



Acknowledgement of Country

Transport for NSW acknowledges the traditional custodians of the land on which we work and live.

We pay our respects to Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of NSW.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our nation's First Peoples followed for tens of thousands of years.

Transport for NSW is committed to honouring Aboriginal peoples' cultural and spiritual connections to the lands, waters and seas and their rich contribution to society.

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1. Introduction

These guidelines outline Transport for NSW's minimum requirements for the provision of a survey of foreshore structures constructed on or immediately adjoining Transport for NSW (TfNSW) wetland.

The survey and report will be recorded in TfNSW's Maritime survey archives and incorporated into TfNSW's Maritime Geographic Information System (GIS). After integration into the Maritime GIS, the data may be used to generate plans that support tenure of the surveyed structures and for other mapping applications.

A survey is generally required for new structures; however, these guidelines also apply to survey of existing structures where required (for example where the previous TfNSW Maritime record appears to be older than the structures or the structures on site do not match the TfNSW Maritime GIS).

For surveys associated with infrastructure projects being delivered by TfNSW, additional or alternate survey specifications may apply.

For clarification of anything in these guidelines and/or where they should be applied, please contact TfNSW, Maritime Survey Manager on 9563 8538 or at maritime.survey@transport.nsw.gov.au

2. Survey Requirements

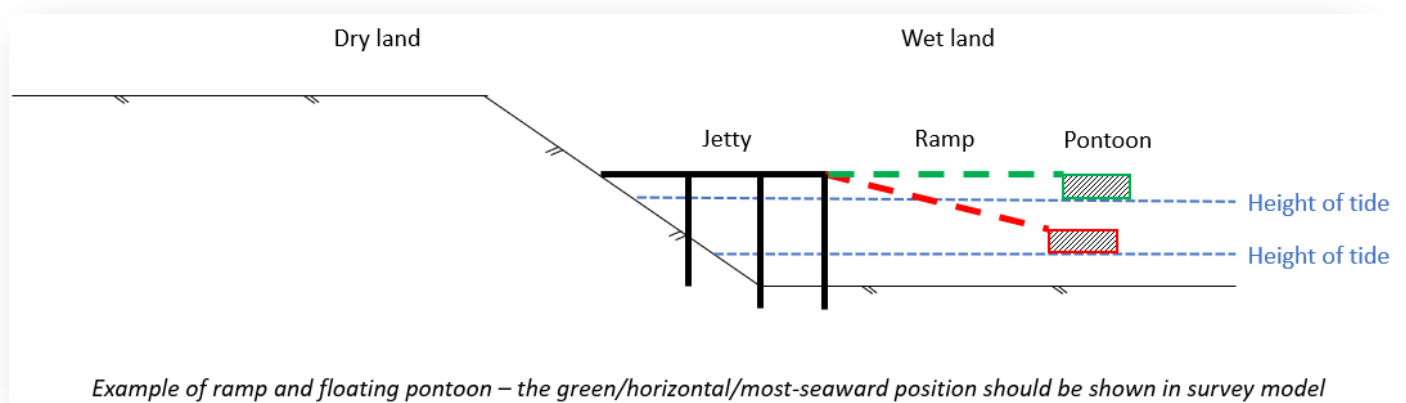
2.1 Survey

The survey must be a standalone survey of all structures and features within the site area (over land and water depending on the case) both new and existing. In the case where the structures are new, it must only be undertaken after construction has been fully completed. Marked-up or 'redline' design plans are not acceptable.

Heights are not generally required unless specifically requested or identified in the approved design plans. For example, cut-off pile heights or finished surface levels may be required to be confirmed against the approved design.

The survey must cover the full extent of the occupations. For example, the toe of a sloping seawall in addition to the top, or the eave of a boatshed in addition to the walls.

Floating structures that change position depending on the height of the tide must be plotted when in their most seaward position (i.e., horizontal). For example, a ramp may connect a pontoon to a fixed jetty. The length of the ramp in this case should be measured and applied in the resulting survey model to show the most seaward position of the pontoon. Please see the sketch below which illustrates this requirement.



The survey of the structures can be carried out using Total Station (TS) or Network Real Time Kinematic Global Navigation Survey System (NRTK GNSS) survey techniques. Other techniques such as laser scanning, or

photogrammetry will require approval by the Maritime Survey Manager prior to commencing work.

The survey must be provided in Map Grid of Australia (MGA) co-ordinates on the Geocentric Datum of Australia (GDA) 2020. The survey must be verified by connection to established marks in NSW's Survey Control Information Management System (SCIMS) and/or previously surveyed control marks from Maritime Survey records. When using NRTK GNSS, as a minimum, the accuracy of the equipment should be verified by measurement of a mark(s) nearby to the site with established coordinates in SCIMS.

