

PAVEMENT MORATORIUM

THREE (3) YEARS MORATORIUM FOR NEW PAVEMENT AND ONE (1) YEAR FOR SLURRY SEAL.

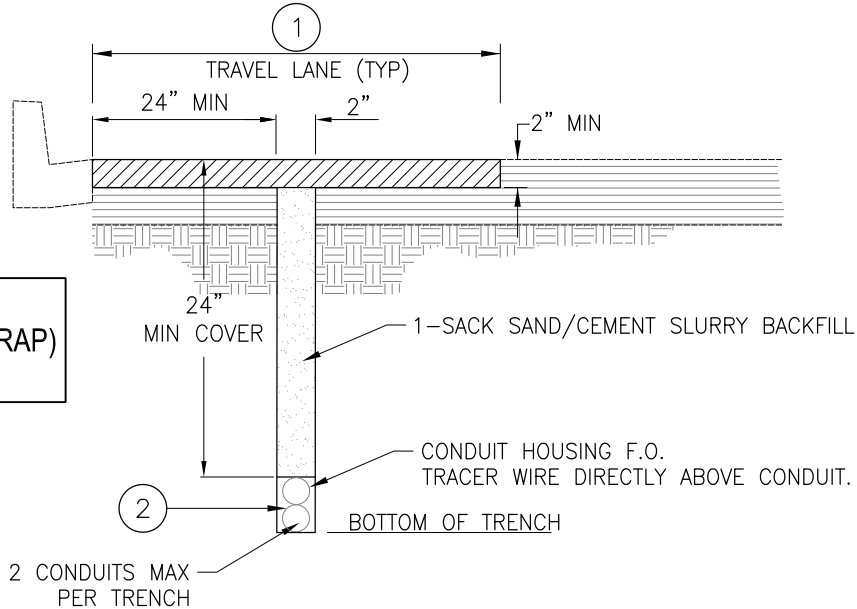
MORATORIUM PERIOD BEGINS AFTER NOTICE OF COMPLETION (NOC) HAS BEEN FILED.

FOR NOC DATES REFER TO PUBLIC WORKS WEB SITE.

REPAIRS DESCRIBED IN THIS STANDARD ARE FOR STREETS NOT UNDER MORATORIUM.

ANY TRENCHING IN STREETS UNDER MORATORIUM REQUIRES PRIOR APPROVAL FROM THE CITY ENGINEER.
IF APPROVED, EXTENSIVE PAVEMENT RESTORATION AND ITS LIMITS SHALL BE DETERMINED BY THE CITY ENGINEER

ASPHALT CONCRETE (AC) SECTION



ASPHALT CONCRETE :
Finish Course: B3 PG 70-10 (NO RAP)

TYPICAL MICROTRENCHING SECTION

NOTES:

- ① a. GRIND A MINIMUM 2" FOR FULL WIDTH OF ANY TRAVEL LANE IMPACTED BY THE TRENCH. IF ANY TRAVEL LANE IMPACTED BY THE TRENCH IS ADJACENT TO EITHER A BIKE LANE OR A PARKING LANE, THE PAVEMENT SHALL BE GRIND AND RESURFACED WITH 2" OF AC TO THE EDGE OF THE GUTTER (SEE APW STD 132 CASE I, II OR V ON SHEET 2).
- b. FOR TRANSVERSE (PERPENDICULAR) TRENCHES, GRINDING AND RESURFACING WITH 2" OF AC SHALL EXTEND 15' BEYOND LIMITS OF EACH SIDE OF THE TRENCH (SEE APW STD 132 SEE CASE III, SHEET 2).
- ② CONDUIT SHALL BE SECURED IN PLACE TO PREVENT RISING FROM THE TRENCH BOTTOM AND TOUCHING THE TRENCH WALL. ANCHORS SHALL BE SET A OF MAX 10' SPACING.

GENERAL NOTES FOR ALL TRENCH TYPES:

- 1. NO RECLAIMED ASPHALT PAVEMENT (RAP) IN FINISHED AC FINISH COURSE.
- 2. THE CITY CAN REQUIRE FULL DEPTH AC SECTION REPLACEMENT DEPENDING ON STREET CONDITIONS.
- 3. ALL DAMAGED OR REMOVED STRIPING, PAVEMENT LEGENDS, MARKERS, AND TRAFFIC SIGNAL LOOPS SHALL BE REPLACED.
- 4. MANHOLES, VALVES OR VAULTS IMPACTED BY THE AC IMPROVEMENTS SHALL BE RAISED AND LOWERED PER GREENBOOK, COA STD 205-1, 206, W-150, W-151 AND W-152.
- 5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (GREENBOOK), LATEST APPROVED EDITION, INCLUDING SUPPLEMENTS, AND THE CITY OF ANAHEIM "SPECIAL PROVISIONS" AND "SUPPLEMENTS AND MODIFICATIONS" AS APPROVED BY CITY ENGINEER.
- 6. CONTRACTOR SHALL PROVIDE COMPACTION TEST RESULTS CERTIFIED BY A GEOTECHINCAL ENGINEER.

