

Job Hazard Analysis (JHA)

Task: Aerial Enclosure Retrieval in the Telecom Industry

Risk Assessment Code (RAC) Legend

- **☒ Red (High Risk):** Unacceptable—stop work and implement controls before proceeding.
- **☑ Yellow (Moderate Risk):** Proceed with caution—implement and verify controls.
- **☑ Green (Low Risk):** Acceptable—maintain controls and continuous monitoring.

Overall Initial RAC for Aerial Enclosure Retrieval Task: ☒ High Risk

Job Steps, Hazards, and Controls

| Step No. | Task Description | Potential Hazards | Controls / Safe Work Practices | Initial RAC |
|----------|---|---|--|-------------|
| 1 | Pre-job planning & scope review | Incomplete scope; missing permits; lack of coordination with utility owners | Conduct tailboard/JSA meeting; review work prints; verify enclosure location and condition; confirm utility clearance with 811/One-Call; assign stop-work authority. | ☒ |
| 2 | Material staging (bucket truck, hand tools, rigging, PPE) | Struck-by falling tools; trip hazards; improper staging of heavy gear | Stage tools/materials on stable ground; use tool belts/buckets; barricade staging area; maintain housekeeping. | ☒ |
| 3 | Traffic control setup (if working roadside) | Vehicle strikes; pedestrian exposure; inadequate signage | Deploy MUTCD-compliant traffic control plan; cones, barricades, signage; certified flaggers; ANSI/ISEA 107 Class 2/3 high-visibility apparel; lighting for night work. | ☒ |
| 4 | Pole inspection before climbing or bucket use | Pole structural failure; hidden rot or cracks; energized conductors nearby | Sound and probe pole; inspect guy wires and attachments; maintain NESC clearance from power lines; tag unsafe poles. | ☒ |
| 5 | Accessing aerial work area (climbing or bucket truck) | Falls from height; equipment malfunction | 100% fall protection with body harness and lanyard; bucket truck inspected daily; follow three-point climbing technique; use secured ladders. | ☒ |
| 6 | Hoisting tools/equipment | Dropped object hazard; struck-by below | Use hand line or bucket tool bag; establish drop zone with barricades; never carry large items while climbing. | ☒ |

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|----------|---|---|---|-------------|
| 7 | Opening aerial enclosure | Pinch points; falling cover/parts; contact with energized utilities | Wear gloves and safety glasses; tether enclosure covers; maintain required NESC clearance from energized lines; test enclosure for integrity. | ? |
| 8 | Disconnecting and retrieving fiber/copper cables from enclosure | Fiber shard exposure; cable snap-back; ergonomic strain | Wear safety glasses and cut-resistant gloves; dispose of shards in sharps container; maintain bend radius; use mechanical assist if needed. | ? |
| 9 | Lowering enclosure from strand | Dropped load hazard; rigging failure; struck-by swinging load | Use rated rigging/ropes; control with tagline; exclusion zone below; never stand directly under load. | ? |
| 10 | Handling retrieved enclosure on ground | Ergonomic strain; sharp edges; crush hazard | Use team lift or mechanical assist; wear gloves; set enclosure on stable ground; store away from traffic path. | ? |
| 11 | Closing strand hardware or removing brackets | Pinched fingers; tool slippage; strand instability | Wear gloves; maintain secure footing; use proper hand tools; re-secure strand hardware after removal. | ? |
| 12 | Weather/environmental hazards | Wind sway at height; heat/cold stress; lightning | Suspend aerial work during storms/high winds; provide hydration/shade in hot weather; thermal PPE in cold; postpone work during lightning. | ? |
| 13 | Descending pole or exiting bucket | Falls; dropped tools | Maintain 100% tie-off when climbing; lower tools separately; exit bucket per manufacturer instructions. | ? |
| 14 | Site housekeeping and restoration | Trip hazards from tools/debris; incomplete restoration | Collect scrap cables, hardware, and enclosure parts; dispose of waste properly; sweep/clear work area. | ? |
| 15 | Traffic control removal & demobilization | Vehicle strikes during removal | Remove devices in reverse order; flaggers remain until last cone collected; final walkdown inspection. | ? |
| 16 | Documentation & turnover | Missing records; non-compliance with utility owner standards | Record enclosure ID, cable IDs retrieved, and location; photograph work; update as-builts; submit QC to utility/owner. | ? |

PPE Requirements

- **Head/Face/Eye:** Hard hat (ANSI Z89.1); safety glasses with side shields (ANSI Z87.1); face shield if cutting or grinding hardware.
- **Hearing:** Hearing protection when exposed to generators, traffic, or tools >85 dBA.
- **Hands:** Cut-resistant gloves for cable/enclosure handling; insulated gloves when near energized lines.

- **Feet:** Safety-toe boots with slip-resistant soles.
 - **High-Visibility Apparel:** ANSI/ISEA 107 Type R, Class 2 (day) or Class 3 (night/high-speed).
 - **Fall Protection:** Full-body harness with shock-absorbing lanyard or fall arrest device; 100% tie-off during climbing/aerial access.
 - **Respiratory:** Dust mask or respirator when handling dusty/contaminated enclosures.
 - **Weather-Specific:** Rain gear, insulated PPE, or UV/sun protection as conditions require.
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Regulatory & Industry Practice Alignment (summary)

- **OSHA:** 29 CFR 1926 Subpart E (PPE), Subpart M (Fall Protection), Subpart V (Power Transmission/Distribution if near energized lines), Subpart O (Motor Vehicles/Equipment).
- **NIOSH:** Best practices for aerial work safety, fall prevention, dropped object prevention, and ergonomics in cable handling.
- **ANSI/ISEA:** ANSI/ISEA 107 (high-visibility apparel), ANSI Z87.1 (eye protection), ANSI Z89.1 (head protection), ANSI Z359 (fall protection).
- **NESC:** Clearance requirements for aerial plant and worker approach distances to energized power conductors; safe strand loading practices.
- **MUTCD:** Work zone traffic control standards for roadside aerial retrieval work.