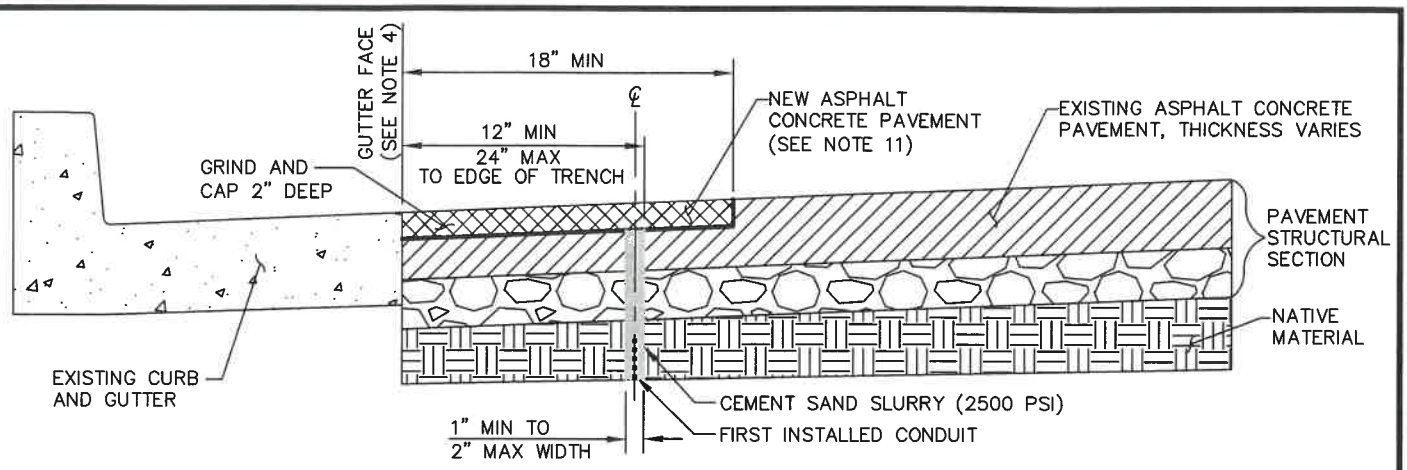

TYPICAL MICRO-TRENCH SECTION

NOTES

1. MICRO-TRENCHING SHALL ONLY BE USED TO INSTALL TELECOMMUNICATION CONDUITS.
2. MICRO-TRENCHING SHALL NOT BE ALLOWED IN CONCRETE PAVED STREETS, NOR SIDEWALKS, CURBS AND GUTTERS.
3. MICRO-TRENCH ALIGNMENTS SHALL CONSIST OF RUNS PARALLEL TO THE CENTERLINE OF THE STREET. STREET CROSSINGS MAY BE PERMITTED UPON THE CITY ENGINEER'S DISCRETION, PROVIDED THE ALIGNMENT IS PERPENDICULAR TO THE STREET CENTERLINE TO THE EXTENT POSSIBLE. MICRO TRENCH SHALL BE PLACED A MINIMUM OF 24", MEASURED HORIZONTALLY, FROM THE OUTSIDE OF ANY EXISTING UNDERGROUND UTILITY.
4. THE EDGE OF THE MICRO-TRENCH SHALL BE A MINIMUM OF 12-INCHES AND A MAXIMUM OF 24-INCHES FROM THE EXISTING FACE OF THE GUTTER, EXISTING CONCRETE STRUCTURE, OR CURB IF GUTTER IS NOT PRESENT.
5. THE MICRO-TRENCH WIDTH SHALL BE A MINIMUM OF 1-INCH AND A MAXIMUM 2-INCHES.
6. THE CONDUIT SHALL BE INSTALLED SO THAT THE TOP OF THE CONDUIT BANK IS AT A MINIMUM DEPTH OF 12-INCHES BELOW THE EXISTING AC PAVEMENT SURFACE AND AT LEAST 1-INCH BELOW THE BOTTOM OF THE PAVEMENT STRUCTURAL SECTION. THE MAXIMUM TRENCH DEPTH SHALL BE 24-INCHES.
7. CONDUIT BANK REQUIRES (1) 12AWG HIGH STRENGTH (MIN. BREAK LOAD 452#) COPPER-CLAD STEEL W/30MIL HDPE ORANGE INSULATION FOR LOCATE/TRACER WIRE.
8. ALL MICRO-TRENCHES SHALL BE COMPLETELY BACKFILLED WITH 2 SACK CEMENT SAND SLURRY 2500 PSI. (MEDIUM TO DARK RED COLOR) TO FINISHED GRADE BY THE END OF THE WORK DAY.
9. COMMENCEMENT OF SURFACE PREPARATION SUCH AS GRINDING FOR ASPHALT CONCRETE PAVING REPLACEMENT SHALL OCCUR NO SOONER THAN 48 HOURS AFTER SLURRY BACKFILL OF TRENCH. FIELD CONDITIONS OR MATERIAL USED MAY NECESSITATE A LONGER WAIT AS DETERMINED BY THE INSPECTOR.
10. AS SOON AS BACKFILL HAS CURED, NOT TO EXCEED 30 CALENDAR DAYS, ASPHALT CONCRETE SHALL BE GROUND AND CAPPED AS FOLLOWS:
    A. EXISTING AC AND SLURRY BACKFILL SHALL BE GROUND DOWN 2-INCHES, FOR A WIDTH OF 18-INCHES MINIMUM BUT NO LESS THAN 6-INCHES FROM BOTH EDGES OF THE MICRO-TRENCH AND RESURFACED IN KIND WITH CLASS C2 PG 64-10 OR ARHM IN ACCORDANCE WITH CURRENT GREENBOOK STANDARDS AND SPECIFICATIONS OR AS APPROVED BY THE CITY ENGINEER. WHEN THE CAP LIMIT IS WITHIN 2-FEET OR LESS FROM THE GUTTER FACE, CURB, SLAB OR STRUCTURE, THE CAP LIMIT SHALL EXTEND TO THAT ITEM. ADDITIONAL GRIND AND OVERLAY MAY BE REQUIRED AT THE CITY'S DISCRETION BASED ON STREET CLASSIFICATION, LANE LINE AND BIKE LANE LOCATIONS.
    B. PAVEMENT SHALL BE LEVEL WITH ADJACENT ROADWAY ELEVATIONS AND SHALL PROVIDE A SMOOTH SURFACE PER GREENBOOK SECTION 302-5 AND IS SUBJECT TO ACCEPTANCE BY THE INSPECTOR.
    C. PAVEMENT MARKINGS SHALL BE RESTORED IN KIND.
11. ONLY ONE MICRO-TRENCH PER SIDE OF THE STREET IS ALLOWED. ADDITIONAL MICRO-TRENCHES MAY BE CONSIDERED AT THE DISCRETION OF THE CITY ENGINEER.
12. CONNECTION TO SERVICE LATERALS, JUNCTION BOXES, ETC., SHALL BE DONE SUCH THAT CURB AND GUTTER IS NOT DISTURBED, SETTLED OR DAMAGED. REMOVAL LIMITS OF SIDEWALK SHALL FOLLOW APPLICABLE STANDARDS AND REQUIREMENTS AS APPROVED BY THE CITY ENGINEER. THE USE OF HYDRO-JETTING IS NOT PERMITTED. VOIDS RESULTING FROM TRENCHLESS METHODS SHALL BE BACKFILLED WITH APPROVED CONTROLLED LOW-STRENGTH MATERIAL (CLSM).
13. THE MICRO-TRENCH SHALL BE CONSTRUCTED WITH CONTINUOUS UNIFORM STRAIGHT AND NEAT EDGES.
14. CONSTRUCTION INSTALLATION METHODS PARTICULARLY SUITABLE FOR MICRO-TRENCHING SHALL INCLUDE:
    A. MICRO-TRENCHER CAPABLE OF MEETING TARGET DEPTH AND WIDTH IN A SINGLE PASS WITH AN INTEGRAL HOOD AND ASSOCIATED VACUUM SYSTEM. SELECTION OF CUTTING WHEEL SHALL BE SUCH THAT IT MINIMIZES DAMAGE TO THE ADJACENT AC SURFACE.
    B. MOBILE CONCRETE/SLURRY PLACEMENT WITH AN ON-BOARD VIBRATOR AND NARROW TROUGH TO MATCH MICRO-TRENCH WIDTH.
    C. MOBILE GROUND PENETRATING RADAR SYSTEM THAT IS CAPABLE OF LOCATING BOTH METALLIC AND NON-METALLIC PIPES AND CABLES TO A DEPTH OF 24-INCHES.

REGISTERED PROFESSIONAL ENGINEER
KHOI K. DO
No. 62809
CIVIL
STATE OF CALIFORNIA

APPROVED BY: 62809 9.14.22
KHOI K. DO, PE, CITY ENGINEER — RCE — DATE

RECOMMENDED: 70990 9/13/22
BRYAN LIRLEY, PE, ASST. CITY ENGINEER — RCE — DATE

REV	DESCRIPTION	BY	APP'D	DATE

CITY OF ONTARIO

MICRO-TRENCHING

STANDARD DRAWING NUMBER
1308