

TO: James L. App, City Manager
FROM: Robert A. Lata, Community Development Director
SUBJECT: Utility Trench Repair Standards
DATE: April 6, 2004

Needs: For the City Council to consider the adoption of new standards for pavement repairs associated with utility trenching.

Facts:

1. At their meeting of May 28, 2002, the Planning Commission moved to direct City staff to forward a letter to the City Council with regards to concerns about inconsistent street patches. The Planning Commission suggested that the Streets and Utilities Committee could look into establishing more stringent standards for patching City streets after trenching.
2. Research into street patching standards in other communities found that many require a "Street Cutting Permit" which includes specifications, tracking and fee structures.
3. In May 2003, a Utility Franchise Fee to offset the cost to maintain streets that have been deteriorated by utility trenching was introduced. The Fee was based upon the relationship of trench repairs to the on-going cost of City wide street maintenance. (Citing a study by the University of Cincinnati on the impact of utility trenching on long-term pavement performance).
4. The City Council adopted a Utility Franchise Fee on July 1, 2003, based upon this research.
5. The Streets and Utilities Committee reviewed the proposed trench repair standards at their meeting of February 27, 2004. The Committee agreed to forward the new standards to the City Council with a recommendation of approval with the stipulation that the warranty period for contractors constructing utility trench repairs be nine months.

Analysis and

Conclusion: The research by the University of Cincinnati indicates that the area of impact to an existing street extends to three feet outside the edge of the trench. A trench repair standard that accounts for these impacts is proposed.

The requirement to overlay multiple utility trenches on a single project is included in the Standard Conditions for Tracts and Parcel Maps adopted by the City Council. However, there is no standard that addresses the circumstances under which a full pavement overlay is required. Specific criteria are needed that prompt the full paving overlay of streets where multiple excavations have occurred.

Nearly all complaints regarding rough patches in streets are in reference to temporary repairs. Temporary repairs are typically comprised of asphalt placed cold. Cold asphalt is designed to be compacted by on-going traffic and therefore is left a little higher than adjacent grade. Cold asphalt may compact below adjacent grade resulting in annoying bumps. Temporary repairs need to be monitored in order to be effective and to limit disruption and traffic comfort. A temporary trench repair standard is included for consideration in addition to a monitoring program to assign responsibility for on-going maintenance and timely permanent pavement replacement.

Policy

Reference: City Standard Details and Specifications

Fiscal

Impact: The trench repair standards proposed are designed to mitigate the impact of utility trenches on the life and durability of streets. The implementation of these standards will result in longer paving life of streets and therefore neutralize the costs driven by premature repair of asphalt that has been trenched and patched inadequately.

- Options:**
- a. Adopt Resolution No. 04-xx revising Standard Drawing U-2 as shown in Exhibit A and adopt new City Standard Drawing U-2A as shown on Exhibit B and add text to the City Standard specification as noted in Exhibit C.
 - b. Amend, modify or reject the option above.

Attachments: (1)

1. Resolution with exhibits A, B & C

RESOLUTION NO. 04-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES
ADOPTING A CITY STANDARD DETAIL FOR UTILITY TRENCH REPAIRS
IN CITY STREETS

WHEREAS, at their meeting of February 27, 2004, the Streets and Utilities Committee forwarded a recommendation to the City Council to revise City Standard Detail U-2 (attached hereon as Exhibit A) and adopt City Standard Detail U-2A (attached hereon as Exhibit B) for repair of utility trenches in City streets; and

WHEREAS, the utility trench repairs standard will include a program of monitoring trench repairs and requiring cash deposits from contractors as a condition of issuance of encroachment permits. This program is outlined in text to be added to the City Standard Details and Specifications (attached hereon as Exhibit C); and

WHEREAS, the adoption of a utility trench repair standard is exempt from environmental review in accordance with Section 15061(b)(3) of the Guidelines to Implement the California Environmental Quality Act. The Standard will not have a significant effect on the environment.

NOW, THEREFORE, BE IT RESOLVED, DETERMINED, AND ORDERED as follows:

SECTION 1. That the City Council of the City of El Paso de Robles does hereby revise Standard Drawing U-2, as shown on attached "Exhibit A"; adopt new City Standard Drawing U-2A, as shown on the attached Exhibit "B" and add text to the City Standard Specifications as noted on attached Exhibit C.

