EVERSTREAM - SOF 16382 AMENDMENT

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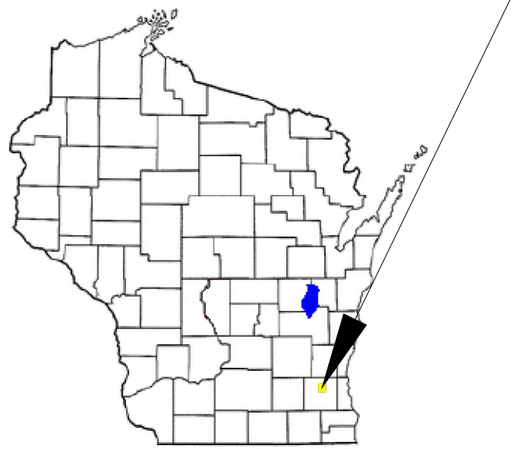
PERMITS REQUIRED:
SHEETS 1-2: CITY OF WAUKESHA COUNTY HIGHWAY
SHEETS 2: WAUKESHA COUNTY HIGHWAY

TABLE OF CONTENTS:

Project Location

CITY OF WAUKESHA



COORDINATE SYSTEM: HARN/WI.WAUKESHAWI-F

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.

Legend

- = Telco
- = Cable TV
- = Electric
- = Gas
- = Water
- = Sanitary Sewer
- = Storm Sewer
- = Private Fiber Optic
- = New Underground Fiber
- = Existing Underground Fiber
- = Easement
- = New Handhole
- = Locate Station
- = Existing Handhole
- = 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
- = Culvert
- = Railroad Light
- = Traffic Light
- = Pull Box
- = Tree

Typical Install Depth is 36"

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, handholes, 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.

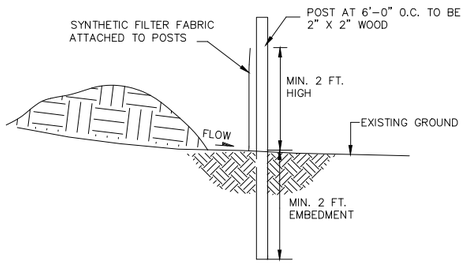
Potholing is not allowed in ADA compliant or non-compliant pedestrian ramps. Any hard surface excavations within any pedestrian ramp panels will result in the Contractor's replacement of the entire ADA Compliant panel, along with adjacent panels at the Contractor's expense.

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.

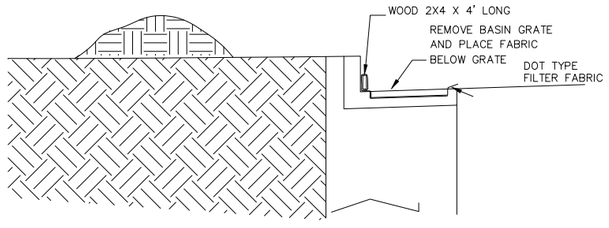
All disturbed lawns, vegetation, flowers, shrubbery, trees, landscaping, etc. must be replaced or restored to its previous condition or better. Lawn repair will require a minimum of 4" of black dirt and municipal approved grass blends are to be applied.

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.

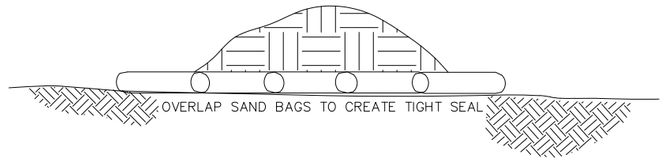
Silt Fence Erosion Control:



Storm Inlet / Catch Basin Erosion Control:



Sand Bag Barrier Erosion Control:



SECTIONS 1 & 2 are only included in the Project Bidding Documents

SECTION 3—AERIAL INSTALLATION

3.01 Aerial Placement Description

This project entails approximately 0' feet of Strand and Lash, 0' feet of Overlash, and 0' feet of Un-lash and Re-lash aerial cable installation along 0 new poles and 0 existing poles. Placement will consist of a ¼" steel strand messenger with dual lash of one or more cables.

