JOB HAZARD ANALYSIS (JHA)

Business name

Document: JHA-001 Rev 1
Prepared: Nov 9, 2026
Review by: Dec 9, 2026
Highest risk after controls: Medium

1. BUSINESS AND JOB DETAILS

Job	Trenching for services	**Start date**	Nov 9, 2026
Working hours	7:00 am to 3:30 pm	**Trade**	Excavation and earthworks

2. JOB STEPS, HAZARDS AND CONTROLS

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
1	Get 811 locates, then locate and mark services on the ground	Hitting underground services Gas and fuel lines Rules: 29 CFR 1926.651(b) and your state 811 law	**Critical Possible / Fatality**	1.1 Keep machine buckets well clear of marked services and use a spotter. [Engineering (guarding)] 1.2 Scan the area with a cable locator before digging and mark services on the ground. [Engineering] 1.3 Hitting underground services: see step 3 for the full controls [Administrative] 1.4 Isolate and purge the line before work, with the owner's approval. [Elimination] 1.5 Lock off and tag the isolation valve. [Engineering (guarding)] 1.6 Check for leaks with a gas detector before and during work, and ventilate the area. [Engineering] 1.7 Only licensed gas fitters work on gas lines. [Administrative] 1.8 Remove ignition sources: no smoking, no hot work and no sparking tools near the line. [Administrative] 1.9 Know where the shut-off valve is and what to do if a leak happens. [Administrative] 1.10 Wear safety glasses and gloves, and keep a fire extinguisher close by. [PPE]	**Medium Rare / Fatality**	Site supervisor
2	Check for overhead power lines and plan where the machine and spoil will go	Contact with overhead power lines Being hit by heavy equipment Rules: 29 CFR 1926.1408 and 1926.416; 29 CFR 1926 Subpart O	**Critical Possible / Fatality**	2.1 Ask the utility to de-energize, move or insulate the lines before work starts. [Elimination] 2.2 Use non-conductive (fiberglass) ladders near any power lines. [Substitution] 2.3 Mark the safe distance with flags, tape or warning lines and keep all equipment and people outside it. [Engineering (guarding)] 2.4 Keep equipment at least 10 feet from lines up to 50 kV once the utility confirms the voltage, more for higher voltages, and 20 feet when the voltage is unknown (29 CFR 1926.1408). [Administrative] 2.5 Use a dedicated spotter whenever equipment moves or raises anything near lines. [Administrative] 2.6 Treat all lines as energized. If equipment touches a line,	**Medium Rare / Fatality**	Site supervisor

