



EXCAVATING SAFELY NEAR PIPELINES.

What you need to know

Please keep this brochure for future reference in case of an emergency.
To request additional copies, please contact us. See inside cover for contact details.

To ensure everyone's safety, it is important that you share this information with any residents, workers, contractors or other individuals who may conduct work on the worksite or property.

Why are you receiving this brochure?

This brochure contains important safety information for those who live and work near pipelines. This includes information about:

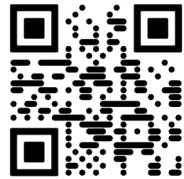
- How to recognize a pipeline in the area
- What kind of activities are permitted on a pipeline right-of-way
- Your obligations when working on or near a right-of-way
- One-Call requirements
- What is a crossing agreement and why you may need one
- Consequences of unsafe digging
- Recognizing and responding to a pipeline leak
- How TC Energy ensures pipeline safety
- Contact information

To understand the role you play in contributing to pipeline safety, please review this brochure. To request more information or additional copies of this brochure, please contact us at public_awareness@tcenergy.com or call 1-855-458-6715.

In the case of a pipeline emergency or to report suspicious activity along the right-of-way, please call 911 and local law enforcement, and then call TC Energy's emergency number at 1-888-982-7222. The emergency telephone number can also be found on the nearest pipeline marker, or on the back of this brochure.

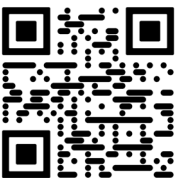
TC Energy respects your privacy. To find out more about TC Energy's commitment to privacy and protecting your personal information, please see www.TCEnergy.com/privacy.

The majority of TC Energy's pipelines are regulated by the Canada Energy Regulator in Canada, with some pipelines regulated provincially. This brochure is intended to provide safety information in compliance with regulatory requirements. For more information, visit www.cer-rec.gc.ca or www.tcenergy.com.



You can view an interactive map of federally regulated pipelines by scanning the QR code below with your smart phone.

This map is not comprehensive of all underground utilities and is not a substitute for submitting a One Call to properly locate pipelines.



Veillez scanner ce code QR avec votre téléphone intelligent afin d'accéder à la brochure en français.

Purpose of pipelines and pipeline facilities

Pipelines are the safest and most efficient method to transport the energy that we need and use every day. Our pipelines and pipeline facilities are built using industry best practices, which include using the highest quality materials during construction and implementing a rigorous pipeline maintenance program. This includes the facilities required to safely operate the pipeline, like tank terminals and meter, compressor, and pump stations.

Meter stations measure the volume of natural gas transported through the pipeline, both at entry points (receipt station) and delivery points (sales station).

Compressor stations are necessary to maintain controlled and appropriate pressure levels along the length of a gas pipeline to ensure continuous and safe gas flow.

Pump stations are necessary to maintain controlled and appropriate pressure and flow along the length of a liquids pipeline to ensure continuous and safe operation.

Tank terminal is an industry term for a liquids storage facility. They consist of a number of interconnected storage tanks where oil is measured and collected until it is ready to be transported through the pipeline.

Prevent an incident, *before it happens*



Click or call before you dig—it's free

The best safety practices stop accidents before they happen. Just like you won't drill into a wall without knowing where the studs are, it makes sense to find out where the underground utilities are located before digging. Unfortunately, digging without a locate is the leading cause of pipeline incidents.

Before conducting any excavation, either by hand or with machinery, contact your local One-Call Center at least 3 business days (5 in Ontario) in advance by visiting www.clickbeforeyoudig.com - Canada's source for provincial One-Call rules, regulations and contact information.

The One-Call Center will notify the facility owners in your area, who will send representatives to mark these facilities with flags, paint or other marks, helping you to avoid damaging them. Even with a locate, any excavation on a TC Energy right-of-way requires a TC Energy representative be present.

A notification to the One-Call Center is required by law in some areas, and not making a One-Call could result in fines or penalties. The service is free and could prevent accidents, injuries or deaths.

Learn more about the One-Call requirements in your province by visiting www.clickbeforeyoudig.com.

Know what utility markings mean

When you request a locate, coloured flags and/or paint are used to mark the location and type of underground utility.

