

1.0 PURPOSE

- 1.1 The purpose of this procedure is to establish the minimum requirements for safe use, care, storage, and inspection of ladders.

2.0 SCOPE

- 2.1 This program applies to all Westlake's employees, visitors, vendors and contract employees.
- 2.2 Where applicable, if local law or regulation imposes requirements different from the minimum requirements set forth in this procedure, the more stringent requirement shall apply.

3.0 VARIANCES AND EXEMPTIONS

- 3.1 Any Variance from this procedure must be temporary, task-specific, and supported by a documented risk assessment. Each Variance shall include an expiration date (not to exceed 12 months) and must be approved by the site manager and respective Manufacturing leadership. Risk analysis and mitigation strategies equivalent to the procedure requirements shall be applied, utilizing the hierarchy of controls.
- 3.2 Any Exemptions from this procedure that are deemed permanent require approval from the Vice President of Operational Excellence & HSE, along with either the Executive Vice President of PEM or the Senior Vice President of HIP. Risk analysis and mitigation strategies equivalent to the procedure requirements shall be applied, utilizing the hierarchy of controls. Exemptions must be reviewed and revalidated every 3 years.

4.0 DEFINITIONS

- 4.1 A-Frame Ladder- A type of self-supporting ladder that forms an "A" shape when opened.
- 4.2 Extension Ladder - An extension ladder is a non-self-supporting portable ladder adjustable in length. It consists of two or more sections traveling in guides or brackets so arranged as to permit length adjustment. Its size is designated by the sum of the lengths of the sections measured along the side rails.
- 4.3 Fixed Ladder - A fixed ladder is a ladder permanently attached to a structure, building, or equipment.
- 4.4 Ladder Safety System- System designed to eliminate or reduce the possibility of falling from a ladder.
- 4.5 Personal Fall Arrest System- A system used to arrest an employee in a fall from a walking-working surface. It consists of a body harness, anchorage, and connector.

The means of connection may include a lanyard, deceleration device (rope grab), lifeline, or a suitable combination of these.

- 4.6 Single Ladder - A single ladder is a non-self-supporting portable ladder, nonadjustable in length, consisting of but one section. Its size is designated by the overall length of the side rail.
- 4.7 Step Ladder - A stepladder is a self-supporting portable ladder, nonadjustable in length, having flat steps and a hinged back. Its size is designated by the overall length of the ladder measured along the front edge of the side rails.
- 4.8 Wire Rope Ladder- (aka-Pilot Ladder/Jacob Ladder) A type of ladder that utilizes flexible wire rope sides and rigid rungs. Designed for use in difficult places where a rigid ladder would be impractical.

5.0 RESPONSIBILITIES

5.1 Plant Manager/Leadership

- 5.1.1 Each Plant Manager, or their designee, is responsible for implementing this policy at their site(s), developing site-specific procedures, ensuring personnel training, and maintaining required documentation.

5.2 Maintenance Management/Superintendent

- 5.2.1 Ensure semiannual and annual inspections are conducted.

5.3 Supervisors/Leadership

- 5.3.1 Ensure employees comply with this procedure by providing appropriate ladders, conducting training on its proper use and inspection, and verifying that only suitable ladders and elevated platforms are used.
- 5.3.2 Perform routine inspections of walking and working surfaces to eliminate slip, trip, and fall hazards, and ensure any damaged or worn equipment is promptly reported, removed from service, and discarded.
- 5.3.3 Monitor all worker activities to ensure accountability and compliance.

5.4 All Employees

- 5.4.1 Authorized employees shall conduct pre-use inspections of all ladders and personal fall protection equipment and report any deficiencies immediately. **If any ladder defects are found, the ladder shall be tagged with a “DO NOT USE” tag and the ladder defect will be reported to the immediate supervisor.**
- 5.4.2 Maintain work areas free of slip, trip, and fall hazards, and promptly correct or report any such conditions to a supervisor.
- 5.4.3 Use equipment that is appropriate for the assigned task and ensure it is inspected prior to use. When working on unprotected surfaces that are four feet (1.2 meters) or more above a lower level, employees must adhere to fall protection requirements and consider the Hierarchy of Controls when determining the fall protection.

5.5 Contractors/Suppliers

- 5.5.1 Each contractor or supplier shall be responsible to adhere to the requirements outlined in this policy as well as follow their own program when more stringent, to ensure the safety of their employees working on or within a Westlake facility. The Hierarchy of Controls shall be considered when planning and executing the work.