If heights are required, they will need to be shown relative to Zero of the Fort Denison Tide Gauge (ZFDTG) in Sydney Harbour or the local hydrographic datum in locations outside Sydney Harbour. If heights are required, and the survey is outside Sydney Harbour, please confirm the required height datum with TfNSW's, Maritime Survey Manager if you are unsure.

The coordinates of survey marks from TfNSW's Maritime survey records and registered plans may be shown on the resulting sketch plan. This information is useful to preserve survey information and may assist in future surveys at the site.

2.2 Sketch Plan

A sketch plan is required and should include:

- site description and location details (including location diagram)
- registered surveyor's name and signature
- date(s) of survey
- method of survey
- the plan's scale
- datum and scale factor
- the origin of the coordinates of marks used in the survey (control schedule preferred)
- references to field books, background/adjoining data and plans used
- measurements of floating structures from fixed structures (e.g. length of a ramp from a jetty to a pontoon as shown in the image under section 2.1 above)
- north point
- labelling of structures, parcel/address information, and waterway including adjoining information
- cadastral boundary layer from Maritime GIS extract - **see note below*

***Note** - as outlined in section 5.1 of this Guideline, TfNSW will provide digital data (DWG file format) derived from Maritime GIS data for the survey site. The Maritime foreshore boundary layer obtained from the GIS extract should be depicted on the sketch plan to provide diagrammatic context; however, this boundary must not be dimensioned, and offsets from the boundary to surveyed structures must not be specified. The surveyor's signature should accompany a note stating that the boundaries shown on the sketch are not accurate, have not been surveyed, and are indicative only.

2.3 Report

The report should be prepared in a letter style format on your company template (which should include business address and details at a minimum). It should include:

- a description of the structures surveyed

- a comment on the position and size of the structures surveyed when compared to the approved design (approved plans should be supplied by client). Where this is not possible, a comment should be included that the position and size of the structures surveyed have not been checked against any approved design.
- time stamped photos of the structures and the foreshore of the site generally
- Details of check measurements on survey control used in the survey to confirm accuracy of equipment

3. Qualifications Required for Maritime Foreshore Structure Surveys

Maritime foreshore structure surveys must be carried out by or under the supervision of a Registered Land Surveyor

4. Required Format for Submission of Sketch Plan, Report and Data

4.1 Sketch Plan and Report

The sketch plan and report must be provided in PDF format.

4.2 Survey Data

A CAD data file (DWG) of the survey must be supplied. It must:

- be geo-referenced to the Map Grid of Australia coordinates (MGA2020)
- consist of line work and points only (no text, drafting elements or layouts)
- be layered in such a way to clearly indicate what type of feature is represented by each layer, the points and lines should be placed on logically named layers that match the labels and descriptions on the face of the sketch plan, clearly indicate which layers are survey data and which layers are drafted or calculated.
- include the survey control points in file
- include the datum in the filename
- the cadastral boundary layer should **not** be included in the data file

5. Transport for NSW Role

5.1 Search

TfNSW will provide its Maritime survey records (field books and plans) for the survey site. Requests can be made by emailing maritime.survey@transport.nsw.gov.au

TfNSW will provide digital data (DWG file format) from the Maritime GIS data for the survey site. Requests can be made by emailing mapping.maritime@transport.nsw.gov.au Please note this data can be used as a check and for background and adjoining information. However, it is a compiled dataset of many records over time, some of which have been digitised from images, and is at a mapping level of accuracy only. No representation regarding accuracy, currency, completeness, or suitability of the Maritime GIS datasets for any particular purpose is made.

5.2 Review and Auditing

TfNSW will review and catalogue the survey as a Maritime Survey record before updating the Maritime GIS.

TfNSW may conduct random audits of foreshore structure surveys.

TfNSW will require any survey, sketch plan, report, or data it considers unsatisfactory to be re-surveyed/re-drafted and re-submitted.

TfNSW's Maritime Survey Manager is responsible for determining the adequacy of the survey information provided. If you have any questions regarding TfNSW's role, please contact TfNSW's Maritime Survey Manager on 9563 8538 or at maritime.survey@transport.nsw.gov.au