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				the operator stays in the cab and everyone else keeps well away. [Administrative] 2.7 Separate people and equipment with barriers, exclusion zones and marked walkways. [Engineering (guarding)] 2.8 Use equipment with working backup alarms, cameras and lights. [Engineering] 2.9 Have a site traffic plan showing equipment routes, loading areas and pedestrian paths. [Administrative] 2.10 Use a spotter when backing up or working near people. [Administrative] 2.11 Make eye contact with the operator before going near. Stay out of the swing radius. [Administrative] 2.12 Operators are trained and authorized for each machine. Forklift and telehandler operators are trained, evaluated and certified by the employer (29 CFR 1910.178(l), via 1926.602(d)). [Administrative] 2.13 Do a pre-start check on each machine every day and record it. [Administrative] 2.14 Wear hi-vis clothing and a hard hat. [PPE]		
3	Pothole by hand or vacuum to expose marked services	Hitting underground services Lifting and carrying heavy loads Rules: 29 CFR 1926.651(b) and your state 811 law	**Critical Possible / Fatality**	3.1 Keep machine buckets well clear of marked services and use a spotter. [Engineering (guarding)] 3.2 Scan the area with a cable locator before digging and mark services on the ground. [Engineering] 3.3 Hand dig or vacuum excavate to expose services before using a machine near them. [Engineering] 3.4 Call 811 before you dig and wait until all utilities have marked their lines. [Administrative] 3.5 Keep plans or locate tickets on site and check them again if the work area grows. [Administrative] 3.6 Support or protect exposed utilities so they cannot sag or break while the excavation is open (29 CFR 1926.651(b)(4)). [Administrative] 3.7 If you hit a service, stop, get everyone clear, and call the owner and emergency services. [Administrative] 3.8 Wear safety boots, gloves and hi-vis when digging. [PPE] 3.9 Plan to avoid carrying: have materials delivered, and old items picked up, as close as possible to where they are used. [Elimination] 3.10 Use lighter or smaller loads: order smaller bags and shorter lengths, and drain or break down old items before moving them. [Substitution] 3.11 Use trolleys, pallet jacks, hoists, vacuum lifters or plant instead of carrying by hand. [Engineering] 3.12 Use a two-person lift for anything heavy, long or awkward. Plan the route first and clear it. [Administrative] 3.13 Keep the load close, back straight and no twisting. Turn with your feet. [Administrative] 3.14 Rotate tasks and take breaks on long lifting jobs. [Administrative]	**Medium Unlikely / Recordable / lost time**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				3.15 Wear gloves for grip and safety boots to protect your feet. [PPE]		
4	Set an exclusion zone and a spotter around the excavator	Being hit by heavy equipment Road traffic Rules: 29 CFR 1926 Subpart O; MUTCD Part 6 and 29 CFR 1926 Subpart G	**Critical Possible / Fatality**	4.1 Being hit by heavy equipment: see step 2 for the full controls [Administrative] 4.2 Do the work at low-traffic times, or close the road or lane with approval. [Elimination] 4.3 Put solid barriers between the work and traffic where speeds are high, not just cones. [Engineering (guarding)] 4.4 Use a truck-mounted attenuator or buffer vehicle on high speed roads. [Engineering] 4.5 Set up work zone signs and cones to MUTCD Part 6, with trained flaggers. [Administrative] 4.6 Get any permit needed from the city, county or state DOT before you start. [Administrative] 4.7 Park work vehicles to shield the work zone, with beacons on. [Administrative] 4.8 Wear ANSI/ISEA 107 Class 2 or 3 high-visibility clothing. [PPE]	**Medium Rare / Fatality**	Site supervisor
5	Dig the trench, keeping spoil back from the edge	Trench or excavation collapse Being hit by heavy equipment Rules: 29 CFR 1926 Subpart P; 29 CFR 1926 Subpart O	**Critical Possible / Fatality**	5.1 Use methods that keep people out of the trench, such as directional boring or working from the surface. [Elimination] 5.2 Barricade or cover the excavation so people and equipment cannot fall in. Use guardrails on walkways that cross it (29 CFR 1926.651(l)). [Engineering (guarding)] 5.3 Trench or excavation collapse: see step 6 for the full controls [Administrative] 5.4 Being hit by heavy equipment: see step 2 for the full controls [Administrative]	**Medium Rare / Fatality**	Site supervisor
6	Use sloping, shoring or a trench box in any trench 5 feet deep or more (or shallower if the competent person sees signs of a cave-in) before anyone goes in	Trench or excavation collapse Rules: 29 CFR 1926 Subpart P	**Critical Possible / Fatality**	6.1 Use methods that keep people out of the trench, such as directional boring or working from the surface. [Elimination] 6.2 Barricade or cover the excavation so people and equipment cannot fall in. Use guardrails on walkways that cross it (29 CFR 1926.651(l)). [Engineering (guarding)] 6.3 Use a protective system (sloping, shoring or a trench box) in any trench 5 feet or deeper, or shallower if the competent person sees signs of a possible cave-in (29 CFR 1926.652). [Engineering] 6.4 Protective systems for trenches over 20 feet deep are designed by a registered professional engineer (29 CFR 1926.652(b), (c)). [Engineering] 6.5 Keep spoil, materials and equipment at least 2 feet back from the edge. [Engineering] 6.6 Provide a ladder, stairway or ramp within 25 feet of workers in trenches 4 feet or deeper. [Engineering] 6.7 Competent person inspects the trench daily, after rain and as conditions change, and tests the air before entry in trenches over 4 feet deep where a hazardous atmosphere could exist (29 CFR 1926.651(g), (k)). [Administrative]	**Medium Rare / Fatality**	Site supervisor

