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TOC #	Documentation	Required Y/N
PRE-ASSEMBLY DOCUMENTATION		
1	Land Use/NAVCAN	
	8-12 weeks prior to starting construction, the Land Use Crane Submission Form must be filled out and submitted to NAVCAN for all cranes, in all locations, regardless of proximity to an aerodrome. https://www.navcanada.ca/en/aeronautical-information/land-use-program.aspx	
2	Aeronautical Agreement (if applicable)	
	8-12 weeks prior to starting construction, submission of an aeronautical agreement to Transport Canada may be required when working within 6kms of an aerodrome- including hospitals with helicopter pads.	
3	30M33/Record of Discussion/Assurance in Writing	
	If the minimum distances outlined in WorkSafeBC Table 19.1.A cannot be maintained because of the circumstances of work or the inadvertent movement of persons or equipment, an assurance in writing on a form acceptable to the Board (30M33) and signed by a representative of the owner of the power system, must be obtained. All versions/revisions of the 30M33 should be kept here.	
4	Trolley Overhead (TOH) Adjacent Works Documentation	
	When working in proximity to any over, or underground transit systems there should be approval from the entity/owner your work can go through as planned. In Vancouver, consent from TransLink and an approved "Construction Safe Work Plan" is required if working within limits of approach of any powered or non-powered Trolley Overhead Infrastructure, or adjustment or relocation of TransLink TOH systems. https://www.translink.ca/about-us/doing-business-with-translink/temporary-transit-changes	
5	Power Source Information	
	Specify site power or generator power for the crane. Must include electrical permit (issued by municipality or Technical Safety BC and specifying the type of volts required for the crane), proof of installation from a qualified individual (Electrical Field Safety Representative (FSR)) and installed as per manufacturer instruction. Proof of grounding (pictures) are recommended to be filed here as well.	
6	Notice of Project - Tower Crane (NOP-TC)	
	NOP-TC comes into effect October 1, 2024. More information on the NOP-TC can be found in part 14 of the WorkSafeBC Regulations.	
7	Site Layout/Design Package	
	Documents showing specific crane information and location on site- crane operating radii, boom and tower configurations and lengths, complete set of specifications, drawings, and instructions for this crane, including: the engineer's assembly drawing, complete with foundation design, tie-back design, mast bolting torques, custom transitions, tie-downs, etc. If multiple cranes on site it must show the overlap and include all clearance distances between cranes/buildings/adjacent structures etc.	

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8	Foundation, Geotechnical/Soils Engineering & Cylinder Break Documentation	
	Include foundation design drawings (Issued for Construction (IFC) drawings), foundation inspection report, reshoring/cribbing inspection (if applicable), and concrete compressive strength test report. Minimum concrete MPa requirement for tower crane foundation is determined by manufacturer or engineer. Soils/Geotechnical report is provided by the geotechnical engineer following their visit to inspect the site preparation. If required, the separate geotechnical report for the mobile crane used will be filed under the Mobile Crane tab. Note- a Geotechnical Report is also required following a prolonged shutdown.	
9	Pre-Assembly Meeting	
	BC Crane Safety SWP Checklist document outlining responsibilities and documentation is a requirement of the WorkSafeBC Notice of Project-Tower Crane (NOP-TC) submission documentation. If possible, recommended to complete checklist with all associated parties a minimum of two weeks prior to assembly/disassembly to ensure the timely collection of all required documentation to complete the crane binder.	
10	High Angle Rescue Information or Technical High Angle Rope Rescue Program (THARRP) Agreement	
	If the jobsite is outside of the service area for a fire/rescue department or the department is incapable of rescue, high angle rescue must be in place for the jobsite by the employer. If calling 911 is the mode of rescue for tower crane emergencies, approval from the local fire department is required through the THARR Program administered by the British Columbia Construction Safety Association. More information found under WorkSafeBC Guideline-G4.13(3)(a)	
11	Traffic Control/Municipal Permits/Street Use	
	Responsibility of the jobsite to organize and approve Traffic Management Plan (TMP) with the municipality, confirm trucking routes and staging areas for assembly/disassembly, designated parking areas, street closures, etc.	
