

HUB EXPRESS SYSTEM Open Access Lateral

Connection Guide for Property Owners | April 2024



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Joint Trench Administrator
Engineering and Projects Division

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01

Making Connection to HEX

From time to time, TWDX Infrastructure receives inquiries from property owners and utilities requesting to construct a new connection (known as "lateral") into the Hub Express System (HEX). The purpose of this guide is to provide clear guidance and procedures for applicants applying to request new laterals from the HEX system, while promoting joint building and occupancy practices to encourage equal access across our utilities and minimize future disruptions in public ways.

UNDERSTANDING HEX JOINT BUILDING PRACTICES

The HEX system is a national leader in "Dig Once" practices for telecom utilities. Indeed, every construction undertaken by HEX must provide accommodations to enable other and future providers to more easily and cheaply install their fiber optic networks. This means that when the HEX system undertakes new construction, local governments and property owners can be sure that other providers will be able to participate in the joint trench opportunities that are available at the time, as well as in the future by building spare ducts and offering them to other providers at one of the lowest conduit attachment rates on the market.

There are two types of laterals in our conduit system: (i) **HEX-owned connections** that are built by the HEX system, and (ii) **non-HEX-owned connections** that are built by tenant members for their own uses.

DID YOU KNOW?

TOWARDEX became a utility company when its data center lease was terminated by a colocation provider who began competing for the same customers. Having lost its home and ability to use the "Meet-Me Room" for connecting with other internet networks, TOWARDEX found itself almost on the verge of going out of business.

Vowing to *never again* permit another company to abuse their market position to harm its business, TOWARDEX began devising the concept of an open interconnection system that will guarantee freedom of enterprise and unfettered access to internet networks. This concept was adopted in 2021 as the [Project Charter of the Hub Express System \(PCHEX\)](#).

At a cost of \$4 million to construct 3,000 feet for the opening section of the HEX system, no expense was spared in building a state-of-the-art underground network of cable vaults, large duct banks, and access points. These facilities are commercially available for use by telecom providers under the common carrier protections of the law, offering a secure and dependable alternative to *unregulated* Meet-Me Rooms with complete freedom from cross-connect fees and interference by colocation providers.



TYPES OF LATERALS IN THE HUB EXPRESS SYSTEM

HEX-Owned Connections

Also known as Open Access Lateral, System Interconnection, or System Cross Connection, these facilities are owned by the HEX system and are administered in accordance with the "Dig Once" and open access provisions of the PCHEX.

Network providers can request occupancy in these HEX-owned facilities in the same manner as obtaining occupancy in HEX's mainline transmission sections. However, some facilities may be subject to additional site-specific requirements—for example, you may be denied access if you don't have permission to work in the subtending utility or property owner's facility where the HEX system connects.

Where facilities are available, providers can apply for occupancy at anytime through a conduit license and may also participate during the construction through either a HEX-administered joint trench or a municipally sponsored common trench where TOWARDEX is the lead company.

Non-HEX-Owned Connections

Member utilities of the HEX system may apply for a permit and approval from TWDX Infrastructure to connect their own subsidiary line into the HEX system. We will consider each application on a non-discriminatory basis, based on generally applicable engineering practices and operational requirements of our system (including site access, capacity, safety, building codes, design and operating standards, etc.) at each site of the proposed connection.

Once approved, the completed subsidiary line is owned by the member utility that built it and is not subject to HEX administrative practices for joint building and occupancies. Other companies seeking to obtain access will need to seek permission from the owner of the subsidiary line, and neither TWDX Infrastructure nor TOWARDEX can provide any assistance in obtaining occupancy on any non-HEX-owned connections.





02

Open Access Lateral

An Open Access Lateral into the Hub Express System enhances your property's connectivity experience with independence and scale, enabling access to a neutral ecosystem of multiple telecom providers, content, cloud, and internet exchanges.

