CITY OF MADISON - N CHARTER TO W WASHINGTON CONNECTION

PROJECT OWNER:
CITY OF MADISON
TALETHA SKAR
210 MARTIN LUTHER KING BLVD RM 500
MADISON, WI 53703

PROJECT ENGINEER:
MULTIMEDIA COMMUNICATIONS & ENGINEERING, INC.
CONTACT: DAN BECKER
FIBER OPTIC NETWORK SPECIALIST
PO BOX 11064
GREEN BAY, WI 54307
PH. 920-301-7900 EXT. 1002
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DESIGNED BY:
MULTIMEDIA COMMUNICATIONS & ENGINEERING, INC.
CONTACT: SAM FRISBIE
OSP ENGINEER
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EMAIL: sfrisbie@mcewi.com

PERMITS REQUIRED:
CITY OF MADISON RIGHT OF WAY PERMIT

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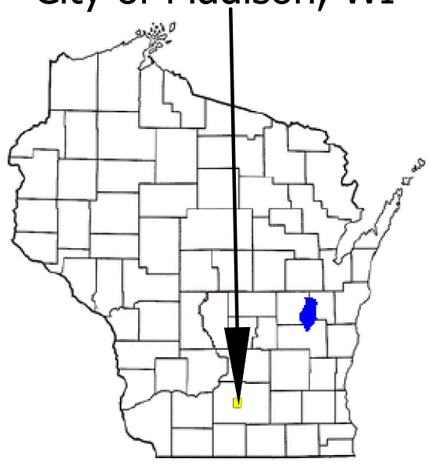
Project Location
City of Madison, WI



COORDINATE SYSTEM: HARN/WI.DaneWI-F

Legend

- = Telco
- = Cable TV
- = Electric
- = Gas
- = Water
- = Sanitary Sewer
- = Storm Sewer
- = Private Fiber Optic
- = New Underground Fiber
- = Existing Underground Fiber
- = New Handhole
- = Existing Handhole
- = Locate Station
- = Fiber Ped
- = Electric Ped
- = Telco Ped
- = Cable TV Ped
- = Traffic Control Box
- = Electric Transformer
- = Gas Valve
- = Water Valve
- = Fire Hydrant
- = Catch Basin
- = Round Catch Basin
- = Manhole
- = Utility Pole
- = Power Pole
- = Power Transformer Pole
- = Street Light
- = Pole Anchor
- = Aerial Fiber
- = Overhead Guy
- = Aerial Expansion Loop
- = Aerial Splice
- = Standoff
- = Culvert
- = Railroad Light
- = Traffic Light
- = Pull Box
- = Tree

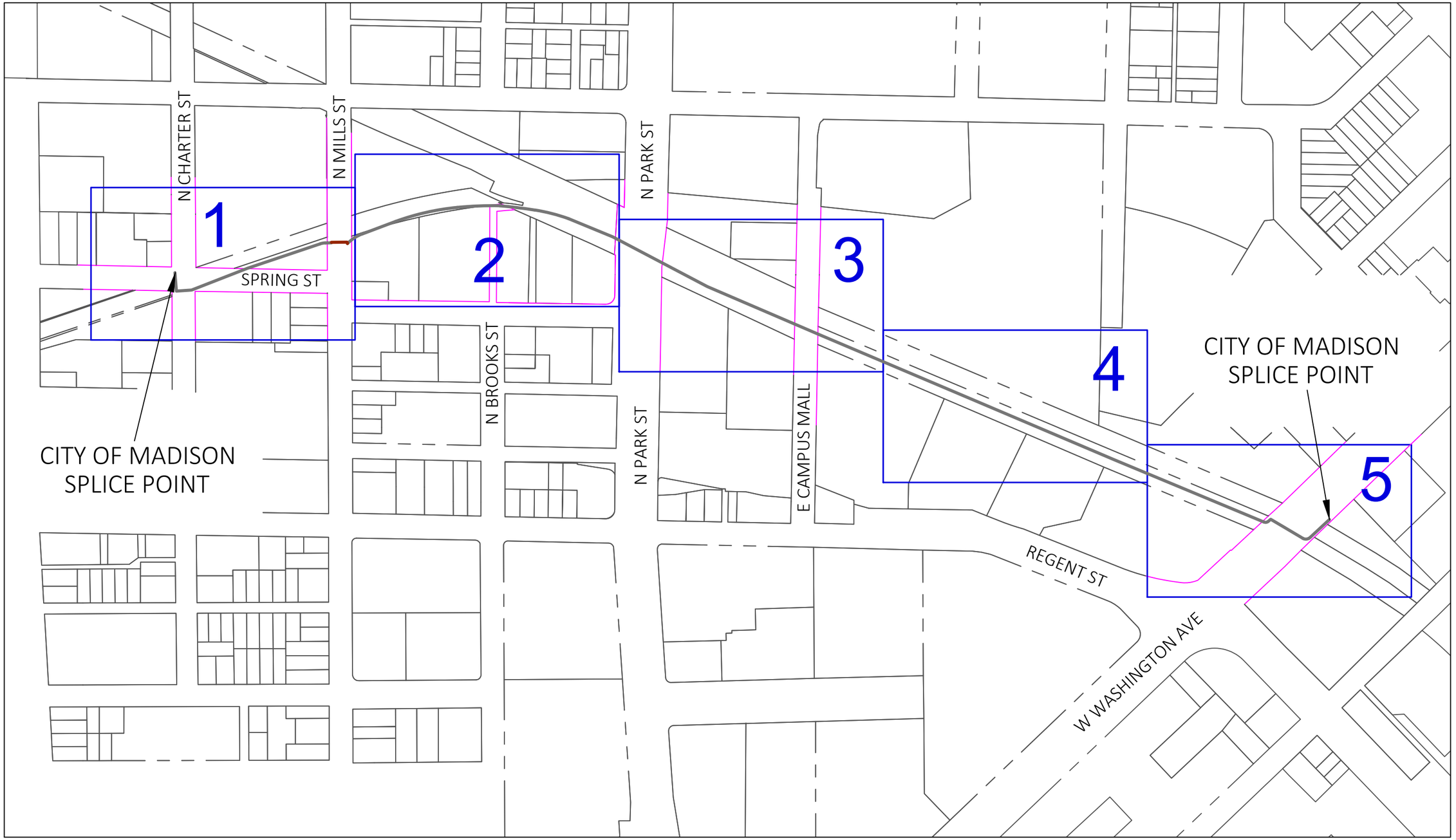
Typical Install Depth is 36"

