.

2. The inspection noted many aspects of structure condition including crest width and elevation, seaward and harbor side slope geometry, missing and/or ejected armor stones, and armor stone interlocking. Only those areas that deviate from a good condition are noted.

3. The east jetty is in overall good condition. The concrete section of the jetty remains unchanged from previous inspections but spalling of the concrete deck and rusting of the interior rebar continues. There are some missing stones on the harbor side in the vicinity of Sta 31+00 but these are considered minor. The head is in marginal condition. There is a minor loss of interlocking on the seaward side radial. A section of stones have slipped down slope causing instability and separation from the grout. Upper adjacent stones remain held in place by the grout.

4. The west jetty is in overall good condition. The root of the structure is in poor condition but has not changed from previous inspections. Some ejected stones and slumping on the seaward side was observed throughout the length of the structure. The head section is in poor condition, with damages around the entire perimeter. There are missing stones at the water line and numerous upturned stones on the crest. There are various cracks in the grout caused by displaced stones along the water line.

5. The jetty heads are in marginal or poor condition. Future inspections should emphasize these areas as progressive damages are expected. A listing of the specific jetty condition observations and/or deficiencies is shown in Appendix A. Field photographs are presented in Appendix B. Any questions concerning this inspection report can be directed to the undersigned.

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Matt Wesley
Coastal Engineering Section

Appendix A

Newport Bay
2016 Structure Condition Inspection
Field Notes**East Jetty**

Sta. 30+50 - Sta. 31+00: Few missing stones on the channel side along the waterline; the seaward slope and the crest are beginning to slump down.

Head Section: On the seaward radial, one armor stone that has slipped down towards the waterline resulting in a minor loss of interlocking; on the harbor side radial, a group of stones have slipped down slope causing instabilities in the adjacent stones and resulting in separation from the overlaying grout; the grout is cracking and beginning to slump down slope but the upper adjacent stones are held in place by the grout.

West Jetty

Sta. 8+00 - Sta. 10+00: The rubble concrete is in poor condition but no change from previous inspections.

Sta. 10+00 - Sta. 12+00: The existing stone is in poor to fair condition with a loss of interlocking but little to no change from previous inspections.

Sta. 12+00 - Sta. 14+00: The crest of the jetty remains in poor condition; the harbor side slope is in poor condition but remains unchanged.

Sta. 17+00 - Sta. 18+00: Minor loss of interlocking at the water line on the seaward side.

Sta. 18+00 - Sta. 20+00: The seaward slope has minor loss of interlocking along the waterline and some stones are starting to roll out; there is also loss of interlocking on the upper slope causing upturned stones.

Sta. 21+50 - Sta. 22+00: Armor stones at the water line have been ejected and the upper adjacent stones on the slope are becoming unstable.

Sta. 22+75 - Sta. 23+00: Armor stones have been ejected on the seaward side near the water line; the upper adjacent stones are becoming unstable.

Sta. 27+75: Slumping of stones at the water line to the lower parts of the slope which is opening a small void in the structure.

Sta. 31+50: Missing stones at the water line on the seaward side is creating a small void but not yet causing upper slope instability.

Sta. 34+00: An upturned armor stone on the central crest area is present.

Head Section: The head section looks in poor condition; there is increasing damages around the entire perimeter; the seaward slope just forward of the navigation-aid has been over steepened for some time now and just further seaward long the slope there is a large void that is opening up; the stones that were being held by the grout have slipped down slope leaving a very steep void; the slope is very vertical as you progress to the centerline section; many stones along the water line have lost interlocking, the crest

centerline area is in very poor condition; many upturned armor stones which are starting to separate from the grout; a very large stone is upturned and sitting at the center of the slope on the harbor side radial also separated from the grout.

Appendix B

Newport Bay
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Field Photographs



Fig 1. East Jetty: Sta. 18+00 viewing landward



Fig 2. East Jetty: Sta. 20+00 viewing landward



Fig 3. East Jetty: Sta. 24+00 viewing landward



Fig 4. East Jetty: Spur viewing harbor side



Fig 5. East Jetty: Sta. 26+00 viewing landward



Fig 6. East Jetty: Sta. 28+00 viewing landward



Fig 7. East Jetty: Sta. 30+00 viewing landward



Fig 8. East Jetty: Sta. 31+00 viewing landward



Fig 9. East Jetty: Sta. 32+00 viewing landward



Fig 10. East Jetty: From the Navigation Aid viewing landward



Fig 11. East Jetty: Navigation Aid viewing seaward



Fig 12. East Jetty: Damage at the head



Fig 13. West Jetty: Sta. 10+00 viewing landward



Fig 14. West Jetty: Sta. 12+00 viewing landward



Fig 15. West Jetty: Sta. 14+00 viewing landward



Fig 16. West Jetty: Sta. 18+00 viewing landward



Fig 17. West Jetty: Sta. 20+00 viewing landward



Fig 19. West Jetty: Sta. 22+00 viewing landward



Fig 20. West Jetty: Sta. 24+00 viewing landward



Fig 21. West Jetty: Sta. 26+00 viewing landward



Fig 22. West Jetty: Sta. 28+00 viewing landward



Fig 23. West Jetty: Sta. 30+00 viewing landward



Fig 24. West Jetty: Sta. 32+00 viewing landward



Fig 25. : West Jetty: Sta. 34+00 viewing landward



Fig 26. West Jetty: From Navigation Aid viewing landward



Fig 27. West Jetty: Navigation Aid viewing landward