

Date Submitted September 29, 2023
Date Effective October 13, 2023
Date Revised October 14, 2024
Resolution _____

Contract No. **C17A6**
Project: JTP-HEX System Cross Connection
Document: 2301923-NE Doc 3 Rev. 1

NOTICE OF INTENTION TO INSTALL UNDERGROUND FACILITIES (NA-2)

This Notice of Intent notifies and advises other agencies that a trench construction work is proposed in the below locus, and provides an invitation to other potential occupants to share the benefits and costs of joint trench construction.

Locus:	121 to 200 Inner Belt Road, Somerville, MA 02143
Authorities Having Jurisdiction:	City of Somerville
Trench and Street Opening Permit:	ES23-000619
Lead Company (Owner):	TOWARDEX Technologies International, Inc. By its Authorized Agent: TWDX Infrastructure, LLC
Common Trench:	Telecommunications Duct Bank
Eligible Participants:	Telecommunications providers in the form of Local Exchange Carriers (LECs) licensed to operate in the Commonwealth of Massachusetts as provided under M.G.L. Chapter 159.
Proposed Installation Extents:	<i>See Exhibit I</i> for Joint Trench Drawing <i>See Exhibit II</i> for Joint Trench Configuration
Enabling Powers: (<i>See Exhibit III</i>)	Fiber Optic Communications Easement (City of Somerville) First Amendment to Fiber Optic Communications Easement Massachusetts General Laws Chapter 166 § 21 Project Charter of the Hub Express System (PCHEX) § 2

If you qualify under Eligible Participants as described above, then **PLEASE TAKE NOTICE** that public notice is hereby given to you that you are invited to partake in the above Hub Express System (“HEX”) joint trench construction.

1. HEX Joint Trench Options

Two paths of engagement are available for participating in a HEX joint trench installation:

(a) 20-Year Indefeasible Right of Use (IRU) in Joint Network Facilities (“JNF”) Duct Bank:

JNF is a set of shadow conduits which is constructed and owned by the Lead Company to provide future capacities in the same manner and routing as Lead Company’s primary transmission lines. JNF conduit is typically provided as a 1.25” HDPE duct. JNF offers a “turn-key” solution, where the participant does not need to be responsible for construction of facilities, and will be provided access to the finished pathway and HEX underground vaults and manholes in accordance to the terms of the IRU agreement.

(b) Participant Installation in the Common Trench:

The participant may elect to install its own conduit into the HEX Common Trench. All participant installations herein shall conform to **Joint Trench Configuration and Occupancy Guide** detailing standard trench dimensions, locations, minimum cover and clearance requirements, and trench occupancy matrix (duct package detail) and conform to the agreed joint trench drawing.



2. Deadlines for Eligible Participants to Register Interest

To apply for participation in this joint trench construction, you must register your interest by the following deadlines:

Request to use 1.25" JNF duct:	August 25, 2025
Request to install your own conduit into the HEX Common Trench:	April 15, 2025

To register your interest before the deadline, send email to utility-licensing@towardex.com or write to:

TWDX Infrastructure, LLC
Attn: Joint Trench Administrator
1 Marina Park Drive, Suite 1474
Boston, Massachusetts 02210

3. Joint Build Agreement

For participants requesting to use JNF ducts, an **Indefeasible Right of Use Agreement** must be agreed upon and executed by both the Lead Company and the Participant.

For participants requesting to add their own conduit into the HEX Common Trench, a **Joint Build Agreement** must be agreed upon and executed by the Lead Company and all participants participating in the consortium build. TWDX Infrastructure will work with each participant to review, modify and approve the participant's proposed installation into the Common Trench, in accordance to the Lead Company's established construction standards and Joint Trench Configuration and Occupancy Guide. The Joint Build Agreement will outline each participant's pro-rata share of construction costs and tie-up costs (including restoration costs) and responsibilities.

PLEASE TAKE FURTHER NOTICE, that joint trench participants are not entitled, nor permitted to attach, access or use any of HEX manholes, handholes and underground vaults (the "HEX cable vaults"). Each participant adding its own conduit is required to undertake additional construction to install and connect its own manhole that is separate from the Common Trench and Lead Company's facilities. **PROVIDED HOWEVER**, each participant may request a **Manhole Transit License** from the Lead Company to request attachment upon, and obtain right of access and use of HEX cable vaults. TWDX Infrastructure or the Lead Company may deny a participant's request for Manhole Transit License, on a non-discriminatory basis where there is insufficient capacity and for reasons of safety, reliability and generally applicable engineering purposes.