Proposed excavation

Temporary survey markings

Electric power lines, cables, conduit and lighting cables

Gas, oil, steam, petroleum or gaseous materials

Communication, alarm or signal lines, cables or conduit

Potable water

Reclaimed water, irrigation and slurry lines

Sewers and drain lines



Recognizing a pipeline in your area

The general location of pipelines can be determined by two characteristics: a pipeline right-of-way (ROW) and pipeline markers.

Right-of-way

- A ROW can usually be recognized as a cleared strip of land in a linear or fairly straight line, cleared of structures and trees.
- The ROW contains the pipeline and is part of the prescribed area that extends 30 metres on either side of the pipeline where certain activities require written consent from the pipeline operator to ensure the continued safety and integrity of the pipeline.
- The ROW must be kept clear of fences, buildings, trees or any other type of structure unless you have permission from the pipeline operator. The impact of a fence post, weight of a shed or the roots of a tree can cause either immediate or long-term damage to the pipeline.
- Structures or development could also impede access to the area for any required maintenance or emergency situations, resulting in safety risks and possible costly impacts to structures on the ROW.
- **The existence of the prescribed area does not necessarily mean development of the land cannot occur within the prescribed area, so contact TC Energy early to discuss your plans.**



Pipeline markers

- Found within line-of-sight on a ROW and at locations where the pipeline crosses streets, highways, waterways and railways.
- Markers only show the approximate location of the pipeline, and the depth of the line may vary. **You CANNOT use pipeline markers as a determination of where or where not to dig.**
- Pipeline markers display the pipeline operator, emergency number and the product transported in the pipeline.
- It is against the law to willfully deface, damage, remove or destroy any pipeline sign.
- Only a TC Energy representative can determine the location and depth of the pipeline. Pipelines may not follow a straight course between marker signs.



Warning sign



Line marker



Vent marker



Aerial marker

Do's and Don'ts on a right-of-way

Do:

- ✓ Respect the landowner – ensure you have permission to use the land
- ✓ Keep to the edges of the ROW – above-ground infrastructure can be hidden by snow or vegetation
- ✓ Report deep ruts, missing or damaged signage or concerns about depth of cover to the pipeline operator
- ✓ Contact emergency officials and the pipeline operator if you see any unusual or suspicious activity, vandalism or other dangerous actions on a pipeline right-of-way

Don't:

- ✗ Drive on, across or over the right-of-way without approval
- ✗ Light fires or have open flame
- ✗ Camp or park on the right-of-way
- ✗ Dig, trench or uproot trees and brush without prior approval
- ✗ Conduct any type of ground disturbance, whether adding or removing soil, materials or ground cover without written consent

RECOGNIZING A PIPELINE LEAK

Although a pipeline leak is rare, it is important to know how to recognize the signs. Use your senses of sight, smell and hearing to detect a potential pipeline leak.

YOU MIGHT



SEE

- Dead or dying vegetation on/near the right-of-way in an area that is usually green.
 - Bubbles in a body of water.
 - Dirt being blown into the air.
 - Ground frosting in summer.
 - Possible fire or flames above the ground, if the leak has been ignited.
- Amber/black liquid which can display as a black patch or pool on the ground.
 - A rainbow sheen or black liquid on top of water.
 - Dead or dying vegetation on/near the right-of-way in an area that is usually green.
 - Stained or melted snow/ice over the pipeline area.



SMELL

- An odour similar to fuel, oil or propane.
 - No odour. Natural gas transmission lines are not usually odourized, though smaller gas distribution lines often have an additive to give it a sulphur or “rotten egg” smell.
- A slight smell similar to “rotten egg”, gasoline, tar or “skunk-like” odour.



HEAR

- A roaring, hissing or whistling noise.
- A roaring, hissing or whistling noise.

