

**ORDINANCE 19-947**

**AN ORDINANCE TO ADOPT THE CITY OF GOODLETTSVILLE STREET REPAIR POLICY AND APPROVING ASSOCIATED FEES AS PREVIOUSLY APPROVED BY RESOLUTION 10-443.**

**WHEREAS**, the City of Goodlettsville Board of Commissioners desire to have a policy that would ensure the long-term maintenance, safety and use of all streets and roadways, and

**WHEREAS**, the City of Goodlettsville Board of Commissioners desires to adopt a policy and specifications that will protect and enhance all street and roadway infrastructure within the city.

**NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF THE CITY OF GOODLETTSVILLE, TENNESSEE, AS FOLLOWS:**

**SECTION 1.** The City of Goodlettsville Street Repair Policy of 2019 is hereby approved and is attached hereto as "EXHIBIT A".

**SECTION 2.** The City of Goodlettsville Board of Commissioners approves all fees associated with the City of Goodlettsville Street Repair Policy of 2019 as indicated in section 1.5 of the policy.

**SECTION 3.** All fees associated with the City of Goodlettsville Street Repair Policy of 2019 may be modified by resolution of the City of Goodlettsville Board of Commissioners.

**SECTION 4.** In case of conflict between this Ordinance or any part thereof and the whole of any existing or future ordinance of the City of Goodlettsville, the most restrictive shall in all cases apply.

**SECTION 5.** This ordinance shall take effect fifteen (15) days from and after its final passage, the public welfare requiring it.

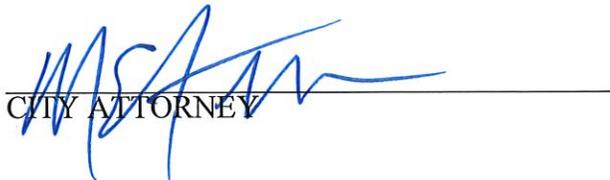
  
MAYOR JEFF G. DUNCAN

  
CITY RECORDER

APPROVED AS TO LEGALITY AND FORM:

Passed First Reading: August 8, 2019

Passed Second Reading: September 12, 2019

  
CITY ATTORNEY



## Pavement Repair Policy, Specifications and Fees

### PAVEMENT REPAIR SPECIFICATION

### EXHIBIT "A"

#### Part 1 – GENERAL

##### 1.1 Description of Work

Provide the necessary plant, labor, materials and equipment to restore and maintain the various streets and driveway surfaces of all type, pavement and driveway bases, curbs, curb and gutter, and sidewalks disturbed, damaged, or demolished during the performance of the work.

##### 1.2 Applicable Specifications

- A. American Society for Testing and Materials (ASTM).
- B. Tennessee Department of Transportation, Standard Specifications for Road and Bridge Construction (TDOT).
- C. Goodlettsville Public Works Drawing, ST – 270, ST – 271, ST – 273, ST – 274, ST – 275

##### 1.3 Applicable References

American Association of State Highway and Transportation Officials (AASHTO), latest revision.

American Society for Testing and Materials, (ASTM), latest revision.

##### 1.4 Permits

Before performing any work, the contractor shall secure the required excavation and temporary lane/road closure permits to work within City of Goodlettsville and State right-of-way.

## 1.5 Fees

An excavation permit is required for each separate excavation at a cost of \$100.00 per permit. A single excavation is defined as having a maximum area of 6 square yards or a maximum of 33 linear feet. Excavation having an area greater than these limits must be separated into 2 or more excavations, each requiring its own permit. In addition to the permit fee, an excavation made in a pavement surface less than 5 years old is assessed a fee of \$500.00 plus 20% of the average cost to repair the excavation in accordance to city specifications.

## PART 2 – MATERIALS

2.1 The quality of materials and workmanship used in the restoration of existing roadway pavements and driveways shall produce a surface equal to or better than the condition before the work began.

2.2 Concrete shall be Class A air-entrained Portland cement type. Flowable fill shall conform to TDOT Standard Specifications, Subsection 204.06.

2.3 Mineral Aggregate Base: Class A aggregate, Grading D crushed stone (TDOT Standard Specifications, Subsection 303.02, Subsection 903.05).

2.4 Bituminous Prime coats: Emulsified Asphalt RS-2 AE-P (TDOT Standard Specifications, Subsection 904.03).

2.5 Crushed Stone Chips: Size 7 or 8 (TDOT Standard Specifications, Subsection 903.14).

2.6 Double Bituminous Surface: For both courses, Grade RS-2 (TDOT Standard Specifications, Subsection 904.03).

2.7 Asphaltic Concrete Binder: Grading B, BM, BM-s, or CW as directed by the City of Goodlettsville Public Works Director or Inspector (TDOT Standard Specifications, Section 307).

2.8 Bituminous Tack Coat: Grade SS-1 (TDOT Standard Specifications, Sections 403, Subsection 904.03)

2.9 Asphaltic Concrete Surface: Grading D or E, as directed by the City of Goodlettsville Public Works Director or Inspector, (TDOT Standard Specifications, Section 411).

2.10 Quick Dry Traffic Marking Paint (White and Yellow), or Thermo-Plastic depending on existing marking and loops.

PART 3 – GENERAL NOTES Applicable to City of Goodlettsville Public Works Standard Drawings ST – 270, and ST – 271

3.1 All backfill operations require grading D crushed stone or flowable fill and an inspection by a Goodlettsville Public Works Director or Inspector. Contractor shall provide Goodlettsville Public Works Inspector a minimum of 24 hours advance notice for all inspections.

3.2 Asphalt pavement may not be installed until the backfill operations have been approved by a Goodlettsville Public Works Director or Inspector.

3.3 Diagonal repairs must be squared off, milled and paved.

3.4 Any disturbed pavement markings must be restored to current City of Goodlettsville standards.

3.5 Final acceptance by Goodlettsville Public Works is required before the work is considered complete.

3.6 In the event of any conflict, discrepancy, or inconsistency among the plans submitted with the permit and these notes, the requirements of the Standard Drawings and Goodlettsville Standards shall govern.

PART 4 - RECESSED TRENCH NOTES

Applicable to Goodlettsville Public Works Standard Drawing ST – 271

4.1 Once the backfill operations on a recessed trench have been approved by a City of Goodlettsville Public Works inspector, the contractor must schedule an inspection for the final repair. The final repair shall have nine (9) inches of binder placed in a minimum of three (3) layers and compacted with mechanical compaction equipment.

4.2 Asphalt surface material shall be placed in two (2) inch thickness and compacted within 1-3 days after the binder is placed.

#### PART 5 - FLUSH TRENCH NOTES

Applicable to Goodlettsville Public Works Standard Drawing, ST – 270

5.1 Once the backfill operations on a flush trench have been approved by a Goodlettsville Public Works inspector, the contractor must schedule an inspection for the final repair. The final repair shall have eleven (11) inches of binder placed in a minimum of three (3) layers and compacted with mechanical compaction equipment.

5.2 All repairs shall include full lane width resurfacing. Exceptions may be granted by the Director of Public Works when the use of infrared technology is proposed.

5.3 The binder surface shall be milled or heated using infrared technology two (2) inches in depth and replaced with two (2) inches of surface mix and compacted with mechanical equipment.

5.4 All longitudinal repairs more than thirty (30) feet in length must be milled and paved the full width of the roadway.