Dated: October 14, 2024
Boston, Massachusetts

TWDX INFRASTRUCTURE, LLC

/s/ Gavin R. Schoch

1 Marina Park Drive 14th Floor
Boston, Massachusetts 02210
Telephone: (617) 863-8325
Facsimile: (432) 225-3784
Website: <https://infrastructure.twdx.net>
Email: gavin.schoch@towardex.com

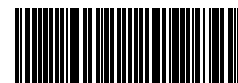
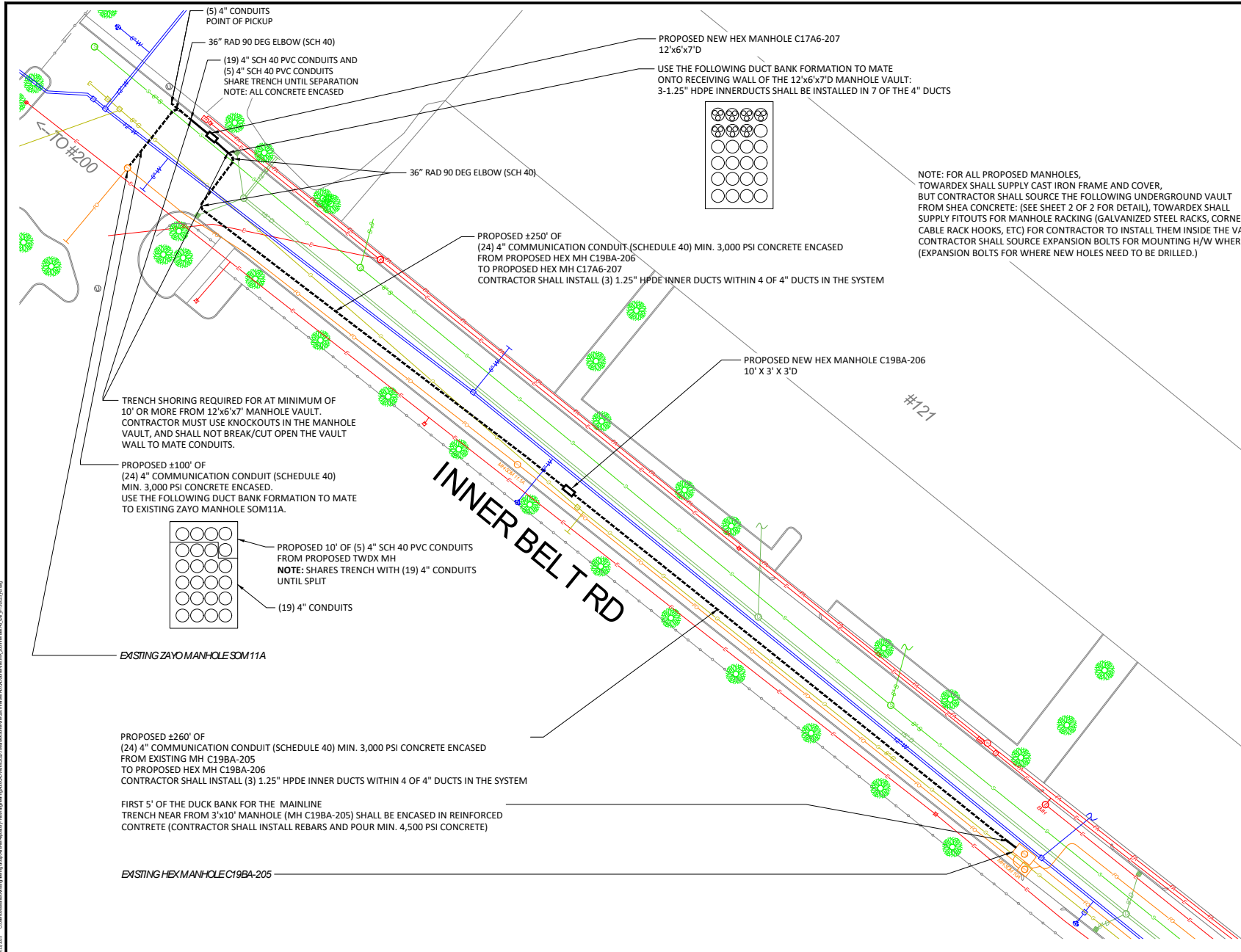


