

FIBER OPTIC CABLE ROUTE PROJECT # XXXXXXX (24-04-0045) PRE-CONSTRUCTION DRAWINGS QWEST M14 BIKE TRAIL ANN ARBOR, MI

APRIL 8, 2024

GENERAL NOTES

- 1. Maintenance of Traffic: Local Traffic must be maintained at all times. The contractor will provide the necessary barricades and lights to protect traffic according to the current standards and specification of the City of Romulus, Wayne County, and the Michigan Manual of Uniform Traffic Control Devices (MMUTCD)
- 2. Contractor must have a copy of the approved permit from the appropriate agency on the jobsite at all times.
- 3. Disturbed areas shall be limited within the right-of-way or easements. Disturbed or damaged landscaping and plantings will be replaced in kind by the contractor, other areas disturbed must be restored to original or better condition.
- 4. Project site will be properly secured prior to the end of each day.
- 5. All work is to be in accordance with all authorities having jurisdiction in the work zone.
- 6. Before construction begins, contractor shall take appropriate precautions to avoid any potential obstructions prior to proceeding with work.
- 7. Safety precautions shall be followed at all times to prevent accidents to vehicular and pedestrian traffic. Signs, barricades, shall be maintained by the contractor.
- 8. The location of all public utilities shown on the plans were taken from the best available records. Underground Contractors, Inc. will not be responsible for any omissions or variations from the locations shown. Before starting construction the contractor shall check with the utility companies on the location of existing utilities and/or structures whether or not indicated on the plans.
- 9. All trenches under or within 3' (three feet) of existing or proposed pavement shall be backfilled with MDOT class II argnular material in 8" layers compacted to 95% of maximum unit weight.
- 10. Excavations are to be shored per MIOSHA-STD-1306 PART 9 Excavations, Trenching, & Shoring
- 11. Hard surface removal necessary on this project to be saw cut full depth and replaced in kind per City of Romulus or Wayne County or MDOT specifications.
- 12. Sidewalk removal required of this project will be accomplished in complete flags and replaced in kind per City of Romulus or Wayne County or MDOT specifications.
- 13. As-Builts will be required for each project including cable footage sequentials at every access point, slack loop, splice location, pole and termination point. Contractor should also provide notes of all changes in depths, running lines, mh/hh locations, and any other applicable notes to depict the work that took place. NOTE: All major changes need to be pre-approved by an authorized Level 3 employee prior to starting the work.
- 14 All conduit will have a minimum of 18" vertical clearance from existing utilities.
- 15. This Project shall be constructed in compliance with Part 91 of Act 451 of 1994 as amended, the soil erosion and sedimentation control act.
- 16. Erosion and any sedimentation from work on this site shall be contained on the site and not allowed to collect on any off site areas or in waterways. Waterways include both natural and man-made open ditches, streams, storm drains, lakes and ponds.
- 17. All work shall be installed in accordance with the Michigan building Code and NFPA 70. Additionally conformances with EIA/TIA and ANSI/NECA/BICSI 568-2001 standards are recommended.
- 18. Fiber not installed in conduit must be plenum material.
- 19. Fiber and conduit shall be labeled with a unique identification at the termination ends and at 50ft intervals along the run.

GENERAL NOTES:

- Contractor must obtain locates prior to disturbing the ground. Contractor must have a copy of the approved permit from the appropriate agency on the jobsite at all times. Any landscaping will be replaced to equal or better than that which existed prior to work Project site will be property secured prior to the end of each day. All work is to be in accordance with all authorities having jurisdiction in the work zone. Contractors are advised to contact Level 3 for any additional information or clarification concerning scope of work or the requirements necessary for project completion. Contractor is responsible to field verify all dimensions, augnitities and existing conditions prior to construction. If a 7
- significant change to the running line is needed, please contact your Level 3 representative before proceeding. Before construction begins, contractor shall take appropriate precautions to avoid any potential obstructions prior 8
- proceeding with work. o construction on private property will commence until approval is given by the appropriate Level 3 employ
- Contractor shall not proceed with work until they have received a Purchase Order and have been directed to do so by an authorized Level 3 representative. Contractor shall not exceed the Purchase Order value without authorization in writing from the appropriate Level 3
- 11.
- 12. As-builts will be required for each project including cable footage sequential's at every access point, slack loop, splice location, pole and terminations point. Contractor should also provide notes of all changes in depths, running lines, MH/HH locations, and any other applicable notes to depict the work that took place. NOTE: All major changes need to be pre-approved by an authorized Level 3 employee prior to starting the work.

SITE CONDITIONS:

The actual location of existing conduit and cables may vary from the location shown. Repair of any damaged conduit containing cable shall be made by use of PVC split duct. The contractor shall be made by use of PVC.

The locations of existing utilities shown in the plan are approximate. When work is to be conducted in the vicinity of known utilities, their actual location must be field verified to avoid conflicts and damage to these utilities. Variation in locations between "recorded ons" and actual positions should be anticip

It shall be the contractor's responsibility to verify the location of all underground utilities. Buried utilities may exist in the area in addition to those shown on the plan. The contractor shall contact property owners when working within private essements for location of underground tanks, pipelines, drain tiles, or other buried improvements. The contractor shall also notify the utility notification cente

The contractor must assume all buried utilities encountered are alive and active unless specifically instructed otherwise by the owners or operators of said utilities.

Damage to sub-surface structures is the sole responsibility of the placing contractor.

The contractor shall protect the existing traffic control loops. If existing traffic control loops are damaged during construction, the entire loopwire from terminal shall be replaced in accordance with governing agency standards and regulations at contractor's expense

Removal of existing asphalt pavement, concrete curbs, and concrete sidewalks will be "neat line" with saw or pavement cutter, per excavation conduit trenches, the concrete removal will be "neat line" with a pavement saw.