DIGGERS HOTLINE

CALL DIGGERS HOTLINE 3 DAYS BEFORE DIGGING:
AT 811 OR (800) 242-8511
EMERGENCY ONLY: (262) 432-7910

ALL UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE. UTILITY INFORMATION WAS PROVIDED IN RESPONSE TO PLANNING LOCATE REQUESTS. CONSTRUCTION CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF MUNICIPAL AND PRIVATE UTILITIES; COMPLETE REPAIR OF ANY AND ALL DAMAGES & RESTORATION INCURRED SHALL BE AT THE EXPENSE OF THE CONTRACTOR. FACILITY PLACEMENT SUBJECT TO CHANGE UPON FIELD LOCATE COMPLETION.

RIGHTS-OF-WAY ARE DEPICTED BASED ON FIELD OBSERVATIONS AND THE LATEST STATE AND COUNTY RECORDS AVAILABLE.



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N

CITY OF MADISON
CHARTER TO WASHINGTON CONNECTION

SHEET GROUP:
OVERVIEW

SHEET ID:
OV1

Print Date: 1.9.2023

EXCAVATIONS

Excavations shall not remain open in excess of 24 hours unless specific permission is obtained from the City Engineer.

In all streets, alleys, sidewalks or other public ways, whether improved or unimproved, all excavated material shall be removed and the trench shall be backfilled with flow-able filled slurry mix.

At no time can spoils or other debris be stored or piled in the street gutter.

Excavation stock piling must remain within the public right of way and cannot be placed on or impede any roadways, driveways, sidewalks, or fire hydrants. Any areas that have minimal public right of way available must stock pile the excavated material on a truck bed or trailer. No stock piling of excavated material will be allowed on private property.

Excavations are to remain outside of wetland areas. All excavations must have proper erosion control practices to prevent stock piled materials from entering wetland areas.

Excavations are to remain 75' from the high-water mark of and waterway. Any excavations must have proper erosion control practices to prevent stock piled materials from entering waterways.

EROSION CONTROL PLAN

Any prolonged open excavations or standing debris piles will require erosion control practices such as sandbagging, placing hay bales, or silt fencing around the area.

The Contractor must employ the following good housekeeping practices that will prevent the ingress of any excavated materials into the Municipal storm water system:

1) Cover Storm Sewer Inlet with DOT Filter Fabric (DOT Type FF, not felt or silt fence material) near areas where excavation and directional drilling operations occur. DOT Type C Inlet protection standards apply (2x4 across back of inlet with DOT Filter Fabric over inlet held in place by inlet cover). Type D Inlet Protection including waddles (fiber filled filter socks) around drains to prevent debris from entering the storm sewer system are required at any low area inlets.
2) Place Silt Fence Barrier around excavation per below typical specification Diagram. Silt Fence to be inspected prior to excavation.
3) Place Sand Bag Barrier around Spoils to prevent runoff ingress into Storm Water Management System.
4) Protect graded restoration area using fibrous matting to prevent erosion into Storm Water Management System
5) Place temporary soil stabilization materials to prevent erosion into Storm Water Management System.

All erosion control measures shall be inspected on a weekly basis and/or after ½" or more of rainfall to ensure the effectiveness of the erosion control measures.