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 6th day of April, 2004, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Frank R. Mecham, Mayor

ATTEST:

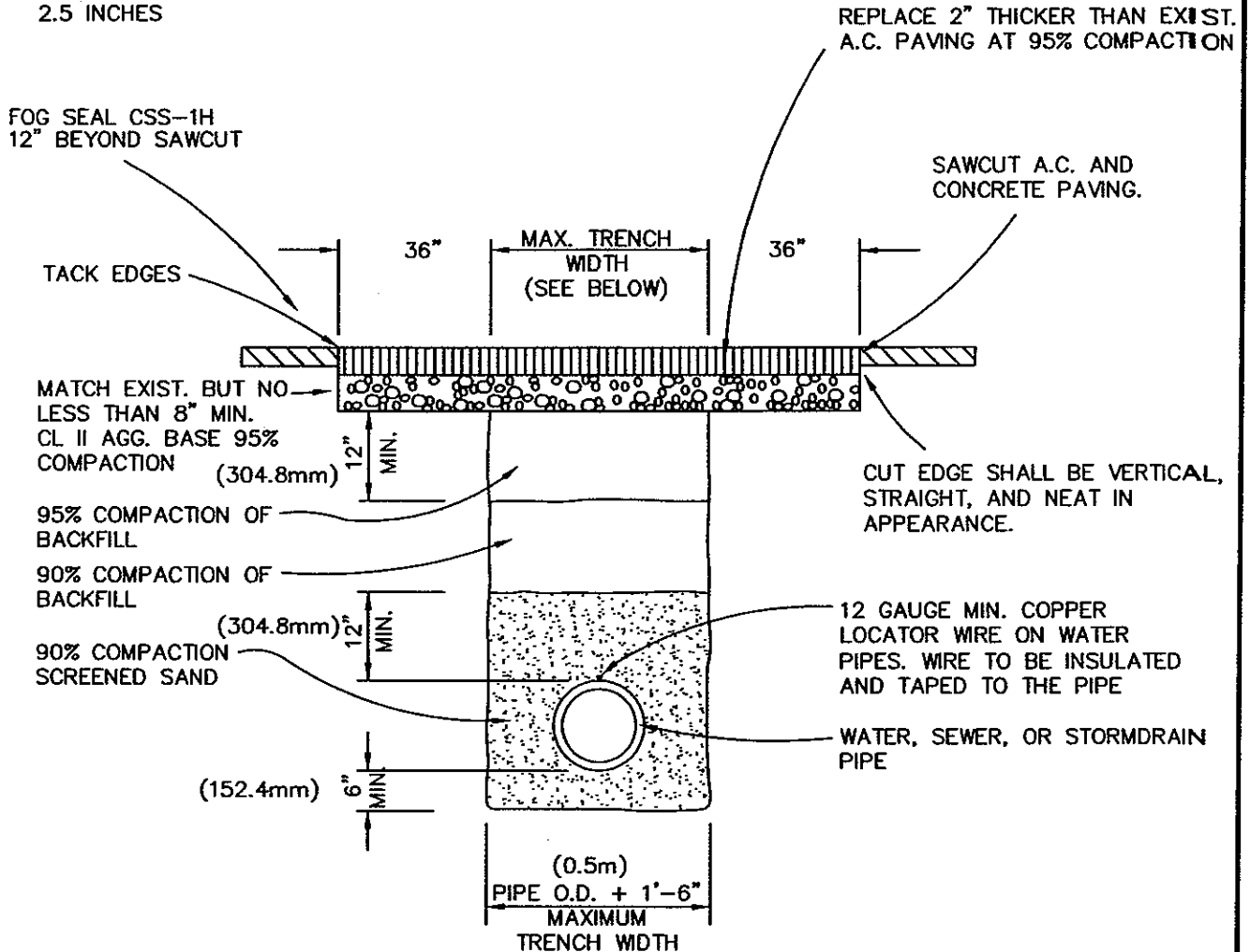
Sharilyn M. Ryan, Deputy City Clerk

REVISIONS

DESCRIPTIONS	BY	DATE	APPROVED

EXHIBIT "A"

MINIMUM PAVEMENT DEPTHS ARE AS FOLLOWS:
 LOCAL STREETS 4" (2 LIFTS)
 COLLECTOR STREETS 5" (2 LIFTS)
 ARTERIAL STREETS 6" (3 LIFTS)
 LIFTS SHALL BE PLACED IN DEPTHS NOT TO EXCEED 2.5 INCHES



NOTES:

- No. 12 AWG LOCATOR WIRE REQUIRED ON ALL WATER MAINS AND SERVICES, TAPED TO TOP OF PIPE (AND SEWER FORCE MAINS).
- NO ROCKS OR OLD PAVEMENT MAY BE DEPOSITED WITH BACKFILL.
- SEE STANDARD U-2A FOR TEMPORARY PATCHES.
- FINISH SURFACE SHALL MATCH EXISTING GRADE WITH A TOLERANCE OF 0.25 INCHES ABOVE ADJACENT GRADE.
- A SEPARATE CITY RIGHT-OF-WAY ENCROACHMENT PERMIT IS REQUIRED.

