Scan the above QR Code to obtain the most current version.

NOTE: FOR ALL EMERGENCIES IMMEDIATELY STOP AND CONTACT 9-1-1

Approved By:	Title	Date Approved
Chris Smith	Director, Safety and Environment	December 23, 2025
Dean Battershill	Manager, Operational Safety	December 23, 2025

Table of Contents

1.0 INTRODUCTION

1.1 PURPOSE

Ground disturbance, or excavations, poses significant hazards to workers, the public, and the environment. This document provides requirements companies and individuals MUST comply with when exposing buried ENMAX facilities. Other sources to comply with include provincial legislation, codes, bylaws, and other utility requirements.

WARNING: Use extreme caution when working near energized cables; consider ALL power cables energized. Contact with cables may cause injury or death; therefore, excavators **MUST** contact their project inspector or access the Temporary Disconnect/Reconnect Form to schedule switching and isolation of energized cables if cable support is needed. Proximity Agreements will be required in Downtown/Network Areas.

NOTE: If energized cables cannot be isolated and grounded, companies must adhere to their own hand exposure and hydrovac safe work practices.

1.2 KEY CONTACTS

The following must be readily available when conducting ground disturbance near ENMAX facilities.

Key Contacts

Contact	Phone Number	Email
Utility Safety Partners	1-800-242-3447	www.utilitysafety.ca
ENMAX Customer Projects		getconnected@enmax.com
ENMAX Field Services (MSO, and anchor and guy removal)		EPCFieldServicesMSOs@enmax.com
ENMAX Hot Digs		HotDigs@enmax.com
ENMAX Line Inspection		lineinspection@enmax.com
ENMAX Transmission	403-514-3679	
ENMAX Trouble Dispatch	403-514-6100	
ENMAX Proximity Agreements		HotDigs@enmax.com

1.3 REFERENCES

All work must be carried out in accordance with the following:

Legislation	Alberta Occupational Health and Safety Code • Part 17 Overhead Power Lines • Part 18 Personal Protective Equipment • Part 32 Excavating and Tunneling Alberta Electrical Utility Code • Section 2- 014 Activities near Overhead Power Lines • Section 2- 018 Moving Equipment or Buildings • Section 2- 020 Excavation Activities in the Vicinity of Underground Power Lines CAN/CSA Standard C22.3 No. 7-10 Underground Systems CAN/ULC-S801-(7.15.6) Standard on Electric Utility Workplace Electrical Safety
ENMAX form	Temporary Disconnect/Reconnect Form
ENMAX Resources	ENMAX Hazardous Electrical Awareness Tutorial NOTE: Available upon request at hotdigs@enmax.com for free, whether on line or in person
Other resources	• Canadian Common Ground Alliance • Utility Safety Partners