6.0 PROCEDURE

- 6.1 Hierarchy of Controls - When determining how to protect against falls, the following hierarchy should be used:
 - 6.1.1 Elimination/Substitution: If the need to perform work at heights can be eliminated through process or design changes, the risk of falling is also eliminated.
 - 6.1.2 Engineering Controls: Change the structure of the work area to reduce exposure using safety devices, guardrails or barriers.
 - 6.1.3 Administrative Controls and Personal Protective Equipment: Implement and adhere to established policies, procedures, and training programs to minimize exposure to fall hazards. Where applicable, utilize approved full-body harnesses in conjunction with appropriate anchorage systems.

6.2 Portable Ladders

6.2.1 Portable ladders shall only be used when no other safe means of accessing a work area or establishing a stable working platform is feasible. If the nature of the task presents a risk of not maintaining three points of contact at all times, fall protection systems must be used when working at heights greater than four feet.

6.2.2 Stability and Placement

6.2.2.1 Use ladders only on stable, level surfaces.

6.2.2.2 Do not place ladders on boxes, barrels, or other unstable bases to gain height.

6.2.2.3 Ladders used on slippery surfaces must be secured and stabilized.

6.2.2.4 Ladders must not obstruct doors or doorways unless the door is blocked open, locked, or guarded.

6.2.2.5 When a ladder is identified as the only practical means for performing routine or non-routine tasks, ensure that work instructions, operating procedures, applicable Job Hazard Analyses (JHAs), and/or Safe Work Permitting (SWP) clearly reflect ladder use and that all relevant requirements are addressed prior to task execution.

6.2.3 Portable ladders must not be occupied by more than one person at a time, unless specifically designed for that purpose.

6.3 Ladder Selection, Use, & Storage

6.3.1 Select and utilize portable ladders suitable for the intended use. Ladders must, at a minimum, be a ladder type "IA" and a duty rating of "extra heavy".

6.3.2 Altered or non-manufacture-approved ladders are strictly prohibited.

6.3.3 Ladders must not be fastened together to extend their length.

6.3.4 Maintain three-point contact at all times while climbing or descending.

6.3.5 Each department owning ladders, shall provide storage, which meets

the following requirements:

- 6.3.5.1 Ladders should be stored where they will not be exposed to excessive heat, or dampness.
- 6.3.5.2 Storage areas should be kept free of obstructions to allow quick, safe access.
- 6.3.5.3 Ladder storage areas will not obstruct access to equipment, valves, Circuit breakers or other controls.
- 6.3.5.4 Storage racks should be constructed in a way that ladders are not stacked on top of each other.
- 6.3.6 Ladders will be returned to their place of storage by the user at the end of the job.
- 6.3.7 Provide protection for each employee exposed to falling object hazards (such as bolt bags and tool tethers to prevent dropped objects).
- 6.3.8 All ladders will meet or exceed requirements of the American National Standards Institute (ANSI) and/or OSHA whichever is greater.
- 6.3.9 Wooden ladders are prohibited from use onsite.
- 6.3.10 Due to aluminum ladder incompatibility with caustic and the electrical hazard associated with them, Westlake will not allow aluminum ladders on site.
- 6.3.11 When working on or with electrical powered systems, metal ladders are not approved.
- 6.3.12 Ladder access should be suspended during severe weather events to include but not limited to high winds, heavy rain, lightning, ice or snowstorms.
- 6.3.13 Load rating of ladders shall not be exceeded.
- 6.3.14 Ladders may only be used for purposes for which they designed by the Manufacturer.
- 6.3.15 Ladders will not be positioned in front of doors that open toward the ladder, unless the doors are secured to prevent opening or guarded.

- 6.3.16 Ladders must be periodically cleaned of grease, oils, and dirt that may conceal defects or cause it to be slippery.
- 6.3.17 Carrying of tools, equipment etc. while ascending or descending a ladder is prohibited.
- 6.3.18 Always face the ladder when ascending or descending.
- 6.3.19 Always use both hands-on ladder when ascending or descending.
- 6.3.20 Always obtain help when positioning long ladders that could become unbalanced and fall.
- 6.3.21 Do not skip ladder rungs when going up or down.