All route clearing/tree trimming will be the responsibility of the contractor. Tree trimming must abide by any municipal standards pertaining to the trimming or removal of tree limbs within the right of way. In areas where contact between the cable and tree limbs or other structures can not be avoided the contractor will be required to secure cable guard around the strand and cable bundle to protect it against long term damage.

3.02 Published Standards

The Aerial Installation will be performed on Wisconsin Public Services (WPS) owned Poles. All standards published by WPS well as the National Electric Safety Code (NESC) and the National Fire Protection Association Publication Chapter 70 (National Electric Code) must be followed by the Contractor.

3.03 Pole Line Engineering

All attachment heights have been identified on the associated CAD Plans. All attachments must be made at the heights shown.

Midspan tensions have been calculated to properly sag the cables in to the existing sag of communication and power conductors. The Contractor will be provided with Sag tables for each aerial span that will show the proper tension for each span. Expansion loops have been included in the aerial sections of the project. The Contractor will be required to install these expansion loops using snowshoe expansion loop brackets and pole mounts. 150' of cable must be stored in each expansion loop.

3.04 Aerial Hardware

The Contractor must provide all attachment hardware such as pole line hardware (3-bolt clamps etc.) bolts, nuts and washers for all poles, all 1/4" EHS aerial strand, anchors, guy guards, and riser guard materials for this project. All pole line hardware must be galvanized. Aerial Strand must be 1/4" Domestic Galvanized Steel rated at 6,000lbs max load strength.

3.05 Pole Bonding

The Contractor will be required to bond the new overhead guy strand to every pole equipped with a ground along the overhead guy route. The Contractor must use a copper bond clamp and #8 AWG bare solid copper conductor to complete each bond.

3.06 Riser Poles

At the ground line of each riser pole, the Contactor must install a steel U-guard Adapter which will cover the exposed 2" ducts and connect to the bottom piece of riser guard. One Manufacturer of this U-guard Adapter is Electrical Materials Company – part number 52-2BC.

All risers must be guarded using a combination of 2.25" steel and PVC riser guard from the U-guard Adapter to an elevation within one foot of the attachment height. The first piece of Riser Guard must be galvanized steel 8 feet in length. Above the first piece of riser guard the Contractor can install PVC guard to the top of the riser.

Riser quadrant drawings will be provided to the Contactor to identify the location of each riser on the pole.

3.07 Pole Anchors

The Contractor must install 6" x 66" screw anchors at all location shown on the associated CAD plans. These anchors must be installed a minimum of 3' from any power anchor point. No auxiliary attachments will be allowed. All downguys must be insulated using a ceramic insulator installed within 2 feet of the pole attachment point. All downguys must be protected with a 6-foot yellow guy marker.

Section 4 UNDERGROUND CONSTRUCTION GUIDELINES

4.01 Duct Placement Guidelines

This project entails placement of Single 1.25" SDR-11 HDPE. The Contractor is responsible to provide all duct, ~~handholes~~, locate posts, locate wire, and pull rope as part of their installation responsibilities. The HDPE Duct part number referenced in Section 8 - Contractor Provided Materials references a duct that includes a mule tape for cable installation. The Contractor will be required to provide all mule tape necessary for cable installations whether it be included with the duct at the time of purchase or provided and installed separately. All ducts will be placed on the routes identified in the attached Drawing. All ducts must maintain a minimum horizontal clearance zone of 18" when paralleling other underground utilities with the exception of water and sewer (storm and sanitary) mains where parallel runs must maintain 60" horizontal clearance.

All underground ducts must be placed a minimum of 36" below finished grade wherever possible. Instances where the duct must be placed at a shallower or drastically deeper depth must be brought to the attention of the Project Manager prior to installation. Below is a summary of minimum duct installation depth per scenario:

- Terrace Area: 36"
- Driveway Crossing: 36"
- Road Crossing: 48"
- Bed of Waterway: 60"
- Railroad: 120"
- *Permit requirements supersede the above minimum depths

The Owner's Project Manager will be on site to coordinate actual placement. Routes will be marked with the use of paint and flags when necessary. The Contractor must not place duct along the route without first reviewing the individual areas with the Project Manager. This measure is designed to avoid instances where the new duct may encroach the restricted clearance zones of other utilities or extend outside the Right of Way.