DEWATERING

Dewatering of pits, trenches, hanholes, or manholes must be done with the use of a sediment bag, a straw bale dewatering basin, or approved equivalent. All dewatering procedures must meet or exceed state standards. All Vacuum Excavation spoils are to be transported and disposed of offsite at an approved dumping station. Dewatering is expected to be negligible given the depth of installation and the nature of the directional boring operations for this project.

FRAC-OUT CONTINGENCY PLAN

Boring activities and bore path are to be continually monitored to observe potential frac-outs. Erosion control materials are to be accessible and onsite should a frac-out occur. Acceptable materials include silt fence, straw bales, and sand bags. As soon as a frac-out is discovered, erosion control must immediately be implemented around the frac-out material (bentonite-water mixture). A vacuum excavation machine is to be accessible on short notice to clean any frac-out material should it occur.

RESTORATION

The Contractor may be allowed to mechanically core through hard surface streets to locate existing utilities provided that the restoration of the core be performed per the specific requirements of the Municipality or Agency having jurisdiction. Core holes must be backfilled with a slurry mixture as specified by the DOT per permitting requirements. The original Concrete or Asphalt core can then be replaced using Plug and Epoxy method.

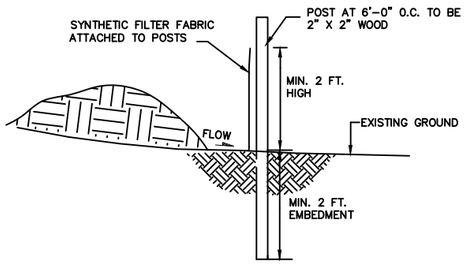
Potholing is not allowed in ADA compliant or non-compliant pedestrian ramps. Any hard surface excavations within any pedestrian ramp panels will result in the Contractor's replacement of the entire ADA Compliant panel, along with adjacent panels at the Contractor's expense.

At no time can the Contractor perform any excavation that undermines the adjacent in-tact surfaces, thereby making vertical mechanical compaction impossible and creating future potential for subsurface failure. This scenario will result in the replacement of the effected hard-surface to the permitting authority's specifications.

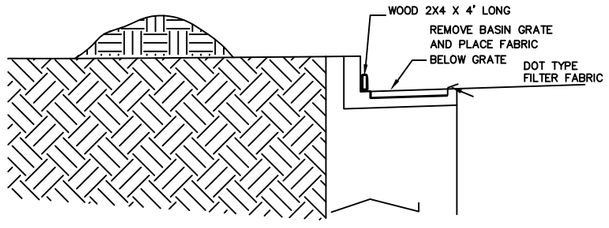
All disturbed lawns, vegetation, flowers, shrubbery, trees, landscaping, etc. must be replaced or restored to its previous condition or better. Lawn repair will require a minimum of 4" of black dirt and municipal approved grass blends are to be applied.

All areas of restoration using Black Dirt and Seed must be protected with biodegradable net-free fibrous matting. Placement of loose straw or other materials that can be easily blown away or otherwise eroded/removed from the restored area will not be permitted. Fibrous matting materials will must be included in the Contractor Cut Sheets and approved by the Owner for use prior to placement.

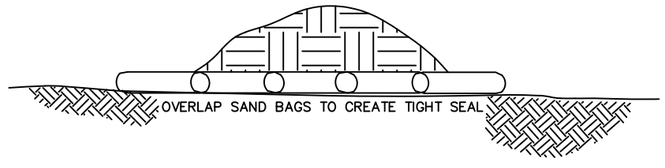
Silt Fence Erosion Control:



Storm Inlet / Catch Basin Erosion Control:



Sand Bag Barrier Erosion Control:



CONSTRUCTION QUANTITIES

Description of Work

The purpose of this project is to create a redundant connection between an existing splice point at the intersection of N. Charter St and Spring St and an existing splice point outside 625 W. Washington Ave. The New duct pack will be a (2) – 2" and (1) – 1.25" ducts with a single 144 strand fiber optic cable.

Use of Quantities Shown

The following lists represent a high–level overview of the project tasks associated with each portion of the project and should not be solely relied on for bidding purposes. It is the Contractors responsibility to thoroughly review and calculate their own quantities and footages in order to complete this project as outlined in this document. The Bid amount must be adequate to fulfill the intent of the entire project.

1) Directional Bore – 2–2" & 1–1.25" duct pack –	48'
2) Install 144 strand fiber optic cable inside existing empty 2" duct –	3,508'
3) Install 144 strand fiber optic cable inside new empty 2" duct –	48'
4) Install expansion loop inside handholes –	1,200'
5) Install 1800–pound mule tape in (2) 2" duct and (1) 1.25" duct –	48'
6) Install 1800–pound mule tape inside existing 2" duct –	3,508'
7) Splice individual fiber strands inside outdoor splice case –	288 total splices (144 in each case)
8) Remove and install new Type 1 handhole –	1
9) Install #10 stranded, jacketed, copper tracer wire inside 2" duct –	3,556'
10)Install new Type V 24x36x36 handhole over existing duct –	1

City Provided Material List

The City of Madison will not be providing any materials for this project.

