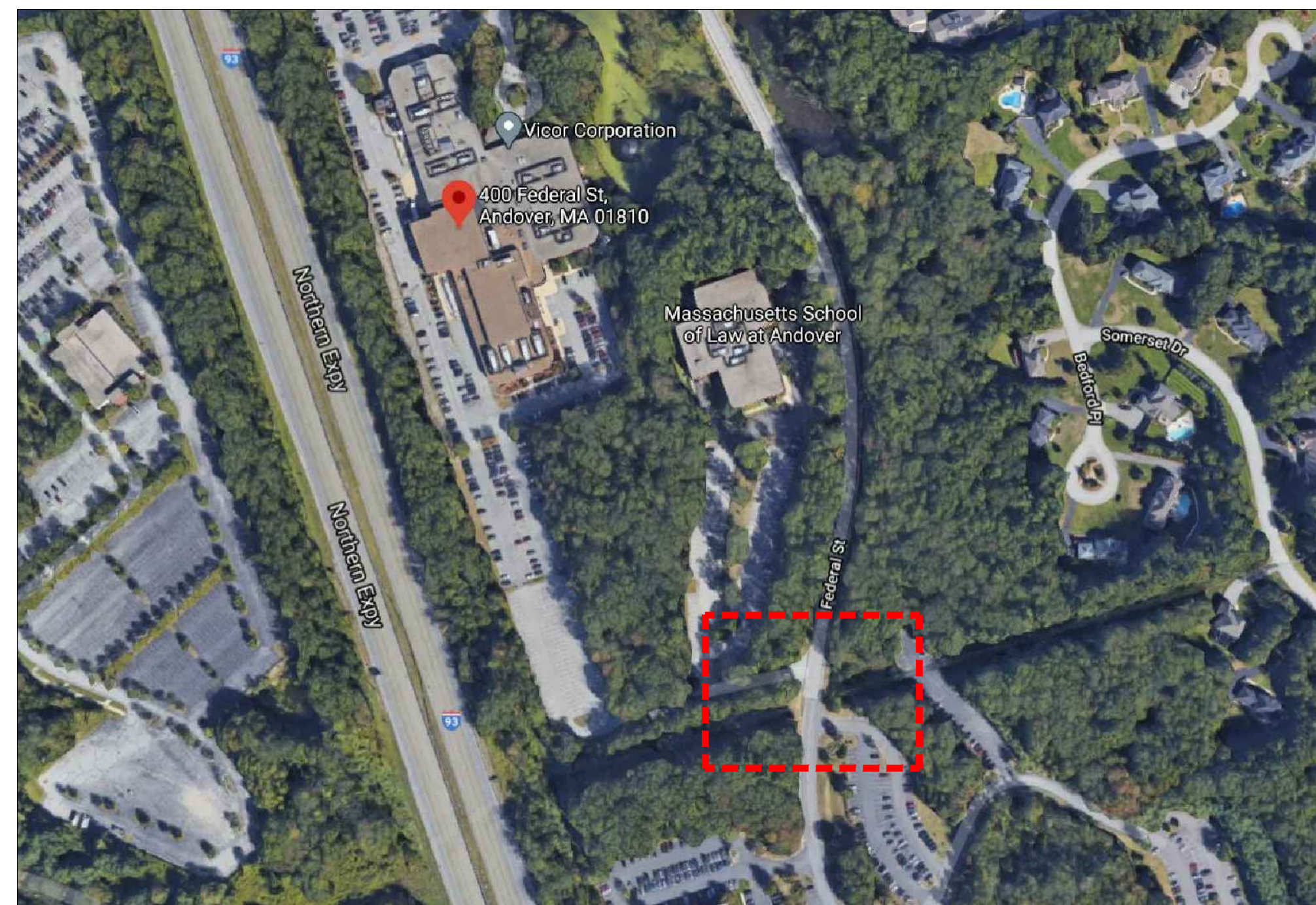




**PROPOSED CONDUIT INSTALLATION
AT
400 FEDERAL ST
ANDOVER, MA**



LOCUS
N.T.S

INDEX OF DRAWING

SHEET NO.	DESCRIPTION
--	COVER SHEET
01	PROPOSED CONDUIT INSTALLATION

AXIS
ENGINEERING GROUP
201 Boston Post Rd West – Suite 100
Marlborough, MA 01752
(774) 556-2924 www.axisgroup.com