12	Radio Frequency Application/Coordination	
	Employers operating tower cranes, self-erecting cranes, or industrial cranes need to submit the Radio Frequency Coordination Request Form (found online through WorkSafeBC) when cranes will be in operation for more than one week, if there are any changes to the assigned radios, and/or on an annual basis as a frequency confirmation.	

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13	Non-Destructive Testing (NDT) Report	
	<p>NDT is required prior to erection and annually thereafter for tower cranes. NDTs may also be used as diligence following an incident or misadventure to confirm integrity of the crane and components. Also note a structural report is required after a prolonged shutdown of the crane. If a tower crane is scheduled to be dismantled within 15 months of being erected, a visual inspection supervised by a professional engineer, and showing no signs of cracking or other structural weakness, can be performed in place of an annual NDT. Check WorkSafeBC and CSA standards to confirm if it applies to your situation. Regarding a certification of repairs or modification (if applicable), any repairs to the crane must be done by or with approval from the manufacturer or under direction/approval by a Professional Engineer in accordance with FEM Design Rules 1.001.</p> <p>COUNTERWEIGHT DOCUMENTATION to be included in this section. Each counterweight and ballast element must be accurately weighed and clearly marked with the information, and additionally noted in the Construction Site Tower Crane Report (Erectors Report).</p>	
14	Variance or Acceptance Documentation	
	Documented approval from WorkSafeBC and all supporting documentation must be filed here.	
15	"Additions" to Crane Surface	
	Must be as per instruction from the manufacturer or certified by an engineer. Examples: company signs, Christmas lights horizontal lifelines for jib/boom access, banners, anti-climbing equipment, etc. This section tab does not apply to added sections when climbing a tower crane.	
16	Crane-Specific Manual	
	Must be on-site readily available to the operator, and on request by the Board.	
17	General Crane Specifications & Load Chart	
	Load charts are found in the crane manual, must be permanently posted on the crane, or must be available to the crane operator who must keep it available at all times while operating. Load charts must be visible to the operator while seated at the controls and at remote control stations. Specification documents will often include typical crane configurations, load charts, and crane component dimensions and weights.	
18	CSA Compliance Documentation	
	Must include certification report. The inspector may put corresponding sticker/s on the structure/electrical panel to signify completion; recommendation if the inspection sticker is on the electrical panel of a tower crane to include pictures of it taken by the erectors in case a municipal or authority inspector needs to see it and won't climb the crane.	
19	Mobile Crane Documentation	
	<u>All</u> information and documentation to do with the mobile crane involved in the assembly, disassembly, repositioning, climbing, etc. to be filed here. Annual inspection, critical lift procedures (if required), lift plan, machine placement/ground conditions (Geotech report), etc.	

TOC #	Documentation	Required Y/N
20	Crane Component Inspections	
	A visual inspection of the crane components must be performed by the Crane Activity Supervisor who assesses for damage occurred during transport or otherwise. CSA states: "Prior to erecting the crane, the crane components shall be visually inspected on site for damage from shipping and handling. Damaged structural members shall not be used until repaired or replaced and the repair or replacement approved by a professional engineer. Reports of these inspections shall be made available upon request." Suggestion to have documented proof filed in this tab.	
21	Derrick Documentation (if applicable)	
	If a derrick crane is used for erecting, climbing, dismantling, etc., detailed drawings signed and sealed by a professional engineer showing the location of the equipment, anchor bolts, guy wires, and all loads imposed on the structure by the weight of the equipment shall be provided and made available by filing all associated documents under this tab.	
22	Crane Climbing Documentation (if applicable)	
	Equipment design and specifications, Safe Work Procedures/Instructions, climbing system NDT (prior to assembly, and annually inspected thereafter when in use), NDT for any additional tower crane components being installed, and shoring inspection.	
