




Critical Observable Action Table Substation Construction



Activity / Environment	Primary Hazards	Critical Observable Actions
	General	<ul style="list-style-type: none"> <input type="checkbox"/> The written tailboard covers all the primary hazards, effective mitigations, and roles and responsibilities relevant to the site and job activity. The tailboard is available for review. <input type="checkbox"/> Crew is wearing appropriate FR clothing and PPE for the task to be performed. <input type="checkbox"/> The site is well organized and free of tripping hazards. <input type="checkbox"/> Work location is clearly defined. <input type="checkbox"/> The SCE Contractor Orientation Hazard Assessment Safety plan (HASP) is on site. <input type="checkbox"/> Emergency Action Plan (EAP) is in place. <input type="checkbox"/> Checker is on site, if required. <input type="checkbox"/> The public is safe from the activities of the work site.
	Fire	<ul style="list-style-type: none"> <input type="checkbox"/> The crew has a hot work permit if required. <input type="checkbox"/> Fire watch is in place when applicable. <input type="checkbox"/> Certified-for-use fire extinguishing tools are in place. <input type="checkbox"/> Combustible material has been cleared away.
	Human Performance	<ul style="list-style-type: none"> <input type="checkbox"/> Crew avoids pinch points and bight. <input type="checkbox"/> Crew is working at a safe pace. <input type="checkbox"/> Crew is communicating effectively. <input type="checkbox"/> Crew is working free of distractions.
	Environmental / Biological Hazards	<ul style="list-style-type: none"> <input type="checkbox"/> There is ample potable water, shade, and opportunity for rest on site. <input type="checkbox"/> The weather and site conditions are safe for work. <input type="checkbox"/> The site is clear of biological hazards (e.g. animals, insects) prior to work.
	Moving Traffic / Pedestrians	<ul style="list-style-type: none"> <input type="checkbox"/> There is effective traffic control in place, with an approved traffic control plan (if necessary), allowing for smooth and safe traffic flow. <input type="checkbox"/> Approved pedestrian control plans are in place and pedestrians are diverted safely around the worksite or are escorted. <input type="checkbox"/> The crew is wearing high visibility clothing. <input type="checkbox"/> Jobsite is secure.
	Equipment Failure	<ul style="list-style-type: none"> <input type="checkbox"/> Operator has performed a daily inspection. <input type="checkbox"/> Equipment is in good condition. <input type="checkbox"/> Crew is using the correct equipment for the job.
	Fall from Heights	<ul style="list-style-type: none"> <input type="checkbox"/> The crew uses three points of contact when ascending or descending heavy equipment and vehicles. <input type="checkbox"/> Crews working aloft have personal fall protection equipment and are attached to an approved anchorage point.
	Backing into Something / Someone	<ul style="list-style-type: none"> <input type="checkbox"/> The crew uses an engaged spotter when backing. <input type="checkbox"/> The equipment has audible backup alarms. <input type="checkbox"/> The operator and spotter have established eye contact and are communicating effectively. <input type="checkbox"/> Operator performed Circle of Safety just prior to movement. <input type="checkbox"/> Electrical Checker is present if vehicle or equipment movement is occurring near (as discussed with Checker) energized equipment.

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<p>(CONTINUED)</p> 	<p>Using a Trailer</p>	<ul style="list-style-type: none"> <input type="checkbox"/> The trailer is in good condition. <input type="checkbox"/> Trailer connections are sound, and safety chains are crossed and in good condition. <input type="checkbox"/> The trailer is chocked when not connected. <input type="checkbox"/> Load is distributed, secure, and within capacity of trailer. <input type="checkbox"/> Trailer is grounded if used near energized equipment or conductors.
	<p>Load Securement</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Loads are securely tied down with rated lines, ropes, or chains prior to moving the equipment. <input type="checkbox"/> Items in the cab are safely stowed.
	<p>Movement on the Worksite</p>	<ul style="list-style-type: none"> <input type="checkbox"/> A checker is used when maneuvering around energized components. <input type="checkbox"/> Vehicles are operated at a safe speed. <input type="checkbox"/> Operators are wearing seatbelts at all times. <input type="checkbox"/> The swing radius is barricaded or there is a dedicated spotter. <input type="checkbox"/> Unattended vehicles are secured with chocks placed and keys removed.
	<p>Overhead Obstructions / Electrical Contact</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Crew maintains Minimum Approach Distance from overhead electrical conductors. <input type="checkbox"/> If applicable, there are "Overhead power line" signs placed. <input type="checkbox"/> Crew uses an engaged spotter to ensure safe clearance from all overhead obstructions. <input type="checkbox"/> Proper equipment grounding is in place when required.
	<p>Fall from Heights</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Ladders are in good working condition. <input type="checkbox"/> Ladders are used as they are specifically designed. <input type="checkbox"/> The ladder is placed on a secure and level footing. <input type="checkbox"/> Ladders are secured from falling over. <input type="checkbox"/> Ladders extend 3 feet above the landing surface. <input type="checkbox"/> Employees avoid overreaching when working from a ladder. <input type="checkbox"/> Employees maintain 3 points of contact with the ladder at all times. <input type="checkbox"/> The ladder is placed so that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder. <input type="checkbox"/> Employees do not work from top three rungs of an extension ladder. <input type="checkbox"/> If required, employees are using a personal protection system while working from a ladder.
	<p>Dropped Objects</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Work zone is secure. <input type="checkbox"/> Workers remain clear of the drop zone. <input type="checkbox"/> Worker on ladder secures tools and materials from falling, using tool lanyards when applicable. <input type="checkbox"/> Employees use a handline to raise and lower materials. If worker must carry tools or materials, it is done in such a way as to not compromise safe movement on the ladder.