1.4 GLOSSARY

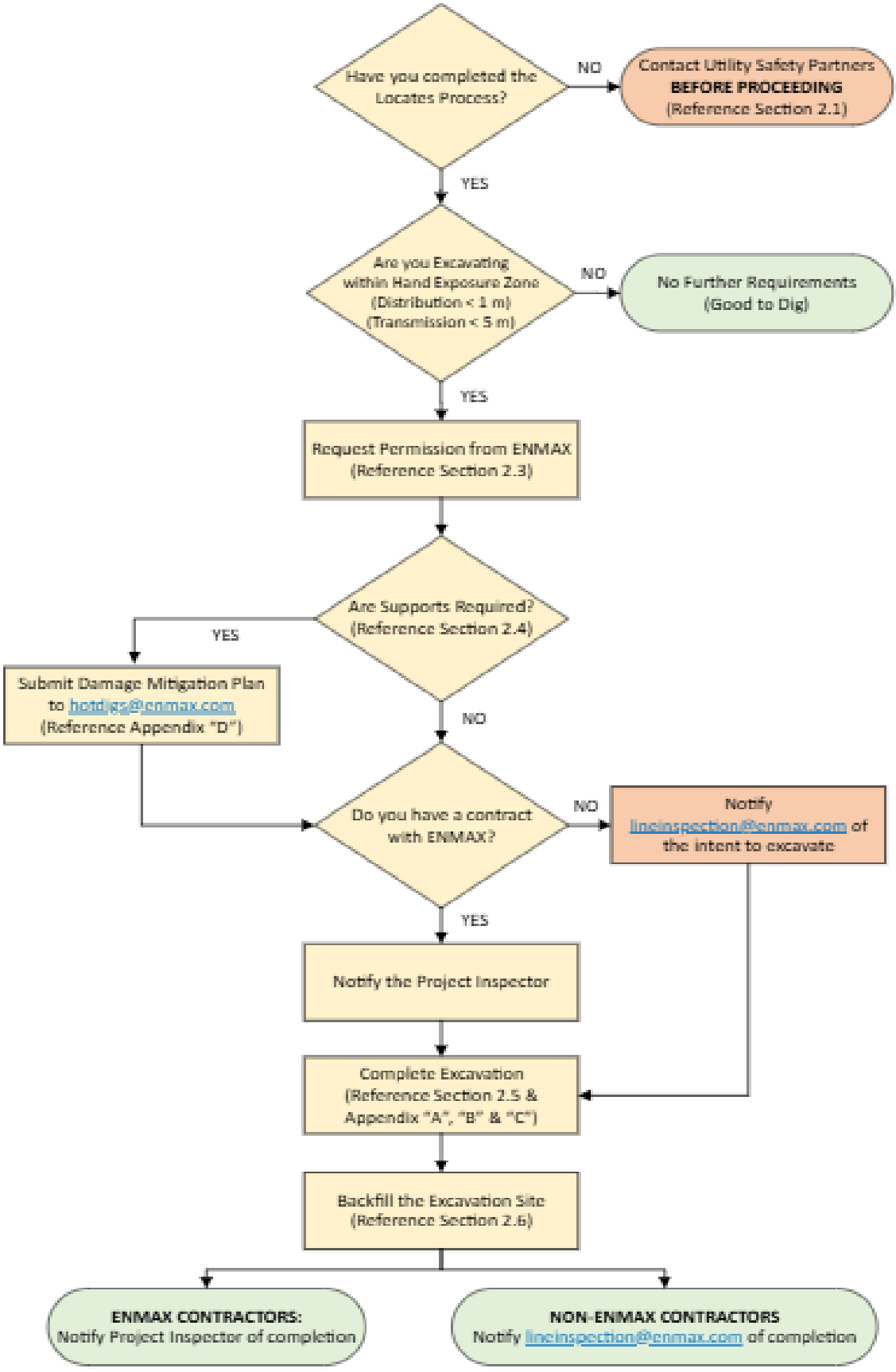
Acronyms

AEUC	Alberta Electrical Utility Code	MSO	Minor Service Order
APEGA	Association of Professional Engineers and Geoscientists of Alberta	PPE	Personal protective equipment
CSA	Canadian Standards Association	QUE	Qualified Utility Employee
HRC	Hazard Risk Category	SWP	Safe Work Practice
LOA	Limits of Approach (Safety Code)		

Terms

Air excavation / hydrovac equipment	A non-destructive process using pressurized water or air and a vacuum truck to remove earth cover (soil, gravel, stones, rubble, mud).
Competent worker	A worker who is adequately qualified, suitably trained, and with sufficient experience to safely perform work without supervision or with only a minimal degree of supervision.
Conflict zone	At risk locations within the work area for any of the following: • Listed on the locate slip by the Locator • Within **1 m (3'-3")** of outside legs of locate marks • Within **2 m (6'-6")** of any ENMAX at-grade facility • Within **1 m** of any provided Manhole or Vault dimensions • Within **5 m** of any ENMAX Underground Transmission 69-kV or 138-kV cables • Within **5 m** of the underside of a Manhole of Vault • As described in **Appendix B - Conflict Zone**
Destructive excavation	An operation using equipment or explosives to move earth, rock, or other material below existing grade.
ENMAX facilities	ENMAX facilities include: • Cables and ducts • Concrete duct banks • Guy wire w/pole anchors • Manholes • Poles • Pull boxes • Switches • Transformers • Transformer vault • Transmission infrastructure • Secondary pedestals and tubs
Excavator	Any contractor, developer, property owner, or other individual performing any work, operation or activity that results in a disturbance of the ground, regardless of depth.
Ground disturbance	Any work, operation, or activity that results in a disturbance of the ground, regardless of depth.
Hot dig	Process of exposing energized cables and facilities using non-destructive methods.
Locate marks	Temporary markings to identify the approximate location of underground infrastructure (buried facility). Examples include pin flags, coloured paint, stake chasers, coloured chalk, chevron.
Non-destructive zone	One (1) metre (3'-3") from either side of the outside leg of the locate marks or flags
Non-destructive excavation	Hand exposure (provided there is a non-conductive handle on shovel), air vacuum or hydrovac equipment.

2.0 GROUND DISTURBANCE PROCESS



2.1 LOCATES

ENMAX underground facilities

Submit an online locate request at Utility Safety Partners **PRIOR** to any ground disturbance near ENMAX facilities. **Note:** Locates will only identify live electric cables.
Call Utility Safety Partners directly at **1-800-242-3447** for the following:

- Request an emergency locate
- Provide damage information

NOTE: Inside property-private owners; includes commercial lots, multi-dwelling, provincial highways/roadways, and utility corridors (streetlighting and fiber) must obtain locates for secondary conductors via private utility locating service provider of choice.

At grade facilities

System ground wires and ground rods are not locatable. They are typically buried below the final grade and encompass a **1 m (3'-3")** area around or adjacent to ENMAX facilities.

CAUTION: Contacting the ground system may cause damage to the adjacent structures or equipment and/or personal injury or death. Only Non-destructive excavation in accordance with this Guideline may be performed when disturbing the ground within **2 m (6'-6")** of equipment.