TURN YOUR LAST MILE INTO THE MOST CRITICAL ASSET

Open Access Laterals are owned by the HEX system and are administered under the authority of the PCHEX, providing accommodations to enable other and future network providers to more easily and affordably install fiber optic service on your property.

Telecom providers have two options to use the Open Access Lateral: they can apply for a license to pull their fiber optic cable into the property at published attachment rates once the development is complete, or they can choose to engage in the project during construction by joint trench participation. Property owners and local government agencies gain from this "Dig Once" approach to minimize recurring projects because it reduces the need for additional disturbances and excavations along the way.

GETTING STARTED WITH OPEN ACCESS LATERAL

Property owner's checklist for requesting an Open Access Lateral:

1. Check if your building or construction site is near from the HEX system. You can check As-Builts at [TWDX Infrastructure's web site](#) to verify whether your project is close enough to connect. Major obstacles, such as railroads, controlled-access highways, or restrictive lands, should be avoided.
2. Before contacting TWDX Infrastructure, start securing the appropriate permits required by your city or county building and planning department. Please note that most projects require permits.
3. All business customers are required to receive telecommunications service (such as Dedicated Internet Access, Private Line, Dark Fiber, etc.) from a service provider who is an existing member utility of the HEX system.

If none of the participating member providers of HEX have any customers to service at the property, TWDX Infrastructure will typically not approve an application for Open Access Lateral.



IMPLEMENTATION PROCESS

Applying for an Open Access Lateral

1. You can request your application by sending us an email at: utility-licensing@towardex.com

If you're an existing customer, you can also use the Member Utility Portal to submit your request. You will be assigned a TWDX Infrastructure service representative who becomes the point of contact for you or your contractor.

2. Once your application has been submitted, TWDX Infrastructure will create a schedule and engineering plan to meet your service connection needs.

You or your contractor will be asked to supply details of the project, including scope, timeline, blueprints, anticipated fiber optic cable count and conduit sizing requirements for the amount of telecom carrier connectivity you plan to install. Once these requirements have been identified and verified, project design phase will commence.

Review Design and Approve Project

1. During the project design phase, TWDX Infrastructure will identify your costs, and prepare a high-level overview of the proposed Open Access Lateral installation to your property.

At this time, if you choose to approve the project and proceed with the work, you will need to establish a Force Account and pay a design deposit, which will be credited toward the final amount you pay for the work.

2. Once we receive your design deposit, TWDX Infrastructure will begin preparing construction drawings and may order critical materials having longer lead times. A **Common Trench Letter** will be published and transmitted to all participating member utilities of the HEX system for joint trench participation opportunities.
3. TWDX Infrastructure will notify local authorities to begin securing permits for any portion of the Open Access Lateral involving the public right-of-way (including petition for a Grant of Location, etc.) and for the work required to support your utility hookup into the HEX transmission line.
4. Your TWDX Infrastructure representative will send you the project design and contract for the full amount of the project work. If you would like TWDX Infrastructure to proceed, return the signed contract along with your payment to expedite processing and minimize delays.

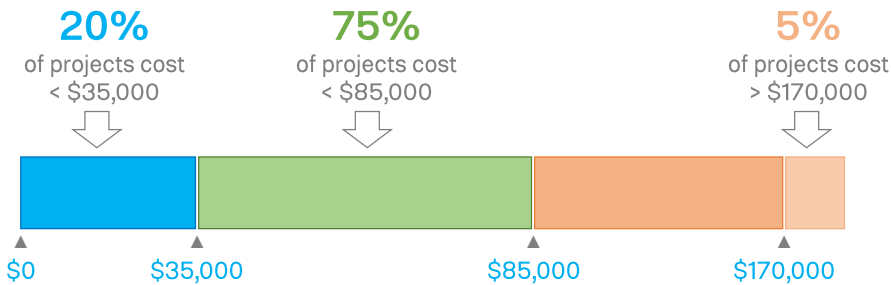




03

Typical Cost Estimates

The cost range discussed here is intended as a rough estimate you can use for budgetary purposes in installing an Open Access Lateral. This is not a bill and does not create any service agreement or relationship between you and TWDX Infrastructure or TOWARDEX, and furthermore, the cost range provided here should not be relied upon to be accurate, and actual costs may vary based upon unique circumstances encountered in each installation.