EXHIBIT I
JOINT TRENCH DRAWING





NOTE: FOR ALL PROPOSED MANHOLES, TOWARDEX SHALL SUPPLY CAST IRON FRAME AND COVER, BUT CONTRACTOR SHALL SOURCE THE FOLLOWING UNDERGROUND VAULT FROM SHEA CONCRETE: (SEE SHEET 2 OF 2 FOR DETAIL), TOWARDEX SHALL SUPPLY FITOUTS FOR MANHOLE RACKING (GALVANIZED STEEL RACKS, CORNER MOUNTS, CABLE RACK HOOKS, ETC) FOR CONTRACTOR TO INSTALL THEM INSIDE THE VAULT, CONTRACTOR SHALL SOURCE EXPANSION BOLTS FOR MOUNTING H/W WHERE REQUIRED (EXPANSION BOLTS FOR WHERE NEW HOLES NEED TO BE DRILLED.)

1" = 20 FEET

0 10 20 40 60

LEGEND

✕	ELECTRIC POLE	⊠	STREET LIGHT
⊗	JOINT UTILITY POLE	⊠	ELECTRIC MH
⊠	LAMP POST	⊠	TEL MH
⊠	TRAFFIC LIGHT	⊠	CATV MH
⊠	SEWER MH	⊠	COMM PEDESTAL
⊠	DRAIN MH	⊠	IRRIGATION VALVE
⊠	TELEPHONE MH	⊠	WATER METER
⊠	ELECTRIC MH	⊠	GAS METER
⊠	CATV MH	⊠	SEWER GATE
⊠	WATER MH	⊠	GAS GATE
⊠	PAG	⊠	WATER GATE
⊠	BUSH/SHRUB	⊠	HYDRANT
⊠	RIGHT OF WAY	⊠	MAIL BOX
⊠	COLLEVER	⊠	STONE BOUND
⊠	GUARD RAIL	⊠	PARKING METER(S)
⊠	FENCE	⊠	STEEL POST
⊠	ELECTRIC VAULT	⊠	SIGN POLE
⊠	TRAFFIC MH	⊠	US CABLE MARKER
⊠	PROPOSED MH	⊠	TRANSFORMER
⊠	PROPOSED CONDUIT	⊠	CATCH BASIN

NOTE:
EXISTING UTILITIES SHOWN ARE APPROXIMATE AND NOT WARRANTED TO BE CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PUBLIC AND PRIVATE UTILITIES PRIOR TO BEGINNING ANY EXCAVATION.

CALL BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
72 HOURS NOTICE REQUIRED.
ENTER 1-888-DIG-SAFE

PREPARED BY:
AXIS
ENGINEERING GROUP

PREPARED FOR:
twdx
Infrastructure

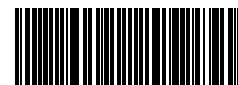
REV #	DESCRIPTION	DATE
1	CHG PROP PATH	1/11/23
2	CHG PROP PATH	5/10/23
3	CHG CONDUIT CONFIGURATION	9/12/23

TITLE:
PROPOSED CONDUIT INSTALLATION
200 INNER BELT RD
SOMERVILLE, MA

SURVEYED BY: AXIS ENGINEERING	PRINT NO: 1 OF 3
DRAWN BY: SL	SCALE: 1" = 20'
DATE: 12/09/2022	AS-BUILT

EXHIBIT II

JOINT TRENCH CONFIGURATION



HUB EXPRESS SYSTEM TRANSMISSION COMMON TRENCH DETAIL

C17A6: 58+49 to 59+99

C19BA: 59+99 to 63+50

N.T.S.