2.2 NON-DESTRUCTIVE ZONE

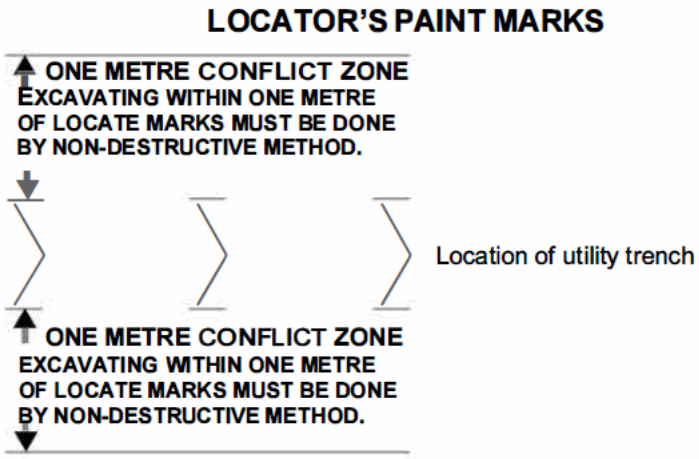
Within the non-destructive zone

MECHANICAL EXCAVATION IS NOT PERMITTED WITHIN NON-DESTRUCTIVE ZONES (refer to Appendix B)

Locate marks (chevron), shown below, depict the location of underground facilities.

The conflict (non-destructive) zone extends **1 m (3'-3")** beyond the outside edges of the locate marks.

Contact information for **OTHER facility owners** can be found on the **back of the locate** slip provided by the locate service provider.



NOTE: Locate marks are valid for **60 days** from the date provided unless otherwise specified.

Outside the Non-Destructive zone

If ground disturbance occurs **OUTSIDE** the non-destructive zone, ENMAX has no restrictions. Excavation may proceed (subject to requirements of provincial legislation, codes, bylaws, and other utilities).

2.3 ENMAX PERMISSION LETTER

Permission Letter	**Obtain** an ENMAX Permission Letter BEFORE performing ground disturbance near ENMAX facilities. The Letter MUST remain on site while exposing ENMAX facilities. **Email** HotDigs@enmax.com to obtain an ENMAX Permission Letter.
Excavator requirements	Excavators MUST comply with the following requirements: • Create and adhere to own SWPs for ground disturbance (reference Appendix A – Safe Work Practices for minimum requirements) • Ensure all personnel involved in any ground disturbance are competent workers • Supervisor of the Excavation has Ground Disturbance Level II training • Ensure SWP and procedures comply with this guideline, applicable legislation, bylaws, standards and codes • Ensure a cell phone or other means of contacting ENMAX Trouble Dispatch is always available while at the worksite • Comply with all requirements contained in the ENMAX Permission Letter

2.4 NOTIFICATIONS FOR EXCAVATION ACTIVITIES

ENMAX Projects – Contract in Place

Contact the ENMAX Project Inspector when performing work for ENMAX and a contract exists between ENMAX and the contractor.

Non-ENMAX projects

Notifications for non-ENMAX projects are outlined below.

If…	Then…
Damage to ENMAX Infrastructure	Call Trouble Dispatch at 403-514-6100 or Project Inspector Reference Section 2.7 Procedure - If Damage Occurs.
Engineering supports are required for pull boxes, transformers, duct banks, poles, cables, and cables in duct ≥ 1.2 m	Submit a Damage Mitigation Plan to hotdigs@enmax.com, that includes engineered drawings (Stamped by a Professional Engineer from **APEGA**) a minimum of 14 days prior to planned excavation. Reference Appendix D
Working within the Downtown Core or Beltline	Work Scope Plans and Diagrams need to be submitted to hotdigs@enmax.com, 6 months prior to construction starting. Proximity/ Crossing Agreement will also be required.
Work is within **2 m (6'-6")** of ENMAX facilities	Complete the steps below a minimum of **5 days prior** to planned excavation. i. Notify lineinspection@enmax.com for intent to excavate. ii. If deemed necessary, complete the ENMAX Temporary Disconnect/Reconnect Form for ground grid protection around transformers, rigging and slinging of cables, or isolation and grounding where practicable. iii. If required, request a **Minor Service Order (MSO)** to schedule ENMAX personnel to complete the request.
Anchor and guy removal	Request a Minor Service Order (MSO) to schedule ENMAX personnel to complete the request. Email the following: • lineinspection@enmax.com • EPCFieldServicesMSOs@enmax.com
Backfill inspection	Follow the process in Section 2.6 Backfill.

2.5 COMPLETE GROUND DISTURBANCE

Perform ground disturbance

Complete ground disturbance in accordance with this Guideline; requirements include:

- Compliance with instructions & restrictions conveyed by the permission letter
- Appendix A – Safe Work Practices
- Appendix B – Conflict Zone
- Appendix C – Excavation Methods
- Appendix D – Damage Mitigation Plan

2.6 BACKFILL

Notification

Notify the following PRIOR to backfilling the site.