All exposed duct ends must be covered with a temporary plug or adequately sealed with duct tape to prevent the ingress of dirt, water, and debris prior to the installation of the cable, locate wire, and mule tape.

The Contractor is required to mark the location of the bore head with paint a minimum of every 5' with a depth in inches every 10' while directional drilling is underway. Once the directional drilling is complete and the duct is pulled back. The Contractor must ensure the marks are adequately painted and visible.

There will be a period of time when the duct is placed and before the installation of the locate wire is complete. During this time period, it is up to the contractor to protect potential damage to the duct to the fullest extent. This includes making sure the painted bore marks are fresh, flag the route if necessary, and periodically check on the installed duct to determine if any potential digging is obvious. This will be done on a best effort basis, since Digger's Hotline may not have notification setup yet for the newly installed duct.

4.02 Handhole Placement Guidelines

The Contractor will be required to place new 30"x48"x36" pre-cast handholes (BULKU304836 Bulk Vault HDPE Structural Foam with Shield Composite Cover - TIER 22 Load Rated ANSI/SCTE 77:2013) along the route shown on the CAD plans. See the attached CAD drawings for placement location and size of the handholes. Manufacturer substitutions "or-equals" will not be allowed for the handholes and lids.

The handholes must sit parallel with adjacent streets, buildings, or other structures and must be flush with all surrounding surfaces, and if installed on a slope or grade the handhole must follow the contour of the grade as much as possible.

The installed handholes must sit atop a 12" bed of ¾" washed, crushed stone for drainage - ***pea gravel or other stone smaller than ¾" is not an acceptable base for drainage***. All fill around the Handhole must be mechanically compacted in 12" layers to within 8" from the top to prevent settling.

Inside each new handhole the Contractor will be required to install a single 5' long by 1/2" diameter copper clad ground rod. The ground rod must not protrude more than 3" above the surface of the crushed stone bed. After ground rod installation, the Contractor must equip the top with a conductor clamp that will allow the Contractor to tie a #12 AWG UL TYPE USE 2/RHH/RHW-2 Outdoor rated PVC jacketed stranded copper locate wire to the end.

4.03 Locate Post/Station Placement Guidelines

~~The Contractor will be required to install flush mount locate stations and above grade locate posts adjacent to handhole identified on the CAD Drawings. The Locate Post will be used to access the locate wires for future locating purposes.~~

~~Between the handhole and locate post the contractor must install a short length of 1-1/4" corrugated innerduct. This will facilitate the installation of the locate wires into the station from the handhole.~~

~~At no time will a locate station be installed in a location where it impedes or can be damaged by the removal of the handhole lid.~~

4.04 Fiber Optic Cable Installation Guidelines

The Contractor can install the fiber optic cable by hand or with the use of pneumatic/hydraulic installation equipment. However the means of installation, the Contractor must take care to not exceed the cable's maximum pulling tension (typically 600lbs). When using a mechanical tugger the contractor must have the ability to monitor the pulling tensions to ensure the maximum is not exceeded at any time during the installation.

The Contractor must utilize multiple breakaway/swivel devices at all times while installing the fiber optic cables. The lead swivel must be used for the fiber optic cable(s) with a second swivel set 8" back from the first for the locate wire and mule tape.

The Contractor must employ steel pulling sleeves/guides at the duct entry point to protect the duct, cable, and any existing cables from damage during the installation process.

At each handhole the Contractor must store a minimum of 150 feet of cable slack (unless otherwise noted on the CAD Plans) neatly coiled and stored upright in the handhole and labeled at each end with a permanent label, identifying the Cable Owner and the Strand Count. Suitable labels for this purpose are Panduit #PST-FO.