FINISH GRADE

TRENCH SHORING EXTENTS (TYP) →

COMPACTED SOIL COVER →

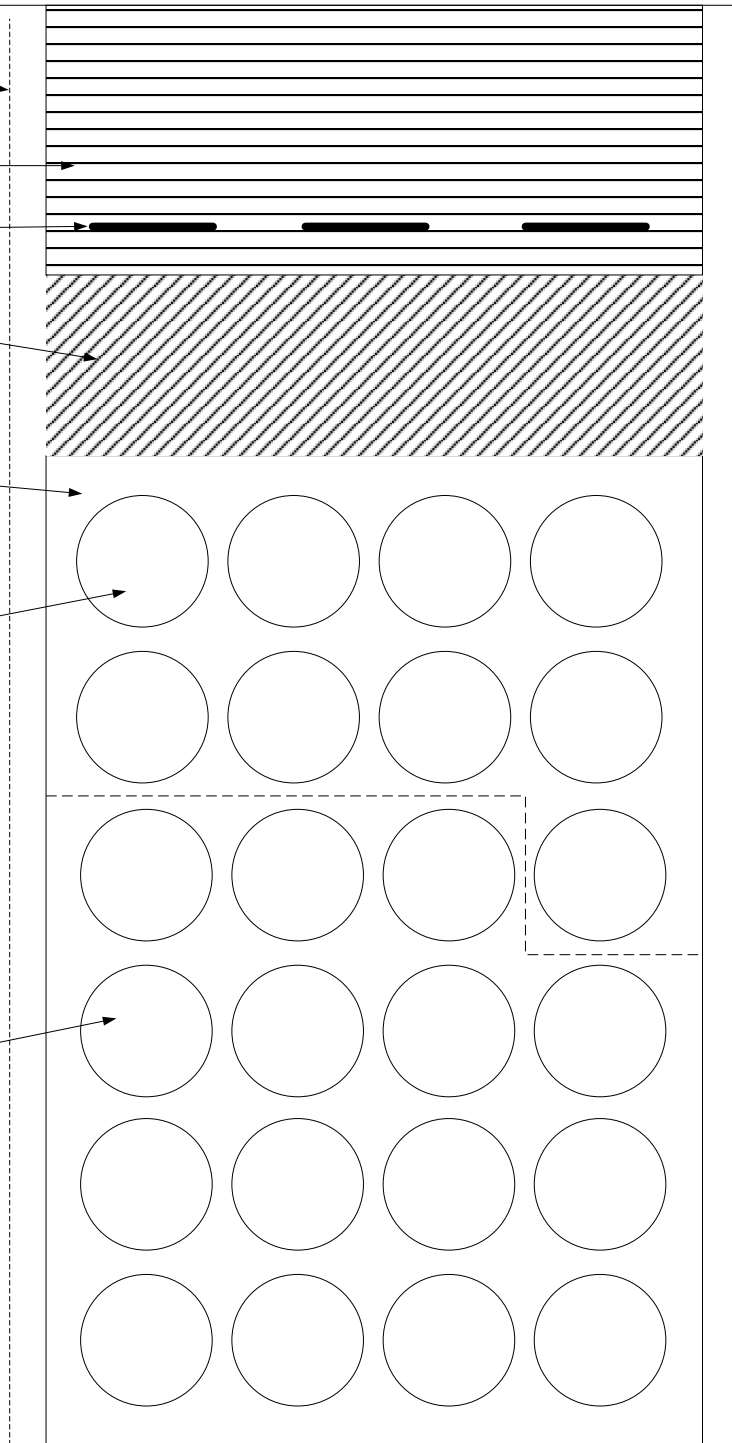
WARNING TAPES →

JOINT TRENCH INSTALLATIONS AS
REQUIRED (TYP) →

MIN. 3,000 PSI CONCRETE
ENCASEMENT (TYP) →

JNF (9)—4" PVC DUCTS
1 1/4" SUB-DUCTS:
(2)—1 1/4" CITY OF SOMERVILLE
(2)—1 1/4" TWDX IP
(23)—1 1/4" JOINT NETWORK FACILITIES

HEX MAINLINE (15)—4" PVC DUCTS →



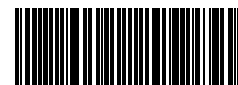
Joint Trench Configurations and Occupancy Guide

