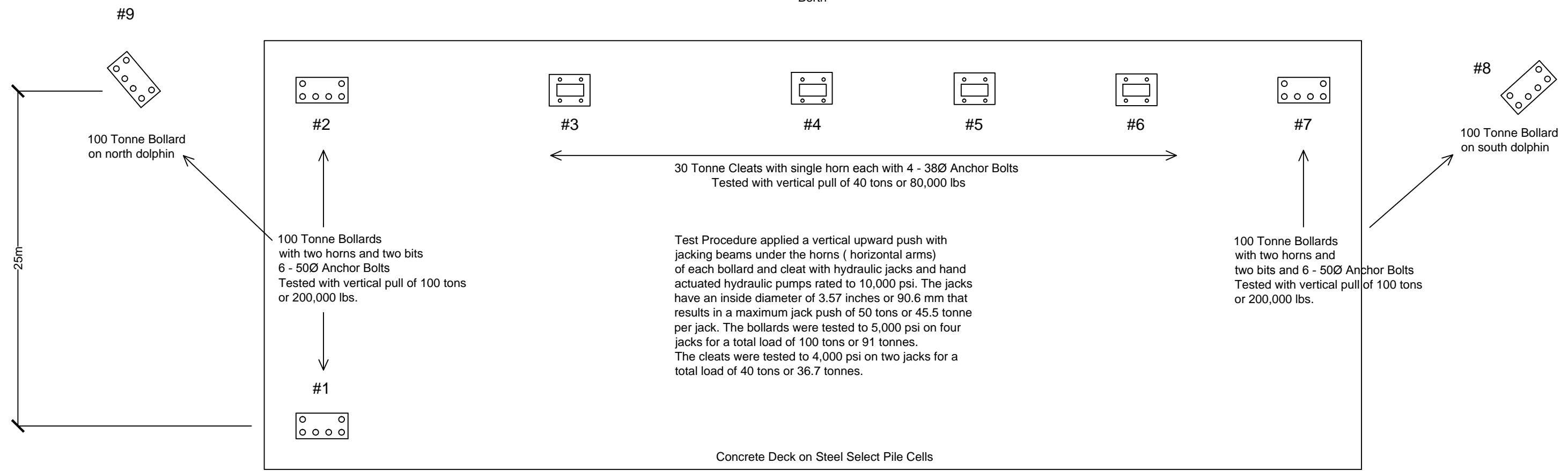


Berth



Test Procedure applied a vertical upward push with jacking beams under the horns (horizontal arms) of each bollard and cleat with hydraulic jacks and hand actuated hydraulic pumps rated to 10,000 psi. The jacks have an inside diameter of 3.57 inches or 90.6 mm that results in a maximum jack push of 50 tons or 45.5 tonne per jack. The bollards were tested to 5,000 psi on four jacks for a total load of 100 tons or 91 tonnes. The cleats were tested to 4,000 psi on two jacks for a total load of 40 tons or 36.7 tonnes.

Concrete Deck on Steel Select Pile Cells

Shore

ISSUED FOR USE

Notes:
 1 - Dock Designed by Swan Wooster Engineering Co. Ltd. 1980-08-04
 - Reference Drawings " Swan Wooster Eng. Co. LTD Duke Point Forest Products Terminal AS-3556-21-112 Rev A;115Rev A;117RevA"
 2 - Pull Load Testing by Test Right Ltd.
 3 - Witnessing of Pull Load Test by Tetra Tech EBA

CLIENT		Nanaimo Port Authority Duke Point Dock D			
		Bollard and Cleat Load Testing Inspection Record Diagram			
PROJECT NO. V31103033	DWN YT	CKD GG	REV 0	Figure 1	
OFFICE Vancouver	DATE 2013-05-10 & 13				

\\sba.local\corp\Transportation\311\Projects\704-V31103033-01 NPA Dock D Bollard Test\Report Format\Nanaimo Port Authority Dock D - Bollard_Load_Testing.dwg [FIGURE 1] September 26, 2014 - 9:21:56 am (BY: GAWDIN, GARY)