Following cable, locate wire, and mule tape installation all occupied ducts must be plugged using a split plug appropriately sized to accommodate the cable diameter - do not use foam, putty, or tape to permanently plug any duct. All spare ducts must only contain mule tape for future installations and be sealed using properly sized duct plugs.

Following the cable placement, the contractor will be asked to dispose of any remaining cable reels. Reel disposal, if required, will be listed as a construction unit in Section 7 Construction Quantities.

4.05 Locate Wire Installation Guidelines

The Contractor will be required to install a #12 AWG UL TYPE USE 2/RHH/RHW-2 Outdoor rated PVC jacket- stranded copper locate wire along all routes. This locate wire will be installed inside the plowduct with the fiber optic cable.

Where the new locate wire enters the locate stations it must be secured to the device's insulating lugs via a crimp-on spade connector. The locate stations are equipped with multiple lugs. The outer lugs are for use with locate wires that run inside the plowduct in either direction from the locate post, while the center lug is used to route a #12 AWG UL TYPE USE 2/RHH/RHW-2 Outdoor rated PVC jacket- stranded copper ground wire through the base of the locate station to the ground rod located inside the adjacent handhole. The Contractor must tie the conductor to the ground rod using the attachment clamp, and to the locate post in the same fashion that is used for the locate wires.

Following the installation of the locate wires and ground wire into the flush mount locate station all wires must be labelled with either their direction of travel or labelled as the ground wire.

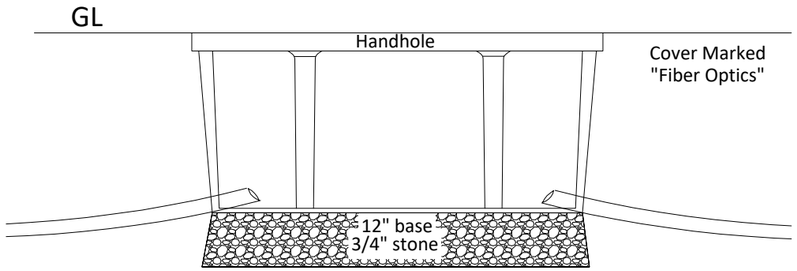
4.06 Mule Tape Installation Guidelines

The Contractor will be required to install a single 1,800 lb mule tape within the plowduct with the locate wire and fiber optic cable and within the spare duct for future use where applicable.

4.07 Red Line Drawings and Installation Documentation

The Contractor will be required to make notes on the Owner provided drawings indicating any adjustments in the route (Project Manager must approve adjusted route), the depth of installation, duct splice locations, and cable sequential numbers in and out of the handholes and at the termination point. All notes are to be made on the drawings (provided by the Engineer). A copy of the notes must then be provided to the Project Manager.

Handhole Placement Detail



Section 5 — INTERIOR CONSTRUCTION GUIDELINES

5.01 Exterior to Interior Transition

Where the underground plowducts extend to the exterior of a building, the contractor is required to transition below grade from each plowduct to a Galvanized Rigid Steel pipe that extends up the side of the exterior wall. At the below-grade transition point where the rigid pipe meets the plowduct, the Contractor must utilize a watertight fitting that is rated for underground use (ETCO Specialty Products "E-Loc" DEL-237 or equivalent).

At the top of the new rigid pipe runs the contractor must core a 2" hole into the building and install a 12"x12"x6" NEMA 3R rated pull box over the hole and aligned so the building core is situated at the top of the pull box.

All new cores into each building must be sleeved with EMT. Interior EMT extending to a termination room can extend through the core to satisfy this sleeve requirement, however instances where interior EMT is not being placed the Contractor must sleeve the core with EMT and securely fasten the sleeve to the exterior pull box and inside the building. All sleeves/EMT ends must be equipped with collared fittings to avoid cable damage.

Extending out of the bottom of the outdoor pull box, the Contractor must install a 1" Rigid Steel pipe down to an elevation of 4' above finished grade.

All new exterior pipes and boxes must be securely fastened to the building wall with anchors and fastening hardware suitable for a permanent installation into the materials comprising the wall.