6. Submitting Sketch Plan, Report and Data to Transport for NSW

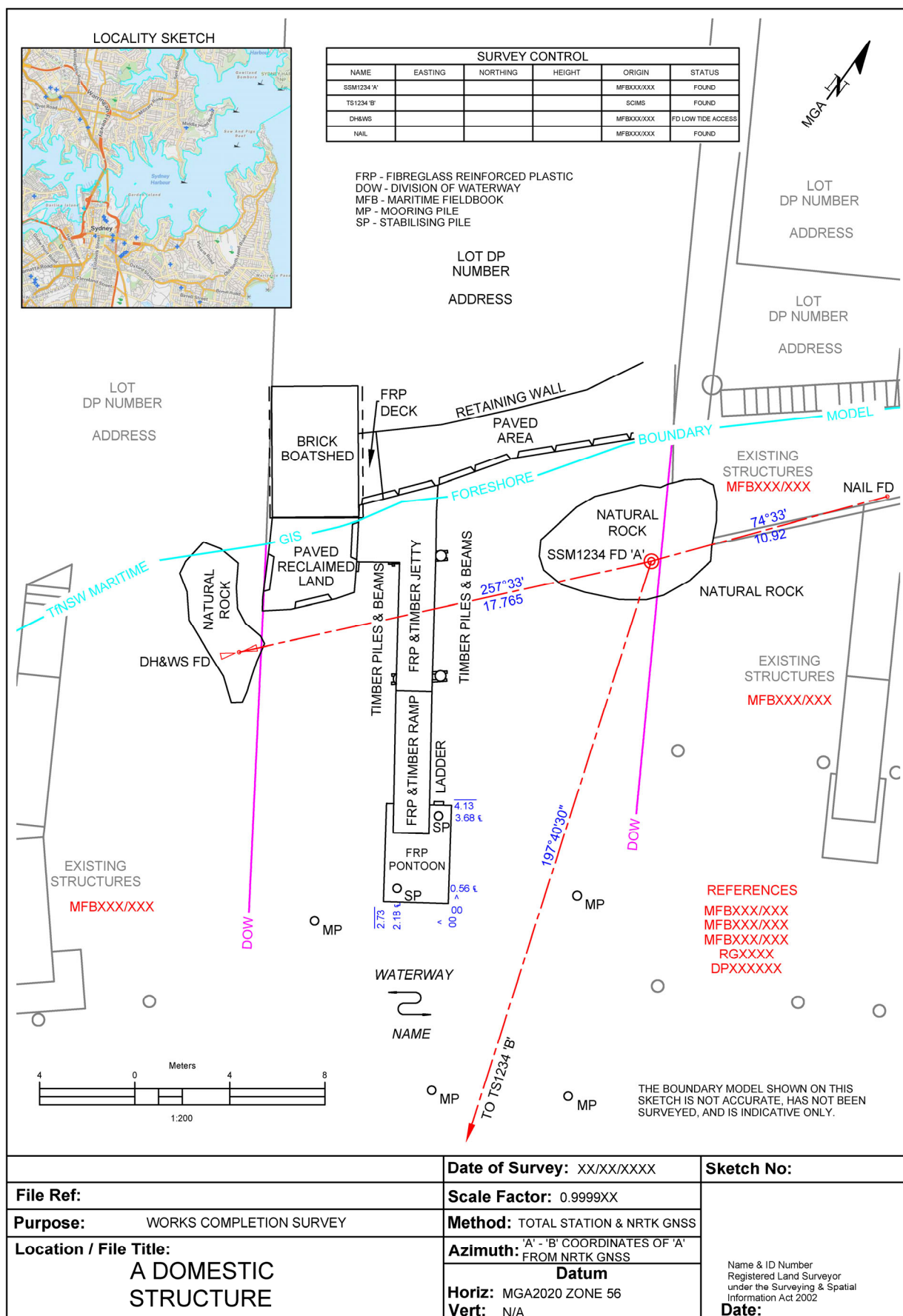
6.1 Email and Checklist

Submit sketch plan, report and CAD file by email: maritime.survey@transport.nsw.gov.au