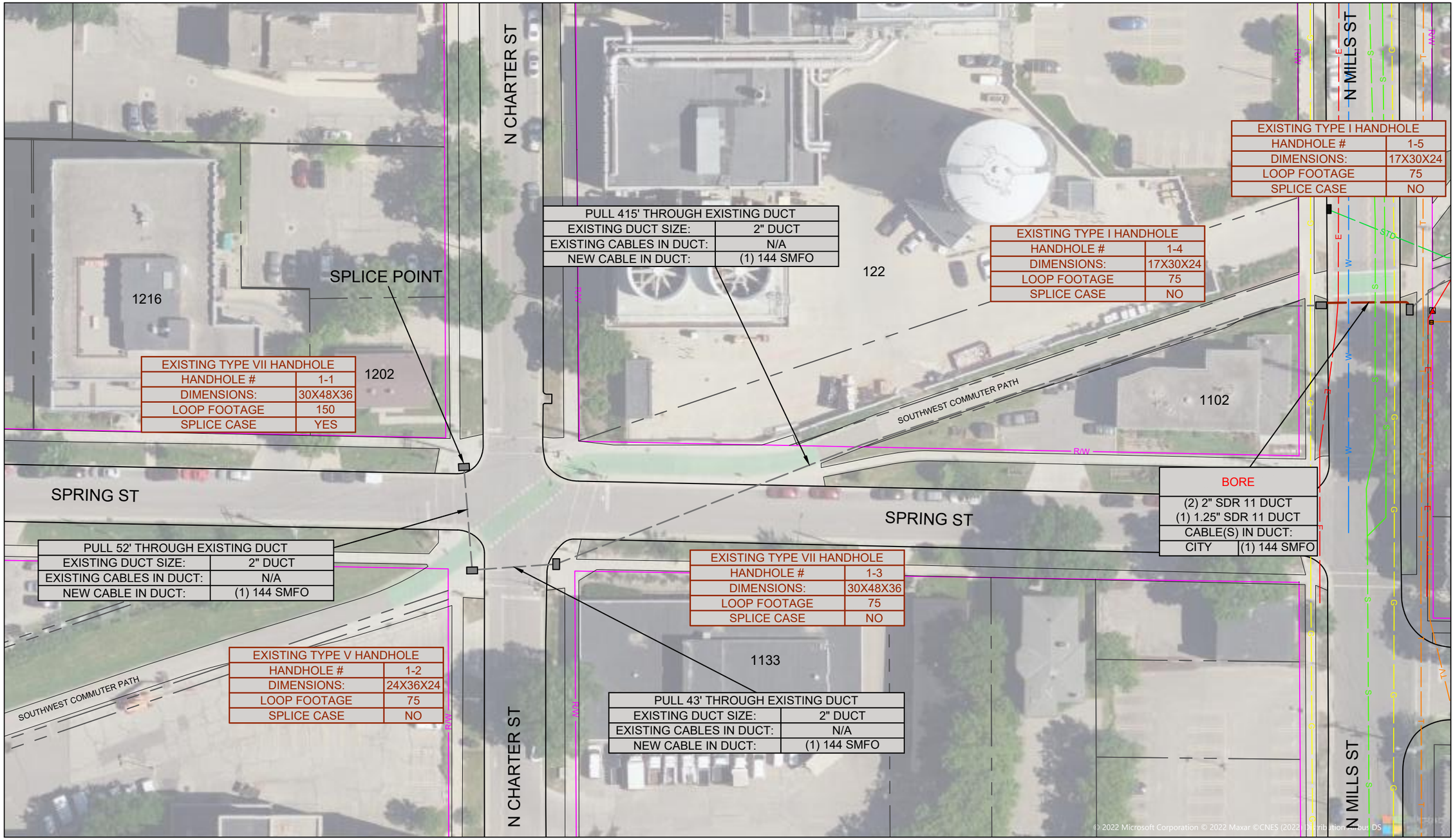
Contractor Provided Material List

The Contractor must purchase and provide all the following materials for this project:

1. All outside plant Fiber Optic cables – 144 Strand Singlemode OS2 Glass; loose tube, single armor; single jacket construction.
2. Underground Plowduct – 2" inside diameter first–run SDR–11 HDPE Orange smooth exterior/smooth interior with mule tape. Carlon A13C6N1JNNE (2"), or equivalent.
3. Underground Plowduct – 1.25" inside diameter first–run SDR–11 HDPE Orange smooth exterior/smooth interior with mule tape. Carlon A6C6N1JNNE (1.25"), or equivalent.
4. TYPE I Flush–mount Handhole – Composite concrete fiberglass construction 17"x24"x24h" with 2 bolt extra heavy duty cover marked "Fiber Optics". Quazite #PG1730BB24 Base / #PG1724HH21 (ANSI Tier 22) Cover, or equivalent.
5. TYPE V Flush–mount Handhole – Composite concrete fiberglass construction 24"x36"x24h" with 2 bolt extra heavy duty cover marked "Fiber Optics". Quazite #PG2436BB24 Base / #PG2436HH21 (ANSI Tier 22) Cover, or equivalent
6. 1800–pound mule tape – Carlon TL38203 or equivalent.
7. Locate Wire – #10 AWG UL TYPE USE 2/RHH/RHW–2. Non–manufacturer specific.
8. Split Duct Plug – 2" & 1.25" outside diameter split plugs with interior port diameter sufficient for cable size. Carlon or equivalent.
9. Fusion Splice Sleeves – Clear heat shrink fusion splice sleeve with steel reinforcing rod. Non–manufacturer specific.
10. Fiber Optic Cable Labels – Labelled with Owner – Strand Count – Start Point – End Point.
11. Consumables and Installation hardware – Contractor required consumables for the installation of all the above items per these Request for Bid Documents.
12. Biodegradable Net–Free matting designed for short term use similar to the American Excelsior Company's Curlex ® CL Blanket.