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				6.8 Nobody works in a trench where water is collecting unless the competent person has controls in place, such as pumping or special support (29 CFR 1926.651(h)). [Administrative] 6.9 Nobody stands under a loaded bucket or near a truck being loaded (29 CFR 1926.651(e)). [Administrative] 6.10 Never work alone in a trench. Watch for water, cracks and bulging walls, and get out if you see them. [Administrative] 6.11 Wear a hard hat, hi-vis and safety boots. [PPE]		
7	Barricade the trench, with guardrails on any walkway that crosses it (29 CFR 1926.651(l)); provide ladder access; pump out water before anyone goes in (1926.651(h)); and keep engine and pump exhaust away from the trench	Public entering the work area Falling from a ladder Rules: 29 CFR 1926 Subpart X	**High Possible / Serious injury**	7.1 Fence off the site with secure temporary fencing and lock the gates when you leave. [Engineering (guarding)] 7.2 Give pedestrians a safe, marked path around the work, with ramps for strollers and wheelchairs. [Engineering (guarding)] 7.3 Use hoarding, covered walkways or catch fans where work is above public areas. [Engineering] 7.4 Put signs at each entry: site name, contact number and "No unauthorized entry". [Administrative] 7.5 Make the site safe at the end of each day: cover holes, lower plant, remove ladders and lock tools away. [Administrative] 7.6 Use a spotter when moving plant or materials across public paths. [Administrative] 7.7 Use a platform ladder, mobile scaffold or aerial lift for longer jobs instead of a straight ladder. [Substitution] 7.8 Use Type I, IA or IAA ladders in good condition. Tag and remove any damaged ladder. [Engineering] 7.9 Set extension ladders at a 4 to 1 angle on firm, level ground, secured, and reaching 3 feet above the landing. [Engineering] 7.10 Use ladders only for short, light work. Do not carry heavy or awkward loads up a ladder. [Administrative] 7.11 Keep three points of contact and your belt buckle between the stiles. Do not overreach. [Administrative] 7.12 Do not stand on the top three rungs of an extension ladder or the top step of a stepladder. [Administrative] 7.13 Check the ladder before each use: feet, rungs, side rails and locks. [Administrative] 7.14 Wear non-slip safety boots with clean soles. [PPE]	**Medium Unlikely / Serious injury**	Site supervisor
8	Inspect the trench at the start of each shift and after rain	Trench or excavation collapse Rules: 29 CFR 1926 Subpart P	**Critical Possible / Fatality**	8.1 Trench or excavation collapse: see step 6 for the full controls [Administrative]	**Medium Rare / Fatality**	Site supervisor
9	Lay services, then backfill and compact in layers	Trench or excavation collapse Hand-arm and whole-body vibration Loud noise	**Critical Possible / Fatality**	9.1 Trench or excavation collapse: see step 6 for the full controls [Administrative] 9.2 Use low-vibration tools and methods, such as a breaker on an excavator instead of a hand jackhammer. [Substitution]	**Medium Unlikely / Recordable / lost time**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
		Lifting and carrying heavy loads Rules: 29 CFR 1926 Subpart P; 29 CFR 1926.52		9.3 Keep tools sharp and well maintained, and use anti-vibration handles and seats. [Engineering] 9.4 Limit trigger time on high-vibration tools and rotate workers. [Administrative] 9.5 Keep hands warm and dry, and take regular breaks. [Administrative] 9.6 Use quieter tools and methods, such as cut-to-size materials, low-noise machines and battery tools. [Substitution] 9.7 Keep noisy plant away from work areas, and use screens or distance between the noise and people. [Engineering (guarding)] 9.8 Keep tools maintained and use mufflers on compressors and generators. [Engineering] 9.9 Limit time on noisy tools and rotate workers. [Administrative] 9.10 Lifting and carrying heavy loads: see step 3 for the full controls [Administrative]		
10	Reinstate the surface and clean up the road and sidewalk	Poor housekeeping and waste Road traffic Rules: MUTCD Part 6 and 29 CFR 1926 Subpart G	**Critical Possible / Fatality**	10.1 Order materials to size and send packaging back where you can. [Elimination] 10.2 Put dumpsters and waste chutes close to the work. [Engineering] 10.3 Clean as you go, and do a full clean up at the end of each day. [Administrative] 10.4 Keep exits, stairs and walkways clear at all times. [Administrative] 10.5 Stack materials neatly on level ground, away from edges. [Administrative] 10.6 Wear gloves when handling waste. [PPE] 10.7 Road traffic: see step 4 for the full controls [Administrative]	**Medium Rare / Fatality**	Site supervisor