ZONING & ANTI-COLLISION (if applicable)		
23	Zoning System Documentation	
	Including manuals, procedures, daily testing instructions/procedures, and a detailed site plan to show the power lines or items of avoidance. Non-OEM systems require additional approval or instruction from the manufacturer or professional engineer. Zoning system installation is required when in an overlap situation with an adjacent crane. (OHSR 14.84.1).	
24	Anti-Collision System Documentation	
	Including manuals, procedures, daily testing instructions/procedures, and a detailed site plan showing the multiple crane locations. Non-OEM systems require additional approval or instruction from the manufacturer or professional engineer. Anti-collision system installation is required when there is an overlap situation with an adjacent crane. (OHSR 14.84.1).	
ROPES & TEST BLOCKS		
25	Testing Certification for Hoist Ropes	
	Commonly referred to as a "mill certificate", which includes manufacturer information on testing and certification. More information on content requirements outlined in the CSA standard.	
26	Hoist Rope Record (if applicable)	
	Rotation resistant hoist ropes must be shortened 3 metres per every 500 hours of use (by a qualified person) unless specified by manufacturer, has 14+ outer strands, or has a plastic-coated inner core. File information required in OHSR 14.91(3) here on hoist rope.	
27	Rigging Certification Documentation	
	Annual chain sling inspections filed here. Periodic inspection intervals shall not exceed 1 yr. Documentation that the most recent periodic inspection was performed shall be maintained.	

TOC #	Documentation	Required Y/N
28	Test Block Documentation	
	Test blocks and their lifting points shall be as specified by the crane manufacturer, or by a professional engineer. The weight of each test block must be accurately determined and durably/legibly marked on it.	
29	Horizontal Lifeline Documentation (if applicable)	
	Instructions from the manufacturer, or a professional engineer, for installation and use, plus inspection documents to be filed here (if applicable).	
BELOW THE HOOK (BTH)		
30	DEP Box, Work Platforms & Secondary Rigging Documentation	
	Engineered drawings, proof of pre-use inspection/confirmation "safe for use", any specific procedures, dry run documentation, and information/instruction for the secondary rigging attachment/secondary support anchorage to be filed here.	
31	Below the Hook Lifting Devices Documentation	
	Manufacturer instructions for use and capacity information, NDT inspection hard copies (inspection plates on the unit must be accompanied by a hard copy document), approved engineering/design documents, and proof of inspections from qualified individuals filed here.	
PROCEDURES & COMPLIANCE		
32	Crane Assembly/Disassembly Written Procedures (site-specific)	
	Crane to be erected according to manufacturer procedures or approved engineering direction signed off by all assembly/disassembly workers involved. If applicable, the design, location, and method of attaching a tower crane operators cab must be approved by the crane manufacturer or by a professional engineer. Rated capacities must be adjusted as necessary if using a cab type and location not approved by the manufacturer.	
33	Crane Activity Supervisor & Lead Hand Qualifications	
	Outlined in the Notice of Project- Tower Crane requirements, the supervisor and lead hand must be qualified and competent in all phases of crane erection, dismantling, and climbing. Certification is an asset.	
34	Safe Work Procedures - Assembly/Disassembly	
	Examples can include fall protection plan (required to be site-specific, accurate to the task being performed, must be adjusted for changing site conditions such as pre/post building construction), overlap procedures (to include other cranes, mobile equipment, pump trucks, etc.), lockout/tagout, limits of approach (LOA), blind lifts, etc.	
35	Safe Work Procedures – Operation & Maintenance	
	Examples can include: fall protection plan (required to be site-specific and accurate to the task being performed- operator or maintenance fall pro plan shouldn't include assembly/disassembly info and must be adjusted for changing site conditions such as pre/post building construction, overlap procedure (to include other cranes, mobile equipment, placing booms, pump trucks, etc.), lockout/tagout, limits of approach (LOA), blind lifts, etc.	