If work is for	Then contact the following PRIOR to backfilling…
ENMAX	Project Inspector to arrange for inspection
Other **MON-FRI (06:00 and 16:00)**	Damage Prevention Dept. at LineInspection@enmax.com
After hours	Trouble Dispatch at **403-514-6100** to arrange inspection

The use of unshrinkable fill / fillcrete must be approved by ENMAX civil engineer, in areas where compaction is not possible, as long as it has a concrete compressive strength of 0.6 to 1 MPa maximum.

Backfill shall be in accordance with City of Calgary Road specification and ENMAX compaction guideline.

- Common fill shall be compacted to 98% SPMDD in uniform layers not exceeding 300 mm when compacting with hand tamping equipment and 600 mm when using hydraulic equipment.

NOTE: Restore final grade to ensure the burial depth of ENMAX cables has not changed. Contact your ENMAX Inspector if a rise or fall in the final grade exists **PRIOR** to excavation and backfill to record the new grade. For all others, call 403-514-6100

2.7 PROCEDURE – IF DAMAGE OCCURS

Procedure

If damage occurs complete the following steps:

Step	Action
1.	**STOP WORK!**
2.	**Exit** the work site immediately.
3.	**Call 911** if an injury has occurred.
4.	**Secure** the site; use appropriate signs, barriers, or barricades.
5.	**Contact** ENMAX Trouble Dispatch at 403-514-6100, and the Project Inspector if required.
6.	**Call** 1-800-242-3447 to submit a damage ticket and complete online reporting via Utility Safety - Damage Reporting

WARNING: Do **NOT** re-enter the excavation site until clearance has been given and repairs have been completed by an ENMAX QUE.

NOTE: *Repairs can only be completed by ENMAX. All costs will be incurred by the party causing repair requirement.*

APPENDIX A – SAFE WORK PRACTICES

Barriers and barricades

Excavators are responsible for the following:

- **Prevent** exposed energized equipment and cables from public contact
- **Restrict** access to all open excavations during periods of inactivity (unsupervised); may include a cover, barricade, **1.8 m (6') rigid fence**

Personal protective equipment (PPE)

A minimum of the following PPE is required for all ground disturbance activities within the conflict zone; for hand exposing only.

Reference AB OH&S Part 18.

Protective clothing	Fire resistant outer layer clothing, ankle to cuff **NOTE:** HRC 2 (8 Cal/ cm2) minimum
Safety glasses	CSA Z94.3 Eye and Face Protectors with a minimum IR rating of 1.7
Rubber gloves	Tested - Class 3 high voltage rubber insulated gloves (rated at 30,000 volts) with outside leather protectors.
Head protection	CSA Approved Class E Hard Hat
Hearing protection	CSA approved hearing protection (if required)
Footwear	CSA approved dielectric footwear with the following symbols:

Warning signs

If the job site and equipment are left unsupervised, signs in accordance with the excavator's procedures **MUST** be visible. Minimum information to include:

- Caution or Warning of open excavation
- Name of ground disturber
- Emergency contact number

"**DANGER HIGH VOLTAGE**" sign must be located a minimum of **3 m (9'-10")** from the truck to reduce the risk of injury from step and/or touch potential.

WARNING: Do NOT touch any vehicles while excavating is in progress to avoid touch potential (electrocution may occur). A minimum of **2 m** distance should always be maintained from that equipment.

APPENDIX B – CONFLICT ZONE

Shallow primary and secondary cables

All underground facilities must be fully exposed to sight using non-mechanical / non-destructive methods.

Mechanical excavation is **NOT** permitted within **1 m (3'-3")** of all exposed underground facilities in all directions.

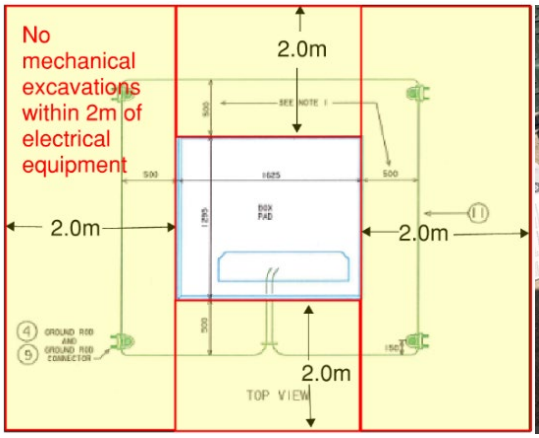
WARNING: Shallow electrical facilities may exist directly underneath the asphalt or concrete sidewalks; therefore, asphalt and concrete cutting and removal directly over a marked facility is **NOT PERMITTED** until the depth of the facility is exposed to sight. Confirm the depth and position under the asphalt **PRIOR** to saw cutting across the facility.

Underground transmission equipment and cables

If an ENMAX disclaimer for "No Clearance" exists on the locate slip, then mechanical excavation work is **NOT** permitted within **5 m (16'-5")** on either side of the locate mark. Contact **ENMAX Transmission Inspector at 403-514-3679.** Reference ENMAX note located on the back of the Utility Safety Partners ticket for direction.