Contractor Completion Clause

The Contractor is required to complete the installation with the material included in their Bid response.



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CITY OF MADISON
CHARTER TO WASHINGTON CONNECTION

SHEET GROUP: 1:50 Scaled Plans

SHEET ID: 01

Print Date: 1.9.2023

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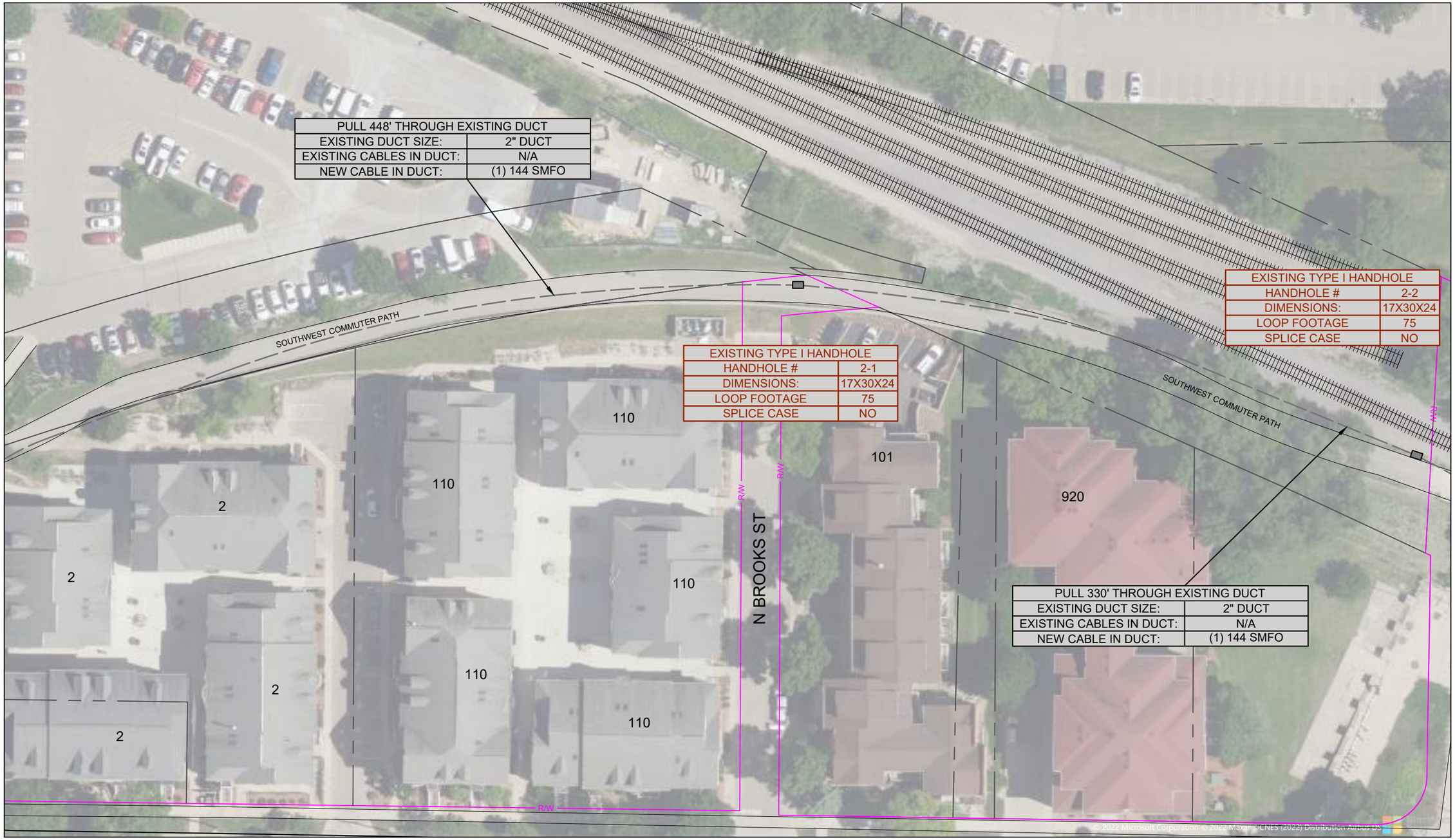