If concrete curb returns and/or sidewalks are replaced due to conduit or manhole installation, the contractor shall place approved dicapped sidewalk and curb access ramps in conformance with State statutes

All materials necessary for repair of streets, curbs, sidewalks, sanitary sewers, storm sewers, and public service utilities and the installation of such materials shall be in conformance with the requirements and specifications of the agency or department responsible for the operation and maintenance of the repaired facility.

All work shall conform to the specifications of the jurisdictional permit agency

All open trenches will be clearly marked with barricades or cones. Steel plates or other types of bridging shall be provided to cover open trenches in the travel portion of the streets. These plates or bridging shall be adequate to support the normal vehicle loads anticipated in this area and shall be in place during all non—working hours.

All surface to be restored to original condition, and backfill to be compacted as specified. Trench excavation in surface which include concrete treated base shall follow local area specifications

HAZARDOUS MATERIAL

The contractor shall notify the jurisdictional permit agency immediately if any materials are encountered that are considered by the EPA, DEQ, or OSHA as hazardous. If potentially hazardous materials are encountered the contractor shall secure the site and prevent any accidental exposure by the public or the contractor's personal.

The contractor may excavate up to, but shall not disturb known hazardous materials such as asbestos, oils, acid, etc. The removal of all hazardous materials must be done by an approved or certified hazardous materials contractor licensed by the state

A copy of all correspondence pertinent to the removal of the hazardous materials shall be transmitted to the owner and a copy shall be available at the project office and the job site.

CONSTRUCTION STAKES

In areas where the conduit alignment is not clearly defined by the curb lines, fence lines, or other evidence of the right—of—way, the engineer will provide centerline stake or paint marks where required to make the proposed conduit

Closure identified in the plans shall be located by the contractor. Deviation from plan layout shall be approved by the engineer prior to conduit and/or enclosure installation

Manhole centers will be field staked by the engineer when requested with offset staked at right angles to the conduit

If additional field staking of location of conduit, manholes, property lines, etc. becomes necessary, the contractor is to notify the inspector or the engineer two days prior to the beginning of the work.

PERMITS-FRANCHISES-EASMENTS

Physical work shall not be started until the governing agency inspector and the contractor are in possession of and have carefully reviewed and fully understand all conditions and specifications set forth in the required permit, franchises and/or

Placing foreman to have a copy of the permits, easements on site at all times.

Any conflict between work print specifications and specifications set forth under related permits, franchises, and/or ements must be cleared by proper company authority before progressing with work involved.

TRAFFIC CONTROL

Any project involving work along a major arterial road and/or heavy traffic volume should be anticipated

Uniform traffic flow shall be maintained at all times. Only equipment and materials necessary for immediately scheduled or in progress will be maintained in the work area. All other equipment and material will be "stored or stockpiled" in such a manner as to eliminate hazardous conditions for traffic or pedestrians during non-working or shut down period

Traffic warning devices and signs shall conform to the manual on uniform traffic devices for streets and highways(US Government Printing Office) and to the state highway division standards specifications for highway construction. High level warning type devices are to be used at times and special warning devices may be stipulated by the jurisdictional permit agency at any time he use will add to the safety and protection of traffic or pedestrian in he construction area

All conduit trenching in paved areas shall be backfilled with crushed gravel or completely covered at the completion of each working day. Any backfilled trench shall be capped with a minimum layer of asphalt or concrete cold patch at the end of each working day.

The contractor shall mark the conduit trench and define their construction area clearly with barricades, cones, and/or other visible methods that alert the public of the construction activity

A traffic control plan shall be prepared by the contractor as required and submitted to each permitting agency requesting such plan for review and approval or revision prior to commencing any construction activity for this project. The approved plan shall be submitted to the agency and a copy of the plan shall be kept at the construction site and must be available for review by agency representatives.

SPECIAL UTILITY CLEARANCE

- surface (outside edge to outside edge) from parallel water mains. 12" vertical separation.
- D The vertical and horizontal separation shall be maintained at all times unless responsible for any and all encroachments. E.
- to water mains.

STRUCTURE PROTECTION

Manholes and conduit to be placed adjacent to existing structures such as bridges, bridge footing/piers, foundations, walls, power and telephone poles, ad other utilities shall maintain a minimum clearance as shown. The contractor shall not undermine any adjacent structure without specific written permission form the owner/operation of such structure.

Shoring used as foundation support shall be designed specifically for both the live and dead loads off the structure or if only the dead is used for design. The contractor shall provide a detailed layout and plan of the method of establishing and maintaining the design load condition (i.e. road detours, tiebacks , etc.).

See utility clearance section notes for the clearance criteria to parallel or cross utilities.

Existing utilities exposed during excavation shall be 100% supported by either trench bridging and suspension or by the use of longitudinal trays or platforms vertically supported by adjustable building jacks.

Existing splice cases and cable supported by suspension from a cross beam. Supports shall be placed at a maximum spacing of 4 feet and shall consist of a canvas sling with nylon belting or rope. All cable support shall be placed in a manner that prevents kinks or other damage to the cable sheath.

An acceptable alternative to cable slings would be the utilization of a wide flange "I" bean or channel as a "cable tray" with cables/cases banded in place.

The contractor shall provide shoring for conduit trench excavation 48" or more in depth as measured from the high side of the trench and for all manhole excavate

Manhole shoring shall be tight-sheeted

All shoring shall conform to the standards and specifications of local party and the occupational safety health administration

The contractor shall provide all shoring and design calculations to the permit issuing agency prior to commencing any construction activity.

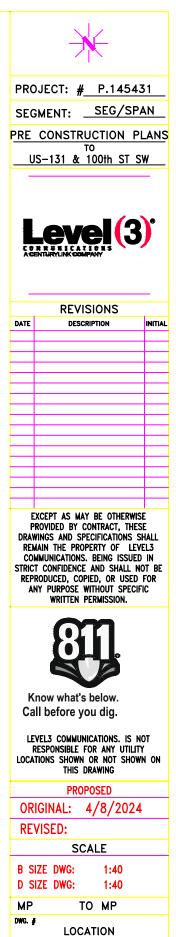
work conducted adjacent water mains shall conform to the following conditions.