#### PART 6 – EXECUTION – Subgrade

##### 6.1 Subgrade

A. Before any material aggregate base is installed, contractor shall compact the subgrade of the area to be paved to 95% of the optimum density as determined by ASTM D 698.

B. The backfill material shall contain no topsoil or organic matter. For all areas where subgrade has been prepared, test for uniformity of support by driving a loaded dump truck at a speed of 2 to 3 mph over the entire surface. Make further improvements on all areas that show a deflection of 1 inch or more. When completed, the finished subgrade shall be hard, smooth, stable, and constructed in reasonably close conformance with the lines and grades that existed prior to the beginning of construction.

### 6.2 Mineral Aggregate Base

A. Install a mineral aggregate base to the type specified sections 4.2 B and 4.2C in accordance with Section 303 of the TDOT Standard Specifications. The maximum compacted thickness of any one layer shall be 6 inches.

B. When a base is compacted, cut back the surface course of the existing pavement a minimum of 1 foot beyond the limit of the joint between the old and new base course. Take special care to ensure good compaction of the new base course at the joint. Apply and compact the surface to conform to the existing pavement so that it will have no surface irregularity.

C. Where flowable fill is required it shall conform to TDOT Standard Specifications Section 204.06, Excavatable Flowable Fill (EFF). Typically a 28 day compressive strength shall be 30 psi. Refer to ST-270 drawing for proper placement.

### 6.3 Double Bituminous Surface

A. Apply the first course at a rate of 0.38 to .042 gallon per square yard with either emulsified asphalt, Grade RS-2 and then immediately cover with Size 6 crushed stone chips at a rate of 33 to 37 pounds per square yard. After this is rolled, apply the second course at a rate of 0.30 to 0.35 gallons per square yard. Then roll the entire area.

B. After the application of the cover aggregate, lightly broom or otherwise maintain the surface for a period of 4 days, or as directed by a Goodlettsville Public Works Inspector.

Maintenance of the surface shall include the distribution of cover aggregate over the surface to absorb any free bitumen and cover any areas deficient in aggregate.

Sweep excess material from the entire surface with rotary brooms. Sweep the surface at the time determined by a Goodlettsville Public Works inspector.

#### 6.4 Asphaltic Concrete Binder

A. Apply a bituminous prime coat of emulsified asphalt, Grade AE-P at a rate of 0.38 to 0.42 gallon per square yard. Take care to prevent the bituminous material from splashing on exposed faces of curbs and gutters, walls, walks, trees, etc. If such splashing does occur, remove it immediately. After the prime coat has properly cured, apply an asphaltic concrete binder to the thickness shown on the standard drawings in the Subdivision Street Design Standards and Specifications.

B. Carefully place material to avoid segregation of the mix. Broadcasting of the material will not be permitted. Remove any lumps that do not readily break down.

C. If milling of the street is required, the thickness of the binder course as specified by a Goodlettsville Public Works inspector shall be maintained after milling.

#### 6.5 Asphaltic Concrete Surface

If the asphaltic concrete surface is to be placed directly on the mineral aggregate base, place the bituminous prime coat as described above. If the surface course is to be placed on a binder course, then apply a bituminous tack coat of the sort specified above under MATERIALS at a rate of 0.05 to 0.10 gallons per square yard. Take care to prevent splashing of the bituminous material on the exposed faces of the curbs, gutters, walls, walks, trees, etc. If such splashing does occur, the material shall be removed by the contractor. After the prime or tack has been properly cured, apply the asphaltic concrete surface to the thickness shown on the drawings in the Subdivision Street Design Standards and Specifications. Apply the surface course as described above for the asphaltic concrete binder course, Sections 4.4.

#### 6.6 Smoothness

The finished surfaces shall conform to the lines and grades that existed prior to construction. No deviation, variations, or irregularities exceeding ¼ inch in any direction when tested with 12 foot straightedge will be permitted in the finished

work, nor will any depressions that will not drain properly. All defects shall be corrected by the contractor.

## 6.7 Sampling and Testing

A Goodlettsville Public Works Inspector may require that tests be made on the completed elements of the pavement to ascertain the compacted thickness of the base and surface courses. If sections with deficiencies are found, the full section for a reasonable distance on each side of the deficiency shall be refused. All such sections shall be removed and reinstalled. All test holes in connection with the thickness test shall be patched.

## PART 7 – EXECUTION – Excavations

7.1 Where trenches have been opened in any roadway or street that is a part of the State of Tennessee Highway system, restore surfaces in accordance with the requirements of TDOT. All other restoration shall be done in accordance with the Goodlettsville Public Works Specifications.

7.2 Excavations in the pavement area shall require that pavement surface edges be saw-cut or cold plane milled to provide a straight and smooth edge.

7.3 Flowable fill will be required on all arterials, collectors, and downtown streets. Flowable fill shall meet the requirements in TDOT Standard Specifications, Section 204. Flowable fill may also be required in areas of special significance as determined by a Goodlettsville Public Works inspector.

7.4 Upon completion of installation of utility or other work if a temporary patch is to be used, placement of compacted backfill or mineral aggregate base or grading D crushed stone (6" layers) and temporary asphalt patch (2" cold mix) shall be placed and rolled or mechanically compacted until such time that the permanent repair will be constructed as shown on Goodlettsville Public Works Standard Drawing ST - 270 or ST - 271.

7.5 All final repairs shall use a minimum four (4) foot trench width and a one (1) foot cutback on all sides of the excavation as shown on Goodlettsville Public works Standard Drawing ST - 270 or ST - 271, except at the edge of pavement.

7.6 Upon completion of installation of utility or other work, placement of compacted backfill mineral aggregate base capped off with 8" to 12" of grading D crushed stone (6" layers), asphaltic concrete binder (3" layers), and surface shall be placed as shown on Goodlettsville Public works Standard Drawing ST - 270 or ST - 271.

7.7 Full lane or roadway width milling and paving shall be required for all excavations. Exceptions may be allowed in some cases where infrared technology is used. If a continuous trench, or five (5) successive cuts or more are made at intervals of 200 feet or less, the entire section of roadway affected is to be milled and paved. If an excavation falls within the edge of pavement and a construction joint, milling and paving can be completed to the existing construction joint. New Utility cuts shall be milled and paved to any existing cuts or damaged pavement within 10 feet. If the existing cut or damaged pavement is less than 10 feet in length, the existing cut shall also be milled and paved. The Director of Public Works shall have full discretionary power in determining if affected roadways are to be repaired either the full width of the lane or full width of the roadway.

7.8 Asphalt repairs adjacent to curb and gutter work encroaching more than 24-inches into the roadway shall require full lane width paving. If a construction joint falls within the road centerline and the edge of pavement, the milling and paving can be completed to the existing construction joint.

7.9 Curb and gutter, sidewalk, and shoulders, shall be restored as required to match existing construction. Replace damaged sections with complete new sections from expansion joint to expansion joint. Patching curb, gutter, or sidewalk will not be permitted.