Above Grade facilities

Mechanical excavation is **NOT** permitted within **2 m (6'-6")** of any ENMAX facilities; use non-destructive methods ONLY. Reference ENMAX note located on the back of the Utility Safety Partners slip for direction and notification. Refer to 2.4.



Overhead electrical lines

Ground disturbance may occur near overhead electrical lines. The excavator must ensure safe distances to electrical lines and equipment are adhered to; reference AEUC Table 1 - Safe Limits of Approach Distances from Overhead Power Lines for Persons and Equipment for additional information. This table is also referenced in the following:

- AB OH&S Code - Schedule 4
- AB OH&S Code - Part 17 Overhead Power Lines

NOTE: Personnel and equipment must stay a minimum of **7 m (~23')** from all overhead lines.

Contact one of the following if work is required closer than **7 m (~23')** for LOA:

If…	Then contact the following to arrange an inspection
ENMAX Project	Project Inspector
Mon - Fri (6 AM to 4 PM)	Damage Prevention - LineInspection@enmax.com
After hours/weekends	Trouble Dispatch at **403-514-6100**

Manholes and Vaults

Within **3 m** of any Manhole or Vault entrance

Within **1 m** of supplied Manhole/ Vault Dimensions via the Locates

Within **5 m** of the underside of a Manhole of Vault

APPENDIX C – ACCEPTABLE EXCAVATION METHODS

1. AIR EXCAVATION METHOD

Minimum equipment specifications

Air excavation uses pressurized air that is used to slough away soil and is subsequently collected by a vacuum tool such as an Air Spade.

At a minimum, when using air excavation ensure that:

- Air pressure does **NOT exceed 100 psi**
- Vacuum dig tube end has a neoprene lip or equivalent
- Non-conductive wand, tube, and hose extensions

CAUTION: Any air pressure above the listed values is considered a destructive means of excavating.

Potential risks to facilities

Cable damage may occur if falling rocks or sloughing material contact exposed cables or ducts. If damage is suspected, reference Section 2.7 Procedure - If Damage Occurs.

Minimum safety precautions

Ensure the following minimum safety precautions when exposing cables using air excavation:

- Do **NOT** allow the wand to become stationary
- Make a sweeping motion during use perpendicular to the cables (vs. lengthways); this eliminates stationary contact with the cable at the end of each sweep
- After the buried facility is exposed, maintain a minimum distance of **175 mm (7“)** between the cable and the wand nozzle
- Avoid positioning the vacuum tube directly over exposed facilities

WARNING: The air wand and vacuum pipe may become energized if faulted conditions exist.

2. HAND EXPOSURE METHOD

Minimum equipment specifications

Ensure the following **minimum** requirements when using shovels to hand expose underground cables:

- Shovels have dry, non-conductive handle
- Pointed probes that may pierce the cables are not used

Potential risks to facilities

Cable damage may occur if the shovel hits the cable. If damage is suspected, reference Section 2.7 Procedure - If Damage Occurs.

Minimum safety precautions

Ensure the following minimum safety precautions when exposing cables with a shovel:

- Use PPE as per APPENDIX A
- Expose cables to sight at regular intervals (minimum of 5 m)
- No mechanical means within **1m** (36”) of either side once line is exposed
- Use extreme caution when working within **1.5 m (≈5’)** of any cable splices.
- During business hours notify lineinspection@enmax.com or Project Inspector to arrange for inspection prior to backfilling.
- After hours contact ENMAX Trouble Dispatch at **403-514-6100.**

WARNING: Do not move, walk on, or disturb cable splices while hand exposing cables.

3. HYDROVAC METHOD

Minimum equipment specifications

At a minimum, when using hydrovac, ensure:

- Water pressure does **not exceed 1500 psi**
- Water temperature does **not exceed 37.8 °C (100 °F)**
- Vacuum pipe end has a neoprene lip or equivalent to protect the cable/facilities
- There is a single oscillating tip nozzle
- The wand is always moving

CAUTION: Any pressure or temperature variances above the listed values is considered a destructive means of excavating.

Potential risks to facilities

A combination of the water temperature and pressure may damage cables. Damage may appear as a slice in the cable sheath of an unknown depth, or as though the outer sheath has been torn and pulled outward. If damage is suspected, reference Section 2.7 Procedure - If Damage Occurs.

Minimum Safety Requirements

Ensure the following minimum safety precautions when exposing cables with hydrovac:

- Expose cables to sight with Test Holes
- at a minimum of **5 m (~16')** intervals to verify line orientation and depth consistency, but this may vary depending on **site-specific conditions**.
- Direct the high-pressure nozzles in a circular motion
- Do NOT allow the wand to become stationary
- Make a sweeping motion during use perpendicular to the cables (vs. lengthways); this eliminates stationary contact with the cable at the end of each sweep
- After the buried facility has been exposed, maintain a distance of at least **175 mm (7")** between the cable and the oscillating head of the water wand
- Avoid positioning the vacuum tube directly over exposed facilities
- Avoid leaving excess water in the trench

WARNING: The water, wand, and vacuum pipe may become energized if faulted conditions exist.