5.02 Interior EMT / Innerduct Installation

Extending from the exterior pull box, the Contractor must install EMT conduit and or Innerduct (type, size, and quantity shown on Interior Drawings) to the building fiber optic termination point along the path shown on the accompanying Interior Drawings. The Contractor must seal around the conduit pack at all wall penetrations.

The Contractor must take all necessary precautions to prevent activation of building alarms, such as fire or security. Conduits the enter rooms that are sealed for the sake of Halon release systems must be sealed to ensure that the room's integrity is maintained.

Where the interior conduit passes through any non-concrete/block wall the Contractor must create a hole through the wall only large enough for the conduit to pass through, then seal around the conduit with ASTM E814 (UL 1479) approved fire stop materials.

Prior to cutting or coring into or through any building structure that could be deemed as "building support structure" the Contractor must obtain permission from the Project Manager.

At each end, and along the interior conduit path approximately every 10 feet, the Contractor must label the EMT with a warning label identifying the contents as a fiber optic cable. Suitable labels are Panduit's #PCV-FOB.

Along the interior the contractor may be required to install 12"x12"x6" Type 1 pull boxes fitted with a screw cover for pulling assistance and a 24"x24"x8" Type 1 pull box fitted with a screw cover for cable storage. Pull Box location and size is detailed on each building's Interior Piping Drawing. At every pull box (and building entry box) the contractor must use screw type fittings to attach the conduit/innerduct to the box.

Contractor may not use any interior pull box as a replacement for a 90-degree turn.

The interior conduits will to be bonded to a ground point at each building. The Project Manager will determine the ground points. Cable used to Bond the EMT to the Building Ground Electrode will be no smaller than a #6 AWG Stranded copper and must have a green jacket suitable for interior use.

The Contractor must have all necessary tools onsite to allow for the installation of the interior pipe outlined in this document. This includes a Hydraulic Pipe Bender to accommodate the interior EMT sizes specified allowing offsets that will be required for the installation.

5.03 Interior Cable Installation

At each site the cable will be installed within existing cable tray to an existing data rack. At some point within the cable tray, NEMA box, or cabinet as defined on the Interior plans in each building the Contractor must store a 30' expansion loop.

Following the installation of the fiber optic cable through the exterior and interior EMT conduit, the Contractor must seal the conduit ends (where the EMT enters the outside pull box and where the EMT enters the termination room) with ASTM E814 (UL 1479) approved fire stop materials.

All cables will be protected from the point they exist the EMT to the point they enter the rack or wall mount termination unit using innerduct sized appropriately for the cable.

Section 6 CABLE SPLICING TERMINATION AND TESTING GUIDELINES

6.01 Cable Pre-Acceptance Testing

Prior to release to the Contractor, the Owner will require the Contractor crews to perform "pre-acceptance testing" with an Optical Time Domain Reflectometer (OTDR) on each fiber optic cable. The pre-acceptance testing will verify the performance of the cable prior to it being released into the Contractor's possession. Pre-acceptance testing must be performed on every cable strand at 1310nm and 1550nm only from the exposed end of the cable. Test results must be provided to and approved by the Project Manager prior to release of the cable to the Contractor for installation.

6.02 Outdoor Fusion Splicing

The Contractor will be required to Fusion Splice the fiber optic cables at each of the splice points identified on the CAD Plans the Owner will provide all splice cases and trays while the Contactor must provide all splice sleeves and consumables.

6.03 Indoor Fiber Termination

All cable terminations will be performed by splicing factory terminated fiber optic cable pigtails to the ends of the outdoor fiber optic cables. The Owner will provide all pigtail assemblies and cable termination and interior splicing panels while the Contactor must provide all splice sleeves and consumables. The Contractor will be required to install all Owner-provided Termination and Splice equipment as well as route all pre-terminated pigtails between devices.

6.04 Fusion Splicing Equipment

All cable strand splicing will be performed using a fusion splice machine that is capable of splicing within a 0.1dB loss tolerance and equipped with either live monitoring or a Local Injection Detection (LID) testing system, thus ensuring the splice quality while the splice is set up in the machine.