Possible hazards of a pipeline leak or rupture:

GAS PIPELINE

- Dizziness or suffocation if a leak occurs in a confined space or high concentration
- Ignition/fire if a spark or other ignition source is present
- Potential explosion if the natural gas is mixed with air
- Projectiles from site of leak or rupture propelled by the force of escaping gas

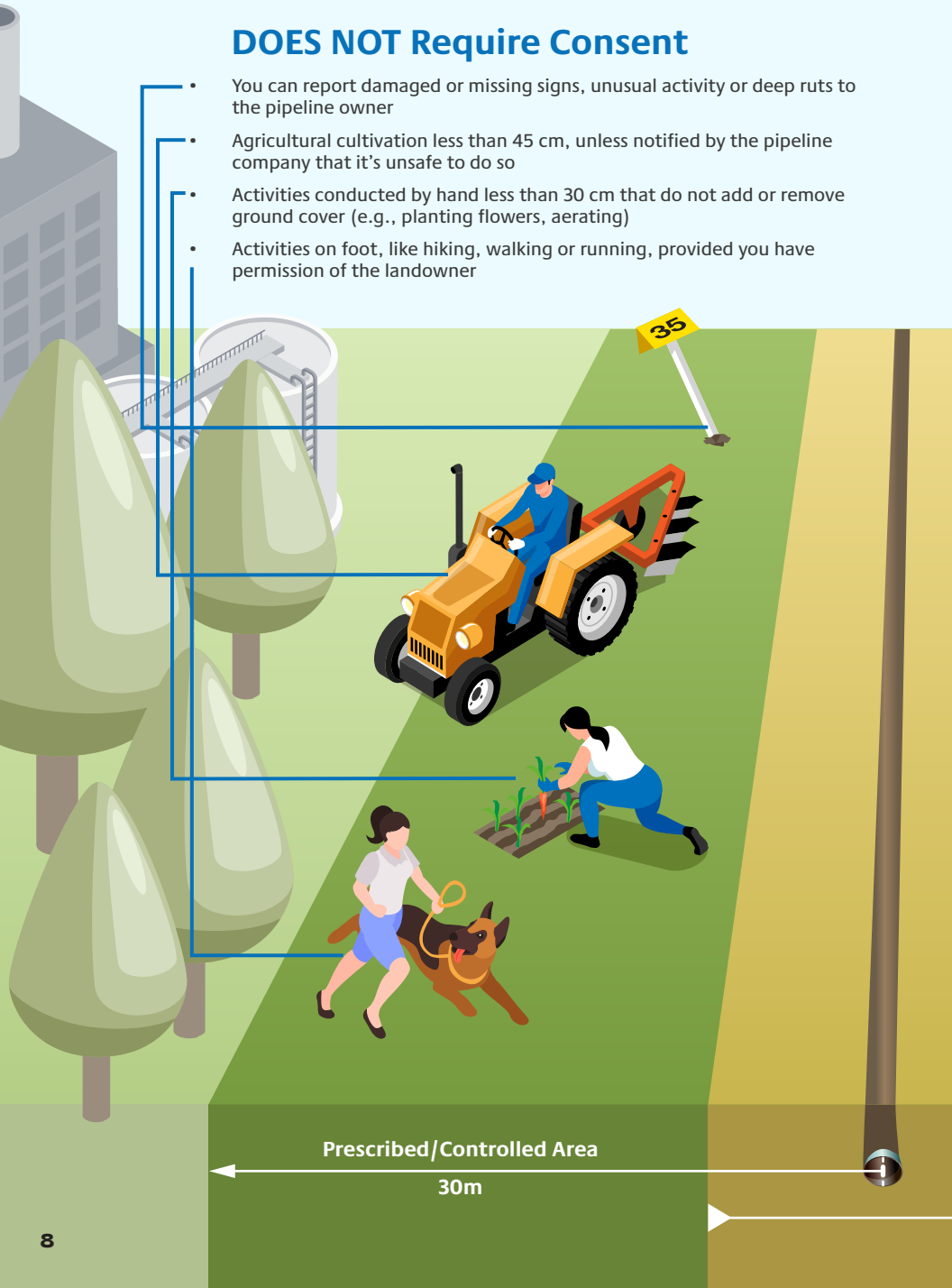
LIQUIDS PIPELINE

- Crude oil may be flammable and explosive under certain conditions.
- Dizziness or suffocation can occur if the vapours displace oxygen in an enclosed area or occur in conditions that allow high concentration.