Risk key: risk = likelihood x consequence on a 5 x 5 matrix. Low, Medium, High, Critical. Work must not start while the risk after controls is high or above. Controls are listed in order of the hierarchy of controls: Elimination, Substitution, Engineering (guarding), Engineering, Administrative, PPE.

3. PPE AND PERMITS

Required PPE	Permits and plans
Safety-toe boots (ASTM F2413) High-visibility safety apparel, ANSI/ISEA 107 Class 2 or 3 (Type R near roadways) Hard hat (ANSI Z89.1) Safety glasses (ANSI Z87.1) Hearing protection (earmuffs or plugs) Work gloves	811 locate ticket / excavation permit

4. PLANT AND EQUIPMENT

Plant / equipment	License or training needed	Inspection needed	Rego / ID	Last inspected	Certificate / report
Excavator					
Plate compactor					
Hand tools					
Dump truck	CDL if the truck's GVWR, or the combination's GCWR, is 26,001 lb or more (49 CFR 383.5), or if it carries placarded hazmat	Brakes, lights, horn, steering, tires and other parts checked at the beginning of each shift (29 CFR 1926.601(b)(14))			

5. TRAINING REQUIRED FOR THIS WORK

- Equipment operator training (29 CFR 1926.20(b)(4)); forklift and telehandler operators trained, evaluated and certified, re-evaluated every 3 years (29 CFR 1910.178(l))
- Competent person for excavations, trained in soil classification and protective systems (29 CFR 1926.651(k), 1926.652)
- Ladder safety training by a competent person (29 CFR 1926.1060)

6. CREW TRAINING AND CERTIFICATIONS

Crew listed at sign-on below, with ticket and licence numbers.

7. EMERGENCY ARRANGEMENTS

Emergency number	911	**First aid kit**	In the work vehicle
Fire extinguisher	In the work vehicle	**Alarm and evacuation**	Shout for help and stop work. Make the area safe and go to the assembly point. Call the emergency number and send someone to meet the ambulance.
Reporting incidents	Report a fatality to OSHA within 8 hours, and an in-patient hospitalization, amputation or eye loss within 24 hours.		

8. MONITORING, REVIEW AND LEGAL BASIS

A competent person inspects the job site, materials and equipment before work each day and as conditions change (29 CFR 1926.20(b)(2)). Any time this JHA is revised, the affected crew is re-briefed and signs again.

Legal basis: OSH Act Section 5(a)(1) and 29 CFR 1926, Safety and Health Regulations for Construction (incl. 1926.20 and 1926.21). OSHA requires employers to find and fix hazards and to train workers on them. A JHA breaks the job into steps, lists the hazards in each step and the controls that protect the crew. General contractors often require one before you start.

Keep this JHA on site during the job, and keep it with the training and inspection records for at least 1 year after the job (longer if your state plan or general contractor requires it). OSHA does not set a retention period for JHAs themselves.

9. REVISION HISTORY

Rev	Date	By	What changed
1	Nov 9, 2026		First issue

10. SIGN-OFF

	Name	Signature	Date	
Prepared by				
Supervisor				
General contractor review				Accepted for use: Yes / No

By signing below, each crew member confirms they were trained on the hazards and controls in this JHA before work started, and will follow it. Stop work and tell the supervisor if conditions change.

Name	Role / company	Tickets / licences	Signature	Date

Name	Role / company	Tickets / licences	Signature	Date