A. Whenever possible conduit shall maintain a horizontal separation of 3', measured Whenever possible conduit shall pass under existing water mains and must maintain

C. The contractor shall be responsible for establishing and maintaining this required vertical separation by either exposing the water main every 100 feet in these areas where horizontal separation is less than 3 feet or by utilizing the depths of adjacent water values, if the contractor utilizes the adjacent water line to determine water main depth, they shall contact the agency at each such location and the agency will determine the necessary depth of the top of the conduit at that point.

specifically revised by agreement between the jurisdictional permit agency and the agency. Any specific deviation in the vertical and horizontal separation from those described shall be reported to the owner by he contractor. The contractor shall be responsible for maintaining vertical and horizontal separation at all times and shall be

Clearances to storm sewer and sanitation sewers shall be exactly the same as those



2 OF 12

LUMEN TECHNOLOGIES SR NETWORK IMPLEMENTATION MANAGER 19675 W 10 MILE RD SOUTHFIELD MI 48075 SCOTT ANTONE OFFICE: (248) 436-9852 CELL: 517-206-8644 E-MAIL: "SCOTT.ANTONE@LUMEN.COM"

CENTURYLINK COMMUNICATION CORP, LLC. SR ENGINEER "AREA OF RESPONSIBILITY" "ADDRESS" "CITY, STATE ZIP" "ENGINEER NAME" OFFICE: (XXX) XXX-XXXX FAX: (XXX) XXX-XXXX CELL: (XXX) XXX-XXXX E-MAIL: "ENGINEER@CENTURYLINK.COM"

UNDERGROUND CONTRACTORS INC. 30561 Andersen Ct. Wixom, MI 48393 DEBORA RENNER OFFICE: (248) 669-2510 EXT. 405 FAX: 248-669-1483 CELL: 248-756-4156 E-MAIL: DRENNEROUNDERGROUNDCONTRACTORS.COM

"COMPANY NAME" "ADDRESS" "CITY, STATE ZIP" "PROJECT ENGINEER NAME" OFFICE: (XXX) XXX-XXXX FAX: (XXX) XXX-XXXX CELL: (XXX) XXX-XXXX E-MAIL: "ENGINEER@COMPANY.COM"

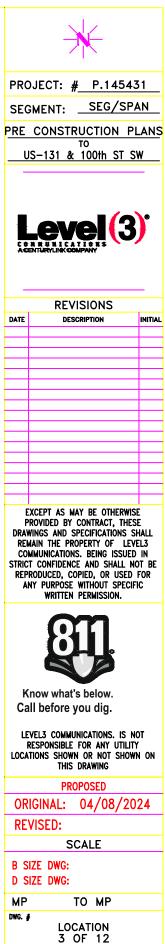
"STATE AGENCY" "CONTACT" "ADDRESS" "CITY, STATE ZIP" "ENGINEER NAME" OFFICE: (XXX) XXX-XXXX FAX: (XXX) XXX-XXXX CELL: (XXX) XXX-XXXX E-MAIL: "E-MAIL ADDRESS"

"COUNTY AGENCY" "CONTACT" "ADDRESS" "CITY, STATE ZIP" "ENGINEER NAME" OFFICE: (XXX) XXX-XXXX FAX: (XXX) XXX-XXXX CELL: (XXX) XXX-XXXX E-MAIL: "E-MAIL ADDRESS"

"RAILROAD" "CONTACT" "ADDRESS" "CITY, STATE ZIP" OFFICE: (XXX) XXX-XXXX FAX: (XXX) XXX-XXXX CELL: (XXX) XXX-XXXX E-MAIL: "E-MAIL ADDRESS"