6.4 Basic Rules for Extension Ladders

- 6.4.1 Extension ladders shall extend at least three (3) feet above the top of the object to be climbed and tied off. At no point shall an employee or contractor stand on the extended top three rungs above the object.
- 6.4.2 Extension ladders should be anchored at the top.
- 6.4.3 For extension ladders, someone should hold the ladder at the bottom or tie the bottom securely while a person is ascending or descending the ladder.
- 6.4.4 Keep extension ladders the right distance from the wall. Remember the 4-to-1 rule – for every four feet of ladder, the bottom should be one foot away from the wall/structure.
- 6.4.5 Extension ladders must be erected so that the upper section side rails lay on the top side of the lower section side rails.
- 6.4.6 Adjustment of extension ladders will be made only when standing on the floor at the base of the ladders.
- 6.4.7 Extension ladders will not be taken apart and used as single ladders; the upper or fly section of an extension ladder must not be used as a single ladder.
- 6.4.8 Extension ladders may not exceed 24 feet in height.

6.5 Basic Rules for Step Ladders

- 6.5.1 Stepladders must never be climbed past the second step from the top. If higher access is needed, get a taller ladder.
- 6.5.2 Do not use stepladders as straight ladders. Stepladders must always be fully opened and locked in the open position while in use.
- 6.5.3 Simple A-frame ladders are to be used while maintaining three-points of contact and no risk to move out of the center of gravity.
- 6.5.4 Must be tied securely prior to work start.
- 6.5.5 The back side of a stepladder will not be used to climb on or stand on unless it is specifically designed for that purpose.
- 6.5.6 Ladders are not to be used in a horizontal position as runways or scaffold boards, etc.
- 6.5.7 Portable step ladders may not exceed 10 feet in height.

6.6 Inspection and Maintenance (Portable Ladders)

- 6.6.1 Ladders shall be inspected before each use for the following with the inspection documented (can be documented on JSA):
 - 6.6.1.1 Loose steps or rungs.
 - 6.6.1.2 Cracked, split, broken or bent uprights, steps, rungs or braces.
 - 6.6.1.3 Splintered uprights, steps or rungs.
 - 6.6.1.4 Ladder shoes missing, damaged, loose, worn, corroded or otherwise in such condition to be unusable.
 - 6.6.1.5 Free from sharp edges
 - 6.6.1.6 Ladder is clean of oil, grease or any other materials.
 - 6.6.1.7 Wobbly from side to side.
 - 6.6.1.8 Loose nails, screws, bolts or other metal parts.
 - 6.6.1.9 Loose, broken or missing extension locks.

6.6.1.10 Deterioration of the extension rope.

6.6.1.11 Any other deficiency that would make the ladder unsafe.

6.6.1.12 Either on the ladder itself or affixed to the ladder will be the owner's name, a number or other identification for tracking purposes, and the date of the most recent inspection.

6.6.1.13 Feet and base: intact, slip-resistant, free from wear or damage.

6.6.2 All portable ladders will be accounted for, inspected by a Competent Person and documented at least Semi-Annually by the department owning the ladder. The inspection will include:

6.6.2.1 The inspection criteria previously noted.

6.6.2.2 Tie-off ropes on ladders 4 feet or greater.

6.6.2.3 Any and all warning labels are clearly legible.

6.6.2.4 Documented inspection will be available upon request.

6.6.3 Ladders not passing inspection will be immediately tagged "Do Not Use" and will be removed from service for repair or disposal.

6.6.4 Ladders to be disposed of must be rendered useless by cutting into pieces and placed in dumpster. **No ladders will be taken home by employees.**

6.7 Fixed Ladders

6.7.1 Design and Installation Standards

6.7.1.1 Ladders above 24 feet above grade or lower deck and installed before 11/19/2018 must be equipped with one of the following: personal fall arrest system, ladder safety system, cage, or well. (existing)

6.7.1.2 Ladders above 24 feet above grade or lower deck and installed after 11/19/2018 must be equipped with a personal fall arrest system or ladder safety system. (new)

6.7.1.3 Ladders above 24 feet above grade or lower deck and installed after 11/19/2018 and when all or a portion of fixed ladder, cage, or well is replaced, a personal fall arrest system or ladder safety system must be installed. Both hands should be free of tools and/or materials when climbing or descending.

6.7.1.4 Ladders greater than sixteen feet (16') in height shall have a fixed cage attached to the ladder structure

6.7.1.5 Prior to the installation of any new fixed ladders, consideration and an assessment to include a personal fall arrest system should be addressed.