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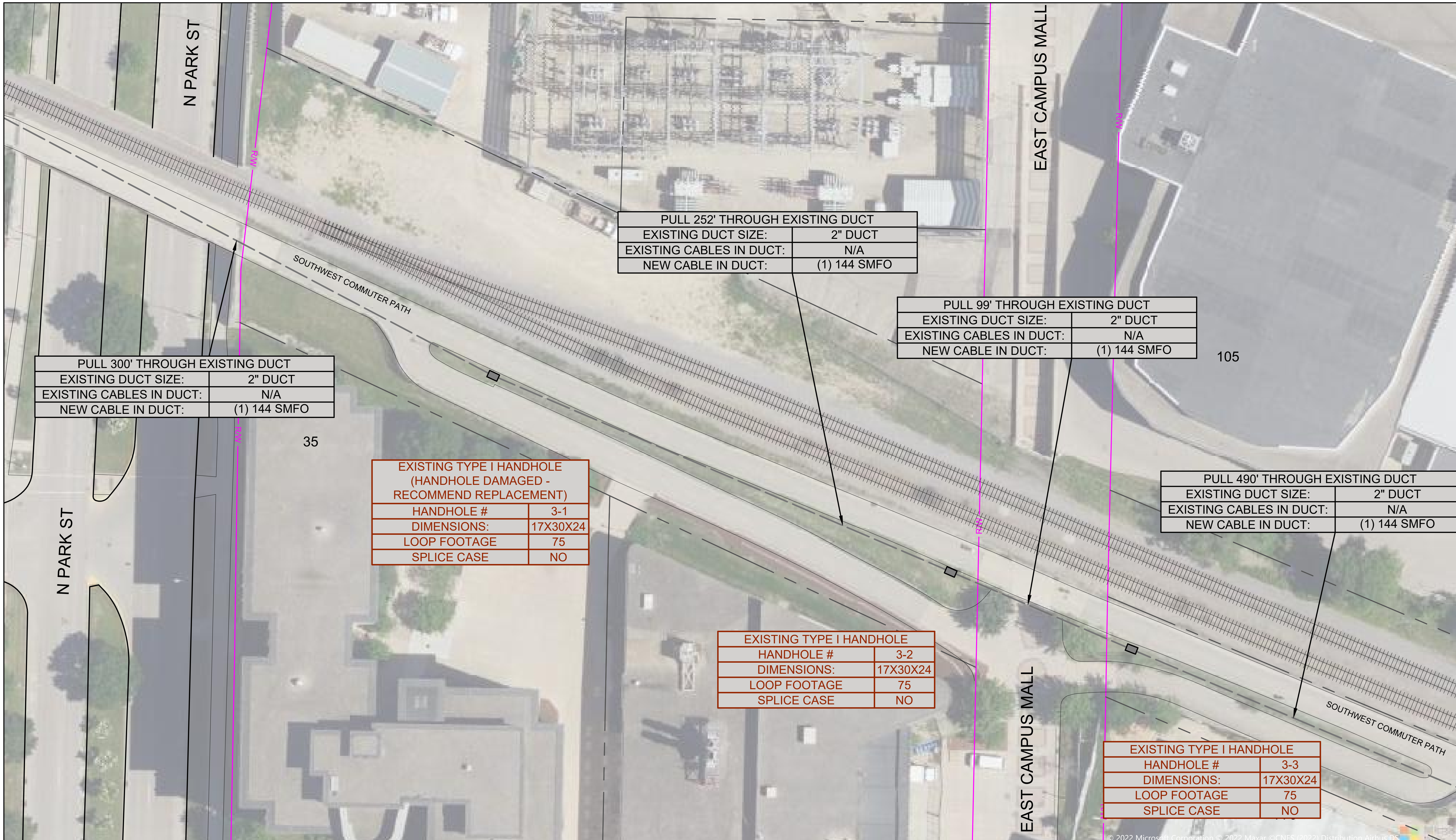
N PARK ST
N PARK ST
EAST CAMPUS MALL
EAST CAMPUS MALL
SOUTHWEST COMMUTER PATH
SOUTHWEST COMMUTER PATH
R/W
35
105
PULL 252' THROUGH EXISTING DUCT
EXISTING DUCT SIZE: 2" DUCT
EXISTING CABLES IN DUCT: N/A
NEW CABLE IN DUCT: (1) 144 SMFO
PULL 99' THROUGH EXISTING DUCT
EXISTING DUCT SIZE: 2" DUCT
EXISTING CABLES IN DUCT: N/A
NEW CABLE IN DUCT: (1) 144 SMFO
PULL 300' THROUGH EXISTING DUCT
EXISTING DUCT SIZE: 2" DUCT
EXISTING CABLES IN DUCT: N/A
NEW CABLE IN DUCT: (1) 144 SMFO
PULL 490' THROUGH EXISTING DUCT
EXISTING DUCT SIZE: 2" DUCT
EXISTING CABLES IN DUCT: N/A
NEW CABLE IN DUCT: (1) 144 SMFO
EXISTING TYPE I HANDHOLE (HANDHOLE DAMAGED - RECOMMEND REPLACEMENT)
HANDHOLE # 3-1
DIMENSIONS: 17X30X24
LOOP FOOTAGE 75
SPLICE CASE NO
EXISTING TYPE I HANDHOLE
HANDHOLE # 3-2
DIMENSIONS: 17X30X24
LOOP FOOTAGE 75
SPLICE CASE NO
EXISTING TYPE I HANDHOLE
HANDHOLE # 3-3
DIMENSIONS: 17X30X24
LOOP FOOTAGE 75
SPLICE CASE NO
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SEE SHEET 4