4. DESTRUCTIVE EXCAVATION AND DIRECTIONAL CORING

NOTE: NOT ACCEPTABLE TO USE WITHIN CONFLICT ZONE UNTIL AFTER THE FACILITY HAS BEEN EXPOSED.

Equipment

Includes the following equipment after a facility has been exposed to sight:

- Auger
- Directional drills
- Ditch witch
- Dozer, grader
- Hammer (electric, hydraulic)
- Plows
- Pneumatic jack hammers
- Post pounders
- Saw (asphalt, concrete)
- Scrapers
- Skid steers
- Track or rubber tire hoe

Potential risks to facilities

Destructive excavation methods have the potential to damage underground equipment and buried facilities. If damage is suspected, reference Section 2.7 Procedure.

WARNING: If any part of the equipment contacts an energized cable, the equipment operator MUST remain on the machine (if safe to do so) until given a clearance from an ENMAX QUE.

Minimum safety precautions

Ensure the following minimum safety precautions when directional coring or using other destructive excavation methods:

- Observe the payload when pulling back through the excavation
- Maintain a **minimum clearance of 1 meter** above, below, and parallel to any exposed cable or facility.
- If **1 meter of clearance** can be maintained **outside the Locate Chevron**, **test holes are not required**.
- In the **Conflict Zone**, **expose cables** using **test holes** at sufficient intervals to visually confirm and maintain the required separation.
- Test holes are typically spaced **every 5 meters**, but this may vary depending on **site-specific conditions**.
- Spotters MUST always be present when using excavation equipment
- Calibrate all tools and ensure strike indicator is operational
- At no point, exposed or not, can you use mechanical tools on ducts with energized cable...No chipping of ducts/duct banks.

Shallow Cables in Downtown Network

CAUTION: When crossing all facilities expose the facilities to sight **AND** a minimum of **1 m (3'-3")** exposed on the drill side PRIOR to coring or drilling. This allows the operator time to stop the task if the drill head approaches the cable/duct.

APPENDIX D –DAMAGE MITIGATION PLAN

1. Mitigation Plan

Required by contractor for excavation that might affect the integrity of the ENMAX Facilities and their stability, such as:

- Cables
- Ducts and duct banks
- Transformers
- Switch Gear
- Pull Boxes
- Transmission infrastructure
- Secondary pedestals and tubs
- Poles
- Guy wire w/pole anchors

Plans will be prepared and stamped by a Professional Engineer, registered and in good standing with APEGA. It shall include support drawings when ENMAX facilities are required to be supported to prevent destabilization. Above ground assets shall not LEAN (put strain on or damage internal components) or have the ability to slide into the excavation.

The Mitigation Plan will also require that Professional Engineer field verify (inspect) that the work is compliant and has been executed within the parameters of the plan.

2. Cable/duct bank support

SUPPORT SYSTEM REQUIREMENTS FOR ENMAX CABLES is available here. See NOTES below:

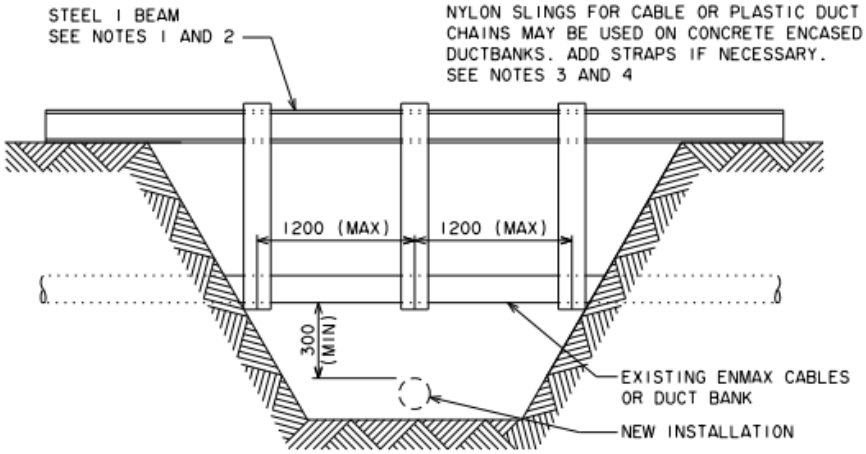


FIGURE 1
CABLE & DUCTBANK SUPPORT

NOTES:

1. The actual size of support beams and slings shall be the responsibility of the contractor. The support system shall be designed to prevent sag, bending or deflection in cables or duct banks.
2. The contractor shall be responsible for ensuring no damage to cables, ducts or duct banks takes place while employing the support system. Any damage shall be reported to the ENMAX inspector immediately. Work shall not commence until submitted drawings have been approved by ENMAX Civil Engineer.
3. The beam shall be in the form of a steel “I” beam (in accordance with CSA 516) set across the excavation running parallel (preferably directly above and aligned) with ENMAX cables or ducts. The beam must adequately support the cable or duct bank. It will extend a minimum of 3 m beyond end of the excavation. Support dunnage or

material for beam is permitted at 1m from excavation edge but cannot be on manholes, transformer vaults or pull boxes.