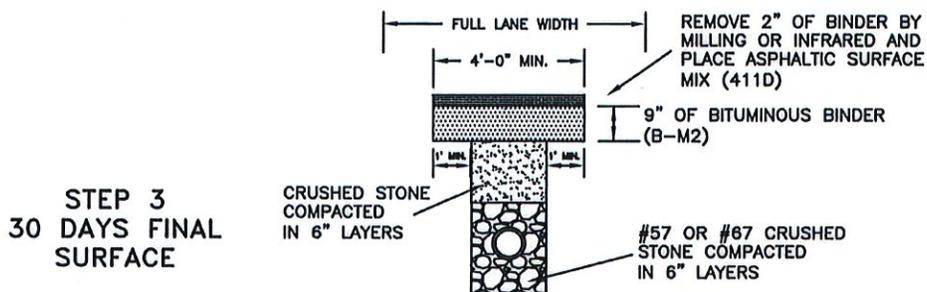
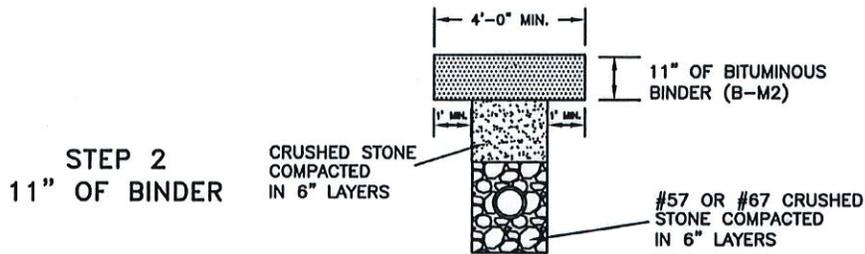
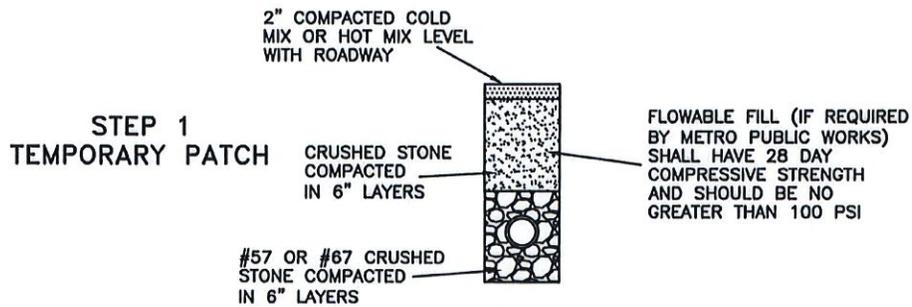
7.10 When a manhole top or other utility casting requires adjustment to an elevation one inch or more above the existing pavement grade a temporary ramp shall be constructed by feathering bituminous asphalt concrete 360 degrees around the casting. A taper slope of not less than two feet per inch shall be used. Taper shall be removed prior to placement of bituminous concrete surface course.

7.11 Where asphaltic concrete surface courses are required for a continuous trench or five (5) successive cuts or more are made at intervals of 200 feet or less, the asphaltic surface course shall not be placed for a minimum of 30 days after the binder is placed flushed in the trench according to Goodlettsville Standard Drawing ST - 270. However, due to seasonal limitations, or other factors deemed appropriate, the Goodlettsville Public Works Inspector may grant variances to this requirement on a case by case basis.

7.12 All repairs within the right of way shall be warranted for a period of eighteen (18) months following the date of final acceptance. Evidence of settling, pumping, or cracking represents a warranty violation. Construction Requirements of TDOT Standard Specifications Section 407 shall apply.

7.13 In addition to this section, all pavement restoration for the various types of streets shall be in conformance with Goodlettsville Public Works Standard Drawings.

Goodlettsville Public Works Standard Drawing  
ST - 270



NOT TO SCALE

## GENERAL NOTES

PAGE 2 OF 3

1. PRIOR TO PLACEMENT OF CRUSHED STONE OR FLOWABLE FILL THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE WILL BE NOTIFIED AND AN INSPECTION OF THE TRENCH WILL BE MADE BY A REPRESENTATIVE OF THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE. AT THE COMPLETION OF THE INSTALLATION OF THE CRUSHED STONE OR FLOWABLE FILL, THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE WILL BE NOTIFIED AND AN INSPECTION OF THE BACKFILL WILL BE MADE BY A REPRESENTATIVE OF THE DEPARTMENT OF PUBLIC WORKS. AFTER ACCEPTANCE OF THE BACKFILL BY THE REPRESENTATIVE OF THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE, THE ASPHALT PAVEMENT CAN BE APPLIED.
2. INSPECTION PERSONNEL OF THE DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED BY CONTRACTOR/PERMITEE AT LEAST TWO (2) DAYS PRIOR TO REQUEST FOR INSPECTION.
3. THE WORK PERFORMED SHALL BE FREE FROM WORKMANSHIP DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF ACCEPTANCE BY THE DEPARTMENT OF PUBLIC WORKS PERMIT OFFICE.
4. EXISTING PAVEMENTS, BASES, CURBS & GUTTERS AND SIDEWALKS SHALL BE CUT AND BROUGHT TO A NEAT LINE BY USE OF AN AIR HAMMER, SAW OR OTHER SUITABLE EQUIPMENT. EXPANSION JOINTS REMOVED SHALL BE REPLACED
5. THE MINIMUM WIDTH TO BE TRIMMED ON EACH SIDE OF THE TRENCH LINE, AS SEEN IN THE SECTION MAY BE WAIVED OR AMENDED UPON APPROVAL OF THE INSPECTOR, HOWEVER, A MINIMUM WIDTH OF REPLACEMENT SHALL BE 4'-0" TO ALLOW FOR A ROLLER.
6. IF PERMANENT PAVEMENT REPAIRS CANNOT BE MADE WITHIN THREE (3) DAYS, THEN TEMPORARY REPLACEMENT SHALL BE MADE WITH 2" COLD MIX OR HOT BITUMINOUS SEAL COAT OVER COMPACTED CRUSHED STONE.
7. ALL EXCAVATIONS MADE WITHIN PUBLIC RIGHT-OF-WAY REQUIRE EXCAVATIONS AND STREET CLOSURE PERMITS FROM THE DEPARTMENT OF PUBLIC WORKS PRIOR TO COMMENCING WORK
8. FLOWABLE FILL WILL BE REQUIRED ON ALL ARTERIALS, COLLECTORS AND DOWNTOWN STREETS. FLOWABLE FILL SHALL MEET THE REQUIREMENTS IN TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS
9. IN THE EVENT OF ANY CONFLICT, DISCREPANCY, OR INCONSISTENCY AMONG THE PLANS AND THESE STANDARD DETAILS, THE REQUIREMENTS OF THE STANDARD DETAILS SHALL GOVERN.
10. ALL REPAIRS SHALL INCLUDE FULL LANE WIDTH RESURFACING EXCEPT WHEN UTILIZING INFRARED TECHNOLOGY. SEE INFRARED SPECIFICATIONS ATTACHED. THERE WILL BE A MAXIMUM OF 40 FT LONGITUDINAL REPAIR WHEN USING INFRARED TECHNOLOGY ON AN EXCAVATED PATCH.
11. ALL REPAIRS SHALL UTILIZE A 1-FOOT CUTBACK ON ALL SIDES EXCEPT THE EDGE OF PAVEMENT.