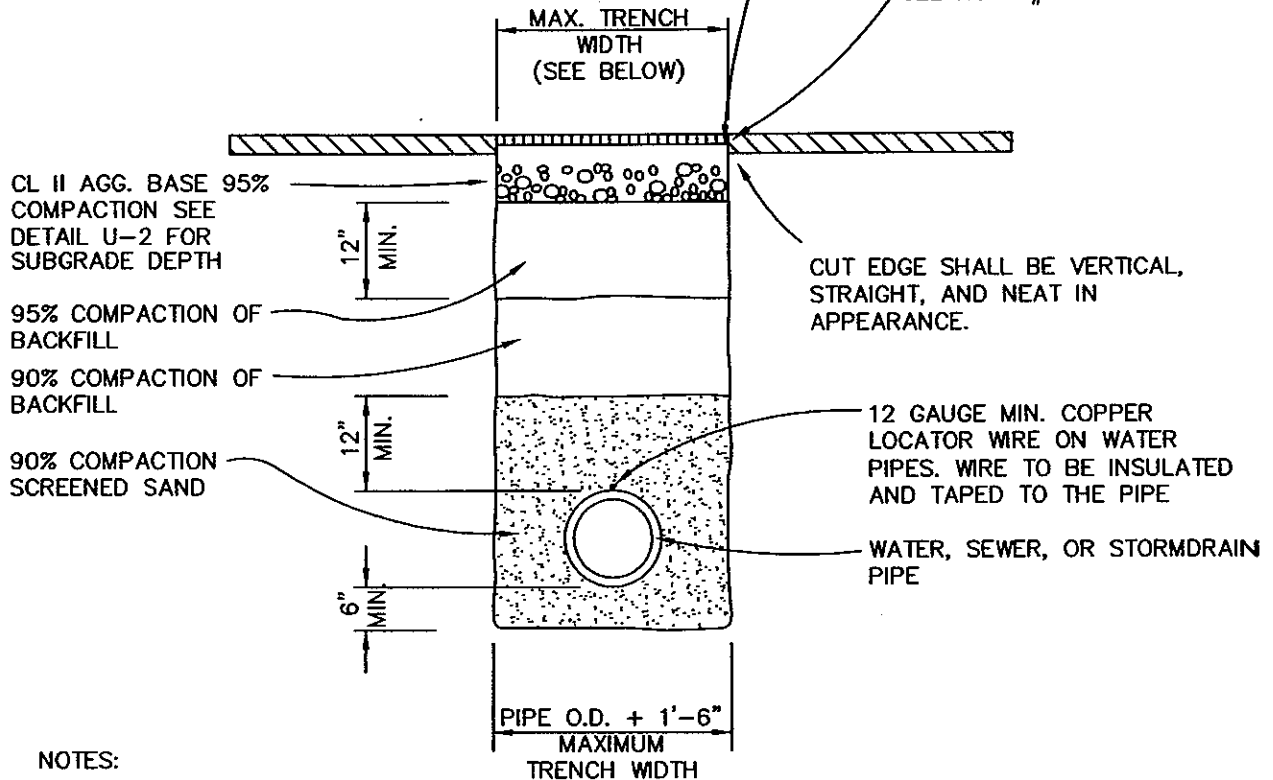
DRAWN BY: JAC	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
DESIGNED BY:		
DATE: 12/01/03	PIPE IN TRENCH DETAIL	U-2
FILE NAME: PR-U-2.DWG		

REVISIONS

DESCRIPTIONS	BY	DATE	APPROVED

2" TEMPORARY A.C. PAVING

EXHIBIT "B"



NOTES:

1. WHEN A TEMPORARY PATCH IS USED, THE INITIAL WIDTH OF THE SAWCUT SHALL BE NO GREATER THAN THAT NECESSARY TO CONDUCT THE EXCAVATION. THE DEPTH OF THE TEMPORARY PATCH SHALL BE 2 INCHES.
2. THE FINISHED SURFACE OF THE TEMPORARY PATCH SHALL, IN ALL CASES, BE LEVEL WITH, OR NO GREATER THAN 1/2 INCH ABOVE, THE ADJACENT GRADE OF THE EXISTING STREET.
3. A TEMPORARY PATCH WILL BE MONITORED ON A DAILY BASIS AND SHALL BE IMMEDIATELY RESTORED TO STANDARD AS IT COMPACTS.
4. IN NO CASE SHALL A TEMPORARY PATCH BE LEFT WITHOUT PERMANENT REPAIR FOR MORE THAN 30 CALENDAR DAYS. THE PERIOD OF THE TEMPORARY PATCH MAY BE REDUCED AS DETERMINED BY THE CITY ENGINEER, SUCH AS IN THE CASE OF ARTERIAL STREETS OR THOSE SERVING HIGH TRAFFIC VOLUMES.
5. No. 12 AWG LOCATOR WIRE IS REQUIRED ON ALL WATER MAINS AND SERVICES, TAPED TO TOP OF PIPE (AND SEWER FORCE MAINS).
6. NO ROCKS OR OLD PAVEMENT MAY BE DEPOSITED WITH BACKFILL.
7. SEE STANDARD U-2 FOR PERMANENT TRENCH REPAIR DETAILS.
8. A SEPARATE CITY RIGHT-OF-WAY ENCROACHMENT PERMIT IS REQUIRED.

DRAWN BY: JAC	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
DESIGNED BY:		
DATE: 12/01/03	TEMPORARY TRENCH REPAIR	U-2A
FILE NAME: PR-U-2A.DWG		

EXHIBIT “C”

CITY STANDARD DETAILS AND SPECIFICATIONS

It is recommended that the following text be added to the City Standard Details and Specifications under Section IV, Streets:

F. Utility Trench Repair

- 1. Monitoring Program** - All excavations into existing City street paving shall be repaired in accordance with City Standard Drawings U-2 and U-2A. A City right-of-way encroachment permit will be required prior to excavation in any City right-of-way. The contractor shall sign an acknowledgement that he/she has a copy of the City trench repair standards (temporary and finish) and shall make an estimate of the square feet of trench repair based upon the standard for finished repairs. All street patches will be subject to a nine-month warranty period, or as determined by the City Engineer. A refundable cash deposit as determined by the City Engineer per square foot of trench repair will be required with the encroachment permit. All trench repairs shall be logged and placed in a data base stating the location, size of patch, contractor, date permit was issued and date accepted as complete.
- 2. Inspections** - A minimum of two inspections are required for each repair. One after preparation and prior to paving, and one final inspection. Inspection time will be billed to the deposit on an hourly basis. Soil compaction tests conducted by a Soils Engineer retained by the contractor, shall be provided upon inspection of the trench preparation and subgrade.

Should the trench repair fall out of compliance with the City Standards during the period of the warranty, the contractor shall be responsible for any necessary repairs and or restoration. After the warranty period the deposit, less the cost of inspections, may be refunded to the contractor, providing the trench repair complies with the following findings:

- The surface of the patch is level with or no higher than 0.25 inches above the grade of the original pavement surface.
- No apparent crack at sawcut line (1/16-inch maximum).
- No apparent pavement raveling.
- No apparent pavement cracking.

If the trench repair is found to be inadequate, based on the criteria stated above, the contractor shall forfeit the deposit and the City shall make the necessary repairs.

- 3. Temporary Patches** - Temporary patches will be monitored on a daily basis by the responsible contractor and shall be immediately restored to standard as they compact. In no case shall a temporary patch be left without permanent repair for more than 30 calendar days. The allowed period of the temporary patch may be reduced as

determined by the City Engineer, such as in the case of arterial streets or those serving high traffic volumes.

4. **Pavement Overlay Required** - Complete street paving overlays will be required where certain projects involve multiple excavations into one street. If one particular project causes three excavations with a 300 foot stretch of a given street, that street must be subject to a complete asphalt overlay of a minimum depth of 1.75 inches (0.15 feet). The overlay shall extend for a minimum length of 100 feet or 20 feet beyond the last cut at each end of the excavated area. The 1.75 inches depth of asphalt may be subtracted from the depth of the asphalt in the trench repair as long as the depth of repair matches or exceeds the depth of the existing asphalt.