4. The contractor shall be responsible for supplying all material. Labour and equipment required to implement an adequate support system.
5. The support drawing(s) to be prepared and stamped by an Engineer registered and in good standing with the Association of Professional Engineers and Geoscientists of Alberta (APEGA). That Engineer is also obligated to inspect and verify all work completed by the contractor is compliant.

3. ENMAX Facilities

Transformers, switch gear, manholes, vaults and pull boxes

- Must NOT be undermined and must be supported
- Contact lineinspection@enmax.com to determine next steps.
- Damage Mitigation Plan will be required.

Excavators supply the following to support cables, duct banks, transformers, switches, manholes, vaults and pull boxes in underground facilities subject to ENMAX's approval.

Supports	Requirements
Beams	• Steel "I" beam (excavator to determine the size) **NOTE:** Submit stamped engineering drawings to Hotdigs@enmax.com • Place across the excavation parallel with the undermined facility • Design to prevent sag, bending, and deflection • Sufficient length to reach a minimum of 3 m (9'-10") beyond the edge of the excavation (on both sides) • Supporting structure will not slough into the excavation due to unstable soil conditions
Chains	• Support concrete encased duct banks
Slings	• Direct buried cable or ducts must be supported by nylon slings • Must be properly rated to hold the structure • Be placed starting adjacent to the excavation face

Power poles

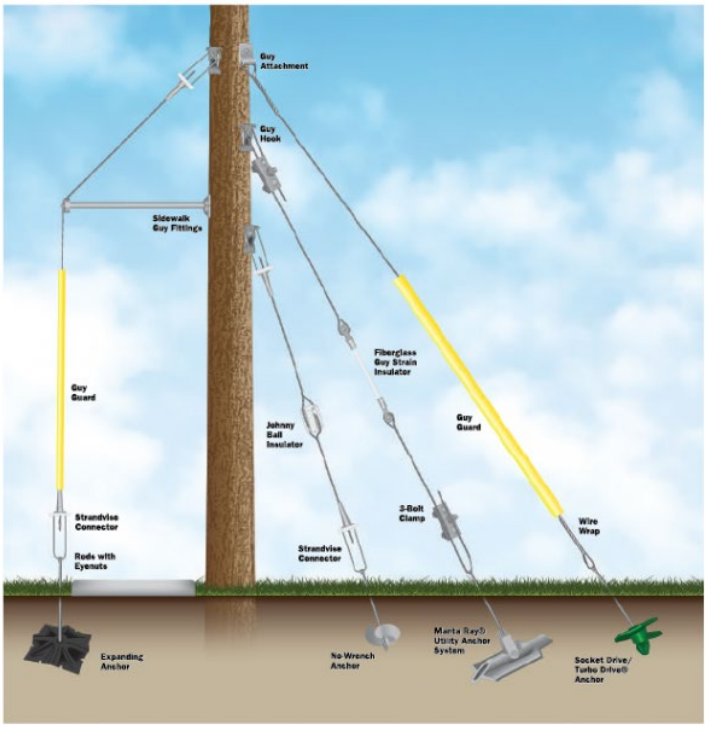
ENMAX requires excavators to stabilize poles and associated equipment, when excavating within **2m** of the pole or the support guy wires, prior to any ground disturbance.

WARNING: The collapse of a power pole could expose individuals to a crush hazard or electrocution.

All excavations and slope cuts must be in accordance with the following AB OH&S Code:

- Part 17 Limits of Approach
- Part 32 Pole Support

Guy Wires and Anchors



- Guys and/or anchors need to be temporarily removed and replaced (contact LineInspection@enmax.com)

Requirements

Excavators must contact the following:

- ENMAX approved pole tie back vendor for availability and cost
- Damage Prevention Dept. at LineInspection@enmax.com during business hours
- For after hours - Trouble Dispatch at **403-514-6100** if questions/concerns arise

NOTE: A QUE must complete all pole tie backs.

Pole tie back vendors

ENMAX approved pole tie back vendors with an ENMAX approved QUE are listed below.

Tie-back Vendor	Phone Number	Email
Iconic Power Systems	403-899-8318 403-542-4670	info@iconicpowersystems.ca; jmackay@iconicpowersystems.com
Primary Engineering	403-881-1721	jwells@primaryeng.com
Robert B. Sommervile	780-228-7479	corey@prolinepower.ca
Valard Construction	403-700-0982 403-710-7099	KRyan@Valard.com; mchappell@valard.com

APPENDIX E - REVISION HISTORY

This document is reviewed a minimum of **every year** or as required.