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36	Emergency Response Plan	
	Rescue procedures must be available and clearly outlined for the operator, technicians, inspectors, etc. who will be in the cab or on the crane. Procedures must be signed and understood by all parties prior to work - Rescue team identified? Appropriate equipment on site for rescue? THARRP application completed (WorkSafeBC Guideline- G4.13(3)(a))? If a DEP box is to be used, pre-use inspection, dry run, secondary support rigging, etc. must be completed and filed.	
POST- ASSEMBLY DOCUMENTATION		
37	Construction Site Tower Crane Report	
	Comprehensive document commonly referred to as the “erectors report” filled out by the crane erector confirming it has been inspected, repaired, erected, and tested in accordance with manufacturer’s specifications, professional engineer direction, applicable standards, and the Occupational Health and Safety Regulation in mind. Supporting documentation may be required for some items.	
38	Preventive Maintenance Schedule & Instruction	
	Include crane-specific maintenance program, applicable procedures, and information on the qualified maintenance/repair personnel. Recommendation to have maintenance dates pre-arranged with the jobsite as close to assembly as possible to avoid re-scheduling/conflicts.	
39	Post-Install Mast Bolt Retorque (if applicable)	
	All information including frequency, torque specs, and proof of completion to be filed here.	
40	Operator Crane Orientation	
	Each operator must have a documented orientation on the specific crane to which they are operating on site. If a new or backup operator is hired, they must also receive the crane-specific orientation.	
41	Operator Certification & Proof of Qualification	
	Certification and proof of qualification are separate documents- a ticket/certification is not acknowledged as proof of qualification by WorkSafeBC. The crane operator's employer should have proof of qualification on file to provide for this section. If the operator has a Provisional designation, their Full Scope mentor/qualified supervisor and any supporting documentation to their mentorship should be filed here as well. More information on operator qualifications and competencies can be found in WorkSafeBC's Occupational Health & Safety Guideline G14.34.	

TOC #	Documentation	Required Y/N
42	Inspections Documentation/Logs	
	<p>If the following inspections are not filed in this crane binder, they must be accessible to the operator, associated workers, and WorkSafeBC at all times.</p> <p>The OPERATOR LOG includes records of any tests, inspections, maintenance, repairs, revisions, modifications, misadventures, damage and subsequent repairs done to the crane while erected at the current site.</p> <p>PRE-USE INSPECTIONS are as per manufacturer instruction and/or Regulation requirements. Documented proof of pre-use inspections is required by WorkSafeBC Regulation; if filed electronically, operator must be able to produce inspections on request.</p> <p>DAILY, WEEKLY, MONTHLY, ANNUAL, & SPECIAL INSPECTIONS are hard copies performed by the operator or rigger. If filed electronically the operator or rigger must be able to produce the documents on request.</p> <p>HOIST ROPE INSPECTIONS are to be completed daily and monthly, inspections to be verified as complete and recorded in the operators log by the crane activity supervisor. A specific, dated report is required if damage as listed in CSA Z248 standard is found.</p> <p>RIGGING INSPECTION REQUIREMENTS found in CSA standard must be done daily when in use and recorded in the operator’s log. Rigging inspection logs can be helpful to document these inspections.</p>	
43	Repositioning Documentation	
	<p>Repositioning includes any change in the crane configuration from the way it was originally installed, including climbing, change of boom length, etc. Before a tower crane is put into service after its mast has been repositioned, a professional engineer must certify that the parts of the crane affected by the repositioning process have been properly installed and any required reshoring for, and bracing to, the supporting structure is in place (post-climb inspection report).</p> <p>Post-climb inspection report (shoring/bracing/tie-back) would usually include the concrete test report for the tie-in points. The requirement for the shoring certification applies to any additional shoring for the support of the crane even if there was no climbing of the crane. The person responsible for the repositioning of the crane must complete a report verifying the certification documents are filed at the workplace and the overload prevention system of the crane has been adjusted as required by regulation, specifying the load limits set for the various devices.</p>	