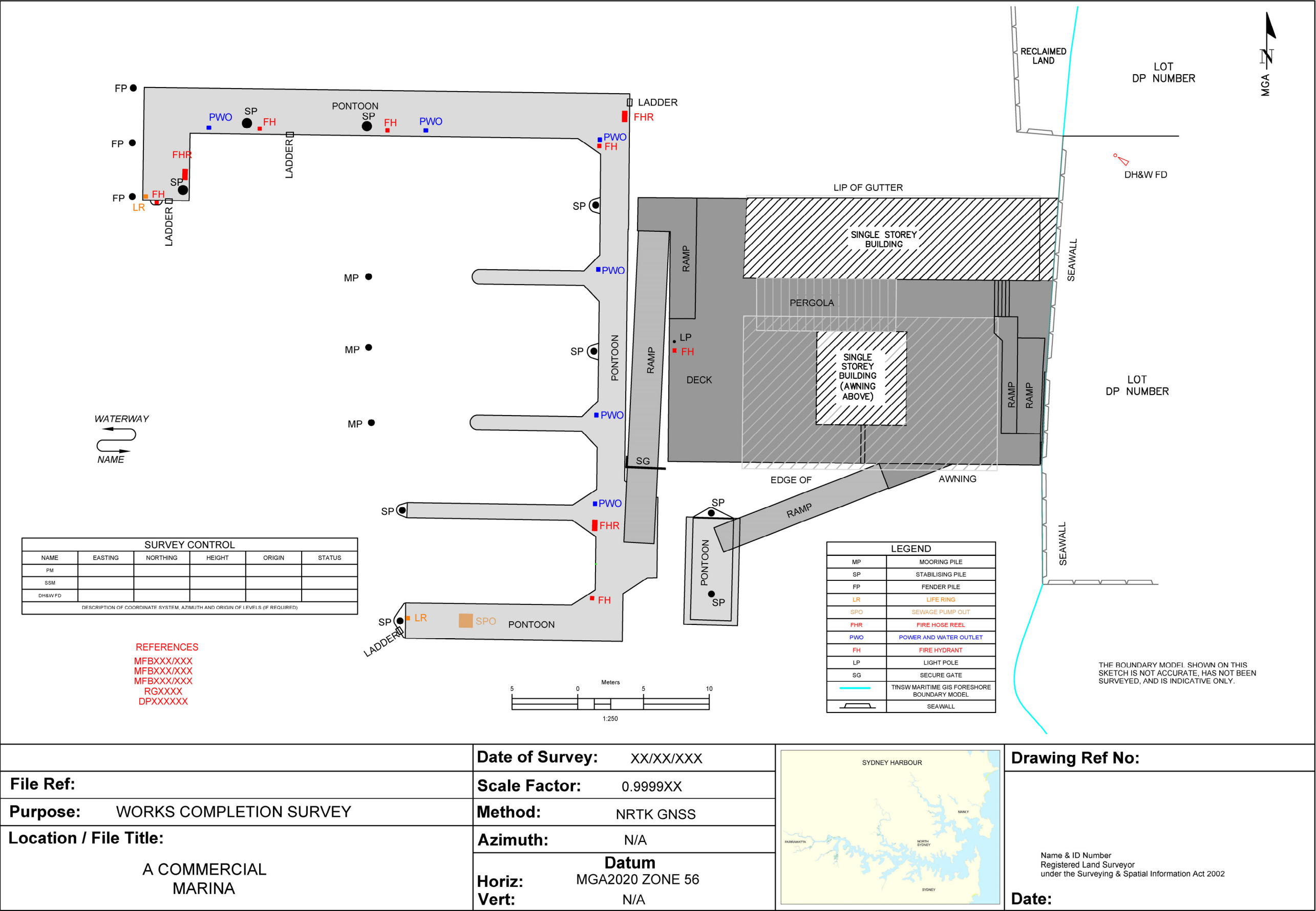
Checklist for common oversights to assist with submission:

- ✓ Sketch plan labels all surveyed features and cadastral/location information and matches logical CAD file layering
- ✓ Sketch plan signed by Registered Land Surveyor
- ✓ Report includes photos within report PDF (not separately)
- ✓ Notes included on plan and in report to clarify any survey differences and/or highlight issues found
- ✓ Background/adjoining information, layouts, text and drafting elements purged from CAD file so that only surveyed points and lines remain in the model space
- ✓ Datum included in CAD file name

6.2 Example Domestic Works Completion Survey Sketch Plan



6.3 Example Commercial Marina Works Completion Survey Sketch Plan



6.4 Example Works Completion Survey Report

TfNSW Maritime Survey Manager
33 James Craig Road
Rozelle NSW 2039

By Email: maritime.survey@transport.nsw.gov.au

Re: Works Completion (or Inspection and Update Survey) A Street, A Suburb

Dear Name,

An inspection and survey of the above property was conducted on the day-month-year.

A new jetty, ramp, pontoon and mooring piles were surveyed. Existing seawalls and a boatshed were also surveyed.

The new structures, with reference to location and size, have generally been constructed in accordance with the approved plans in DA12345678.

Photographs taken at the time of survey are included below.

I permit TfNSW to archive this survey, including the CAD data file supplied, to update Maritime Geographic Information System (GIS), and to use as required to generate plans that support tenure of the surveyed structures and for other mapping applications.

Yours Sincerely

Full Name
Job Title
Company
Contact Details

Other guidelines related to Maritime Survey and Spatial Information are available at:

<https://www.transport.nsw.gov.au/operations/roads-and-waterways/waterways/assets-and-environment/maritime-survey-and-spatial>

Important Note: This document does not constitute legal advice and provides guidance only. Users are advised to seek professional advice and refer to the relevant legislation as necessary, before taking action in relation to any matters covered by this document.

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