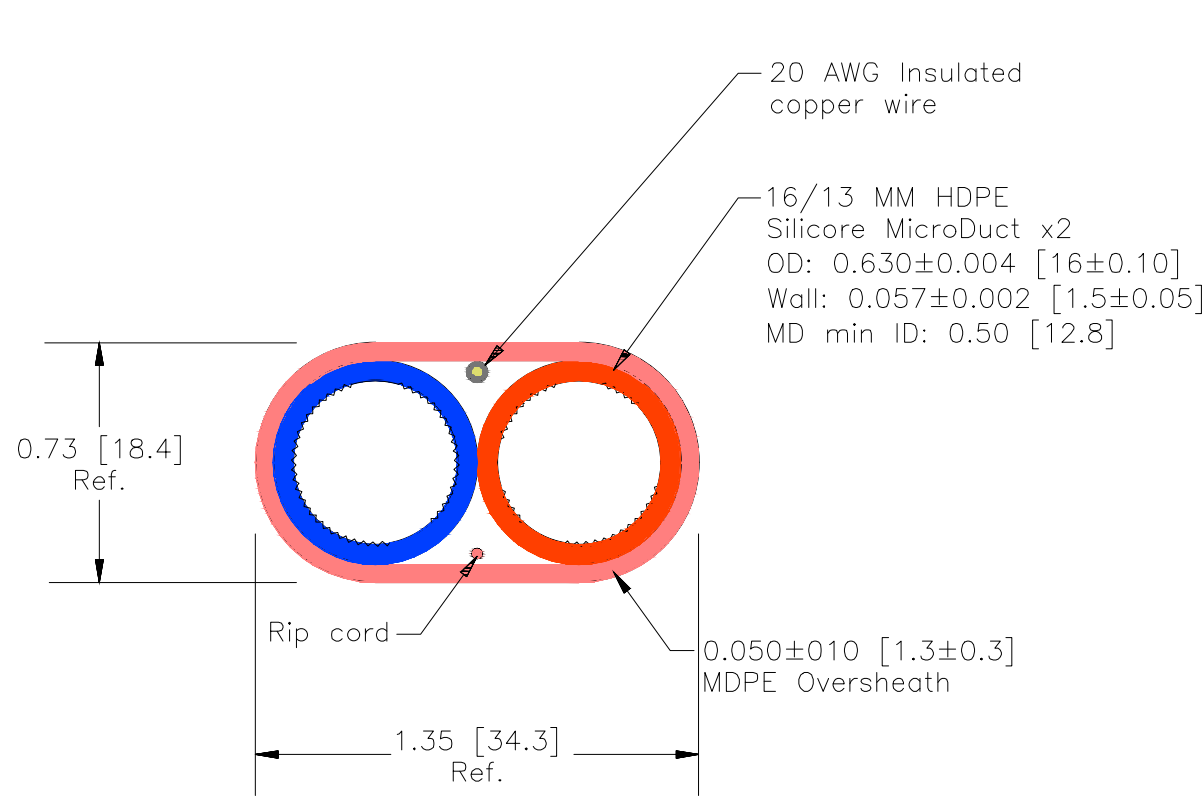
GENERAL NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
3. THE CONTRACTOR SHOULD MAINTAIN A SEPARATION OF 18 INCHES MIN. WHEN CROSSING EXISTING WATER FACILITIES.
4. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANY.
5. THE CONTRACTOR SHALL NOT DISTURB PUBLIC TREES AND SHRUBS.
6. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING AND MAINTAINING TEMPORARY RESURFACING AND/OR PLATING FOR ALL EXCAVATIONS IN PAVED STREETS AND SIDEWALKS UNTIL PERMANENT RESURFACING IS COMPLETE.
8. JOINTS BETWEEN NEW BITUMINOUS CONCRETE ROADWAY PAVEMENT AND SAW CUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACK SANDED.
9. THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXISTING UTILITY LINES THAT BECOME EXPOSED DUE TO EXCAVATION REQUIRED TO INSTALL THE PROPOSED CONDUIT.
10. THE CONTRACTOR SHALL REPLACE ALL DISTURBED TRAFFIC SIGNAL LOOP DETECTORS TO GOOD WORKING CONDITION AS REQUIRED BY THE LATEST STANDARDS OF THE MUNICIPAL TRAFFIC DEPARTMENT.
11. ALL EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.
12. THE CONTRACTOR SHALL REPLACE ALL PAVEMENT MARKINGS IN THEIR ENTIRETY THAT HAVE BEEN DAMAGED BY TRENCH EXCAVATION OR OPERATIONS OF THE CONTRACTOR WITH SIMILAR COLOR AND SIZE THERMOPLASTIC MARKINGS.