**TRENCH REPLACEMENT
MICROTRENCHING FOR FIBER ONLY**



REVISIONS			
No.	DATE	No.	DATE

[Signature]
CITY ENGINEER

05/05/22
DATE

[Signature]
DIRECTOR OF PUBLIC WORKS

05/05/22
DATE

STANDARD DETAIL
133
SHEET 1 OF 2

DEPARTMENT OF PUBLIC WORKS

MICROTRENCHING NOTES:

1. MICROTRENCHING SHALL ONLY BE USED TO INSTALL FIBER TELECOMMUNICATION CONDUITS.
2. MICROTRENCHING WILL NOT BE ALLOWED IN CONCRETE PAVED STREETS, SIDEWALKS, PARKWAYS, CURBS AND GUTTERS.
3. THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITIES, 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. THE CONTRACTOR SHALL FURTHER SUPPLEMENT THE FINDINGS OF U.S.A. TO DETERMINE THE EXACT LOCATIONS AND DEPTHS OF ALL UTILITIES 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 12-INCHES BELOW THE BOTTOM OF THE MICROTRENCH, TO DETERMINE THE EXISTING UTILITY ALIGNMENT AND ELEVATION. POTHOLES SHALL BE IMMEDIATELY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE APW STANDARD DETAIL NO. 132 OR RESTORED AS DIRECTED BY THE ENGINEER.
4. IF EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE INSPECTOR, ENGINEER AND UTILITY OWNER TO PERFORM THE REPAIRS, AT THE CONTRACTOR'S EXPENSE, PROMPTLY ACCORDING TO THE UTILITY OWNER'S REQUIREMENTS AND PER ASSOCIATED CITY PERMITS.
5. THE FOLLOWING ITEMS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL:
 - A. ASPHALT CONCRETE (AC) ROADWAY APPROXIMATE THICKNESS, BASE, DEPTH AND WIDTH OF MICROTRENCH, DEPTH OF TOPMOST CONDUIT, DISTANCES OF MICROTRENCH TO FACE OF GUTTER, CURB, CONCRETE PAVEMENT OR STRUCTURE AS APPLICABLE.
 - B. DETAIL SHOWING CONDUIT FROM MAIN MICROTRENCH 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.
 - C. CUT SHEETS OF THE PROPOSED EQUIPMENT PARTICULARLY SUITABLE FOR MICRO-TRENCHING, INCLUDING:
 - MICROTRENCHER 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.
 - MOBILE CONCRETE/SLURRY PLACEMENT WITH AN ON-BOARD VIBRATOR AND NARROW TROUGH TO MATCH MICRO-TRENCH WIDTH.
 - MOBILE GROUND PENETRATING RADAR SYSTEM THAT IS CAPABLE OF LOCATING BOTH METALLIC AND NON-METALLIC PIPES AND CABLES TO A DEPTH OF 36-INCHES.

LIMITS OF REMOVALS, TRENCH WIDTH, AND LOCATION

6. THE MICROTRENCH SHALL BE CONSTRUCTED WITH CONTINUOUS UNIFORM STRAIGHT AND NEAT EDGES.
7. MICROTRENCH 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 MICROTRENCH SHALL BE A MINIMUM OF 24-INCHES FROM THE EXISTING FACE OF THE GUTTER, EXISTING CONCRETE STRUCTURE, OR CURB IF GUTTER IS NOT PRESENT.
9. THE MICROTRENCH WIDTH SHALL BE A MINIMUM OF 1-INCH AND A MAXIMUM OF 2-INCHES.
10. MICROTRENCHING IS NOT ALLOWED THROUGH EXISTING CURB, GUTTER, CROSS GUTTER, BUS PAD, SIDEWALK, FLOATING CURB EXTENSION, BUS PADS, COLORED CROSSWALK, MEDIAN ISLANDS, OR SIMILAR ELEMENTS IS NOT PERMITTED.
11. THE CONDUIT SHALL BE INSTALLED TO HAVE AT A MINIMUM DEPTH OF 24-INCHES BELOW THE EXISTING AC PAVEMENT SURFACE OF COVER. THE CONDUIT(S) SHALL START BELOW THE MINIMUM 24-INCHES OF COVER.
11. UP TO TWO (2) VERTICALLY STACKED CONDUITS CAN BE PLACED WITHIN A MICRO-TRENCH.
12. ANCHORS/SPACERS SHALL BE PLACED AT A MAXIMUM OF 10- FEET APART ALONG THE ALIGNMENT.
13. A COATED COPPER STEEL TRACER WIRE OF #12-GAGE (OR LARGER) SHALL BE INSTALLED ABOVE THE CONDUITS AND CONNECTED TO GROUNDING RODS PER NESC GUIDELINES.

BACKFILL

14. ALL MICROTRENCHES SHALL BE COMPLETELY BACKFILLED WITH A 1-SACK CEMENT/SAND SLURRY TO FINISH GRADE BY THE END OF THE WORK DAY.

VAULTS AND SERVICE CONNECTIONS

15. 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.
16. THE USE OF HYDRO-JETTING IS NOT PERMITTED. TRENCHLESS METHODS SHALL NOT CREATE A VOID TWO TIMES GREATER THAN CONDUIT. VOIDS SHALL BE COMPACTED AND BACKFILLED WITH APPROVED CONTROLLED LOW-STRENGTH MATERIAL (CLSM) SUCH AS 1-SACK SAND/CEMENT SLURRY.


IDENTIFICATION

17. EACH MICROTRENCH 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 AT EVERY PROPERTY DROP ON THE CURB.
18. PROVIDE A GIS LAYER OF DEPLOYED FIBER LINE.


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SHEET 2 OF 2

DEPARTMENT OF PUBLIC WORKS