Requesting written consent from the pipeline operator

DOES NOT Require Consent

- You can report damaged or missing signs, unusual activity or deep ruts to the pipeline owner
- Agricultural cultivation less than 45 cm, unless notified by the pipeline company that it's unsafe to do so
- Activities conducted by hand less than 30 cm that do not add or remove ground cover (e.g., planting flowers, aerating)
- Activities on foot, like hiking, walking or running, provided you have permission of the landowner



Prescribed/Controlled Area

30m

Before you begin any digging or changes to ground cover, request a locate through your local One Call centre at **ClickBeforeYouDig.com**. If a pipeline is nearby, they will notify you and the pipeline operator. To protect pipelines and to meet regulations, certain activities require written consent from the pipeline operator. For more information, email **crossings@tcenergy.com**, or apply for consent at **writtenconsent.tcenergy.com**.

DOES Require Consent

- Adding or removing earth cover on the right-of-way
- Agricultural cultivation 45 cm or deeper in the prescribed area
- Driving vehicles or mobile equipment on the right-of-way (does not include agricultural equipment related to crop growing and which does not conduct deep tilling practices)
- Installing infrastructure on, under, over or along a the prescribed area (e.g. fence, concrete pad, wood pile, fire pit, shed)
- Digging, adding or removing ground cover in the prescribed area (e.g. digging post holes, deck footings, trenching, clearing brush or stumps, ground leveling)



Responding to a leak or pipeline strike

A “strike” is any contact with a pipeline and can include mechanical equipment like a backhoe, or hand tools such as a shovel.

Any contact with a pipeline can affect the pipeline’s integrity or the protective coating, so it’s important to follow these steps so that a TC Energy representative can inspect the pipeline and its coating for any damage.



If you strike a pipeline or witness any of the typical signs of a leak, or any other unusual sights, sounds or smells near a pipeline location, it is important that you follow these steps:

1. Stop all excavation and construction. Shut off all machinery if safe to do so and move away from the area on foot – warn others to do the same.
2. Do not attempt to repair the pipe or operate any valves.
3. Call '911' as soon as you are in a safe location. Describe the situation and inform the operator of any injuries, leaking product or fire.
4. Call TC Energy’s emergency number at **1-888-982-7222** and explain the incident. This number is available on all pipeline marker signs.
5. Do not continue your project until authorized by a TC Energy representative.

If you cause or witness even minor damage to a pipeline or its coating, please notify TC Energy immediately. A gouge, scrape, dent or crease requires an inspection and possible repairs for the long-term safety of all parties and the surrounding area.

Do not cover a pipeline that has been disturbed, as it will make it more difficult to find the damaged area.

CONSEQUENCES OF UNSAFE DIGGING AND OTHER UNAUTHORIZED ACTIVITY

Unauthorized excavations or other unsafe activities can have potential consequences for those individuals conducting the work, and negatively impact the greater community. Even crossing a pipeline right-of-way can require written consent from TC Energy.



Risk of serious injuries and death.



Interrupted services such as electricity, gas and water.



Fines and repair costs to fix the underground utility line(s).

Other than to plan any digging or work near a pipeline, these other situations could also warrant contacting the pipeline operator:

- In the event of a pipeline emergency
- If an emergency situation requires you to access or cross a pipeline right-of-way through means other than a road, driveway or similar approved crossing
- If you witness unauthorized activity on a pipeline right-of-way. Examples include any of the following on a right-of-way:
 - digging or excavating
 - operating heavy equipment
 - driving vehicles or equipment
 - an accident or overturned vehicle in the ditch near a pipeline marker
 - dirt piles or construction over top
 - fires or flooding

The pipeline operator should be notified of any of these activities. You can find contact information and written consent application information on the back of this brochure.

You can also use the One-Call contact information on the back of this brochure for emergency utility location requests.

What if I need to use the right-of-way?