mce Fiber Optic Specialists

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CITY OF MADISON
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SHEET GROUP:
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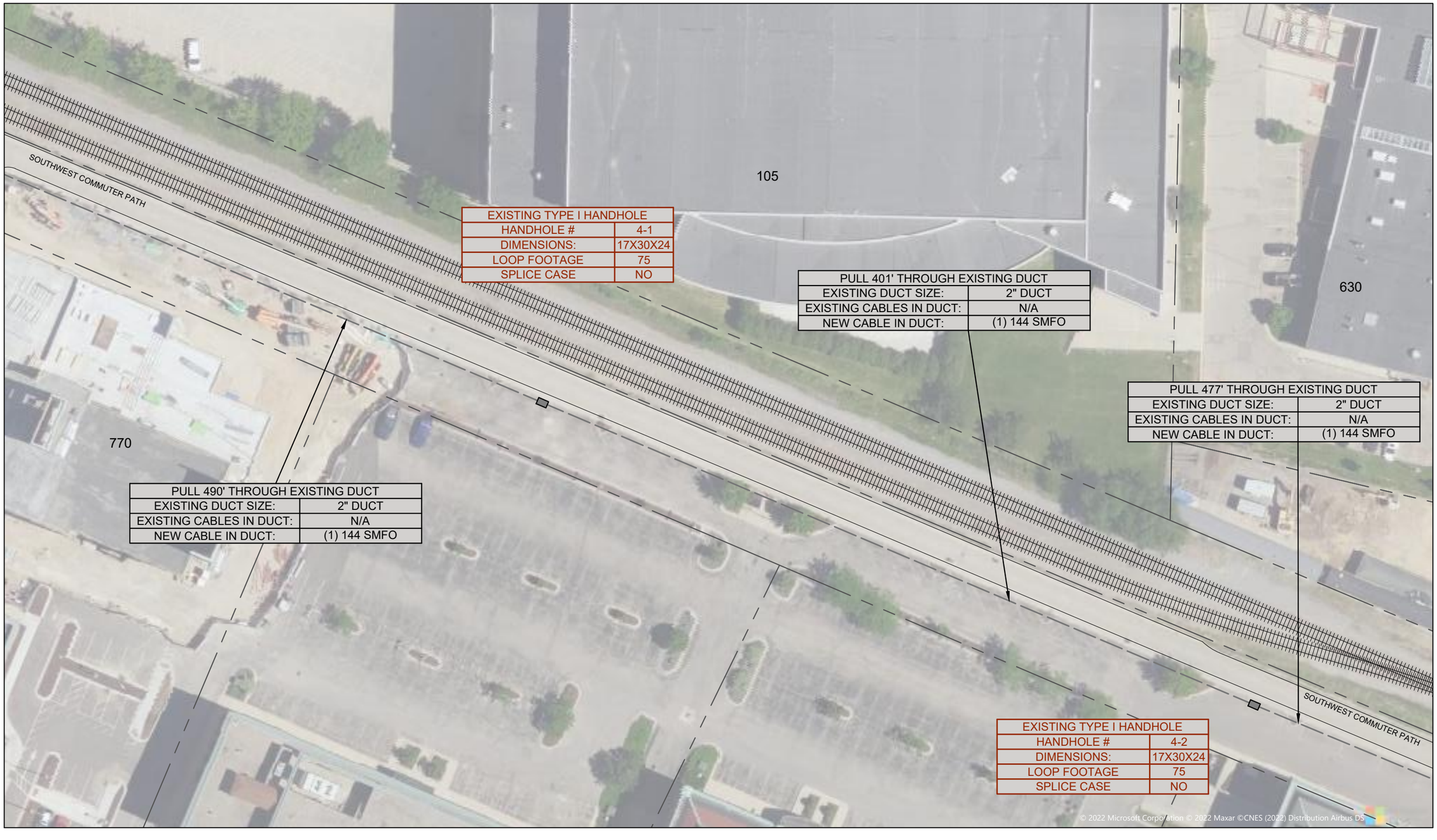
SEE SHEET 3