General Specifications for HEX Common Trench

1. The preferred trench location is a Grant of Location as provided from MGL c.166 § 22 or easement for utilities.
2. All depths and resulting cover requirements are measured from final grade, as in road surface level.
3. Cover, clearances, and separation shall be as great as practicable under the circumstances, but must not be less than the minimum cover, clearance and separation requirements as set forth in 49 CFR § 192.321, 49 CFR § 192.325 and 49 CFR § 192.327. All facilities shall be fixed in place to ensure no motion occurs prior to compaction.
4. Trench dimensions and configurations shown herein are typical. Sizes and configurations may vary depending upon occupancy and/or field conditions. Trench size and configuration must at all times be constructed in a manner which maintains clearances and cover requirements as set forth in Note 2 above.
5. Non-public utilities are not allowed in any Common Trench, e.g. building fire alarm lines, irrigation control, private property or non-LEC telecommunications, outdoor electrical cable, etc.
6. Minimum separation from the trench wall and occupant facilities shall be provided to achieve proper compaction.
7. Notify TWDX Infrastructure at 617-863-8325 at least 30 days prior to construction to arrange a pre-construction meeting date, and at least 48 hours prior to trenching to ensure a TWDX inspector will be on site, if required.
8. State Law: Notify Dig Safe® at 811 or 888-344-7233 prior to any excavation (MGL c.82 § 40A).
9. Maintain proper minimum separation from HEX facilities and “wet” utilities, in accordance with requirements set forth by the appropriate authority for crossing of and installations near “wet” utilities, and at a minimum of 3’ of horizontal separation and a minimum of 1’ of undisturbed earth or the installation of suitable barrier between the facilities as approved by the authority.
10. All HEX transmission line duct packages shall be encased in min. 3,000 psi concrete.
11. Backfill shall be completed in 8-inch lifts and must be supervised by a TWDX inspector.
12. All completed conduits in the Common Trench shall be proved and roped prior to final delivery. Detectable mule tapes shall be installed.
13. Pavement shall be a minimum of 4” of MassDOT approved base/binder and 2” of MassDOT approved finisher topcoat.
14. 4” conduit must be PTS 77 (C plastic) or Schedule 40, with minimum sweep of 3-feet, 90 degree radius, maximum of no more than two 90 degree bends between manholes.
15. All handholes and manholes placed that will be owned and maintained by the property owner must be approved for use by TWDX Infrastructure. The developer may purchase from any manufacturer that meets HEX specifications for manholes, and must include the appropriate racking, sump and pulling irons. Manholes owned by the property owner must have a generic emblem (e.g. ‘TELEPHONE’, ‘COMMUNICATIONS’ or ‘FIBER OPTIC’) on the lid. The use of TOWARDEX’s name or logo is not permitted on a property owner’s manholes or handholes.
16. HEX underground vaults should be sited away from the road traffic and travel lanes where practical and site conditions permit.



EXHIBIT III
ENABLING POWERS



Board Resolution

At the meeting of the Directors of the **TOWARDEX Technologies International, Inc.** duly called and held at 1 Marina Park Drive, Boston, Massachusetts on this 24th day of September 2021 at which a quorum was present and acting, it was VOTED that:

WHEREAS, the Corporation is embarking upon the development of a certain high-speed route for fiber optic communications to interconnect key internet infrastructure facilities in the Boston metropolitan region, and this development shall be named the Hub Express System;

WHEREAS, the proposed Project Charter of the Hub Express System has been recommended for adoption by the President and Chief Executive Officer and the Treasurer of the Corporation;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors finds this proposed Project Charter of the Hub Express System (the "Charter") adequate and sufficient to perform the Corporation's proposed undertaking hereunder;

FURTHER RESOLVED, that the Board of Directors finds that the proposed Charter does not impact the Corporation's ongoing development of its environmental, social and governance goals;

FURTHER RESOLVED, that the Board of Directors hereby authorizes appointment of the Corporation's wholly-owned subsidiary TWDX Infrastructure, LLC, as the Joint Trench Administrator of the Hub Express System pursuant to Section 4 of its Charter;

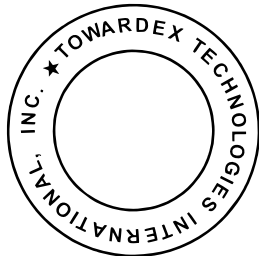
FURTHER RESOLVED, that the Board of Directors hereby appoints Gavin Rowe Schoch as the General Manager of the Joint Trench Administrator;

FURTHER RESOLVED, that this Board of Directors establishes Network Siting Policy Board of the Hub Express System pursuant to Section 5 of its Charter and hereby delegates, authorizes, and empowers the Network Siting Policy Board to oversee the management of capital projects for the Hub Express System, **PROVIDED HOWEVER**, that this Board of Directors shall have the final authority in approval, oversight and revocation of all budgets and capital expenditure activities of this Corporation, including those for the Hub Express System, and that capital budget for each activity under the Charter must be approved by this Board of Directors.

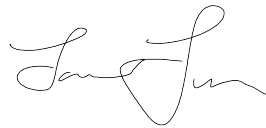
FINALLY RESOLVED, that the Board of Directors hereby ratifies, confirms and approves the Charter and authorizes the establishment of the Hub Express System and its operations in accordance with the Charter.

