CENTRAL ARIZONA PROJECT

SCAFFOLD SAFETY PROGRAM

REVISED MARCH 5, 2025

1.0 Purpose

The purpose of this program is to establish procedures for the safe use of scaffolding by Central Arizona Project (CAP) employees. Contractors performing work for CAP are also expected to abide by this program.

2.0 Scope

Scaffolding is defined as a temporary work platform that has a variety of applications and is used in new construction, alteration, routine maintenance, renovation, painting, and repair activities. Scaffolding offers a safer and more comfortable work arrangement compared to leaning over edges, stretching overhead, and working from ladders. Scaffolding provides employees safe access to work locations, level and stable working platforms, and temporary storage for tools and materials.

This program applies wherever scaffolding is used at CAP.

3.0 General Policy

Scaffolds shall be erected, moved, dismantled, or used only under the supervision of a competent person and by individuals who have received appropriate training.

4.0 Definitions

Terms used in this policy carry the same definitions as those found in the OSHA scaffold standard at 29 CFR 1926.451.

5.0 Training

All employees who erect, dismantle or work on scaffolding will receive training on the types of scaffolds they will use. Training will cover proper erection, handling, use, inspection, and care of the scaffolds, including the installation of guardrails and other fall protection measures. Training will take place prior to assignment to any work on scaffolds. Retraining will occur when job conditions change or when there is evidence of unsafe scaffold use.

CAP designated “competent person(s)” will receive additional training regarding the selection of scaffolds, recognition of scaffold hazards, protection of exposed personnel and public, repair and replacement options, and requirements of OSHA standards.

6.0 Responsibilities

6.1 Managers: Managers have general responsibility to ensure compliance with this safety policy.

6.2 Supervisors: Supervisors are responsible for ensuring employees who work on or with scaffolding receive the appropriate training. Supervisors must not allow any employee who has not received the required training to perform any of the tasks

or activities related to scaffold erection and/or dismantling. Supervisors will ensure that a competent person oversees scaffold erection.

6.3 Competent Person

A competent person (as defined by OSHA) will oversee the erection, use, movement, alteration, dismantling, maintenance, and inspection of scaffolding. The competent person will be knowledgeable about proper selection, care, and use of all equipment as well as assessment for hazards. A competent person will inspect the scaffold at the beginning of every shift, prior to anyone utilizing the scaffold.

Where outside contractors set up scaffolding for CAP use, the competent person(s) assigned to the project shall be there for the entirety of the scaffold erection.

6.4 Scaffold Users

Employees who work from scaffolding shall comply with this policy. Employees will report damaged scaffolds, accessories, and missing or lost components to the competent person.

6.5 Safety Department

CAP's EH&S department will help managers, supervisors, or others as necessary on matters concerning safe scaffold use. EH&S will assist in developing or securing required training, and inspecting scaffolding as needed.

7.0 Safety Requirements for Scaffolds: The following does not represent an all-inclusive list of scaffold safety requirements. Where necessary, refer to the OSHA scaffold standards for additional requirements.

7.1 Pre-Planning: Pre-planning before scaffolding is erected should always take place. Some of the factors to consider include:

- Site layout: Is the surface level and sound?
- Other work that may be in the vicinity.
- Specific requirements for the type of scaffold to be used.
- Any fall protection requirements for the scaffold.
- Nearby overhead electrical lines.
- Weather conditions.
- If there is a competent person on site.

7.2 Inspections: Scaffold components must be in good working order. Each element of the scaffold must be visually inspected before each use. A defective or damaged part could affect the safety and stability of the whole scaffold system and must therefore be removed from service and replaced or repaired.

The CAP scaffold safety tag (red: part 8099-0082 and green: part 8099-0083) must be posted at each scaffold access point and remain in place for the entirety of the job. A reminder inspection checklist is available on the CAP Safety website. Some items to look for include:

- Planks and wood components for splits, rot, burns, warps, splintering, oil, or paint and finishes that could cover defects. Wood planks must be scaffolding grade.
- Connections are in good condition and secured.
- All metal tubes, bracing and other members or parts are straight and free of bends, kinks, dents, cracks, and excessive rust.
- Locking devices are in good working condition.
- Ropes, wires, and cables are free from defects or other damage that impairs their function and strength.
- The setup of the scaffold was not changed from the previous day's use.