6.7.1.6 Ladders that open to work platforms must be equipped with self-closing swing gates, regardless of existing guardrails.

6.7.2 Fall Protection Requirements

6.7.2.1 Employees climbing ladders 24 feet (7.5 meters) or higher must use either a fixed ladder safety cage or a personal fall arrest system (e.g., Self-Retracting Device, vertical lifeline system).

6.7.2.2 When using a Self-Retracting Device, it must be clipped directly to the dorsal D-ring of the user's harness.

6.7.2.3 Users must remain attached to the fall protection device at all times while ascending or descending.

6.7.2.4 Workers must immediately secure fall protection upon transitioning from a ladder or platform and while traversing horizontally across unconventional elevated surfaces (e.g., pipe racks). When elevated work is determined to be the only viable option, all activities must comply with local fall protection requirements, established operating procedures, and/or the issuance of Safe Work Permitting (when applicable).

6.7.3 Inspection and Maintenance (Fixed Ladders)

6.7.3.1 An inspection process shall be established to ensure all fixed ladders are inspected and documented annually by a competent person.

6.7.3.2 Inspections are to include the following, at a minimum:

Condition of Anchorage Connections;

Condition of Ladder Rungs;

Condition of Side Rails;

Condition of Ladder Cage; and;

Condition of Swing Gate to include proper operation.

6.7.3.3 Ladders with structural defects (broken/missing rungs, split rails, corrosion) must be immediately removed from use and tagged out.

6.7.4 Safe Use Practices

6.7.4.1 Maintain three-point contact at all times while using a ladder.

6.7.4.2 Carrying of tools, equipment etc. while ascending or descending a ladder is prohibited.

6.7.4.3 Inclement weather – Access should be suspended during severe weather events to include but not be limited to high winds, heavy rains, lightning, ice or snowstorms. Sites shall follow local protocols and/or guidance for scenarios and equipment/vessels on premises during inclement weather.

6.7.4.4 Only one person at a time is permitted on a straight ladder section.

6.7.4.5 The ladder cage should not be used to rest against when moving up or down the ladder.

6.7.4.6 All fixed ladders will have a swing gate mounted at platform transition from ladder.

6.7.4.7 Electric power cords, air hoses or tag lines, welding, oxygen, acetylene lines, etc., routed inside the ladder cage wells must not present a tripping or climbing hazard to the climber.

6.7.4.8 Ladder rungs, side rails, and cages used for fall protection tie-offs must be able to support the load expected during a fall.

- 6.7.4.9 All guardrails protecting platform work areas from ladder cage well opening will be returned to their closed position after entry or exit from the ladder. installed in at least that section of the fixed ladder, cage, or well that was replaced. (replacement)

6.8 Mobile Platform Ladders

- 6.8.1 Mobile platform ladders shall follow an inspection program that follows manufactures recommendation at a minimum.
- 6.8.2 Units who utilize mobile platform ladders shall have a written HSE procedure that complies with the requirements of 29 CFR 1910.23(e) in addition to the requirements of this procedure.
- 6.8.3 The steps and platforms of mobile ladder stands and platforms are slip resistant. Slip-resistant surfaces must be either an integral part of the design and construction of the mobile ladder stand and platform, or provided as a secondary process or operation, such as dimpling, knurling, shot blasting, coating, spraying, or applying durable slip-resistant tapes.
- 6.8.4 Mobile ladder stands and platforms that have wheels or casters are equipped with a system to impede horizontal movement when an employee is on the stand or platform.
- 6.8.5 Safe Use Practices
 - 6.8.5.1 Stability: place on flat surfaces and ensure that the locking mechanisms are engaged before use.
 - 6.8.5.2 Movement: never move a platform ladder when a worker is on it.
 - 6.8.5.3 Do not overreach or stand on handrails/midrails/toe boards. Keep both feet on the platform or step. Do not use additional ladders or objects to increase height.

6.9 Scaffolds – See Safety Procedure 104 Scaffolds.

6.10 Step Bolts and Manhole Steps – Not Applicable

6.11 Wire Rope Ladders

6.11.1 Any use of wire rope ladders onsite will require unit manager, shift supervisor or HSE representative approval prior to use.

6.11.2 Wire rope ladders must be inspected by a qualified person at least every 12

months.