CENTURYLINK ONE-CALL OFFICE: 1-800-289-4237

OTHER ONE-CALL OFFICE: (XXX)-XXX-XXXX DAVE HUCKFELDT 517-812-2592 SCOTT ANTONE 517-206-8644



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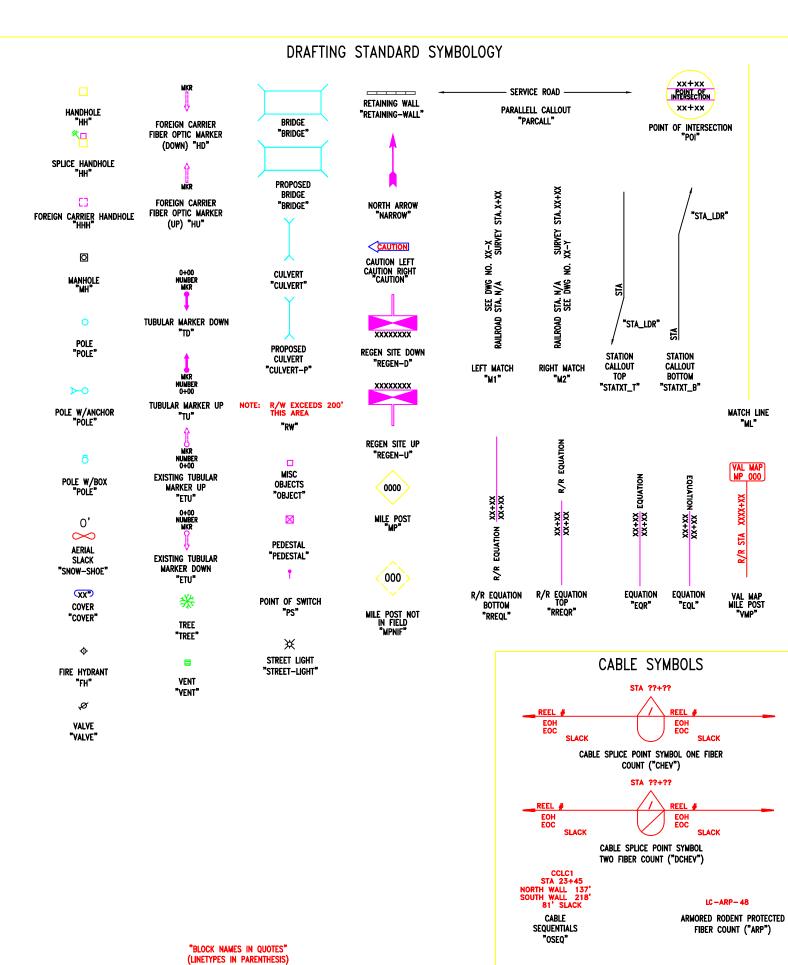
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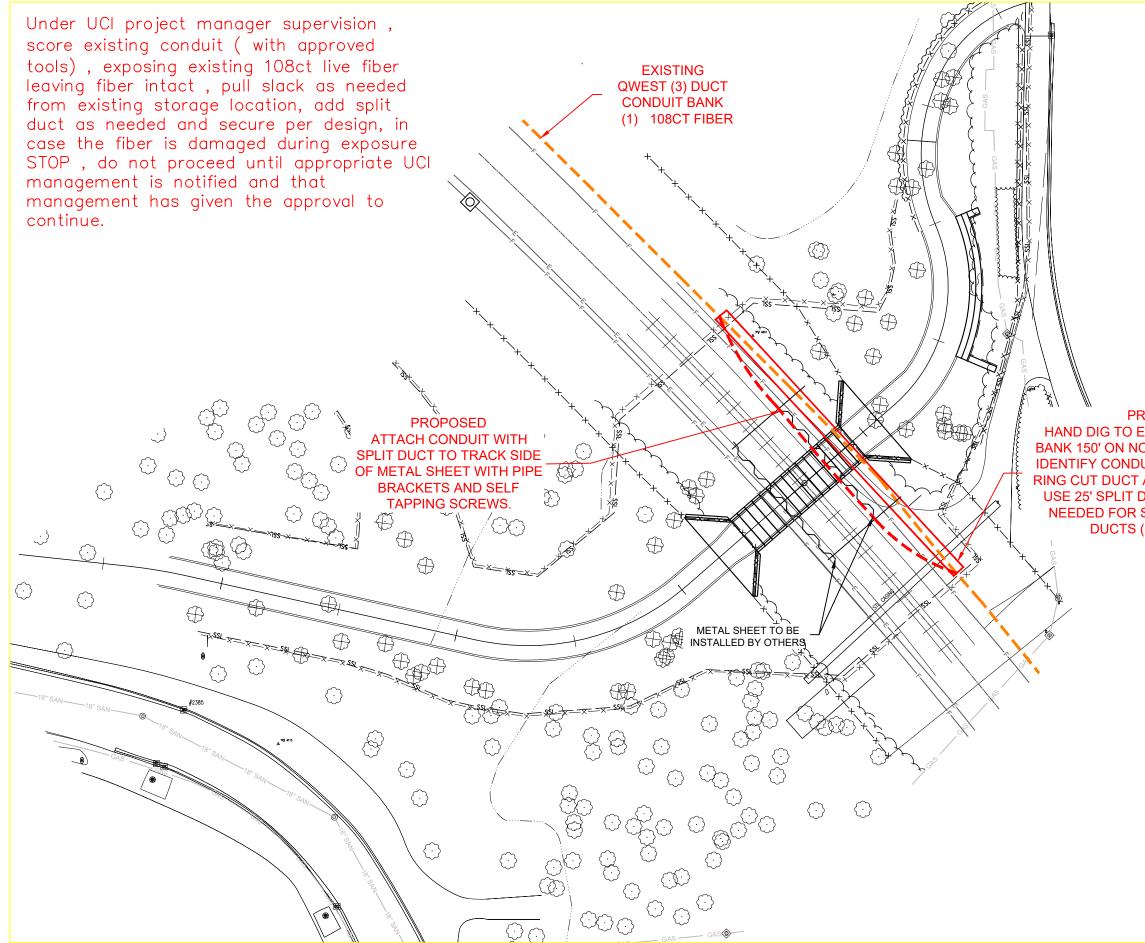
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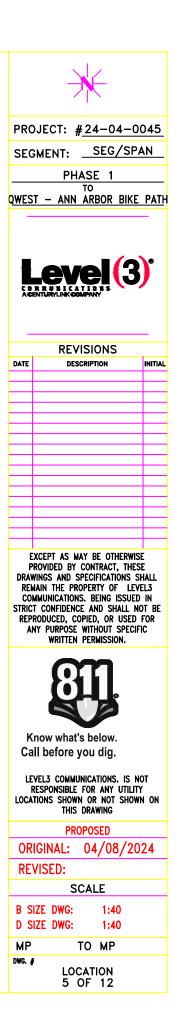
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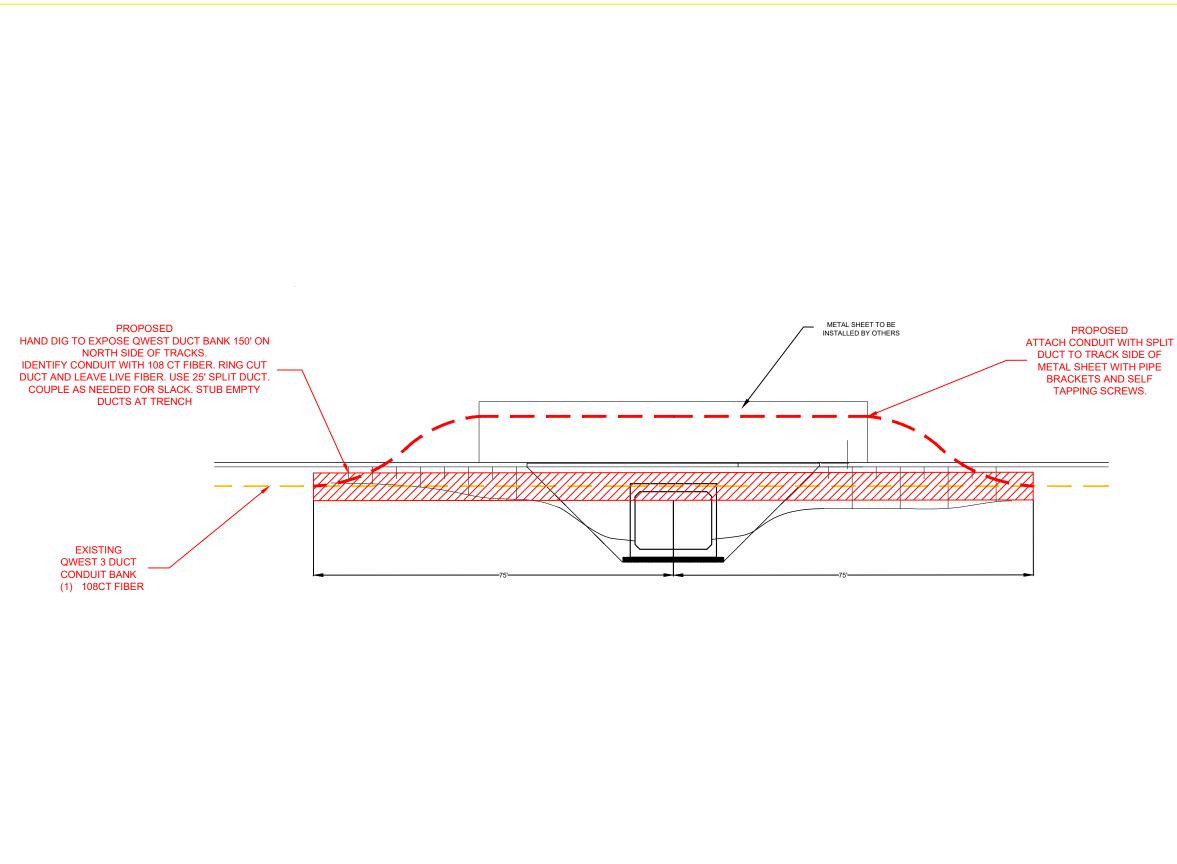