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	Fall from Heights	<input type="checkbox"/> Employee is wearing proper fall protection. <input type="checkbox"/> Fall protection lanyard is attached to aerial lift attachment point. <input type="checkbox"/> Feet planted on basket floor, no overreaching or stepping up.
	Dropped Objects	<input type="checkbox"/> Employees are kept away from the drop zone. <input type="checkbox"/> Employees aloft secure tools and materials from falling, using tool lanyards if applicable.
	Miscommunication	<input type="checkbox"/> Crew has an effective lift plan in place. <input type="checkbox"/> Crew has established communication protocols. <input type="checkbox"/> Operator is certified.
	Crane Destabilization	<input type="checkbox"/> Weather is acceptable for safe operation. <input type="checkbox"/> Crane is level and set up on solid ground with outriggers and pads deployed.
	Overhead Powerline Contact	<input type="checkbox"/> Operator maintains the required clearance from energized conductors based upon voltage, qualification, etc. <input type="checkbox"/> Operator has a spotter and/or checker as required.
	Rigging Failure	<input type="checkbox"/> Rigging is tagged and in good working condition. <input type="checkbox"/> The load lifted is within the working load limit of the rigging and equipment. <input type="checkbox"/> The load is rigged appropriately and by a qualified rigger. <input type="checkbox"/> The load is moved in a controlled manner, using tag lines when necessary. <input type="checkbox"/> Crew and pedestrians remain out from under the load and its path of travel.
	Struck By	<input type="checkbox"/> Crew uses tag lines unless their use creates an unsafe condition. <input type="checkbox"/> Load is moved in a controlled manner. <input type="checkbox"/> Crew remains out from under the load. <input type="checkbox"/> Swing radius and load path are either barricaded or monitored.
	Flying Objects	<input type="checkbox"/> The crew is wearing eye protection. <input type="checkbox"/> The crew has barricaded the work area. <input type="checkbox"/> The crew is using proper equipment with which to chip.
	Silica / Dust	<input type="checkbox"/> Crew is wearing appropriate respiratory protection. <input type="checkbox"/> Crew is using an effective method to minimize dust.
	Electrical Contact	<input type="checkbox"/> There is a clearance, including open disconnects, visible tags, and warning blocks in place. <input type="checkbox"/> The crew has grounded their equipment as required. <input type="checkbox"/> The crew has defined their work space. <input type="checkbox"/> Work area limits are delineated. <input type="checkbox"/> The crew is using a Spotter/Checker. <input type="checkbox"/> Proper warning signage is present.



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 <p>ENCLOSED SPACE</p>	Requirements	<input type="checkbox"/> Proper illumination in place.
	Hazardous Atmosphere	<input type="checkbox"/> Atmosphere is safe to enter. <input type="checkbox"/> Atmospheric readings are continuously monitored and logged. <input type="checkbox"/> Ventilation in place, if required, and placed away from sources of carbon monoxide.
	Engulfment	<input type="checkbox"/> Water is removed from the confined space.
	Fall from Heights	<input type="checkbox"/> Opening is barricaded. <input type="checkbox"/> Ladders secured properly. <input type="checkbox"/> Rescue retrieval system and plan are in place.
	Secondary Electrical Contact	<input type="checkbox"/> Cables are verified and tagged. <input type="checkbox"/> Area is barricaded. <input type="checkbox"/> Energized components are insulated and/or isolated. <input type="checkbox"/> Absence of primary electrical cable is verified.
	Dropped Objects	<input type="checkbox"/> Material lines are used when required.
 <p>TRENCHING & EXCAVATION</p>	Electrical Contact	<input type="checkbox"/> Equipment is grounded as required. <input type="checkbox"/> The crew has defined their workspace. <input type="checkbox"/> Position is Locked Out and Tagged Out. <input type="checkbox"/> The crew is using a Spotter/Checker.
	Fall into Excavation	<input type="checkbox"/> The crew is using proper fall protection when required. <input type="checkbox"/> The crew has placed barricades around the excavation. <input type="checkbox"/> The crew has placed signage to warn of the excavation. <input type="checkbox"/> Excavations are covered or barricaded when unattended.
	Atmosphere	<input type="checkbox"/> Atmosphere is tested if the excavation is deeper than 4 ft, or if the soil may be contaminated. <input type="checkbox"/> Ventilation is used if required.
	Cave-in	<input type="checkbox"/> The excavation is benched, sloped, or shielded as required. <input type="checkbox"/> There is a means of access/egress within 25 feet of anyone working in the excavation. <input type="checkbox"/> Spoil piles are at least two feet from the edge of the excavation. <input type="checkbox"/> Vehicles are not parked directly adjacent to the excavation.