7.3 **Load Capacity:** General capacity requirements for all scaffolds include:

- The scaffold and each scaffold component must be capable of supporting four times the maximum intended load. This includes all personnel, equipment, and supplies.
- Scaffolds must be designed by a qualified person and built and loaded according to that design.
- Never overload the scaffold.

7.4 **Platform Construction:** Most scaffold platform surfaces are made of planks. Planks are usually made of steel, aluminum or wood. Wood scaffold planks should be 2 by 10 inches, scaffold plank grade and stamped by an agency approved by the American Lumber Standards Committee.

- Each platform on all levels must be fully planked or decked, except when used as walkways or during erecting or dismantling operations.
- The platform and walkway must be at least 18 inches wide.
- The space between planks and the space between the platform and the uprights can not be more than one inch.
- The front edge of the platform must be no more than 14 inches from the face of the work unless guardrails are used along the front edge and / or a personal fall arrest system is used.
- Never cover wood platforms with paint, except for the edges, which may be covered or marked for identification.
- Each end of the platform, unless cleated or restrained by hooks or other means, must extend over the centerline of its support at least six inches.
- If the platform is 10 feet or less in length, the end cannot extend over its support more than 12 inches.
- If the platform is over 10 feet in length, its end cannot extend over the support more than 18 inches.

- When platforms are overlapped to create a long platform, the overlap must occur only over supports and must be at least 12 inches.

7.5 Supported Scaffolds: Supported scaffolds have one or more platforms that are supported by outrigger beams, brackets, poles, legs, uprights, posts, frames or similar rigid support. The following are some general requirements for supported scaffolds.

- All supported scaffold poles, legs, posts, frames, and uprights must bear on base plates, as well as mud sills or other firm foundation.
- They must also be plumb and braced to prevent swaying and displacement.
- Footings must be level, sound, rigid and capable of supporting the load of the scaffold without settling or displacement.
- Never use cinder blocks, bricks, gravel, loose fill or other means for leveling uneven surfaces or providing a foundation for the base plate.
- When supported scaffolds have a height to base width ratio of more than 4-to-1 (four feet of height for every one foot of width) then guys, ties or braces must be installed at locations where horizontal members support both inner and outer legs. These devices must be installed at each end of the scaffold and spaced no more than30 feet apart.
- For scaffolds three feet wide or less, guys, ties or braces, must be used at the closest horizontal member for every 20 feet of vertical height. For scaffold wider than three feet, the requirement is every 26 feet or less.

7.6 Suspension Scaffolds: *The use of suspension scaffolding at CAP requires permission of the CAP EH&S Manager.*

7.7 Access Requirements:

- When erecting or dismantling a scaffold, a safe means of access must be provided, if possible. A competent person will determine this based on site conditions and the type of scaffold being erected or dismantled.
- Never use cross braces to climb onto the scaffold or from one level to another level of the scaffold.
- Direct access from one scaffold to another can only be used when the scaffold surfaces are not more than 14 inches horizontally and 24 inches vertically from each other.

7.7.1 Portable, Hook-On and Attachable Ladders

- Place hook-on attachable ladders so their bottom rung is not more than 24 inches above the scaffold support level.
- When hook-on and attachable ladders are used on a supported scaffold that is more than 35 feet high, then rest platforms must be provided at least every 35 feet.
- The minimum rung length for hook-on attachable ladders is 11 ½ inches. Rungs must be uniformly spaced with a maximum spacing of 16 ¾ inches between rungs.

