Street lighting SOPs — USA

Standard operating procedures from OpenSLMS Learn, with references for this region. Use them as templates. Add your company rules and the maker's instructions.

SOP: Safe isolation before electrical work

Make it dead, keep it dead, prove it dead.

Who: qualified electrician Rules: OSHA 1910.147 lockout/tagout, OSHA 1910.269, NFPA 70E

1	Disconnect completely. Open the switch or remove the fuse for the circuit.	[ ]
2	Secure against reconnection. Lock off the device. Attach a tag with your name and the date.	[ ]
3	Verify that the installation is dead. Prove your tester on a known live source, test all conductors, then prove the tester again.	[ ]
4	Earth and short-circuit where your rules require it.	[ ]
5	Cover or barrier nearby live parts.	[ ]

A circuit can have more than one supply, and a controller can switch it on remotely. Isolate at the source, not at the contactor. Set the circuit to maintenance mode in the platform. On utility poles, only qualified utility workers may work near overhead lines.

SOP: Traffic management at a work site

Protect the crew and the public.

Rules: MUTCD Part 6 (temporary traffic control)

1	Get the road permit or approval before the work.	[ ]
2	Choose the layout for the road speed and type from your rules.	[ ]
3	Place signs and cones in the direction of traffic, starting with the advance warning.	[ ]
4	Park the vehicle to protect the work area, with beacons on.	[ ]
5	Wear high-visibility clothing (ANSI/ISEA 107).	[ ]
6	Remove signs in the reverse order when the work is done.	[ ]

SOP: Work at height from a MEWP

Bucket truck work at the top of a pole.

Who: trained operator and a ground person Rules: ANSI/SAIA A92 series, OSHA

1	Check the location for overhead lines, trees, and traffic.	[ ]
2	Set up traffic management. Mark an exclusion zone under the platform.	[ ]
3	Do the daily machine check. Make sure the periodic inspection is in date.	[ ]
4	Set up on firm, level ground with outriggers on pads.	[ ]
5	Check the wind speed. Stop above the maker's limit.	[ ]
6	Clip the harness lanyard to the basket anchor point before you lift.	[ ]
7	Secure tools and parts in the basket.	[ ]
8	The ground person stays at the ground controls.	[ ]

SOP: Replace a luminaire, driver, or node

The most common corrective job.

Who: lamp crew Before: safe isolation, traffic management, and work at height SOPs

1	Open the work order. Check the asset, model, and history.	[ ]
2	Take the correct spare from the store and issue it to the job.	[ ]
3	Isolate the pole at the pole fuse or circuit.	[ ]
4	Photograph the luminaire label before you remove anything.	[ ]
5	Replace the part. For a driver, use the same programme. For a node, record the new serial number.	[ ]
6	Check the gasket and cable gland. Close the luminaire.	[ ]
7	Restore power. Check the light, and that the node reports.	[ ]
8	Label the failed part with asset and job numbers for warranty.	[ ]
9	Resolve the job: cause, part used, and a photo.	[ ]

Dispose of failed electronics as e-waste. Old discharge lamps contain mercury: treat them as hazardous waste.

SOP: Night patrol

Find dark lights before residents do.

Who: driver and observer, or one person on foot When: fixed cycle, for example every 2 weeks

1	Start at least 30 minutes after switch-on.	[ ]
2	Open the patrol in the app. Follow one circuit at a time.	[ ]
3	Mark each light: working, not working, or damaged.	[ ]
4	Also look for cycling lights, damaged poles, and open doors.	[ ]
5	For damage that is a danger, follow the damaged pole SOP.	[ ]
6	Close the patrol. Jobs are raised for each light not working or damaged.	[ ]

The driver must not mark lights while driving. Use an observer, or stop safely. A printable patrol sheet is available as a backup.

SOP: Cabinet inspection

The preventive visit to a cabinet or feeder pillar.

Who: electrician When: by the preventive plan

1	Check the outside: door, lock, base, damage, labels, and access.	[ ]
2	Check inside for water, insects, heat damage, and missing covers.	[ ]
3	Read the meter and controller display. Compare with the platform.	[ ]
4	Test each earth leakage device with its test button. Record the result.	[ ]
5	Check the SPD status windows.	[ ]
6	With covers in place, take a thermal image of terminals and contactors.	[ ]
7	Isolate. Tighten terminals to the maker's torque. Clean the photocell.	[ ]
8	Restore. Switch each circuit on and off from the platform.	[ ]
9	Complete the checklist and photos in the job.	[ ]

SOP: Make a damaged pole safe

After a vehicle hit, a fall, or a report of a shock.

Priority: Critical Who: emergency crew with an electrician

1	Keep people away. Do not touch the pole, door, or cables.	[ ]
2	Set up traffic management and a barrier.	[ ]
3	Isolate the circuit at the source. Follow the safe isolation SOP.	[ ]
4	Test the pole and the area for voltage.	[ ]
5	Make cable ends safe and insulated.	[ ]
6	Remove or secure the pole and luminaire.	[ ]
7	Restore other poles if you can isolate the damaged section.	[ ]
8	Photograph the scene. Record vehicle details or a police reference for cost recovery.	[ ]
9	Raise a follow-up job for the new pole and foundation.	[ ]

SOP: Mass outage after a storm

Restore in the right order.

1	Wait until the storm passes and it is safe to go out.	[ ]
2	Collect reports and controller alarms. Group them by area and circuit.	[ ]
3	Send make-safe crews to fallen poles and exposed cables first.	[ ]
4	Patrol priority routes: hospitals, emergency services, main roads.	[ ]
5	Restore circuits at cabinets before single lights.	[ ]
6	Raise one job for each asset that needs repair. Link them to the storm event.	[ ]
7	Photograph all damage for insurance and cost claims.	[ ]
8	Report progress to the city or road owner each day.	[ ]

SOP: Clean and check a solar street light

The routine visit that keeps solar lights working.

1	Read battery state and charge history from the platform before the visit.	[ ]
2	Check for shade from new trees or buildings.	[ ]
3	Clean the panel with clean water and a soft brush. Do not use high pressure or detergents unless the maker permits.	[ ]
4	Check the panel bracket, bolts, and angle.	[ ]
5	Check cables and connectors for damage and water.	[ ]
6	Check the battery box for heat damage, swelling, or water.	[ ]
7	Test the light with the controller's test mode.	[ ]
8	Record the result and photos in the job.	[ ]

SOP: Commission a controller or node

Checks to do before you trust the data.

1	Map it to the correct asset in the register.	[ ]
2	Set location and clock: latitude, longitude, time zone.	[ ]
3	Check readings against a clamp meter. Check each phase is on the correct input.	[ ]
4	Test switching and dimming from the platform. Confirm on site.	[ ]
5	Test one alarm, for example open a breaker.	[ ]
6	Record it: date, person, results.	[ ]

A reversed current transformer gives negative power or a wrong power factor. It is the most common error after installation.

SOP: Resolve and close a work order

The record that makes every report useful.

1	Select the cause from the list. Use "other" only if no cause fits.	[ ]
2	Record each part used.	[ ]
3	Add a photo of the finished work.	[ ]
4	Raise a new job for any follow-up work.	[ ]
5	Resolve the job.	[ ]
6	The supervisor checks the record and photo, then closes it or returns it.	[ ]

A job without a cause is a lost lesson. Repeat-failure and warranty reports depend on this step.