* - ITEM SHOWN ON UTILITY RECORDS,
BUT NOT FOUND IN FIELD.

~ - ITEM FOUND IN FIELD,
BUT NOT IN UTILITY RECORDS.

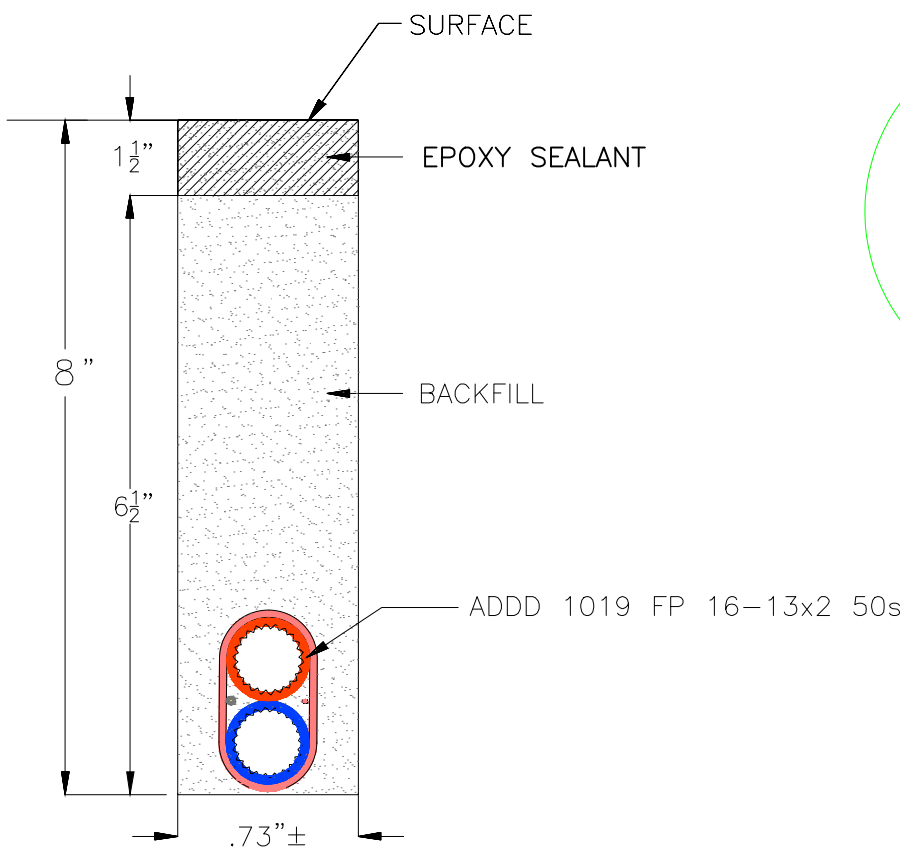
MICROFIBER TRENCH



ADDD 1019 FP 16-13x2 50s
N.T.S.

NOTES:

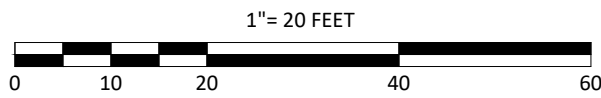
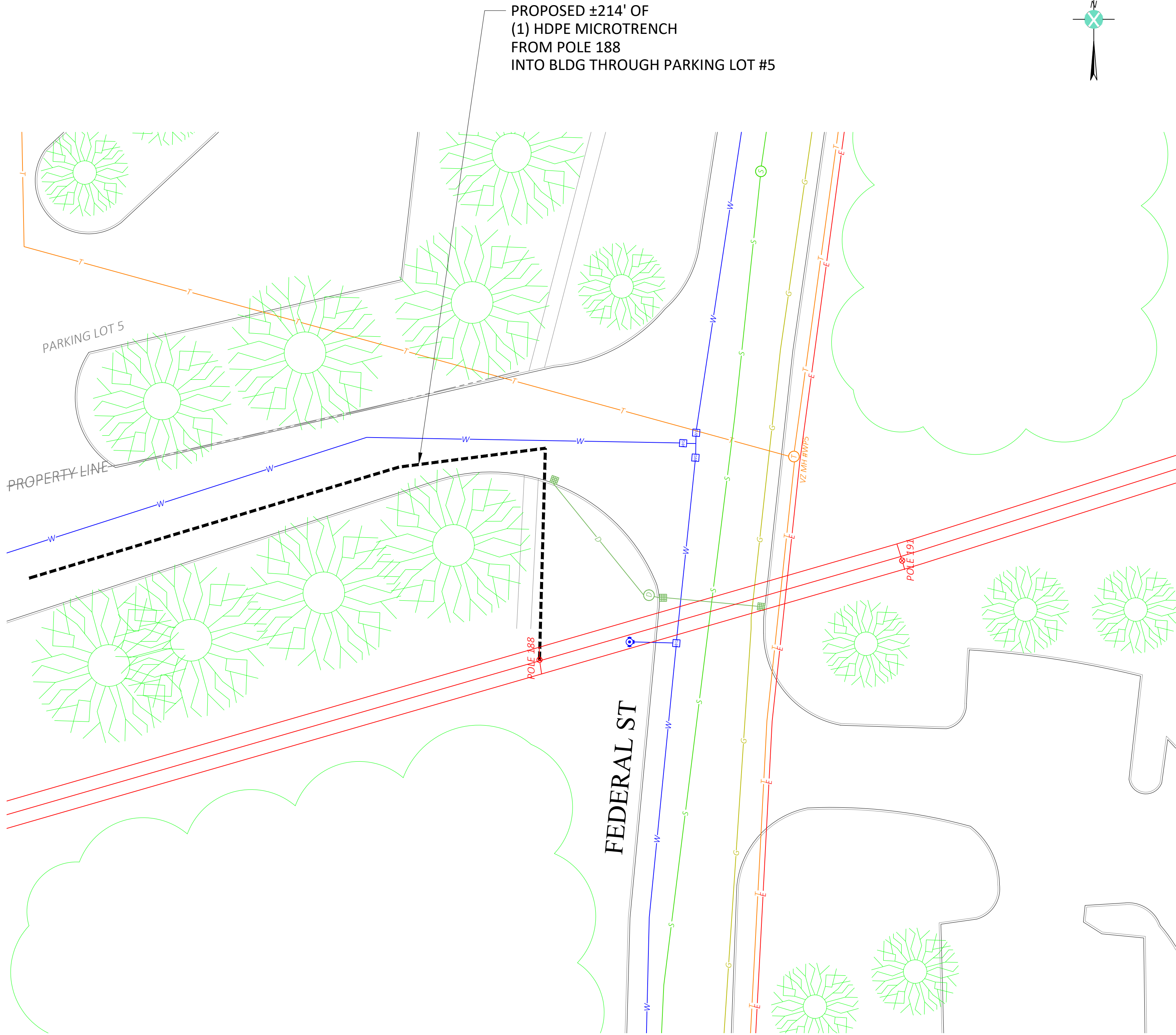
- MicroDuct weight = 0.090 lb/ft [134 g/m]
Oversheath weight = 0.066 lb/ft [98 g/m]
Total weight = 0.156 lb/ft [232 g/m]
- Supported Bend Radius: 11" x 20" [279mm x 508mm]
Unsupported Bend Radius: 18" x 34" [457mm x 864mm]
Safe Pull Load: 812 lbs [369 kg]
- UNITS: INCH [MM]



ROADWAY PATCH AND DUCT BANK
INSTALLATION DETAIL
N.T.S.

TRENCH DETAIL NOTES:

- 12" MAXIMUM FROM TOP OF ADDD 1019 FP TO SURFACE
- 6" FROM TOP OF CONDUIT TO METALLIC WARNING TAPE PLACED ABOVE.
- REPAIR SIDEWALKS AND WALKWAYS WITH SAME MATERIALS AS EXISTING.



LEGEND

⊗	ELECTRIC POLE	⊗	STREET LIGHT
⊗	JOINT UTILITY POLE	⊗	ELECTRIC HH
⊗	LAMP POST	⊗	TEL HH
⊗	TRAFFIC LIGHT	⊗	CATV HH
⊗	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
⊗	CULVERT	⊗	STONE BOUND
⊗	GUARD RAIL	⊗	PARKING METER(S)
⊗	FENCE	⊗	STEEL POST
⊗	ELECTRIC VAULT	⊗	SIGN POLE
⊗	TRAFFIC HH	⊗	UG CABLE MARKER
⊗	PROPOSED HH	⊗	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:

CROWN
CASTLE

REV #	DESCRIPTION	DATE

TITLE:
PROPOSED CONDUIT INSTALLATION
400 FEDERAL ST
ANDOVER, MA

SURVEYED BY:	AXIS ENGINEERING	PRINT NO:	1 OF 1
DRAWN BY:	PRP	SCALE:	AS NOTED
DATE:	03/11/2021	AS-BUILT:	