NOT TO SCALE

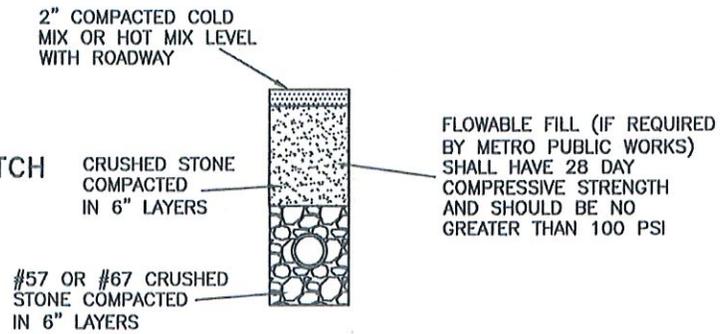
## GENERAL NOTES CONTINUED:

12. NEW UTILITY CUTS WILL BE MILLED AND PAVED TO ANY EXISTING UTILITY CUT OR DAMAGED PAVEMENT WITHIN 10- FEET. IF EXISTING CUT OR DAMAGED PAVEMENT IS LESS THAN 10- FEET IN LENGTH, THE EXISTING CUT OR DAMAGED PAVEMENT SHALL ALSO BE MILLED AND PAVED.
13. ASPHALT REPAIR ADJACENT TO CURB AND GUTTER ALONG A ROADWAY GREATER THAN 24- INCHES SHALL HAVE FULL LANE WIDTH PAVING.
14. WHEN GRADED STONE (I.E. #57, #67, #78 STONE) IS USED THERE IS GENERALLY NO COMPACTION EQUIPMENT REQUIRED. THE MATERIAL DOES, HOWEVER, NEED TO BE PUT IN THE TRENCH IN APPROXIMATELY 12- INCH LIFTS.
15. GRADED STONE PLACED IN TRENCH SHOULD BE CAPPED WITH 8 TO 12- INCHES OF PUG MIX (MIX IS ESSENTIALLY TYPE A BASE, GRADE D, OR MORE COMMONLY KNOWN AS "CRUSHER RUN"). SEE TDOT STANDARD SPECIFICATION 303.07.
16. TYPE "A" BASE, GRADE "D" CAN BE USED FOR THE ENTIRE BACKFILL AND COMPACTED BY MECHANICAL METHODS IN NO MORE THAN 6- INCH LIFTS AS PROVIDED IN SECTION 204.11 OF TDOT STANDARD SPECIFICATIONS.
17. THE PUG MIX SHOULD BE COMPACTED IN 6- INCH LIFTS WITH A STEEL SHELL ROLLER OR OTHER MECHANICAL VIBRATORY COMPACTION EQUIPMENT. SEE TDOT STANDARD SPECIFICATIONS 303.08 AND 303.09. MATERIAL SHOULD BE ALLOWED TO CURE UNTIL ALL THE MOISTURE IS GONE FROM STONE (USUALLY 24-48 HOURS).
18. THE TRENCH SHOULD THEN HAVE 11- INCHES OF BINDER PLACED LEVEL WITH THE ROADWAY IN A MINIMUM OF TWO (2) LIFTS AND COMPACTED WITH MECHANICAL COMPACTION EQUIPMENT.
19. THE BINDER SURFACE SHALL BE MILLED OR HEATED USING INFRARED TECHNOLOGY TWO 2- INCHES IN DEPTH AND REPLACED WITH TWO (2) INCHES OF SURFACE MIX AND COMPACTED WITH MECHANICAL COMPACTION EQUIPMENT.
20. INTERSECTION REPAIRS WILL ONLY REQUIRE FULL LANE WIDTH PAVING.
22. ANY DISTURBED PAVEMENT MARKINGS MUST BE RESTORED TO CURRENT STANDARDS.
23. DIAGONAL REPAIRS WILL BE REQUIRED TO BE SQUARED OFF AND MILLED AND PAVED. NO INFRARED TECHNOLOGY ALLOWED ON THIS TYPE OF REPAIR.
24. ALL LONGITUDINAL REPAIRS MORE THAN 40 FT IN LENGTH WILL BE REQUIRED TO BE MILLED AND PAVED.

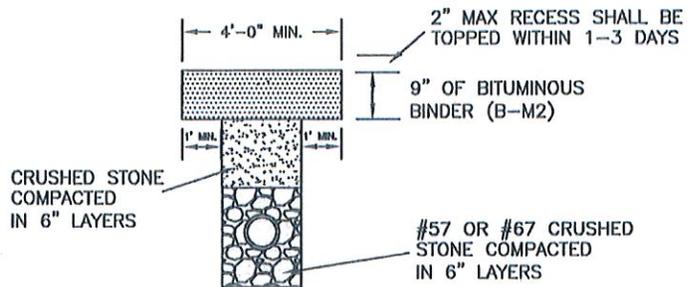
NOT TO SCALE

Goodlettsville Public Works Standard Drawing  
 ST - 271

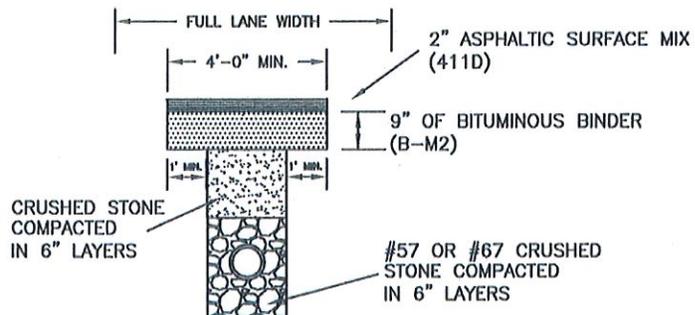
STEP 1  
 TEMPORARY PATCH



STEP 2  
 9" OF BINDER



STEP 3  
 3 DAYS FINAL SURFACE



NOT TO SCALE

## GENERAL NOTES

PAGE 2 OF 3

1. PRIOR TO PLACEMENT OF CRUSHED STONE OR FLOWABLE FILL THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE WILL BE NOTIFIED AND AN INSPECTION OF THE TRENCH WILL BE MADE BY A REPRESENTATIVE OF THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE. AT THE COMPLETION OF THE INSTALLATION OF THE CRUSHED STONE OR FLOWABLE FILL, THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE WILL BE NOTIFIED AND AN INSPECTION OF THE BACKFILL WILL BE MADE BY A REPRESENTATIVE OF THE DEPARTMENT OF PUBLIC WORKS. AFTER ACCEPTANCE OF THE BACKFILL BY THE REPRESENTATIVE OF THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE, THE ASPHALT PAVEMENT CAN BE APPLIED.
2. INSPECTION PERSONNEL OF THE DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED BY CONTRACTOR/PERMITEE AT LEAST TWO (2) DAYS PRIOR TO REQUEST FOR INSPECTION.
3. THE WORK PERFORMED SHALL BE FREE FROM WORKMANSHIP DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF ACCEPTANCE BY THE DEPARTMENT OF PUBLIC WORKS PERMIT OFFICE.
4. EXISTING PAVEMENTS, BASES, CURBS & GUTTERS AND SIDEWALKS SHALL BE CUT AND BROUGHT TO A NEAT LINE BY USE OF AN AIR HAMMER, SAW OR OTHER SUITABLE EQUIPMENT. EXPANSION JOINTS REMOVED SHALL BE REPLACED.
5. THE MINIMUM WIDTH TO BE TRIMMED ON EACH SIDE OF THE TRENCH LINE, AS SEEN IN THE SECTION MAY BE WAIVED OR AMENDED UPON APPROVAL OF THE METRO INSPECTOR, HOWEVER, A MINIMUM WIDTH OF REPLACEMENT SHALL BE 4'-0" TO ALLOW FOR A ROLLER.
6. IF PERMANENT PAVEMENT REPAIRS CANNOT BE MADE WITHIN THREE (3) DAYS, THEN TEMPORARY REPLACEMENT SHALL BE MADE WITH 2" COLD MIX OR HOT BITUMINOUS SEAL COAT OVER COMPACTED CRUSHED STONE.
7. ALL EXCAVATIONS MADE WITHIN PUBLIC RIGHT-OF-WAY REQUIRE EXCAVATIONS AND STREET CLOSURE PERMITS FROM THE DEPARTMENT OF PUBLIC WORKS PRIOR TO COMMENCING WORK
8. FLOWABLE FILL WILL BE REQUIRED ON ALL ARTERIALS, COLLECTORS AND DOWNTOWN STREETS. FLOWABLE FILL SHALL MEET THE REQUIREMENTS IN TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 204.
9. IN THE EVENT OF ANY CONFLICT, DISCREPANCY, OR INCONSISTENCY AMONG THE PLANS AND THESE STANDARD DETAILS, THE REQUIREMENTS OF THE STANDARD DETAILS SHALL GOVERN.
10. ALL REPAIRS SHALL INCLUDE FULL LANE WIDTH RESURFACING EXCEPT WHEN UTILIZING INFRARED TECHNOLOGY. SEE INFRARED SPECIFICATIONS ATTACHED. THERE WILL BE A MAXIMUM OF 40 FT LONGITUDINAL REPAIR WHEN USING INFRARED TECHNOLOGY ON AN EXCAVATED PATCH.
11. ALL REPAIRS SHALL UTILIZE A 1-FOOT CUTBACK ON ALL SIDES EXCEPT THE EDGE OF PAVEMENT.