7.7.2 Stairway-Type Ladders

- Place stairway-type ladders so their bottom rung is not more than 24 inches above the scaffold supporting level.
- Rest platforms are required at least every 12 feet.
- The step width should be a minimum of 16 inches. Mobile scaffold stairway-type ladders must have a minimum step width of 11 ½ inches.
- All stairway-type ladders must have slip-resistant treads on all steps and landings.

7.7.3 Integral Prefabricated Scaffold Access Frames

- Rungs on integral prefabricated scaffold access frames must be at least 8 inches long.
- Rungs must be spaced no more than 16 ¾ inches apart.
- Each frame must be installed in the same configuration as the one below it so the integrated ladder remains on the same side.
- When erecting or dismantling tubular welded frame scaffolds, end frames with horizontal members that are parallel, level, and not more than 22 inches apart vertically may be used as climbing devices for access.

7.7.4 Stair Towers (Scaffold Stairway / Towers): Since stair towers are elevated platforms, the stability decreases as the height increases. Therefore, the construction requirements for this type of scaffolding must be reviewed by a competent person to ensure that the scaffold and its components will support its own weight and at least four times the maximum load.

- Stair towers must be positioned so their bottom step is not more than 24 inches above the scaffold supporting level.
- Stairways must be installed between 40 degrees and 60 degrees from the horizontal. Each stairway must be at least 18 inches between stair rails.
- Each side of the scaffold stairway must have a stair rail that includes a top rail and a midrail. Stair rails must be between 28 inches and 37 inches in height, from the top of the stair rail to the surface of the tread.
- The top rail of each stair rail system must also serve as a handrail, unless a separate handrail is provided.
- A landing platform at least 18 inches long must be provided at each level. All treads and landings must have slip-resistant surfaces. Guardrails must be provided on the open sides and ends of each landing.

7.8 Fall Protection: A competent person will determine if fall protection is necessary and feasible during scaffold erecting and dismantling procedures. If additional fall protection needs to be installed at the project site, the CAP Engineering department should be consulted.

7.8.1 Guardrail Systems

- Guardrails must be installed along all open sides and ends of scaffold platforms that are more than 10 feet above a lower level.
- The top edge height of top rails on supported scaffolds must be installed between 38 and 45 inches above the platform.
- Mid rails must be installed midway between the top rail and the scaffold platform.

7.8.2 Personal Fall Arrest Systems: A personal fall arrest system must be used when guardrails cannot be used to protect against fall hazards. Prior to use, however, a competent person must determine that the scaffold system can safely support the use of a personal fall arrest system.

- A personal fall arrest system must be attached by lanyard to a vertical lifeline, horizontal lifeline, or scaffold structural member.
- The personal fall arrest system must limit free fall to six feet or less.
- Do not attach the personal fall arrest system to the guardrail system.
- The anchor point must be able to support 5,000 pounds per attached worker. When vertical lifelines are used, the anchor point must be independent of the scaffold. Standpipes, vents, other piping systems, electrical conduits, outrigger beams, and counterweights are NOT considered safe points of anchorage.
- Inspect the personal fall arrest system before each use.

7.8.3 Falling Object Protection

- The area below a scaffold must be barricaded and unauthorized personnel must not be allowed to enter; if the platform is more than 10 feet above a lower level, then toe boards must be used.
- Toe boards must be at least 3 ½ inches high from the top edge of the toe board to the level of the walking surface.
- If tools, materials or equipment are piled higher than the top edge of the toe board, then mesh, debris nets, canopies or other means of protection must be installed.

8.0 Dismantling Scaffolding: All scaffolds must be dismantled under the supervision or direction of a competent person.

- Where used, make sure the correct number of ties and braces are in place. Replace any that may have been removed.
- Check that all planks are correctly seated and will not fall as you remove other planks.

- Always dismantle the scaffolding from the top down.
- Lower all components to the ground by rope, hoist, or man-to-man. Never throw the parts to the ground.
- If possible, avoid leaving the scaffold partially dismantled. If it must be left partially dismantled, post warning notices at each point of access.
- Whether erecting or dismantling scaffolding, work should always be suspended during high winds and storms.