



TYPICAL MICRO-TRENCH SECTION
 (INTEGRAL CURB AND GUTTER SHOWN)
 NOT TO SCALE

NOTES:

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) "GREENBOOK".

GENERAL

1. MICRO-TRENCHING SHALL ONLY BE USED TO INSTALL TELECOMMUNICATION CONDUITS.
2. MICRO-TRENCHING SHALL NOT BE ALLOWED IN CONCRETE PAVED STREETS, NOR SIDEWALKS, PARKWAYS, CURBS AND GUTTERS.
3. THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITES, INCLUDING SERVICE CONNECTIONS IN THE FIELD. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT LEAST 48 HOURS PRIOR TO START OF WORK AT 8-1-1, OR TOLL-FREE AT 1-800-422-4133. THE CONTRACTOR SHALL FURTHER SUPPLEMENT THE FINDINGS OF U.S.A. TO DETERMINE THE EXACT LOCATIONS AND DEPTHS OF ALL UTILITES BY USING A MOBILE GROUND PENETRATING RADAR SYSTEM. THE CONTRACTOR SHALL POTHOLE ALL CROSSING UTILITIES AND PARALLEL UTILITIES WITHIN 18-INCHES OF THE PROPOSED ALIGNMENT TO A DEPTH OF 6-INCHES BELOW THE BOTTOM OF THE PROPOSED MICRO-TRENCH, TO DETERMINE THE EXISTING UTILITY ALIGNMENT AND ELEVATION. POTHOLES SHALL BE IMMEDIATELY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE GREENBOOK OR RESTORED AS DIRECTED BY THE ENGINEER.
4. IF EXISTING UTILITES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE INSPECTOR, ENGINEER AND UTILITY OWNER TO PERFORM THE REPAIRS PROMPTLY ACCORDING TO THEIR REQUIREMENTS AND PER ASSOCIATED COUNTY PERMITS. A SEPARATE PERMIT IS REQUIRED FOR EACH UTILITY REPAIR WORK.
5. THE FOLLOWING ITEMS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL:
 - A. PROVIDE A DETAILED SITE PLAN WHICH SHALL INCLUDE THE DISTANCES OF MICRO-TRENCH AND EDGES OF GRIND AND CAP TO FACE OF GUTTER, CURB, CONCRETE PAVEMENT OR STRUCTURE AS APPLICABLE.

LOS ANGELES COUNTY PUBLIC WORKS

MICRO-TRENCHING

STANDARD PLAN

1050-0

APPROVED

ASSISTANT DEPUTY DIRECTOR

3/29/2022

DATE

REVISIONS

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NOTES: (CONTINUED)

- B. A TYPICAL MICRO-TRENCH DETAIL THAT INCLUDES THE FOLLOWING INFORMATION:
 - (1) THE MAXIMUM ASPHALT CONCRETE (AC) ROADWAY THICKNESS, BASE, DEPTH, AND WIDTH OF MICRO-TRENCH, AND DEPTH OF TOPMOST CONDUIT.
 - (2) AC REINSTATEMENT INCLUDING WIDTH AND DEPTH OF GRIND AND CAP.
- C. DETAIL SHOWING CONDUIT FROM MAIN MICRO-TRENCH ALIGNMENT TO LATERAL SURFACE CONNECTIONS INCLUDING TO ANY JUNCTION/PULL BOX. INCLUDE SPECIFIC INFORMATION OF DEPTH, SIZE, AND METHOD OF EXCAVATION BELOW EXISTING CURB AND GUTTER.
- D. CUT SHEETS OF THE PROPOSED EQUIPMENT PARTICULARLY SUITABLE FOR MICRO-TRENCHING, INCLUDING:
 - (1) 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.
 - (2) MOBILE CONCRETE/SLURRY PLACEMENT WITH AN ON-BOARD VIBRATOR AND NARROW TROUGH TO MATCH MICRO-TRENCH WIDTH.
 - (3) MOBILE GROUND PENETRATING RADAR SYSTEM THAT IS CAPABLE OF LOCATING BOTH METALLIC AND NON-METALLIC PIPES AND CABLES TO A DEPTH OF 24-INCHES.
- E. OTHER SITE SPECIFIC ITEMS AS REQUIRED BY THE ENGINEER.