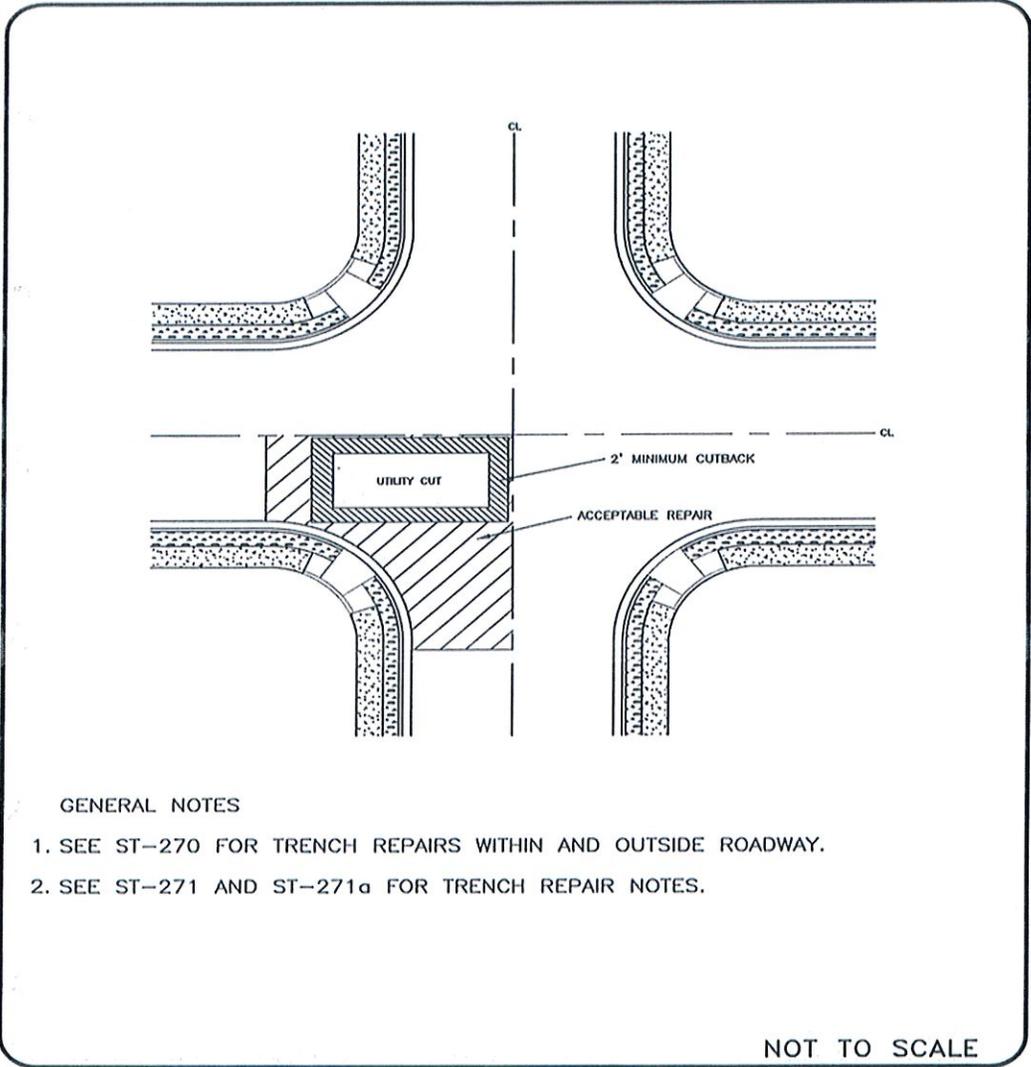
NOT TO SCALE

## GENERAL NOTES CONTINUED:

12. NEW UTILITY CUTS WILL BE MILLED AND PAVED TO ANY EXISTING UTILITY CUT OR DAMAGED PAVEMENT WITHIN 10- FEET. IF EXISTING CUT OR DAMAGED PAVEMENT IS LESS THAN 10- FEET IN LENGTH, THE EXISTING CUT OR DAMAGED PAVEMENT SHALL ALSO BE MILLED AND PAVED.
13. ASPHALT REPAIR ADJACENT TO CURB AND GUTTER ALONG A ROADWAY GREATER THAN 24- INCHES SHALL HAVE FULL LANE WIDTH PAVING.
14. WHEN GRADED STONE (I.E. #57, #67, #78 STONE) IS USED THERE IS GENERALLY NO COMPACTION EQUIPMENT REQUIRED. THE MATERIAL DOES, HOWEVER, NEED TO BE PUT IN THE TRENCH IN APPROXIMATELY 12- INCH LIFTS.
15. GRADED STONE PLACED IN TRENCH SHOULD BE CAPPED WITH 8 TO 12- INCHES OF PUG MIX (MIX IS ESSENTIALLY TYPE A BASE, GRADE D, OR MORE COMMONLY KNOWN AS "CRUSHER RUN"). SEE TDOT STANDARD SPECIFICATION 303.07.
16. TYPE "A" BASE, GRADE "D" CAN BE USED FOR THE ENTIRE BACKFILL AND COMPACTED BY MECHANICAL METHODS IN NO MORE THAN 6- INCH LIFTS AS PROVIDED IN SECTION 204.11 OF TDOT STANDARD SPECIFICATIONS.
17. THE PUG MIX SHOULD BE COMPACTED IN 6- INCH LIFTS WITH A STEEL SHELL ROLLER OR OTHER MECHANICAL VIBRATORY COMPACTION EQUIPMENT. SEE TDOT STANDARD SPECIFICATIONS 303.08 AND 303.09. MATERIAL SHOULD BE ALLOWED TO CURE UNTIL ALL THE MOISTURE IS GONE FROM STONE (USUALLY 24- 48 HOURS).
18. THE TRENCH SHOULD THEN HAVE 11- INCHES OF BINDER PLACED LEVEL WITH THE ROADWAY IN A MINIMUM OF TWO (2) LIFTS AND COMPACTED WITH MECHANICAL COMPACTION EQUIPMENT.
19. ASPHALT SURFACE MATERIAL SHOULD BE PLACED AT 2- INCH THICKNESS AND COMPACTED WITHIN 1- 3 DAYS AFTER THE BINDER IS PLACED.