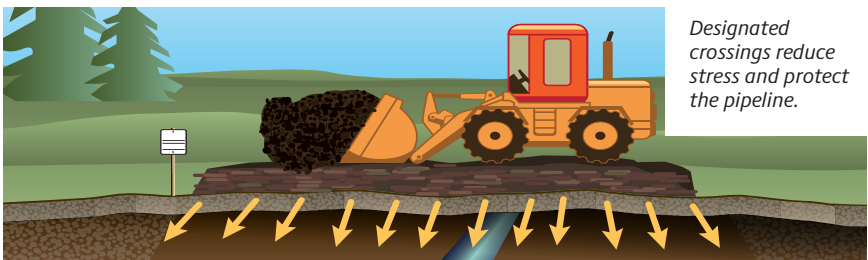
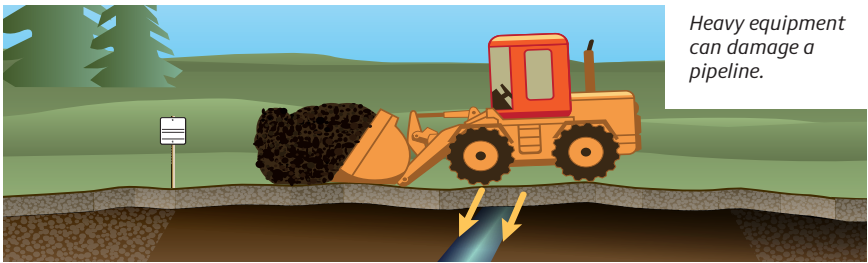
Depending on your plans or activity, it can still be possible for you to work on or use the ROW. Some activities are permitted under normal farming practices, while crossings and encroachments require approval and oversight from TC Energy.

A crossing or encroachment is a temporary or permanent structure across, on, along or under a facility or pipeline right-of-way. A crossing can also mean equipment or machinery crossing over the pipeline right-of-way or facility site. Both need an agreement so that the pipeline operator can understand the scope of work, the risk and what measures need to be taken to mitigate those risks.

You can learn more about permitted activities and crossing agreements at www.tcenergy.com/safedigging. Consent for minor activities can often be obtained directly from a regional TC Energy representative through a locate request.

We're here to help. If you think your activity might require a crossing agreement with TC Energy, you can use our online application form at writtenconsent.tcenergy.com or contact us by phone at **1-877-872-5177** or email at crossings@tcenergy.com. To better serve you and speed up your request, please provide the following information:

- Proposed activity – what are you planning to do?
- Location of proposed work (GPS coordinates are preferred)
- Make and model of any equipment that will cross/encroach the pipeline facilities
- Proposed activity date
- Axle load (weight)
- Your name and phone number
- Email address



How do I know if I need a crossing agreement?

While this isn't a comprehensive list, it can provide guidance on some of the most common activities undertaken on or near a ROW.

Requires written consent:

- Constructing or installing a facility across, on, along or under a TC Energy pipeline right-of-way.
- Conducting ground disturbance (excavation or digging) on or within the prescribed area (30 metres or 100 feet from the centreline of the pipeline).
- Driving a vehicle, mobile equipment or machinery across a TC Energy pipeline right-of-way outside the travelled portion of a highway or public road.
- Using any explosives within 300 metres or 1,000 feet of TC Energy's pipeline right-of-way.

Does not require consent:

- Activities covered under existing land agreements between you and TC Energy.
- Activities related to the growing of crops or the raising of animals, provided the activity does not involve deep tilling practices, installation of permanent structures or an increase or decrease in the cover over the pipeline.

Examples of activities that REQUIRE consent:

- Reducing or adding soil cover
- Fencing/landscaping
- Ground leveling
- Clearing/brushing/grubbing
- Trenching
- Earth moving
- Ditching/drainage clean out
- Drain tile installation
- Buried utility and facility installations
- Augering
- Tree planting/stump removal
- Stockpiling/storage/parking
- Asphalt/driveway work
- Any activity that adds or removes soil cover on the right-of-way

Examples of activities that DO NOT require consent*:

- Plowing
- Fertilizing
- Disking
- Cultivating
- Seeding
- Planting
- Baling
- Harvesting

*Activities listed must be less than 45cm (18") deep, or else they require consent

What does TC Energy do to ensure pipeline safety?