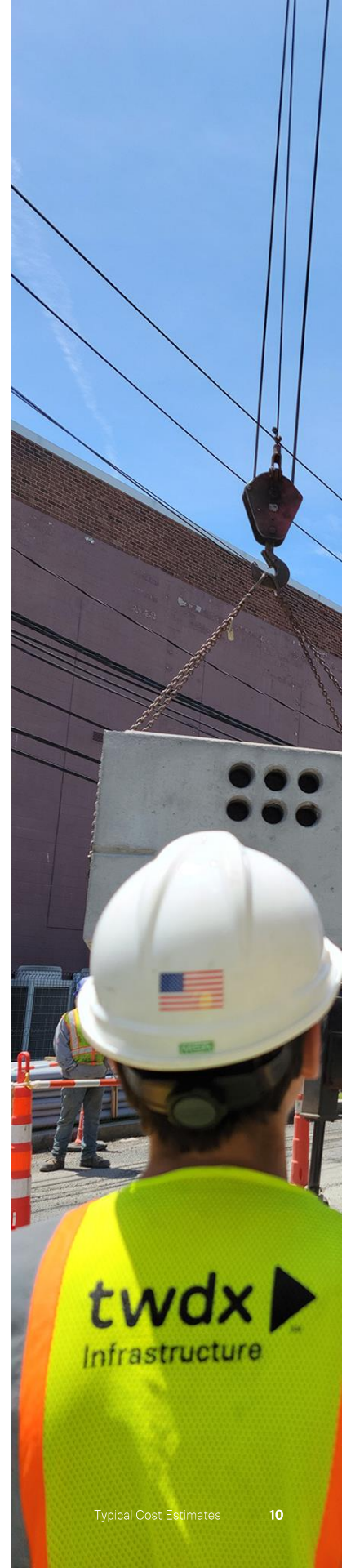
TYPICAL COST RANGE

75% cost less than \$85,000

- No Right of Way or Easement Required
- No Upgrades to Street Infrastructure Required
- Property owner will install its own building points of entry (POEs), zero manholes and trench across its own property

5% cost more than \$170,000

- Right of Way or Easement Required
- Upgrades to Street Infrastructure Required
- Trenching must be completed by TWDX Infrastructure
- TWDX Infrastructure must install building POEs and zero manholes
- Difficult site conditions or long trench required
- Contaminated soil or hazardous materials encountered



Factors that may affect costs:

- Distance to the nearest HEX transmission line
- Difficult conditions, such as ledge, rocks or foreign materials along the route
- Remediation for contaminated soil or any environmental clean-ups required
- Trench protection if the proposed duct bank for your Open Access Lateral is of a large size or anytime an excavation must be shored up for crew and structural safety requirements.
- Traffic control costs: police details, road signage, traffic control devices, etc.
- Restoration costs: sidewalks, street re-pavement, etc.
- Labor costs

The cost range does not include TWDX Infrastructure costs for unique circumstances:

- Extension of HEX mainline or installation of any additional transmission infrastructure. This may be required if current transmission lines are far from your property, or if existing facilities are inadequate to meet your required fiber optic capacity and tenant carrier sizing for the Open Access Lateral.
- Special Facilities charges are applied for any non-standard equipment or installation.
- Service to Open Access Lateral lines and manholes inaccessible by vehicles or there are special restrictions placed upon TWDX Infrastructure's crews to enter and maintain its facilities.