LIMITS OF REMOVALS, TRENCH WIDTH, AND LOCATION

- 6. THE MICRO-TRENCH SHALL BE CONSTRUCTED WITH CONTINUOUS UNIFORM STRAIGHT AND NEAT EDGES.
- 7. MICRO-TRENCH ALIGNMENTS SHALL CONSIST OF RUNS PARALLEL TO THE CENTERLINE OF THE STREET. STREET CROSSING MAY BE DONE PROVIDED THE ALIGNMENT IS PERPENDICULAR TO THE STREET CENTERLINE TO THE EXTENT POSSIBLE.
- 8. THE EDGE OF THE MICRO-TRENCH BEGINNING FROM FROM THE EXISTING EDGE OF GUTTER, EDGE OF PAVEMENT, OR FACE OF CURB IF GUTTER IS NOT PRESENT SHALL BE A MINIMUM OF 24-INCHES TO A MAXIMUM OF LANE CENTER TO AVOID WHEEL PATHS.
- 9. THE MICRO-TRENCH WIDTH SHALL BE A MINIMUM OF 1-INCH AND A MAXIMUM OF 4-INCHES.
- 10. MICRO-TRENCHING MAY BE PERMITTED UPON THE ENGINEER'S DISCRETION ON SPECIAL PAVEMENTS SUCH AS DECORATIVE ASPHALT PAVING, AND THROUGH EXISTING IMPROVEMENTS SUCH AS PERPENDICULAR TO SPEED BUMPS. SPECIAL PAVEMENTS AND EXISTING IMPROVEMENTS SHALL BE RESTORED IN KIND AS APPROVED BY THE ENGINEER. HOWEVER, MICRO-TRENCHING THROUGH EXISTING CURB, GUTTER, CROSS GUTTER, BUS PAD, SIDEWALK, FLOATING CURB EXTENSION, BUS BULB, RAISED CROSSWALK, ISLAND, MINI-ROUNDOABOUT, OR SIMILAR ELEMENTS IS NOT PERMITTED. IF THESE ITEMS ARE ENCOUNTERED THE EDGE OF MICRO-TRENCH LOCATION IN #8 MAY VARY WITH APPROVAL BY ENGINEER.
- 11. UP TO TWO (2) VERTICALLY STACKED CONDUITS CAN BE PLACED WITHIN A MICRO-TRENCH.
- 12. THE CONDUIT SHALL BE INSTALLED AT A MINIMUM DEPTH OF COVER OF 12-INCHES BELOW THE EXISTING AC PAVEMENT SURFACE, AT LEAST 1-INCH BELOW THE BOTTOM OF THE AC PAVEMENT, AND THE BOTTOM OF THE MICRO-TRENCH SHALL BE AT A MAXIMUM DEPTH OF 26-INCHES BELOW THE EXISTING AC PAVEMENT SURFACE UNLESS APPROVED BY THE ENGINEER.
- 13. ANCHORS/SPACERS SHALL BE PLACED AT A MAXIMUM OF 10-FEET APART ALONG THE ALIGNMENT TO ENSURE THE CONDUIT DOES NOT RISE FROM THE BOTTOM OF THE MICRO-TRENCH AND DOES NOT TOUCH THE WALLS OF THE MICRO-TRENCH DURING INSTALLATION.

BACKFILL

- 14. ALL MICRO-TRENCHES SHALL BE COMPLETELY BACKFILLED WITH TRENCH BACKFILL SLURRY (100-E-100) TO FINISH GRADE BY THE END OF THE WORK DAY.

GRIND AND RESURFACE SECTION

- 15. COMMENCEMENT OF SURFACE PREPARATION SUCH AS GRINDING/CHIPPING FOR ASPHALT CONCRETE PAVING REPLACEMENT WILL OCCUR NO SOONER THAN 48 HOURS AFTER SLURRY BACKFILL OF TRENCH. FIELD CONDITION OR MATERIAL USED MAY NECESSITATE A LONGER WAIT AS DETERMINED BY THE INSPECTOR.
- 16. 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 BUT NO LESS THAN 6-INCHES FROM BOTH EDGES OF THE MICRO-TRENCH AND RESURFACED WITH;
 - (1) CLASS C2 ASPHALT AND BINDER GRADE PER SSPWC TABLE 203-6.4.4 AND LOS ANGELES COUNTY PUBLIC WORKS STANDARD PLAN.
 - OR (2) 1-1/2 INCH OF ARHM OVER 1/2 INCH OF D2 ASPHALT CONCRETE TO MATCH EXISTING SURFACE.
 - B. WHEN THE CAP LIMIT IS WITHIN 2-FEET OR LESS FROM THE EDGE OF GUTTER, CURB, SLAB OR STRUCTURE, THE CAP LIMIT SHALL EXTEND TO THAT ITEM.
 - C. TACK COAT ALL EDGES WITH EITHER SS-1H EMULSIFIED ASPHALT OR PG 64-10 PAVING ASPHALT IMMEDIATELY BEFORE THE ADJOINING ASPHALT CONCRETE IS PLACED.

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NOTES: (CONTINUED)

- D. WHERE ANGULAR CROSSING OR ANY LENGTH-WISE CUTS OF A BIKE LANE OCCUR BY MICRO-TRENCHING, THE CAPPING LIMITS SHALL EXTEND THE FULL WIDTH OF THE BIKE LANE. PERPENDICULAR CROSSING MAY RECEIVE TYPICAL CAPPING WIDTH PER NOTE 16.A. ABOVE. PAVEMENT MARKINGS SHALL BE RESTORED IN KIND. WHERE NO BIKE LANE MARKINGS EXIST, CONTRACTOR SHALL CONSULT WITH ENGINEER TO DETERMINE LOCATION OF ANY PLANNED BIKE LANES SO THAT IMPACT OF PAVEMENT SURFACE MAY BE AVOIDED.
- E. PAVEMENT SHALL BE LEVEL WITH ADJACENT ROADWAY ELEVATIONS AND SHALL PROVIDE A SMOOTH SURFACE PER SSPWC SECTION 302-5.

VAULTS AND SERVICE CONNECTIONS

- 17. 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 ENGINEER.
- 18. THE USE OF HYDRO-JETTING IS NOT PERMITTED. TRENCHLESS METHODS SHALL NOT CREATE A VOID TWO TIMES GREATER THAN CONDUIT. VOID SHALL BE COMPACTED AND BACKFILLED WITH APPROVED CONTROLLED LOW-STRENGTH MATERIAL (CLSM)

IDENTIFICATION

- 19. EACH MICRO-TRENCH SHALL BE IDENTIFIED WITH A METAL IDENTIFICATION TAG LISTING THE OWNER, YEAR OF CONSTRUCTION, AND INCLUDE THE WORDS "NOT A SURVEY POINT". IF THE WORK IS MORE THAN 50 FEET IN LENGTH PLACE THE TAG NEAR EACH END OF THE MICRO-TRENCH AND AT INTERVALS NOT TO EXCEED 50 FEET.

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