

Job Hazard Analysis (JHA)

Task: Prepping Cable for Splicing 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 Prepping Cable for Splicing Task: ☑ Moderate 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 prints; incorrect cable ID; lack of utility coordination	Conduct tailboard/JSA meeting; verify splice case location and cable IDs; review as-builts; confirm utility clearance; assign stop-work authority.	☑
2	Material staging (cable prep tools, PPE, solvents, splice cases)	Struck-by falling tools; trip hazards; chemical exposure	Stage materials on level, stable surface; store solvents per SDS; barricade staging area; maintain housekeeping.	☑
3	Traffic control setup (if roadside or aerial splicing location)	Vehicle strikes; pedestrian hazards	MUTCD-compliant traffic control; cones, barricades, signage; certified flaggers; ANSI/ISEA 107 high-visibility apparel; lighting for night work.	☑
4	Inspecting and securing cable to be prepped	Cable snap-back; ergonomic strain	Secure cable on reel stand or lashing bar; use proper posture and lifting techniques; maintain exclusion zone.	☑
5	Removing cable sheath/jacket	Lacerations from sharp tools; cuts from metallic armor	Use proper sheath-cutting tools; cut away from body; wear cut-resistant gloves; maintain tool control.	☑
6	Removing strength members, binders, or armor	Puncture wounds from Kevlar strands; metal shard injuries	Wear gloves and safety glasses; cut Kevlar with shears; dispose of scraps in trash or sharps container.	☑
7	Buffer tube removal	Cuts from tube cutters; flying fragments; repetitive strain	Use approved tube-cutting tools; wear eye protection; dispose of fragments properly; rotate tasks to reduce fatigue.	☑

Step No.	Task Description	Potential Hazards	Controls / Safe Work Practices	Initial RAC
8	Cleaning fibers (using IPA/alcohol wipes)	Chemical exposure; eye irritation; skin contact	Use 99% isopropyl alcohol in ventilated area; wear chemical-resistant gloves and safety glasses; review SDS.	?
9	Fiber preparation (stripping and cleaving)	Flying fiber shards; eye injury; hand cuts	Wear safety glasses with side shields; dispose of shards in sharps container; use approved strippers and cleavers.	?
10	Organizing fibers into splice tray	Pinch points; fiber breakage leading to shards	Wear gloves; handle gently; maintain minimum bend radius; organize fibers neatly in tray.	?
11	Working near energized utilities (if co-located plant)	Electrical shock; arc flash	Only qualified personnel handle bonding/grounding; maintain NESC approach distances; wear insulated gloves if required.	?
12	Weather/environmental hazards	Heat stress; cold stress; wet/dusty conditions	Provide shade and hydration in hot weather; insulated PPE in cold; rain covers for splice cases; respirator if working in dusty conditions.	?
13	Housekeeping and cleanup	Fiber shard exposure; trip hazards from scrap cable	Collect all shards in sharps container; dispose of cable scraps properly; sweep/clear site before demobilization.	?
14	Traffic control removal & demobilization	Vehicle strikes during removal	Remove devices in reverse order; flaggers remain until last cone collected; perform final walkdown.	?
15	Documentation & turnover	Missing fiber records; improper splice log	Record cable ID, buffer tube colors, and fiber counts; photograph prepared cable; update as-builts; submit QC documentation.	?

PPE Requirements

- **Head/Face/Eye:** Hard hat (ANSI Z89.1) when near aerial/overhead hazards; safety glasses with side shields (ANSI Z87.1); face shield when stripping metallic armor.
- **Hearing:** Hearing protection when using power tools or working roadside near traffic >85 dBA.
- **Hands:** Cut-resistant gloves for sheath/armor removal; chemical-resistant gloves when using solvents.
- **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).
- **Respiratory:** Dust mask if prepping cable in vaults with debris/dust; respirator if fumes present.
- **Weather-Specific:** Rain gear, thermal PPE, UV/sun protection as needed.
- **Fall Protection:** Required if prepping aerial cables from bucket trucks or ladders; 100% tie-off enforced.

Regulatory & Industry Practice Alignment (summary)

- **OSHA:** 29 CFR 1926 Subpart E (PPE), Subpart V (Power Transmission/Distribution—if near energized plant), Subpart M (Fall Protection), Subpart O (Motor Vehicles/Equipment), Subpart Z (Hazardous Substances—alcohol, fiber shards).
- **NIOSH:** Fiber shard exposure prevention; ergonomic best practices for repetitive stripping and cleaving; heat/cold stress guidelines.
- **ANSI/ISEA:** ANSI/ISEA 107 (high-visibility apparel), ANSI Z87.1 (eye protection), ANSI Z89.1 (head protection), ANSI Z359 (fall protection).
- **NESC:** Grounding and bonding requirements for metallic cable components; clearance requirements near electrical utilities.
- **MUTCD:** Work zone traffic control standards for roadside splicing operations.