All splices will be protected with appropriate fusion splice sleeves fitted with steel-reinforcing rod(s) (provided by the Contractor).

6.05 Cable Testing

Following the splicing and termination procedures the Contractor will be required to test each strand using an OTDR and Power Meter Light Source (PMLS) at 1310nm and 1550nm. Each terminated strand will be tested between the sites along the ring with both devices at both wavelengths. This totals 8 tests per strand.

All OTDR tests must be performed using a launch cable that is at least 150 meters in length. OTDR event thresholds must be set to show all events greater than 0.01db to will allow the inspector to review all splices or anomalies that register greater than 0.01 along the trace.

6.06 OTDR Viewing Software

Prior to the OTDR testing the Contractor must provide a copy of the OTDR viewing software that is capable of allowing a user to electronically review the test results.

6.07 Test Documentation

Following the OTDR testing the Contractor must provide the Owner with one electronic copy of each test performed. Prior to testing, the Contractor will be provided with the strand identification and labeling plan, the electronic copies of the test results must match the labeling scheme provided to the Contractor.

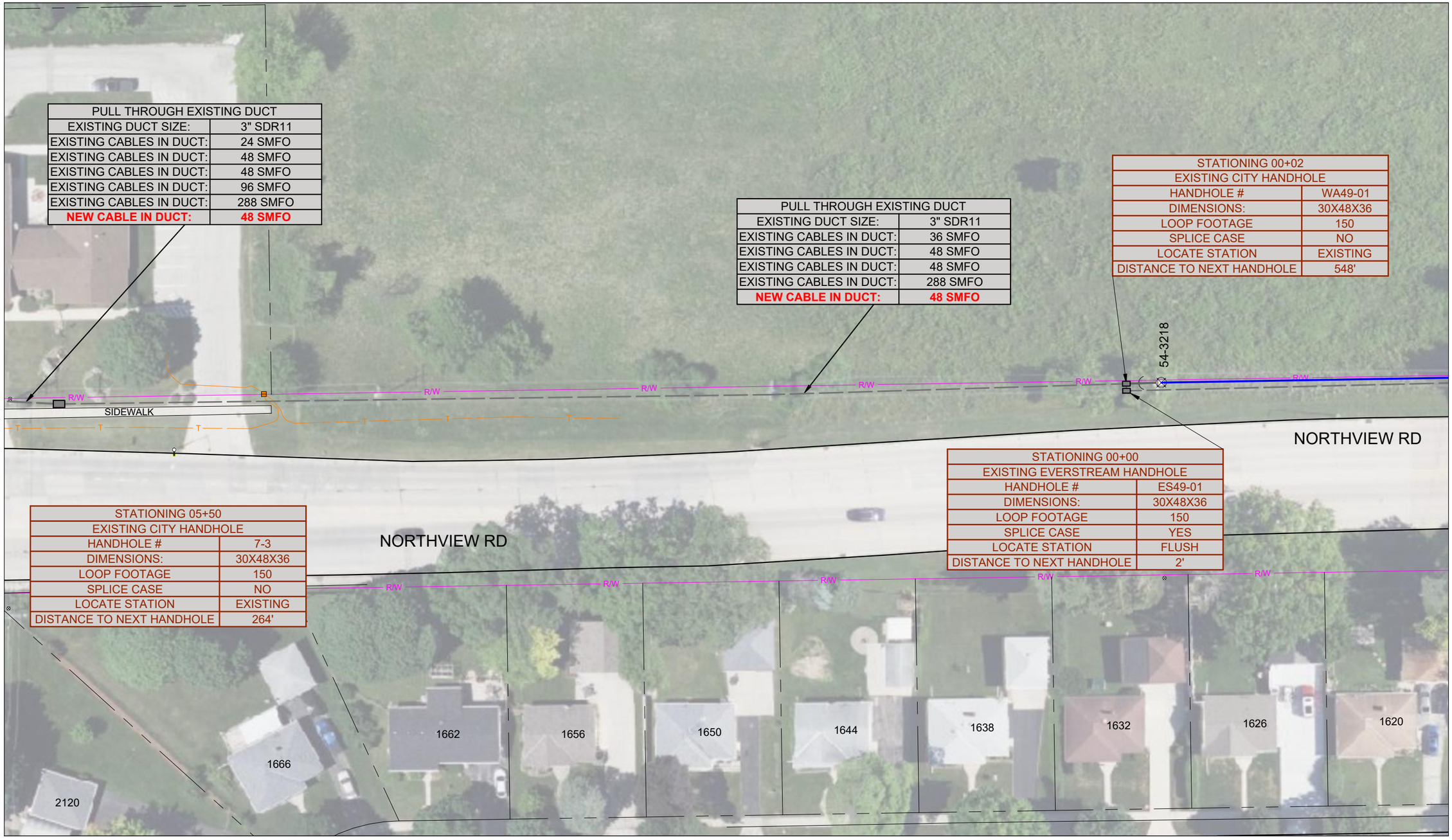
Following the PMLS testing, the Contractor must provide the Owner with test results showing the total link loss between each site along with the average loss for each strand. The test results must be provided on any Windows® compatible electronic spreadsheet.