NOT TO SCALE

**Goodlettsville Public Works Standard Drawing**  
**ST - 273**

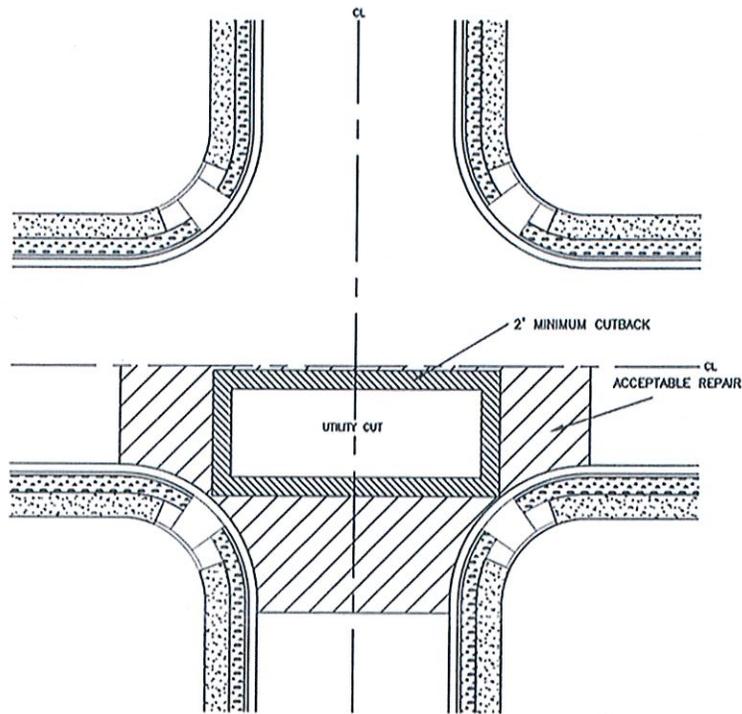


**GENERAL NOTES**

- 1. SEE ST-270 FOR TRENCH REPAIRS WITHIN AND OUTSIDE ROADWAY.
- 2. SEE ST-271 AND ST-271a FOR TRENCH REPAIR NOTES.

NOT TO SCALE

**Goodlettsville Public Works Standard Drawing  
ST-274**

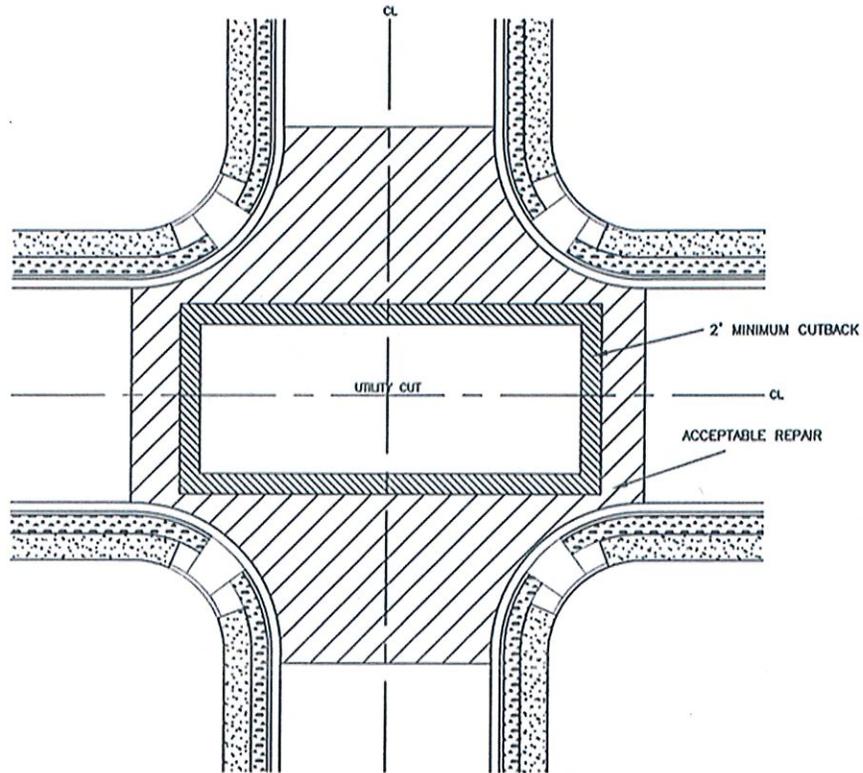


**GENERAL NOTES**

1. SEE ST-270 FOR TRENCH REPAIRS WITHIN AND OUTSIDE ROADWAY.
2. SEE ST-271 AND ST-271 $\alpha$  FOR TRENCH REPAIR NOTES.

NOT TO SCALE

**Goodlettsville Public Works Standard Drawing  
ST-275**



**GENERAL NOTES**

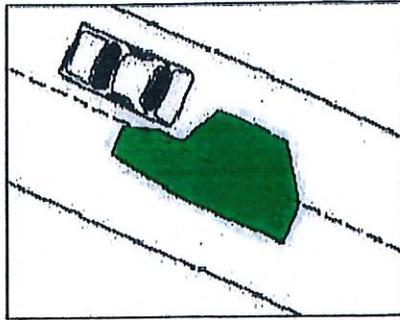
1. SEE ST-270 FOR TRENCH REPAIRS WITHIN AND OUTSIDE ROADWAY.
2. SEE ST-271 AND ST-271a FOR TRENCH REPAIR NOTES.

NOT TO SCALE

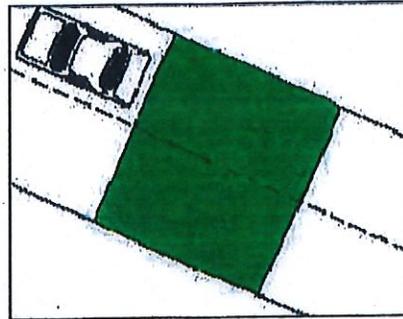
### Example 1

Existing pavements should be removed to clean, straight lines parallel and perpendicular to the flow of traffic. Do not construct patches with angled sides and irregular shapes. All repairs should be full lane width.

NOT ACCEPTABLE



ACCEPTABLE

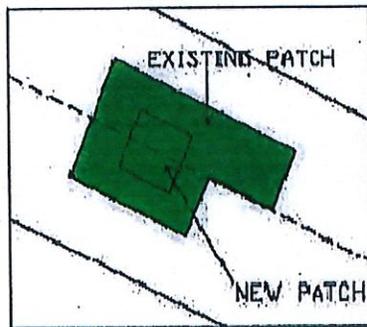


Example 1: Do not construct patches with angled sides and irregular shapes.