TC Energy conducts a rigorous pipeline maintenance program to ensure the integrity and safety of our systems. This includes but is not limited to:

- 24/7 monitoring of our facilities
- In-line inspections of pipelines that can identify the smallest of issues or defects for repair
- Regular patrols of the right-of-way
- Multiple shut-down valves to isolate and limit potential releases
- Cathodic protection to prevent corrosion
- Hydrostatic testing
- Investigative digs
- Ground surveys

In addition to this, TC Energy invests millions every year in research and development to improve and enhance the safety of our pipelines, from smart drone patrolling, fiber optic monitoring, greenhouse gas reduction and environmental sustainability. TC Energy's employees are trained to meet or exceed all regulated training in Canada.

In the interests of public safety, some segments along TC Energy's pipelines have been designated as High Consequence Areas (HCAs) where extra precautions are taken, known as Integrity Management Programs (IMPs). For information regarding these measures, contact TC Energy at public_awareness@tcenergy.com.

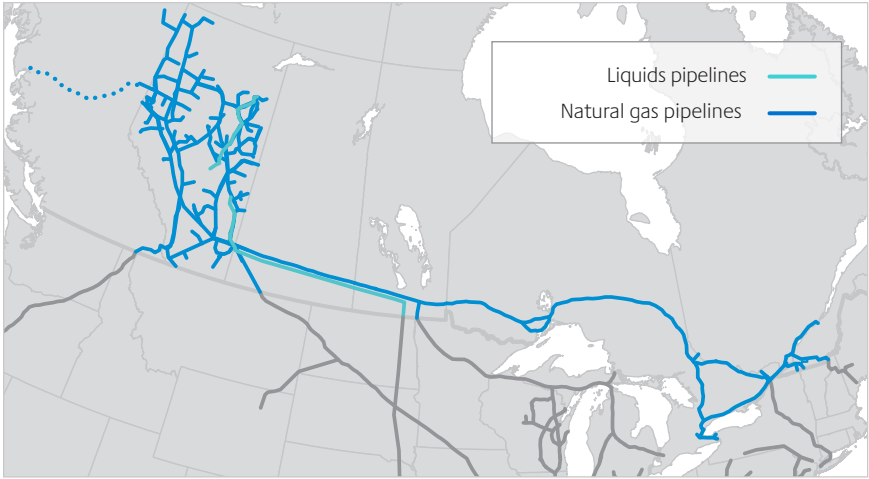
TC Energy's response to a pipeline incident

A pipeline incident could involve an uncontrolled or unplanned release of natural gas or oil from the pipeline system. TC Energy's state-of-the-art leak detection systems, elevated safety features and specially trained staff ensure that leaks will be quickly identified and addressed.

In the unlikely event an incident should occur, TC Energy's top priorities are to ensure the safety of the public and emergency responders, and to minimize effects on the environment and surrounding properties. TC Energy will immediately respond by:

- Shutting down the affected pipeline if necessary
- Isolating the impacted section of the pipeline through either automatic valve shutoff or manual valve operation
- Dispatching emergency personnel to the location of the incident

Trained crews that are dispatched to the site will coordinate a response with local emergency services. TC Energy will not restart the pipeline until the issue has been addressed and it is safe to do so, with the approval of industry regulators. TC Energy's policies and practices for emergency response planning go above and beyond the standard regulatory requirements for emergency response.



Important contact information

Emergency 1-888-982-7222

One Call Centres and Emergency locate or crossing requests

British Columbia	1-800-474-6886
Alberta	1-800-242-3447
Saskatchewan	1-866-828-4888
Manitoba	1-800-940-3447
Ontario	1-800-400-2255
Quebec	1-800-663-9228
Access One Call Centres Online	www.clickbeforeyoudig.com

General inquiries

Phone	1-855-458-6715
Email	public_awareness@tcenergy.com

Applying for written consent

Online	writtenconsent.tcenergy.com
Phone	1-877-872-5177

Crossings inquiries

Email	crossings@tcenergy.com
Quebec Email	quebec_crossings@tcenergy.com

**IMPORTANT SAFETY
INFORMATION
RELATED TO
NEARBY PIPELINE
INFRASTRUCTURE**

PLEASE REVIEW FOR
YOUR SAFETY.

Indicia

Address

