

# Method of Procedure (MOP) For Excavation and Trenching (Rev Jan 2022)

This MOP shall be completed by the General Contractor (GC) and submitted with other associated documentation (e.g., risk plan) to Lockheed Martin Space (LMS) Facility Operations & Services (FOS) and LMS Environment Safety & Health (ESH) prior to start of work per [LM Contractor ESH Requirements](#).

GC and its subcontractors are responsible for the health and safety of their personnel, though their own safety plans and procedures, and must comply with all applicable laws and regulations, as well as all communicated LMS site and program-specific requirements.

<b>Project Name:</b> Click or tap here to enter text.	<b>Contractor:</b> Click or tap here to enter text.	<b>Building:</b> Click or tap here to enter text.
<b>FPR No:</b> Click or tap here to enter text.	<b>Contractor POC:</b> Click or tap here to enter text.	<b>Area:</b> Click or tap here to enter text.
<b>FOS CM:</b> Click or tap here to enter text.	<b>Sub-Contractor:</b> Click or tap here to enter text.	<b>Start Date:</b> Click or tap to enter a date.

<b>Scope of Work</b>	Click or tap here to enter text.
<b>Health and Special Hazards</b>	Click or tap here to enter text.
<b>Safety and Special PPE</b>	Click or tap here to enter text.
<b>Materials Used</b>	Click or tap here to enter text.

**GC shall provide the following project details:**

1. **Excavation Competent Person**
2. **Utility Lines Survey Company**
3. **Utility Lines Survey Conducted**
4. **Utility Lines present**
  - a. **Yes**\_\_\_ **No** \_\_\_\_\_
  - b. **Buried**\_\_\_\_\_ **Overhead**\_\_\_\_\_
  - c. **Marked: Yes**\_\_\_ **No**\_\_\_\_\_
5. **Electrical Lines Present**
  - a. **Yes**\_\_\_ **No** \_\_\_\_\_
  - b. **Buried**\_\_\_\_\_ **Overhead**\_\_\_\_\_
  - c. **Marked: Yes**\_\_\_ **No** \_\_\_\_\_
6. **Communication Lines**
  - a. **Yes**\_\_\_ **No** \_\_\_\_\_
  - b. **Buried**\_\_\_\_\_ **Overhead**\_\_\_\_\_
  - c. **Copper** \_\_\_\_\_ **Fiber** \_\_\_\_\_ **Other**\_\_\_\_\_

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7. **Excavation Equipment (Heavy Equipment, Hand Dig, Other)**
  - a. Backhoe \_\_\_ Front-end Loader \_\_\_ Grader \_\_\_ Posthole Digger \_\_\_ Other \_\_\_
8. **Excavation Depth**
9. **Will workers be Entering Trench**
10. **Will Shoring/Shielding/Sloping be in place**
  - a. Yes \_\_\_ No \_\_\_
  - b. Specify:
11. **Paving Involved: Yes \_\_\_ No \_\_\_**
12. **Concrete Involved: Yes \_\_\_ No \_\_\_**
13. **Re-compacting Required (95% on the Proctor Scale): Yes \_\_\_ No \_\_\_**
14. **Cal/OSHA Annual Permit Submitted to LM (*California Only*):**

## **General Requirements:**

- All excavation activities shall comply with 29 Code of Federal Regulation, Standard 1926.651. Activities in California shall comply with California Code of Regulations, Title 8, Section 1541.
- Utility lines survey shall be completed prior to start of excavation, and utility lines shall be marked.
- Excavations over 5' deep require shoring or a 1½ to 1 tapered slop
- Contractor shall designate a Competent Person, as defined by OSHA, who shall be present at all time to supervise trenching work.
- All soils shall be considered C type soils unless deemed otherwise by a competent soils engineer.
- Contractor shall submit, prior to start of excavation/trenching a Cal/OSHA Annual Permit to ESH, for trenches that are 5 feet or deeper if workers will be entering the trench. (*California only*).
- Daily inspections of excavations shall be conducted and documented by the competent person. Inspections shall be conducted as often as necessary.
- The atmospheres shall be tested prior to workers entering trenches that are 4 feet or deeper, when there is a potential for hazardous atmosphere to exist in the trench. The atmosphere shall be tested as often as necessary.
- Spoil piles shall be placed at least 2 feet away from the excavation to prevent back filling and surcharge loads.

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- Waste asphalt and cement shall be shipped off-site or recycled but not used as fill.
- If the total project-disturbed acreage approaches one acre, Contractor shall provide Phase II Storm water Construction Permit. A copy of this signed permit shall be forwarded to ESH.
- Projects crossing streams and construction in a streambed or wetland shall require Army Corps 404 permitting. Crossing streams is discouraged. Contact ESH prior to crossing/working in streambeds and/or wetlands.
- Groundwater monitoring wells shall not be disturbed. Damaged wells will require immediate repair or replacement. Contact ESH if any wells are disturbed or damaged.
- If any unusual conditions, odors, etc., are detected, contact ESH.
- If groundwater, unusual odor/discoloration, or wet soil is encountered during excavation contact ESH
- Secure any down-stream stormwater drains and/or contain excavated soil with berms, sandbags, or plastic
- Construction is complete when all disturbed areas are stabilized with asphalt, concrete, riprap, or vegetation.
- Place soil piles up-hill of excavation to channel any sediment loading into the excavation. .
- Excess clean soil may go to the spoils pile north of the rifle range with permission from Roads & Grounds (*Colorado only*).
- Any area in EPL may have soil contamination (*Colorado only*). If any unusual conditions, odors, etc., are detected, contact ESH (*Colorado only*).
- Stormwater permit if disturbance is 1 acre or greater, verify black zone map, spoils, water crossing/diversion, groundwater, erosion controls, duration > 5 days. A copy of this signed permit must be forwarded to the ESH Stormwater POC (*Colorado only*)