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	Chemical Burn	<input type="checkbox"/> Skin is covered when working with wet concrete. <input type="checkbox"/> Crew is wearing eye protection.
	Silica Dust	<input type="checkbox"/> A dust reduction technique is applied. <input type="checkbox"/> Workers are using an appropriate respirator if necessary.
	Fall from Heights	<input type="checkbox"/> Excavation protected against fall hazards with signs and barriers.
	Dropped Objects	<input type="checkbox"/> Work zone is secure. <input type="checkbox"/> Workers remain outside of the drop zone.
	Electrical Contact (Concrete Placement Boom)	<input type="checkbox"/> Concrete pumping equipment set up correctly and away from power lines.
	Impalement (Rebar, etc.)	<input type="checkbox"/> Rebar is capped.
	Collapse	<input type="checkbox"/> Scaffold components can support at least four times their maximum intended load. <input type="checkbox"/> Scaffold is assembled per manufacturer instructions. <input type="checkbox"/> Scaffold is certified and green tagged with all required information.
	Fall from Heights	<input type="checkbox"/> Scaffold is fully planked with no more than 1" gap between planks. <input type="checkbox"/> Platform is at least 18 inches wide. <input type="checkbox"/> Guardrails are used if work height is > 6 feet. Guardrail system includes top rail; mid rail; toe board; and posts. <input type="checkbox"/> Scaffold is 14 inches or less from face of work (if guardrails are removed).
	Dropped Objects	<input type="checkbox"/> Work platform is free of clutter, mud, oil, or any tripping hazard.
	Electrical Contact	<input type="checkbox"/> Scaffolding is more than 10 feet from any power line. <input type="checkbox"/> Drop Zone barricaded / work zone secure.
	Secondary Electrical Contact / Arc Flash / Blast	<input type="checkbox"/> Crew is wearing appropriate PPE. <input type="checkbox"/> Rubber gloves (if required) are in good condition and tested within the last 6 months. <input type="checkbox"/> Wires are safe ended. <input type="checkbox"/> Work area is clearly defined and marked. <input type="checkbox"/> Voltage and current are confirmed. <input type="checkbox"/> Workers are using insulated tools.
	Abrasions / Lacerations	<input type="checkbox"/> Crew cutting away from body. <input type="checkbox"/> Crew using cut resistant gloves.
	Dropped Objects	<input type="checkbox"/> Work zone is secure. <input type="checkbox"/> Workers remain clear of the drop zone. <input type="checkbox"/> Crews are communicating well.

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	Open Floors	<input type="checkbox"/> Barricades are in place. <input type="checkbox"/> Holes and floor openings left unattended are covered and marked.
	Electrical Contact	<input type="checkbox"/> Cable tails are controlled. <input type="checkbox"/> Cables are safe ended. <input type="checkbox"/> Cables are identified prior to cutting. <input type="checkbox"/> Voltage and amperage are confirmed. <input type="checkbox"/> Checker is present if required. <input type="checkbox"/> Crew is wearing appropriate arc-rated clothing.
	Struck By	<input type="checkbox"/> Load and strain are calculated. <input type="checkbox"/> Load is within the capacity of rigging and equipment. <input type="checkbox"/> Crew remains clear of the bight.
	Electrical Contact	<input type="checkbox"/> Workers and materials remain outside the Minimum Approach Distance (MAD). <input type="checkbox"/> Testing equipment is present and calibrated. <input type="checkbox"/> Voltage and current are confirmed. <input type="checkbox"/> Observer and/or Checker present if required. <input type="checkbox"/> Crew wearing appropriate arc-rated clothing and PPE.
	Primary Electrical Contact	<input type="checkbox"/> Proper cover and barriers in place. <input type="checkbox"/> Work area properly identified. <input type="checkbox"/> Safe work distances are maintained (MAD). <input type="checkbox"/> Work position and equipment are properly grounded. <input type="checkbox"/> Checker is present. <input type="checkbox"/> Visual blocking devices are present. <input type="checkbox"/> Crew is wearing appropriate arc-rated clothing or remains outside the Arc Blast Radius.
	Secondary Electrical Contact	<input type="checkbox"/> Cables are safe ended. <input type="checkbox"/> Crew is using secondary gloves (low voltage) as required. <input type="checkbox"/> Crew is using an arc-flash rated face shield when required. <input type="checkbox"/> Circuit status verified (energized or de-energized). <input type="checkbox"/> Crew using insulated tools.