Rev.	Date	Revision History
1.0	October 11, 2017	New document
2.0	March 30, 2020	Reviewed by stakeholders; updated format
3.0	January 15, 2021	• Added reference to Primary Switch Disconnect Reconnect Form • Minor edits
3.1	June 15, 2021	• Updated Section 2.5 • Replaced Senior Line Inspector with Damage Prevention Dept. • Added QR Code • Updated “Pole tie-back vendors”
4.0	February 1, 2022	• Updated references in Appendix B section “Overhead electrical lines” • Added a link to AEUC
5.0	December 22, 2022	• Stakeholder review November 10th, 2022 • Updated Alberta One-call to Utility Safety Partners • Updated the term Conflict zone to include “…of any ENMAX Underground Transmission 69-kV or 138-kV cables” • Updated the Primary Switch Disconnect Reconnect Form to Temporary Disconnect/Reconnect Form • Updated NOTE in Section 2.1. • Updated CAUTION in Section 2.1. • Added Step i to Section 2.4 to notify lineinspection@enmax.com • Added Step #6 to 2.7 PROCEDURE – IF DAMAGE OCCURS • Added a requirement to safety glasses - minimum IR rating of 1.7 • Updated WARNING in Appendix B Conflict Zones • Removed Altec from the Pole tie back vendors list • Added APPENDIX E - ENMAX CONSTRUCTION STANDARDS
5.1	February 2, 2023	• Updated Section 2.4 (shown highlighted for this revision only) • Updated Section 2.6 replaced “During business hours” with specific days and hours
5.2	June 15, 2023	• Removed Liam Preston & added new contact for Iconic Pole tie back
5.3	Oct 2023	• Added photos in Appendices B, C and D • Added, “to verify line orientation and depth consistency” in minimum Safety precautions. • Added,” of 1.2 m and longer” to Section 2.4 Notification for Excavation Activities • Appendix B- changed Distribution Facilities to Above Grade facilities • Changed Appendix E from Engineered Supports to Engineered Requirements. • In 4. DESTRUCTIVE EXCAVATION AND DIRECTIONAL CORING changed to “Maintain **1 metre** of separation / clearance above, below, and parallel to the cable / facility” as well as changed to “Expose cables to sight at sufficient intervals to maintain separation (typically every 5 m but it may vary based on site specific conditions)” to allow for leeway on expensive driveways

	Dec 18, 2023	• Added “unless otherwise specified” to the end of the NOTE in Section 2.2 • Updated Flowchart for Section 2.8 *(moved to beginning of Sect. 2 – Dec 2024)* • Highlight in Grey- Section 2.4 ENMAX Projects- Contract in Place • Moved plan revision history to updated Appendix E. • Moved information note: re – contacting 911 for emergencies to front cover. • Updated support requirements for ducts and duct banks with notes. • Updated backfill requirements with notes. • Added Anchor and Guy Wire diagram to Appendix D. • Updated procedure in section 2.7 – step #6
6.0	August 19, 2024	• Updated supplier list for Pole Tie Back Vendors

7.0	December 4, 2024	• Updated flowchart errors- Email address and remove “Buffer Zone”
		• Removed “Buffer Zone” and utilized either “Conflict Zone” or “Hand Expose Zone”
		• Updated 1.4 Glossary- Conflict Zone to include: Within **5 m** of the underside of a Manhole of Vault
		• Update Backfill Section
		• Inserted Proximity Agreement
		• Update 2.7 If Damage Occurs
		  ○ Only ENMAX to Repair
		  ○ Cost will be responsibility of Company responsible
		• Update 2.8 Conflict Zone verbiage
		  ○ Remove Buffer Zone with hand Exposure Zone
		  ○ Change “No Clearance to Dig” sticker to disclaimer of “No Clearance”
		• Update Appendix C – Excavation Methods
		  ○ Add “At no point, exposed or not, can you use mechanical tools on ducts with energized cable...No chipping of ducts/duct banks.”

8.0	December 12, 2024	• Moved Disturbance Guideline chart to beginning of section 2. • Updated exposure guidelines for shallow duct banks.
9.0	February 24, 2025	• Removed reference to 2.1 – Asphalt • Updated 2.0 Ground Disturbance Process flow to reference “conflict zone” opposed to “non-destructive zone”.
10.0	November 14, 2025	• Added Pole support Vendor

11.0	December 17, 2025	• Update Glossary (APEGA and Conflict Zone)
		• Update Flow Chart
		• Update 2.1 Locates (Live electric cables)
		• Update 2.2 Non-Destructive Zone (Outside Edge of Locate Mark)
		• Update 2.5 Complete Ground Disturbance (ADD Appendix D – Damage Mitigation Plan)
		• Update Appendix C – Acceptable Excavation Methods
		  ○ 4. Destructive Excavation Methods- Added NOTE
		  ○ Added additional criteria to Minimal Safety Precautions
		• Changed Appendix D to Damage Mitigation Plan
		  ○ Added Mitigation Plan and reordered section
		  ○ Added to the Note Section
		  ○ Deleted photo and pole diagram

12.0	May 7, 2026	• Change Primary Engineering contact. • Update current version date.