

WAC 296-32-24020 Rigging plan. (1) A rigging plan is intended to ensure that the proper procedures, equipment and rigging is used for each operation and to ensure that the supporting structure can support the rigging loads. A rigging plan shall consider the following items:

- (a) Operational and nonoperational construction loads;
- (b) Construction equipment;
- (c) Supporting structure;
- (d) Construction sequence and duration;
- (e) Required load testing and field monitoring.

(2) Rigging plan criteria. A rigging plan may be very detailed and complex or very simple, depending on the type of job and the type of equipment necessary to complete the job. The following data shall be considered when completing a rigging plan:

- (a) General.
 - (i) Scope of work;
 - (ii) Construction sequence;
 - (iii) Duration of construction;
 - (iv) Monitoring requirements;
 - (v) Rigging plan classification;
 - (vi) Gross loads to be lifted;
 - (vii) Height of lift;
 - (viii) Operational and nonoperational wind loadings;
 - (ix) Load lifting restrictions.
- (b) Gin poles.
 - (i) Vertical or tilted position;
 - (ii) Gin pole identification;
 - (iii) Load chart reference number;
 - (iv) Maximum cantilever required;
 - (v) Forces created by tags;
 - (vi) Load line size and number of parts.
- (c) Basket and bridle attachments. Sling size, type, angle and connection details to the structure and to the gin pole.
- (d) Jumping of a gin pole.
 - (i) Jump line size and number of parts;
 - (ii) Block sizes and connection details;
 - (iii) Gin pole attachment details;
 - (iv) Track details and connections to the structure.
- (e) Hoists.
 - (i) Load chart indicating line pull based on number of layers on the drum;
 - (ii) Hoist line pull required;
 - (iii) Cable sizes and breaking strengths;
 - (iv) Hoist anchorage details;
 - (v) End connection efficiencies;
 - (vi) Distance and orientation from tower base.
- (f) Crown blocks.
 - (i) Block size and capacity;
 - (ii) Sling size and applicable rigging hardware;
 - (iii) Attachment details to the structure, foundation or other support.
- (g) Block size and capacity.
 - (i) Sling size and applicable rigging hardware;
 - (ii) Attachment details to the structure.
- (h) Tag lines.
 - (i) Straight or trolley;
 - (ii) Size and type of tag line;

- (iii) Tag angle restrictions.
- (i) Reserved.
- (j) Cranes.
- (i) Main;
- (ii) Tailing;
- (iii) Pedestal;
- (iv) Chicago boom.
- (k) Supporting structure.
- (i) Condition assessment;
- (ii) Temporary guys;
- (iii) Reinforcement to support the rigging loads;
- (iv) Procedures for the removal or reinforcing of structural members;
- (v) Procedures for guy replacement;
- (vi) Procedures for guy tensioning;
- (vii) Guy slippage considerations.
- (l) Miscellaneous.
- (i) Overhaul ball;
- (ii) Condition of appurtenances to be removed;
- (iii) Interference with climbing facilities;
- (iv) Field welding and cutting procedures.

(3) Rigging plans. For Class II, III and IV rigging plans where a load is raised, lowered or suspended by rigging shall have a documented rigging plan. All work that requires rigging shall be classified in accordance with the proposed scope of work and classifications as outlined below:

(a) All construction or maintenance activities shall have a rigging plan classification outlining the project and the responsibilities within that project. Class II, III and IV rigging plans shall have a documented rigging plan.

(b) An on-site competent rigger shall be designated for all classes of construction or maintenance to identify hazards, and authorize corrective measures. For Class III and IV activities, a qualified person shall coordinate the involvement of a qualified engineer as required when establishing rigging plans. A qualified engineer shall perform the analysis of structures and/or components for Class IV activities.

(c) Proposed activities shall be outlined in a written rigging plan prior to implementation of a Class I, II, III and IV activities. The minimum level of responsibility for establishing a rigging plan is specified below:

(i) Class I. The minimum level of responsibility is a competent rigger; the scope of work does not affect the integrity of the structure and the proposed rigging loads are minor in comparison to the strength of the structure. Gross lift loads shall not exceed three hundred fifty pounds;

Note: This class excludes the use of gin poles or other sophisticated lifting devices.

(ii) Class II. The minimum level of responsibility is a competent rigger and the scope of work involves the removal or the addition of appurtenances, mounts, platforms, etc., that involves minor rigging loads in comparison to the strength of the structure. Gross lift loads shall not exceed five hundred pounds;

(iii) Class III. The minimum level of responsibility is a competent rigger communicating with a qualified person.

(A) The qualified person may communicate with a qualified engineer for clarification or information.

(B) Gross lift loads for lift systems attached to the structure shall not exceed two thousand pounds.

(C) This responsibility includes rigging plans that involve work outside the scope of Class I, II or IV construction.

(D) All new structure and foundation construction shall be classified as a minimum Class III plan. Where structure or foundation strength or stability concerns are present, new construction work shall be classified as Class IV.

(E) Work may be deemed Class III by a qualified person where component modifications are made to connections of structural members where at least one level of redundancy is maintained at all times, the structural member remains secure and engaged in the bracing system, and the work is completed within a continuous workday (for example, bolt replacements on multi-bolt leg flanges). For component modifications where redundancy is in question, the qualified person shall communicate with a qualified engineer for determining the appropriate plan classification. Such communications must be documented and included in the rigging plan.

(F) A qualified person shall be involved for all construction or maintenance activities utilizing cranes or other lifting devices not attached to the structure to ensure proper planning communications between all employers and to determine the need for involvement of a qualified engineer.

(iv) Class IV. The minimum level of responsibility is a competent rigger communicating with a qualified person who will be communicating with a qualified engineer. The scope of work involves custom or infrequent construction methods, removal of structural members or unique appurtenances, special engineered lifts, and unique situations;

(v) All gross lift loads for lift systems attached to the structure in excess of two thousand pounds shall be considered Class IV;

(vi) Planned lifts for lift systems attached to the structure with load position angles exceeding ten degrees, and/or tag angles exceeding seventy degrees for straight tag applications, should include communication with a qualified engineer to ensure the structure and selected attachment point may safely support the resulting rigging forces;

Note: Comprehensive information relating to rigging plans, gin poles, site assessment is contained in the following consensus documents: ANSI/TIA 222-G 2016, ANSI/TIA 322 (Loading Analysis, and Design Criteria Related to the Installation, Alteration and Maintenance of Communications Structures, and in conjunction with ANSI/ASSE A10-48 2016 (Criteria for Safety Practices with the Construction, Demolition, Modification and Maintenance of Communications Structures).

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060, and chapter 49.17 RCW. WSR 17-20-069, § 296-32-24020, filed 10/2/17, effective 1/1/18.]