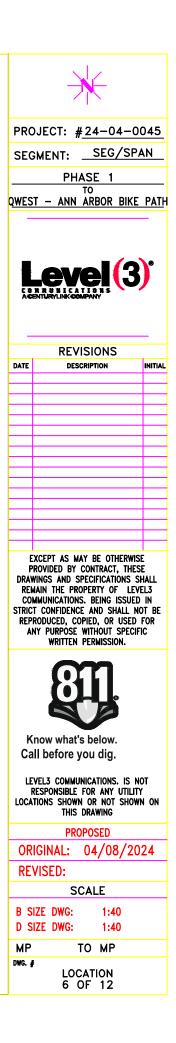
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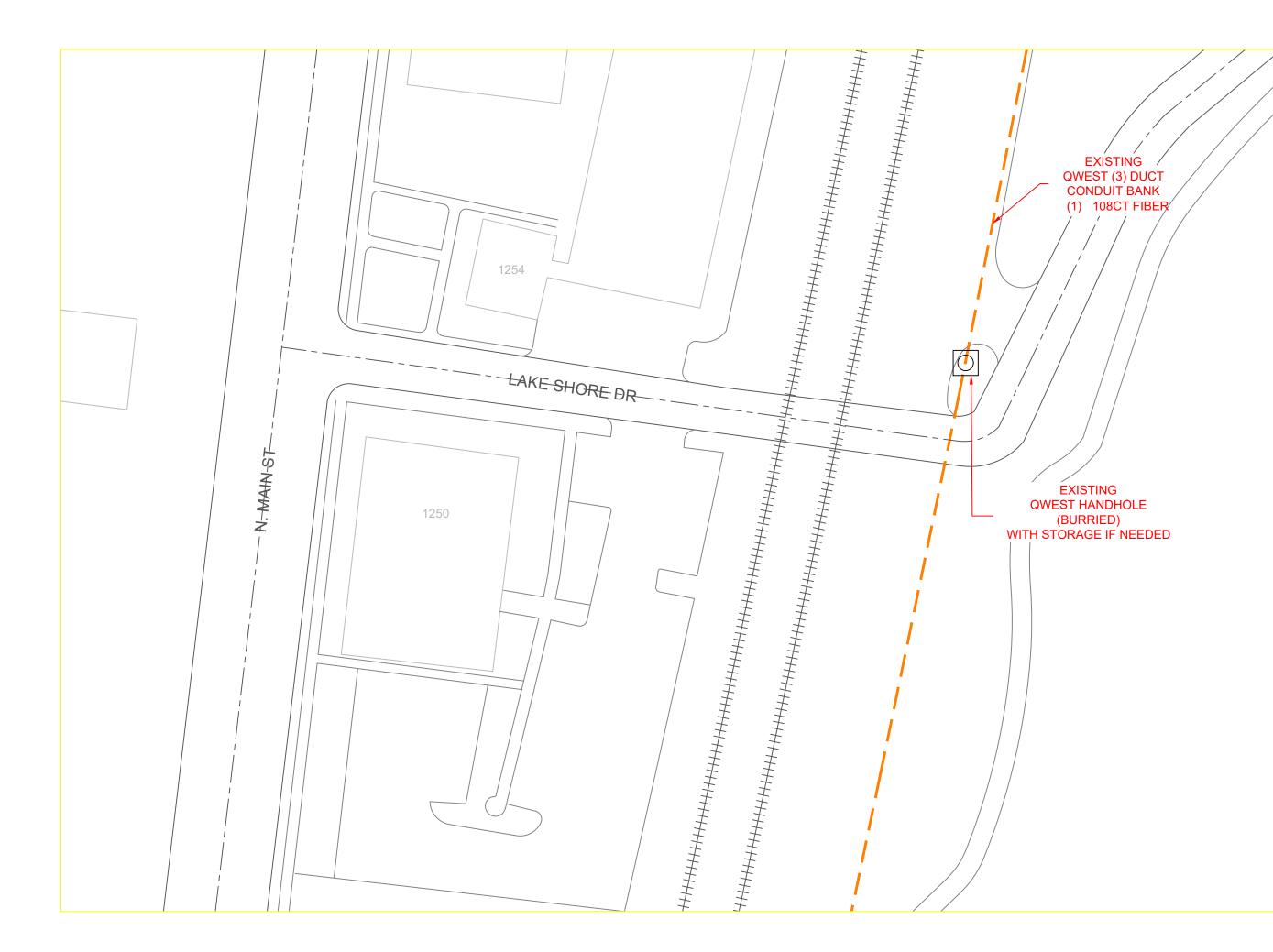


