

Job Hazard Analysis (JHA)

Task: Over-Lashing 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 Over-Lashing 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; uncoordinated work with other utilities | Conduct tailboard/JSA; review strand maps and as-builts; confirm permits and traffic control; verify clearance with joint use utilities; assign stop-work authority. | ☑ |
| 2 | Material staging (cable reels, lashers, rollers, strand tools) | Struck-by rolling reels; improper storage; trip hazards | Secure reels with chocks; store equipment off roadway; keep walk paths clear; use mechanical assists for handling heavy reels. | ☑ |
| 3 | Traffic control setup (MUTCD-compliant) | Vehicle strikes; inadequate tapering; limited visibility | Develop and implement MUTCD-compliant plan; certified flaggers; use cones, barricades, and advance signage; high-visibility apparel (ANSI/ISEA 107); night lighting as required. | ☑ |
| 4 | Pole inspection before climbing | Pole failure due to rot, cracks, insect damage | Sound/boring test poles; tag defective poles; install brace or replacement if unsafe; follow NESC clearance standards. | ☑ |
| 5 | Climbing poles or using bucket truck/lift | Falls from height; contact with energized conductors | 100% tie-off fall protection; inspect climbing/bucket equipment; maintain OSHA/NESC minimum approach distances; daily equipment inspections. | ☑ |
| 6 | Setting up cable lasher and block rollers | Dropped tools; pinch points; improper installation | Use tool lanyards; secure lasher to strand with safety chain; install rollers correctly at pole attachments; barricade drop zones. | ☑ |

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|-----------------|--|--|---|--------------------|
| 7 | Loading new cable into rollers | Strain injuries; dropped cable; damage to cable jacket | Use two-person lift or mechanical assist; lift with legs not back; secure cable in rollers; maintain bend radius. | ? |
| 8 | Installing cable lasher on strand | Pinch/crush injuries; lasher roll-off; improper attachment | Lashers tethered with safety chain; keep hands clear of lash points; verify strand clamps and rollers secure before release. | ? |
| 9 | Lashing new cable to existing cable/strand | Line-of-fire hazards from tension; tool malfunction; cable snap-back | Maintain exclusion zone under lashing operation; operate lasher per manufacturer's instructions; do not exceed recommended pulling tensions; continuous ground-to-aerial communication. | ? |
| 10 | Pulling lasher along strand (over-lashing operation) | Dropped lasher; cable misalignment; snagging on hardware | Use tagline to control lasher; inspect hardware and strand before advancing; slow and controlled progression; barricade pedestrian/vehicle traffic below. | ? |
| 11 | Securing lashing wire at spans/poles | Cuts from lashing wire; dropped tools; improper tie-off | Wear cut-resistant gloves; tether lashing wire tools; properly terminate and secure wires; coil and secure excess to prevent unraveling. | ? |
| 12 | Managing mid-span splices or existing attachments | Overloading strand; damaging existing telecom/power attachments | Verify strand capacity before adding load; maintain NESC clearance; consult utility owner if overloaded; use spacers as required. | ? |
| 13 | Crossing intersections, driveways, or busy areas | Struck-by vehicles; entanglement hazards | Flaggers at crossings; use traffic control per MUTCD; schedule off-peak when possible; maintain exclusion zone under span. | ? |
| 14 | Transferring reels and advancing cable | Struck-by moving reels; ergonomic strain | Chock reels; use reel stands; keep hands/feet clear during feeding; two-person control when advancing cable. | ? |
| 15 | Weather/environmental conditions | Lightning; high winds; icy or slick surfaces | Suspend work during lightning or high winds; use weather-specific PPE; de-ice walking surfaces; monitor forecast. | ? |
| 16 | Noise and vibration (power tools, lashers) | Hearing loss; vibration injuries | Hearing protection above 85 dBA; rotate tasks; anti-vibration gloves; maintain tools. | ? |
| 17 | Final securing of cable and lasher removal | Dropped lasher; loose attachments | Lower lasher via rope or bucket, not free drop; secure all lashing wire; inspect cable path and sag/tension. | ? |
| 18 | Documentation & as-built verification | Missed QC requirements; regulatory issues | Photograph completed spans; verify attachment heights and spacing; update as-built records; submit to utility owner. | ? |
| 19 | Traffic control removal & demobilization | Vehicle strikes during removal | Remove devices in reverse order; maintain flaggers until last cone collected; final walkdown inspection. | ? |

PPE Requirements

- **Head/Face/Eye:** Hard hat (ANSI Z89.1); safety glasses with side shields (ANSI Z87.1); face shield when handling lashing wire.
- **Hearing:** Hearing protection (earplugs/muffs) when using lashers, impact tools, or if exposed to >85 dBA.
- **Hands:** Cut-resistant gloves; insulated gloves if near energized conductors (qualified personnel only).
- **Feet:** Safety-toe boots with slip-resistant soles.
- **Fall Protection:** Full-body harness with shock-absorbing lanyard or SRL; 100% tie-off when climbing poles or working from lifts.
- **High-Visibility Apparel:** ANSI/ISEA 107 Type R, Class 2 (day) or Class 3 (night/high-speed).
- **Respiratory:** Required if drilling or boring into poles for attachments (OSHA silica compliance).
- **Weather-Specific:** Rain gear, insulated cold-weather clothing, UV/sun protection.

Regulatory & Industry Practice Alignment (summary)

- **OSHA:** 29 CFR 1926 Subpart M (Fall Protection), Subpart V (Power Transmission/Distribution), Subpart E (PPE), Subpart O (Motor Vehicles/Equipment).
- **NIOSH:** Safe climbing practices, ergonomic handling of cable reels, prevention of struck-by incidents.
- **ANSI/ISEA:** High-visibility apparel (ANSI/ISEA 107), fall protection equipment (ANSI Z359), PPE performance standards.
- **NESC:** Clearances, attachment sequencing, loading limits on strand, working space on poles.
- **MUTCD:** Work zone traffic control requirements for aerial telecom construction.