Board Resolution 564 establishing the Hub Express System.

Attest:



As adopted on this 24th day of September in the year of our Lord, two thousand twenty-one by the Board of Directors of the Corporation,



(Clerk) (Secretary) of the Corporation

PROJECT CHARTER

of

The Hub Express System

As citizens and an enterprise lawfully conducting business in the Commonwealth, we hereby reaffirm our commitment to closing the digital divide and ensuring digital equity for all. Information wants to be free, and in recognizing the power of telecommunications in bringing people and communities together for the advancement of our society, we are determined to promote more accessible, open and free internet as private citizens and industry professionals working in the expansion of internet infrastructure in our Commonwealth. We therefore agree to the following principles in an undertaking contemplated under this Project Charter of the Hub Express System:

Section 1

The network interconnection and internet peering ecosystem in Boston have been plagued by the lack of competition in their supporting infrastructures, resulting in prolonged delays in new investments and adding inefficiencies to the routing of internet traffic. We therefor agree to embark upon a lawful undertaking to operate a new multi-cable, multi-conduit fiber optic transmission system dedicated to promoting interconnection freedom, accessibility, network neutrality, digital equality, freedom of enterprise and freedom of expression for all.

Section 2

In promoting accessible infrastructure for broadband investments in our Commonwealth, we will lead the industry in implementing Dig Once practices, enabling future providers to more easily and cheaply install their networks in underground facilities operated by this Charter's undertaking. We will lawfully comply and work with requirements of each authority having jurisdiction to coordinate construction with other companies to minimize future disruptions upon public ways. If an authority does not require us to coordinate construction with other companies, we will then strive to exercise the latest best practices in joint building as adopted by the utility industry. We will notify and work with other interested providers to ensure that they have the opportunity to use the infrastructure we construct in this undertaking.

Section 3

The Telecommunications Act of 1996 enacted by the 104th United States Congress is a pivotal law in granting opportunity to everyday citizens like ourselves to form enterprise to build communications infrastructure. The Act underscores that even in industries facing high barriers to entry such as telecommunications, free enterprise remains the bedrock of a prosperous American society, enabling economic growth, job creation, and the betterment of people's lives. We affirm our commitment to and support of the intent of this Act and will ensure compliance by this Charter's undertaking in all applicable laws of the United States of America and our Commonwealth.

Section 4

To ensure that fair access to facilities operated by this undertaking is provided on a competitively neutral and nondiscriminatory basis, we will form a subsidiary of our corporation who is dedicated to neutrally administering the facilities of this undertaking which fall under the authority of this Charter.

Section 5

We will form a network siting policy board to exercise high-level oversight in our Charter's undertaking of capital projects. The network siting policy board will have the authority to oversee the design, engineering and budget of any capital project contemplated by this undertaking, and will consist of at least one executive officer of our corporation and advisors so duly elected by our corporation's board of directors.

Section 6

In the event of a dispute arising in operations or implementation of a capital project, the network siting policy board will meet to amicably seek to resolve such disputes. The administrator of this undertaking as established in Section 4, may act as a neutral liaison and provide research and recommendations to the network siting policy board. If the dispute cannot be resolved effectively or may expose our corporation to a sanction or legal liability, the matter will then be deferred to our corporation's board of directors.

Section 7

This Charter may be amended from time to time by the board of directors of our corporation.



City of Somerville, Massachusetts

Signature Report

File Number: 23-1063

Mayor's Request: 215772

Requesting approval of the First Amendment to Fiber Optic Communications Easement Agreement with TOWARDEX.

Official Text

To the Honorable City Council:

The Mayor respectfully requests that this Council approve the attached First Amendment to Fiber Optic Communications Easement Agreement with TOWARDEX.

Appropriate staff will be available to answer any questions you may have. Thank you for your consideration of this matter.

Respectfully Submitted,
Katjana Ballantyne, Mayor

MAYOR'S REQUEST APPROVED BY THE CITY COUNCIL OF THE CITY OF SOMERVILLE, MA AT A REGULAR MEETING ON 6/28/2023.

APPROVED BY THE MAYOR OF THE CITY OF SOMERVILLE, MA ON 6/30/2023.