All tests must be saved with origination point, end point, and strand number identified within the trace name. Abbreviations for sites are recommended.

6.08 Optical Loss Budget

The Contractor will be provided with optical link budgets for each installed cable strand. Budget losses are calculated using the total link loss between sites, and then averaging the result of both directions using the parameters identified in Table 1 below. The test results provided to the Project Manager must confirm that 100% of all installed strands perform within the optical loss budget and within the specific tolerances for individual events identified in Table 1 below.

Note that even though a link loss test may show a loss that is within the optical budget, any event shown by the OTDR report that exceeds its thresholds listed in the Bidding Documents will result in a failed test result and must be remedied prior to system acceptance by the Owner. Instances where individual tolerances cannot be met must be reviewed with the Project Manager prior to completion.



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Scale: 1" = 50' ANSI B/Tabloid

EVERSTREAM
SOF 16382

Sheet Group:
1:50 Scaled Plans

Sheet ID:
01

Print Date: 2.1.2022

Permits required on this sheet: CITY OF WAUKESHA

-STARTING AT EVERSTREAM HH ES49-01 NEAR RISER POLE 54-3218, PULL NEW 48CT FIBER THROUGH EXISTING DUCT TO EXISTING CITY HH WA49-01.

-PULL NEW 48 FIBER THROUGH EXISTING 3" CITY DUCT THROUGH EXISTING CITY HH 7-3 TO EXISTING CITY HH 7-2.

-VACUUM EXCAVATE AND PLACE A 1 ¼" DUCT BETWEEN THE CITY HH 7-2 TO PULL BOX -1.