EXISTING TYPE I HANDHOLE	
HANDHOLE #	4-1
DIMENSIONS:	17X30X24
LOOP FOOTAGE	75
SPLICE CASE	NO

PULL 401' THROUGH EXISTING DUCT	
EXISTING DUCT SIZE:	2" DUCT
EXISTING CABLES IN DUCT:	N/A
NEW CABLE IN DUCT:	(1) 144 SMFO

PULL 477' THROUGH EXISTING DUCT	
EXISTING DUCT SIZE:	2" DUCT
EXISTING CABLES IN DUCT:	N/A
NEW CABLE IN DUCT:	(1) 144 SMFO

PULL 490' THROUGH EXISTING DUCT	
EXISTING DUCT SIZE:	2" DUCT
EXISTING CABLES IN DUCT:	N/A
NEW CABLE IN DUCT:	(1) 144 SMFO

EXISTING TYPE I HANDHOLE	
HANDHOLE #	4-2
DIMENSIONS:	17X30X24
LOOP FOOTAGE	75
SPLICE CASE	NO

SEE SHEET 5

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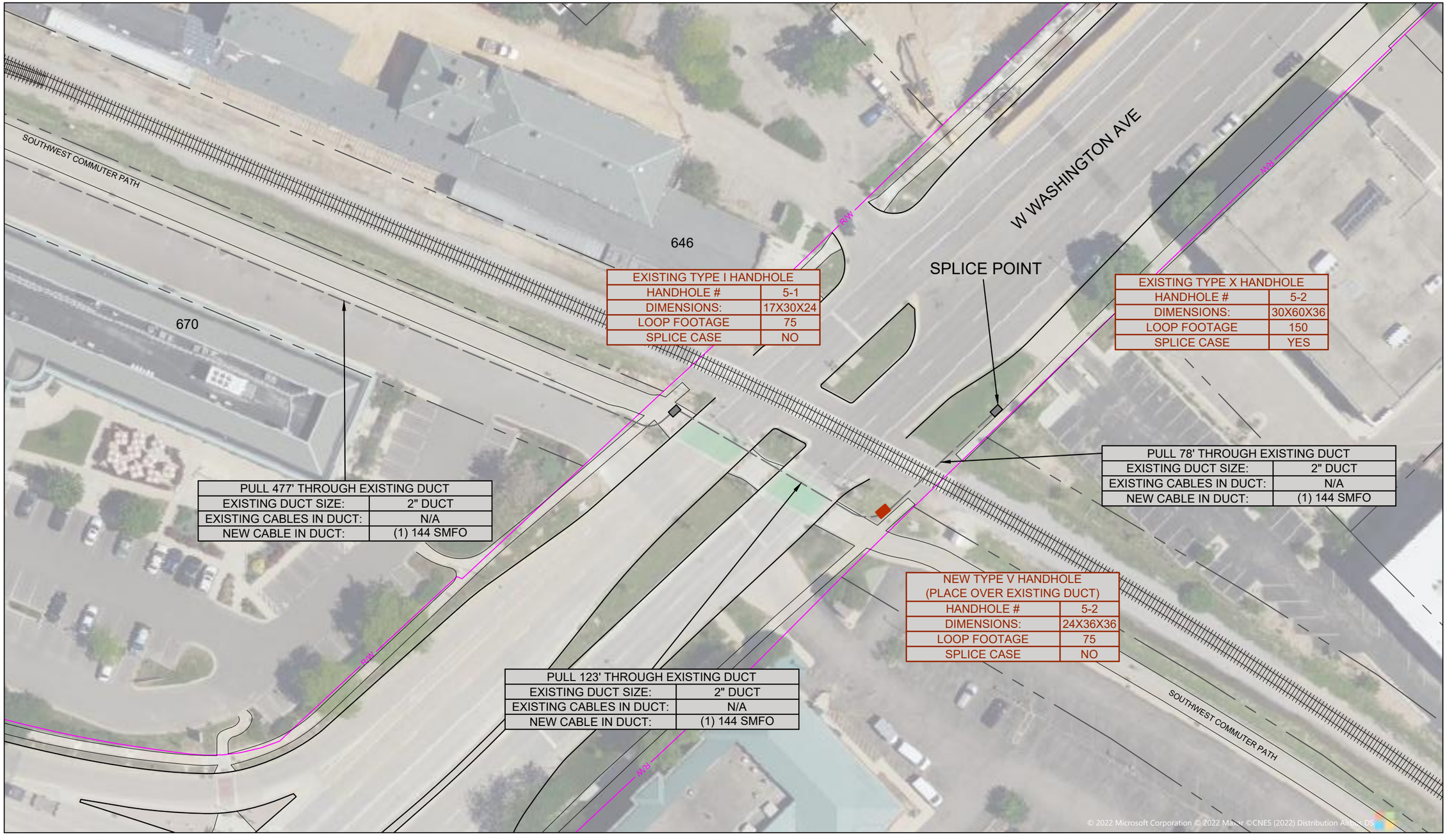

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