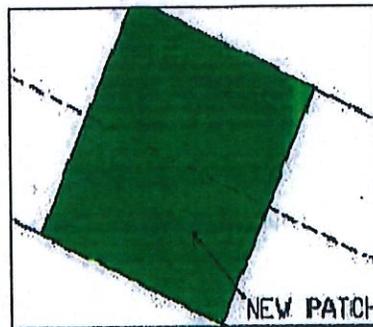
### Example 2

Avoid patches within existing patches. If this cannot be avoided, make the boundaries of the patches coincide. All repairs should be full lane width.

NOT ACCEPTABLE



ACCEPTABLE

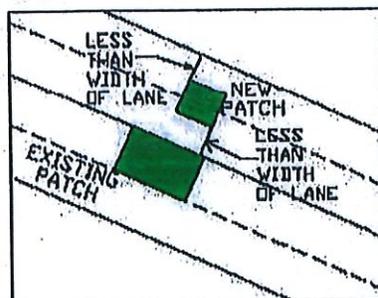


Example 2: Avoid patches within existing patches.

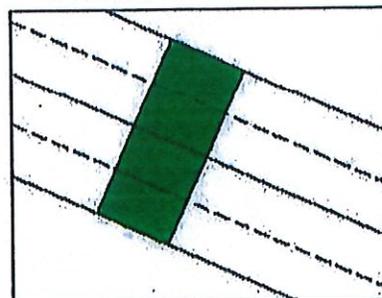
### Example 3

Do not leave strips of pavement less than one-half lane in width from the edge of the new patch to the edge of an existing patch or the lip of the gutter.

NOT ACCEPTABLE



ACCEPTABLE



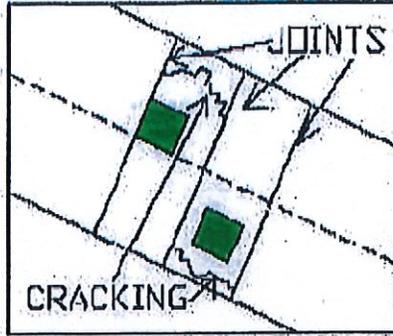
Example 3: Do not leave strips of pavement less than one-half lane in width

### Example 4

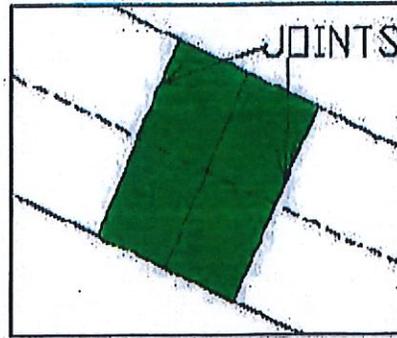
In concrete pavements, remove sections to existing joints, or new saw cut joints at midslab, that are in good repair. In damaged concrete, the limits of removal should be determined in the field by a representative of Goodlettsville Public Works.

#### CONCRETE PAVEMENT

NOT ACCEPTABLE



ACCEPTABLE

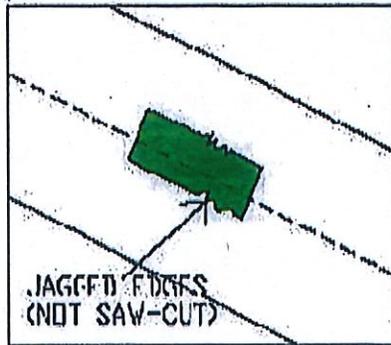


Example 4: In concrete pavements, remove sections to existing joints.

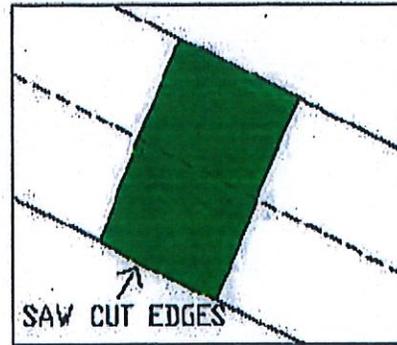
### Example 5

Asphalt and concrete pavements should be removed by saw cutting or grinding. Avoid breaking away the edges of the existing pavement or damaging the remaining pavement with heavy construction

NOT ACCEPTABLE



ACCEPTABLE

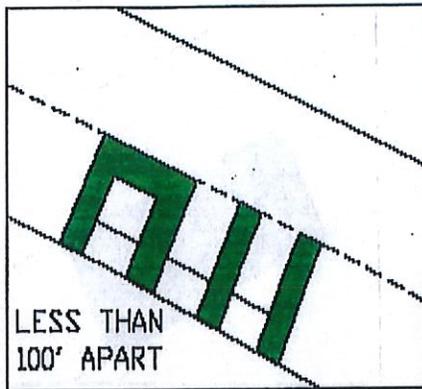


Example 5: All edges shall be saw cut.

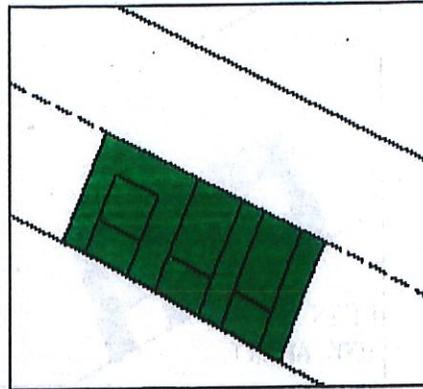
### Example 6

In the case of a series of patches or patches for service lines off a main trench, repair the pavement over the patches by grinding and overlay when the spacing between the patches is less than 10 feet: In cases where the existing pavement is in poor condition and may require overlay within the next few years, this requirement may be modified or waived by the Director of Public Works.

NOT ACCEPTABLE



ACCEPTABLE



LESS THAN

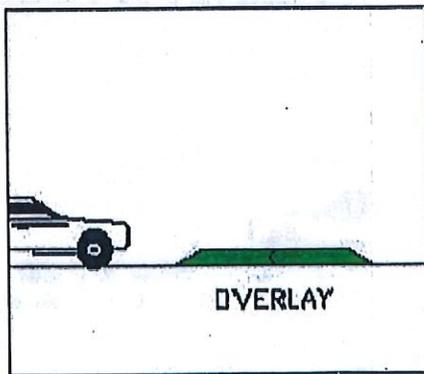
10' APART

Example 6: The patched area must include any existing patches within 10 feet.

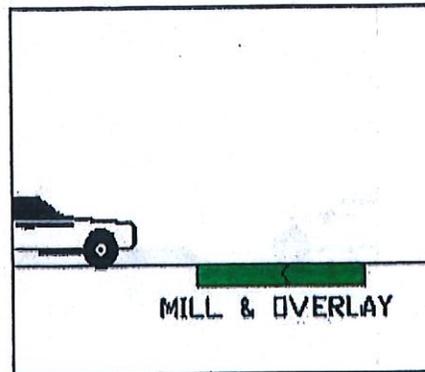
### Example 7

Completed street repairs should have rideability at least as good as, if not better than, the pavement prior to the repairs. A driver may be able to see a street repair, but in the case of a quality repair, should not be able to "feel" it in normal driving. A patch should provide a smooth ride with smooth transitions on and off the repair and all joints should be located outside the wheel path. Overlays should be placed by first removing the existing pavement to the desired depth by grinding or milling, and then placing the pavement flush with the adjacent surfaces. Overlays with feathered edges are not acceptable.