Attest:

Kimberly Wells

August 24, 2023

Date Certified



2023 00096602
Bk: 81933 Pg: 199 Doc: AMEND
Page: 1 of 7 08/28/2023 12:02 PM

FIRST AMENDMENT

TO

FIBER OPTIC COMMUNICATIONS EASEMENT AGREEMENT

This First Amendment to Fiber Optic Communications Easement Agreement (this "Amendment") is made as of August 23 2023, by and between the City of Somerville, a body corporate and politic and political subdivision of the Commonwealth of Massachusetts with a usual address of 93 Highland Avenue, Somerville, MA 02143 ("Grantor") and TOWARDEX Technologies International, Inc., a Delaware corporation with principal address at One Marina Park Drive, 14th Floor, Boston, Massachusetts 02210 ("Grantee").

Capitalized terms used, but not otherwise defined, herein shall have the meanings ascribed to them in the Original Easement (as defined below).

WHEREAS, Grantor and Grantee are parties to that certain Fiber Optic Communications Easement Agreement recorded on November 10, 2021, and recorded with the Middlesex South Registry of Deeds in Book 79114, at Page 53 (the "Original Easement");

WHEREAS, in connection with the upgrade of the Fiber Optic Facilities, Grantor and Grantee desire to amend the Easement Areas depicted on the plan attached as Exhibit A to the Original Easement and more particularly described on Exhibit B, by substituting therefor the Plan attached to this Amendment as Exhibit A and the legal descriptions of the Easement Areas attached to this Amendment as Exhibit B, as each are incorporated by reference herein.

NOW, THEREFORE, for consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which are hereby acknowledged, Grantor and Grantee hereby agree to amend the Original Easement as follows:

1. Exhibit A. By deleting therefrom Exhibit A attached to the Original Easement and incorporated therein by reference, and substituting therefor Exhibit A attached to this Amendment and incorporated herein by reference.
2. Exhibit B. By deleting therefrom Exhibit B attached to the Original Easement and incorporated therein by reference, and substituting therefor Exhibit B attached to this Amendment and incorporated herein by reference.
3. Governing Law. This Amendment shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts.
4. Ratification. Except as modified and amended hereby, all of the terms, covenants, conditions and provisions of the Original Easement, as modified and amended hereby, are hereby ratified and shall remain in full force and effect.

[Signatures follow on next page]

RETURN TO:
TOWARDEX Technologies
1 Marina Park Dr
STE 1410
Boston, MA
02210

SEE PLAN NO. 574 OF 2023
0 INNERDELT RD SOMERVILLE

GRANTOR:

CITY OF SOMERVILLE

Name: Katjana Ballantyne
Katjana Ballantyne, Mayor

Attest:

Approved as to form:

By: Cindy Amara
City Solicitor

COMMONWEALTH OF MASSACHUSETTS)

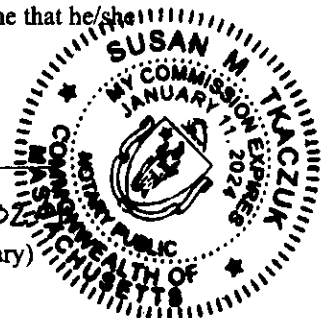
) ss:

COUNTY OF MIDDLESEX)

On this 23rd day of August, 2023, before me, the undersigned notary public, personally appeared Katjana Ballantyne, the Mayor of the City of Somerville, and proved to me through satisfactory evidence of identification, which was personal knowledge, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily in such capacity for its stated purpose.

Susan M Tkaczuk
Notary Public

My commission expires: 1/11/2024
(Official Signature and Seal of Notary)



GRANTEE:

TOWARDEX TECHNOLOGIES INTERNATIONAL, INC.

Name:



James H. Jun, Chief Operating Officer

Attest:

Approved as to form:

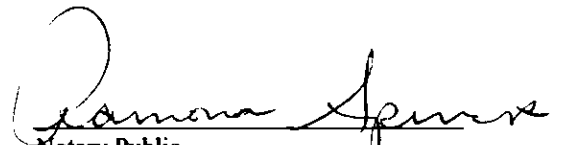
By: 
David L. Sterrett
Its: Corporate Counsel

COMMONWEALTH OF MASSACHUSETTS)

) ss:

COUNTY OF MIDDLESEX)

On this 18th day of August, 2023, before me, the undersigned notary public, personally appeared James Jun, and proved to me through satisfactory evidence of identification, which was drivers license, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily in such capacity for its stated purpose.


Notary Public
My commission expires: June 29, 2029
(Official Signature and Seal of Notary)