PROPOSED HAND DIG TO EXPOSE QWEST DUCT BANK 150' ON NORTH SIDE OF TRACKS. IDENTIFY CONDUIT WITH 108 CT FIBER. RING CUT DUCT AND LEAVE LIVE FIBER. USE 25' SPLIT DUCT AND COUPLE AS NEEDED FOR SLACK.. STUB EMPTY DUCTS (2) AT TRENCH.

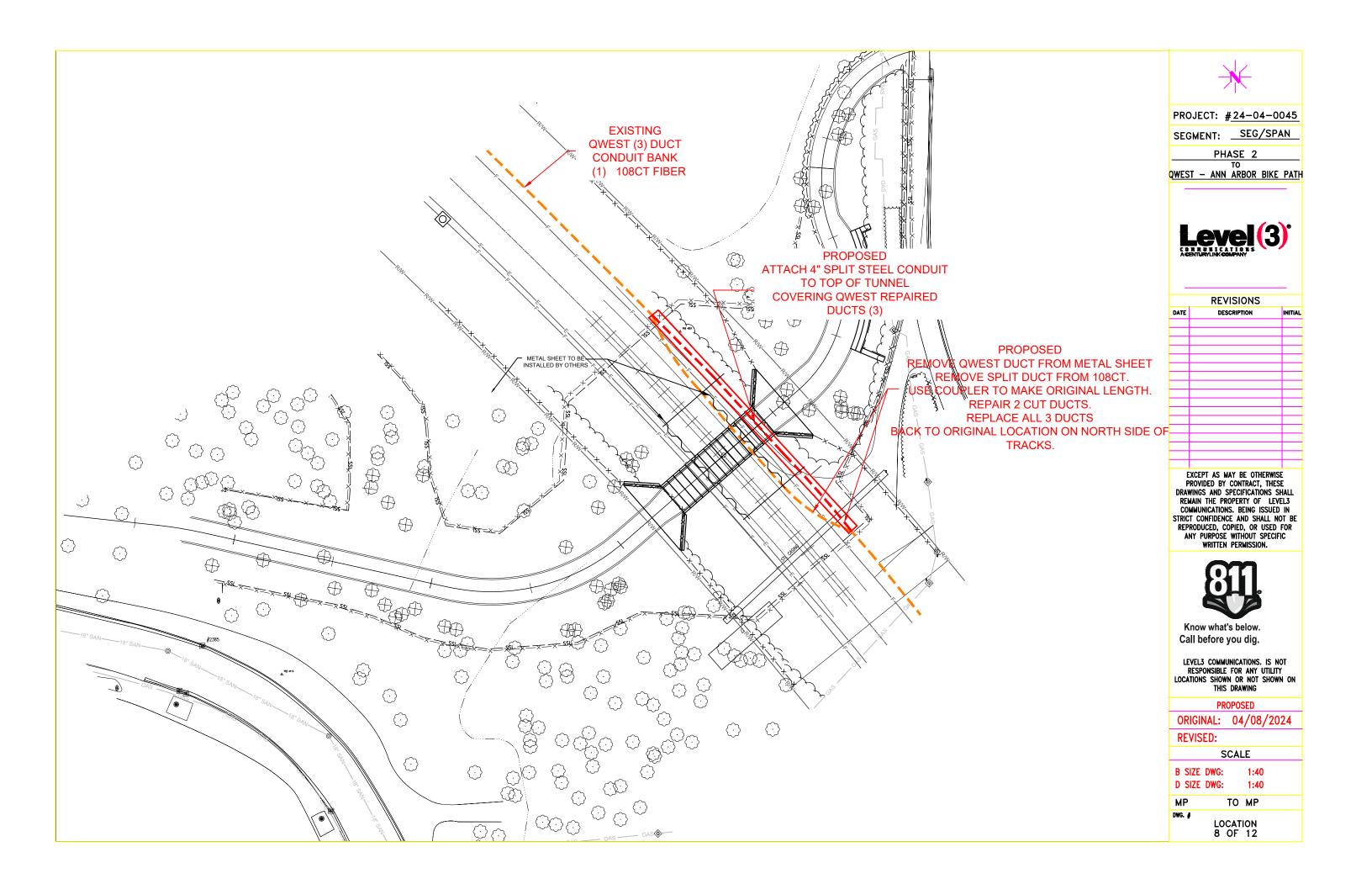


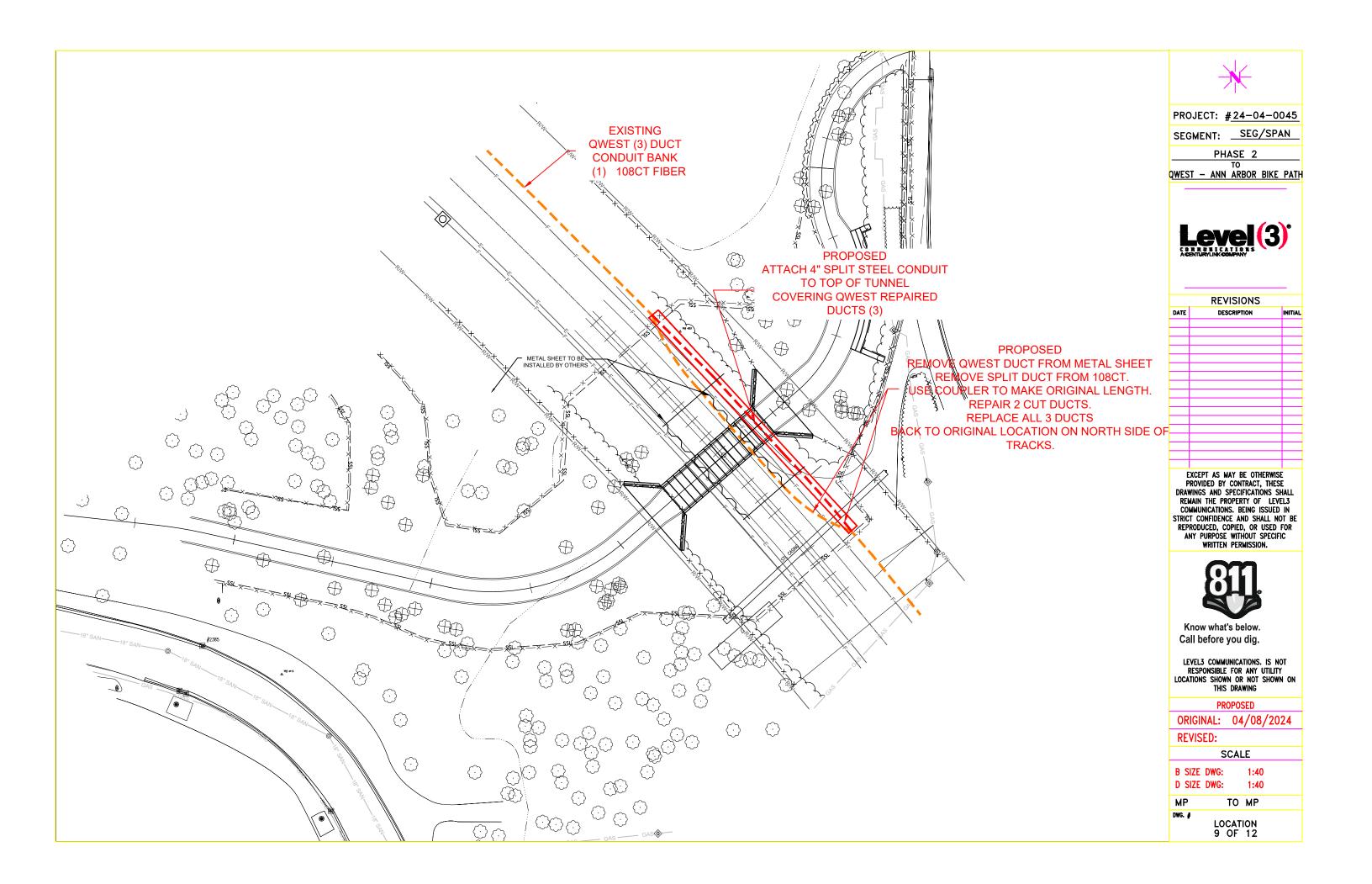


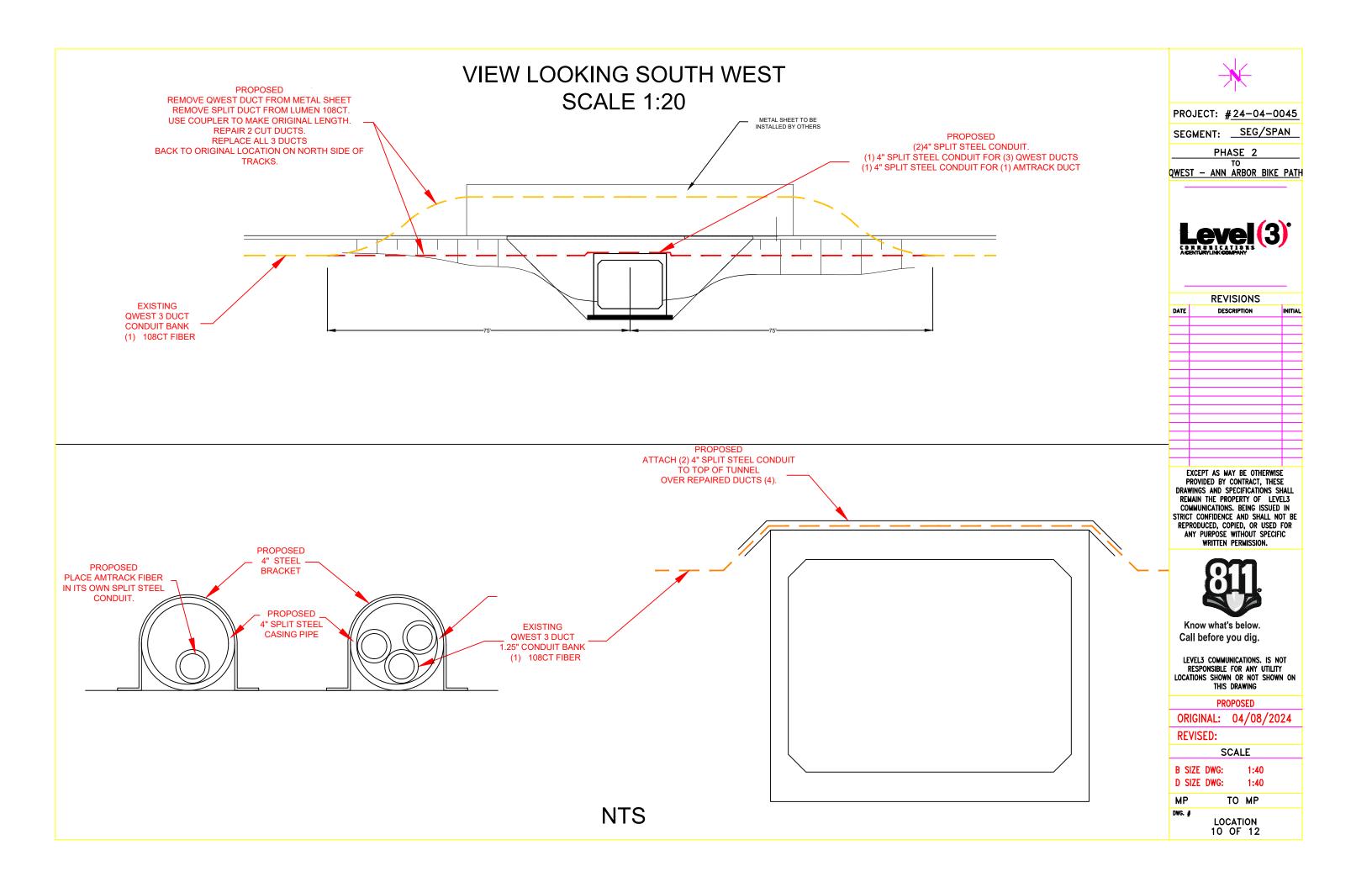


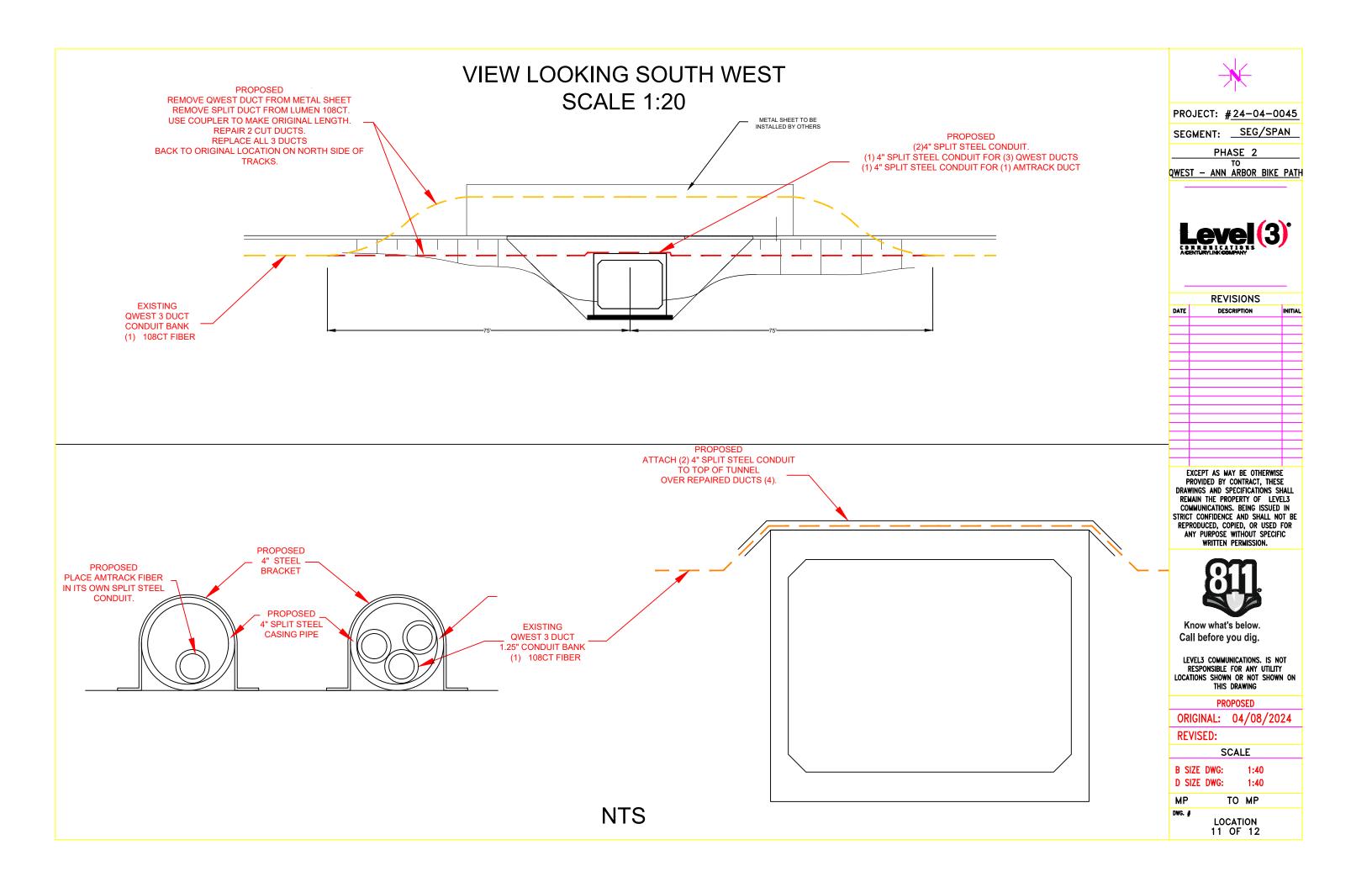












Total Underground Cost Unit		Total Aerial Cost Unit			Total Interior Cost Unit						
Description	Units	Estimated Quantity	Actual Quantity	Description	Units	Estimated Quantity	Actual Quantity	Description		Estimated Quantity	Actual Quantity
DIG & EXPOSE EXIST FACILITY	CU YD	150								Quantity	Quantity
RMV BURIED FACILITY	FT	150									
RMV BURIED FACILITY <=48in ADDL FAC	FT	300'									
REPOSITION FIBER SLACK EXST CONDUIT	FT	150									
GROUND LAY CABLE	FT	300'									
FACILITY ADJUSTMENT UNDERGROUND	FT	300'									
PLUG EXISTING CONDUIT	EA	4									
REPAIR CONDUIT OR HDPE	FT	400									
TUNNEL ATTACHMENT	FT	60									

Total Material Cost Unit			
Description	Units	Estimated Quantity	Actual Quantity
INRDCT 1.25 SDR 11 ORANGE	FT	300	
4" SPLIT STEEL PIPE	FT	30	
45 DEGREE 4" SPLIT STEEL PIPE	EACH	4	
FLEX SPLIT CONDUIT 1in-2in	FT	300	

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