NOT ACCEPTABLE



ACCEPTABLE

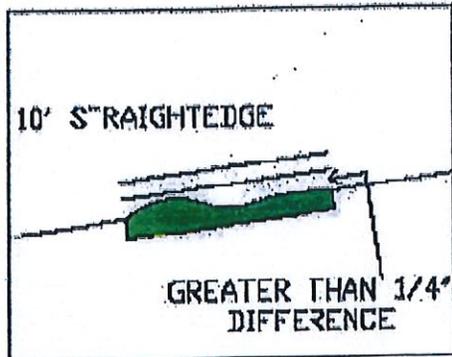


Example 7: Patches may not decrease rideability.

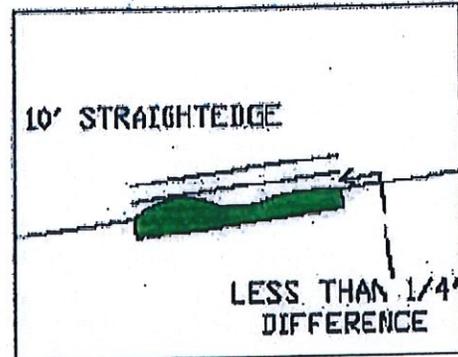
### Example 8

Surface tolerances for street repairs should meet the standard for new construction. That is, the finished surface of the street repair should be tested with a ten- (10-) foot straightedge parallel to the centerline or perpendicular across joints. Variations measured from the testing face of the straightedge to the surface of the street repair should not exceed one-quarter- ( $\frac{1}{4}$ -) inch.

NOT ACCEPTABLE



ACCEPTABLE

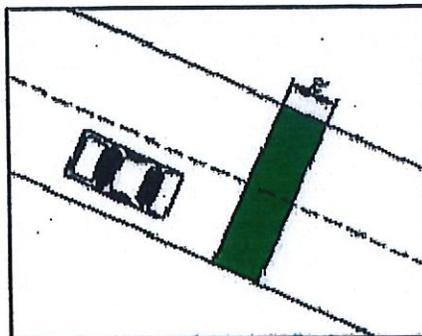


Example 8: Surface tolerances for street repairs should meet the standard for new construction.

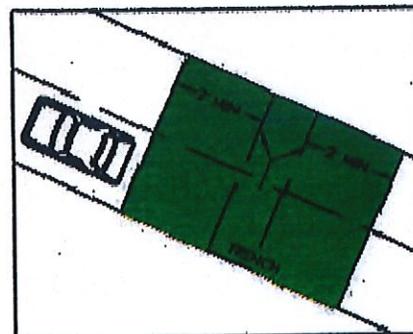
### Example 9

Transverse patches on arterial and collector streets shall be overlaid across the entire street width for a distance of two- (2-) feet minimum on all sides of the trench using a T-Patch.

NOT ACCEPTABLE



ACCEPTABLE



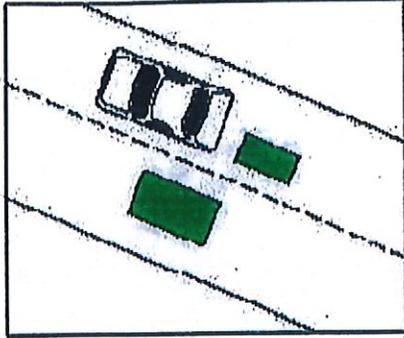
Example 9: Trenches must be patched using a T-Patch.

Example 9: Trenches must be patched using a T-Patch.

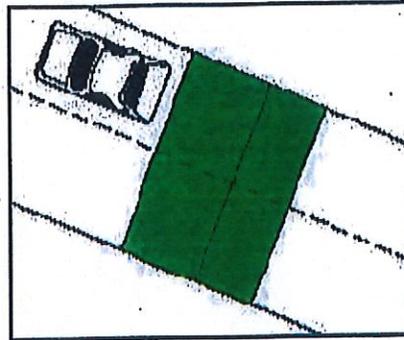
**Example 10**

Do not allow the edges of patches to fall in existing wheel paths. The edges of patches parallel to the direction of traffic shall be limited to the boundaries of lanes or to the centerline of travel lanes.

NOT ACCEPTABLE



ACCEPTABLE

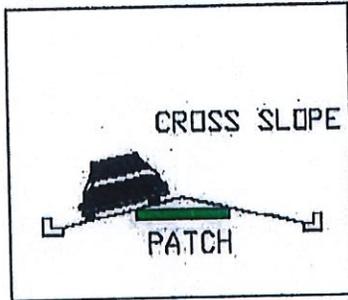


Example 10: Do not allow the edges of patches to fall in wheel paths.

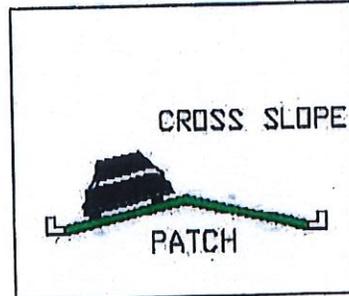
**Example 11**

Patches should have a smooth longitudinal grade consistent with the existing roadway. Patches should also have a cross slope or cross section consistent with the design of the existing roadway.

NOT ACCEPTABLE



ACCEPTABLE



Example 11. Patch slope and grade must match existing pavement.

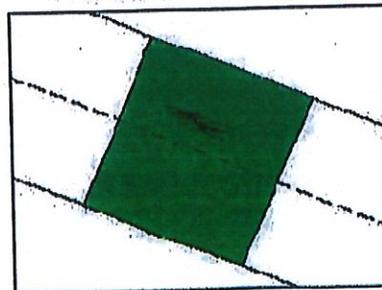
**Example 12**

When the proposed excavation falls within 10 feet of a section of pavement damaged during the utility repair, the failed area shall be removed to sound pavement and patched. Scarring, gouging, or other damaged pavement adjacent to a patch shall be removed and the pavement repaired to the satisfaction of the GOODLETTSVILLE PUBLIC WORKS.

NOT ACCEPTABLE



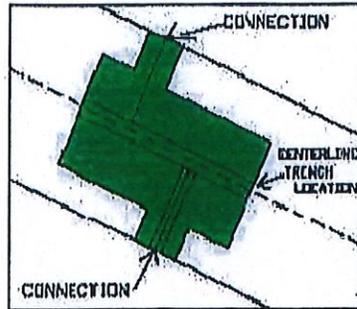
ACCEPTABLE



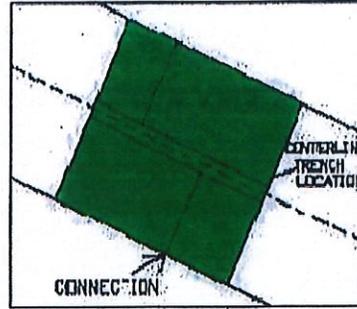
### Example 13

For patches in asphalt, a tack coat shall be applied to all edges of the existing asphalt before placing the new pavement. After placing the new asphalt, all seams (joints) between the new and existing pavements shall be sealed with an asphalt tack coat or rubberized crack seal material. Avoid frequent changes in width of patches. For future maintenance, this simplifies removal of adjacent pavement failures.

NOT ACCEPTABLE



ACCEPTABLE



NOTE - TRENCH AND CONNECTOR LOCATIONS ARE CONCEPTUAL ONLY. SEE DETAILED CROSSSECTION AND PROFILE SHEETS FOR CONSTRUCTION PROCEDURES AND WIDTHS.

Example 13: Patches must avoid frequent width changes.