DANGER
Falling Object
Caution: Do Not
Touch

twdx

CAUTION
FIBER OPTIC
CABLES

CAUTION
FIBER OPTIC
CABLES

JTP
100'
57+49
EOT
C17A6
207
MMH
58+49

04

Frequently Asked Questions

Question:

Who owns the Open Access Lateral? Do telecom carriers own it?

The Open Access Lateral belongs to the HEX system and is owned by TOWARDEX. Typically for larger installations, TOWARDEX will require execution of an Easement Agreement to site the facilities on your property. For smaller installations, a simpler Access Agreement is typically used.

Member telecom carriers of HEX do not typically have ownership in the Open Access Lateral, unless specific arrangements have been made during the joint trench participation. Most member telecoms generally prefer to use a conduit license or an Indefeasible Right-of-Use Agreement to place their fiber optic cables.

Question:

I would like ownership in the lateral connection to control access into my building's inside fiber infrastructure. How do I go about accomplishing this?

To accomplish this, you'll need to (at your sole cost and expense) construct your own private utility lines within your property, including building entrance facilities (POEs), risers, lateral conduits and zero manholes as required. You can then request TWDX Infrastructure to deliver the Open Access Lateral to your zero manhole near the edge of your property that you own and control.

The Open Access Lateral will remain the property of TOWARDEX and be owned by the Hub Express System, but only up to the point where it stops at your zero manhole. After that, you will be entirely in charge of supplying the facilities and conduits necessary to access the remaining portion of your property.



Question:

I want you to give me a conduit or subduct in the Open Access Lateral to the nearest HEX system manhole out in the street, and grant me access to use that manhole. Can this be accomplished?

Only public utilities are permitted in the HEX system, and this also applies to any Open Access Lateral belonging to HEX. In order for the property owner to request attachment onto the HEX system, including any Open Access Lateral, it will need to submit that request as a public utility company, such as a competitive local exchange carrier (CLEC) or telephone company. Requests by non-public utility entities will be denied.

Question:

I am a property owner who is also a CLEC, so I satisfy the above requirement to participate in the HEX system. How can I get a piece of conduit or subduct in the Open Access Lateral for my own use?

Getting a conduit license from TWDX Infrastructure is the simplest and easiest method.

Alternatively, at the project design phase, you could decide to participate in a joint trench. The joint trench typically provides access to long-term IRU and **Joint Build Agreement** avenues of involvement, providing you with more options to obtain rights to use a conduit. Your TWDX Infrastructure representative will provide you with a Common Trench Letter that details the different avenues for participation provided by the joint trench project.



Question:

I am dealing with a telecom provider who is in the HEX system, but is not interested in becoming a tenant at my property. Can I utilize the Open Access Lateral to meet this provider through the HEX system?

As long as your telecom provider is willing to provide you hand-off out in the street, yes. If you are a CLEC, you can request a conduit license to run your own fiber optic cable into the HEX system to meet up with your provider.

Alternatively, you can hire any of the tenant carriers who are deployed in the Open Access Lateral at your property to provide you with a short-run dark fiber from your building to your provider's splice case out in the street. TOWARDEX, for example, offers low-cost Near-Net Cross Connects for this type of application.

Question:

Can the Fiber Optic Exchange program be extended into my building, through the Open Access Lateral?

No. TWDX Infrastructure does not install Fiber Optic Exchange member trunks into private properties. However, if the zero manhole at your property is owned by you and Open Access Lateral terminates directly into your zero manhole, then you can request that member trunk cable be dropped there. You will then need to extend it from your zero manhole to get into your building.

Please note that if the zero manhole at your property is not owned by you and belongs to the HEX system, then the Fiber Optic Exchange trunk cannot be delivered there. TWDX Infrastructure does not permit any splicing or slack coiling inside of any zero manholes owned by the HEX system.



MORE CONNECTED. MORE VALUE.
INFRASTRUCTURE MEETS
INTERCONNECTION

towardex.com/go/hex

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