6.11.3 Must be inspected prior to each installation by a competent or designated person in accordance with manufacturers' recommendations.

6.11.4 Fall arrest system must also be used when using a wire rope ladder and must be used in accordance with manufacturer's recommendations.

7.0 TRAINING

7.1 Annual training for all employees assigned to plant operating areas will be completed. Documentation will be maintained by the HSE Department.

7.2 Retraining will be conducted whenever a periodic inspection reveals that employees are not fully aware of, or are not following established procedures, or if regulatory requirements change.

8.0 RECORDKEEPING

8.1 The HSE Department will maintain employee training records.

8.2 The department owning and inspecting the ladder(s) will maintain the annual/ (12 month) documented inspection.

9.0 PROCEDURE REVIEWS

9.1 The Westlake's Program will be reviewed at least every three years. HSE will ensure this review is performed. The purpose of reviewing is to assess compliance, and to evaluate program effectiveness.

Revision History

REV 6	<ul style="list-style-type: none"> • Reformatted procedure to align with HSE.GP.700.001. • Added Table of Contents • Revised 1.0 Purpose, 2.0 Scope, and 300 Responsibilities to align with 700.001. • Added 3.0 Variances and Exemptions • Revised 4.0 Definitions to remove definitions not used in the procedure and align with 700.001. • Revised 6.0 Procedure to align with 700.001 <u>Highlights – 6.2.1- Require fall protection from all portable ladders when performing a task where 3 points of contact cannot be made and the individual is at heights greater than 4 feet.</u> 6.3.2 – Job made Ladders are no longer allowed. 6.3.9 - Wooden Ladders are not permitted onsite along with Aluminum Ladders (6.3.10). 6.3.12 – Ladders should not be used during severe weather. 6.3.17 – Carry tools or other equipment while using a ladder is prohibited. • Added 6.8 Mobile Platforms and 6.11 Wire Rope Ladders to document current site practices. • Removed Attachments 1-4. 	R. Estevens	2/1/2026
REV 5	<p style="text-align: center;"><i>Changes due to Corporate WWS procedure:</i></p> <p>5.6.3 Changed to semi-annual 5.8.9 Portable step ladders may not exceed 10 feet in height. 5.9.1 Extension ladders may not exceed 24 feet in height. 9.3 Added OSHA 1910.23(e) Mobile Ladder Stands/Platforms 9.8 Geismar Walking Working Surfaces procedure 112 9.9 Corporate Walking Working Surface procedure 71.006 5.10.12 Ladders greater than sixteen feet (16') in height shall have a fixed cage attached to the ladder structure. 5.10.13 added fixed ladder inspection criteria 5.11.1 added OSHA 29 CFR 1910.23(e) 5.11.2 added slip resistant surfaces on mobile ladders Requirements for mobile platforms with wheels/casters</p>	S. Lansing	05/16/2023
REV 4	<p><i>Section 5.5.3 change inspection responsibility from maintenance to ladder owner. 4.3.1 removed from section 4.3 and put in section 5.0 procedure. Added ladder impound yard map. Note page 4 of 9. 5.6.3.2 added owners name. Added attachment 4. Item 7.2 recordkeeping added. 5.5 Fiberglass ladders only on site. 5.7.4 Change from must to will and added note below 5.7.4.</i></p>	S. Lansing	10/03/2022

REV 3	HSE 20-18 Delete: 4.3.1 (1 st part) requirement to have fall protection on ladder 4 feet or greater.4.3.2 provide fall protection, 4.3.3 SRL's to be provided, 5.6.3 remove requirement for fall protection on ladder. 5.9.8 take out requirement to be tied off while working from ladder. Add in risk assessment for work on Page 4 of 10 NOTE.	S. Lansing	11/06/20
REV 2	11/19/2018 fall protection requirement, ladders installed 11/18/2018 fall protection requirement, ladder/cage/well replacement requirement. Provide and install fall protection requirements, stairway platform depth requirement & step requirement, vertical 5.11.3 clearance requirement.5.9.4 swing gate added.	S. Lansing	11/19/2018
REV 1	New procedure format, inspection before use on each shift before use, competent person annual inspection, anyone utilizing ladder provided fall protection and falling object protection, fall protection provided at unprotected elevations, SRL requirements, HSE dept monitor compliance, ladder inspection requirements, 3 points of contact requirement NOTE, ladder use	S. Lansing	4/10/2018