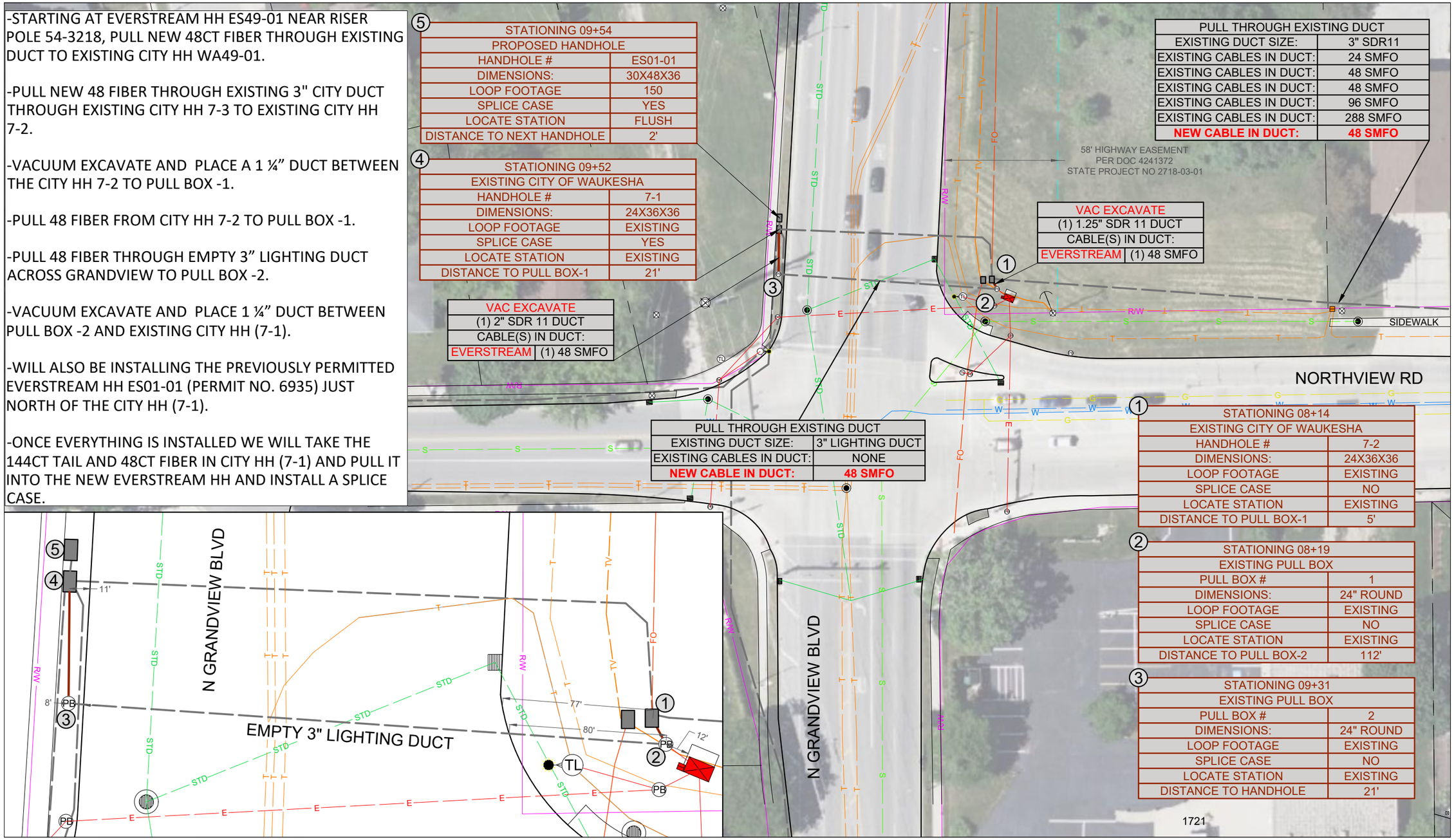
-PULL 48 FIBER FROM CITY HH 7-2 TO PULL BOX -1.

-PULL 48 FIBER THROUGH EMPTY 3" LIGHTING DUCT ACROSS GRANDVIEW TO PULL BOX -2.

-VACUUM EXCAVATE AND PLACE 1 ¼" DUCT BETWEEN PULL BOX -2 AND EXISTING CITY HH (7-1).

-WILL ALSO BE INSTALLING THE PREVIOUSLY PERMITTED EVERSTREAM HH ES01-01 (PERMIT NO. 6935) JUST NORTH OF THE CITY HH (7-1).

-ONCE EVERYTHING IS INSTALLED WE WILL TAKE THE 144CT TAIL AND 48CT FIBER IN CITY HH (7-1) AND PULL IT INTO THE NEW EVERSTREAM HH AND INSTALL A SPLICE CASE.



See Sheet 1

Multimedia Communications & Engineering, Inc.
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0 50' 100' N

Scale: 1" = 50' ANSI B/Tabloid

EVERSTREAM
SOF 16382

Sheet Group: 1:50 Scaled Plans

Sheet ID: 02

Print Date: 2.1.2022

Permits required on this sheet: CITY OF WAUKESHA/WAUKESHA COUNTY