

# ROAD EXCAVATION PERMIT APPLICATION

SEND TO DANNY TURNBULL (DANNY.TURNBULL@LEBANONTN.ORG) AND CHRIS LASATER (CHRIS.LASATER@LEBANONTN.ORG) ONCE COMPLETED FOR REVIEW



TODAYS DATE: \_\_\_\_\_ REVISED: 2/6/2025  
PERMIT NUMBER (STAFF USE): \_\_\_\_\_  
CONTRACTOR: \_\_\_\_\_  
CONTRACTOR ADDRESS: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_ CONTACT PHONE # : \_\_\_\_\_  
EMAIL ADDRESS: \_\_\_\_\_ AFTER HOURS PHONE # : \_\_\_\_\_  
NAME OF DEVELOPMENT / PROJECT: \_\_\_\_\_

EXCAVATION / BORE LOCATION (INCLUDE SKETCH/EXHIBIT): \_\_\_\_\_

INSURANCE CERTIFICATE AND CONTRACTORS LICENSE ATTACHED?  YES  NO (PERMIT WILL NOT BE ISSUED UNTIL RECEIVED)

PURPOSE OF WORK:  WATER TAP  SEWER TAP  GAS TAP  ROAD/SIDEWALK IMPROVEMENTS

ATTACH COPY OF WATER/SEWER TAP APPLICATION OR GAS SERVICE CONTRACT

TYPE OF WORK  EXCAVATION  TUNNEL  BORE  OTHER: \_\_\_\_\_

TRAFFIC CONTROL PLAN ATTACHED?  YES  NO SEE LANE CLOSURE SECTION OF THE ROAD EXCAVATION GUIDELINES FOR ALL REQUIREMENTS PRIOR TO CLOSURE & PERMIT APPROVAL

TYPE OF CLOSURE NEEDED?  SIDEWALK  ROAD  LANE NOTE: FULL ROAD CLOSURES WILL ONLY BE CONSIDERED IN SPECIFIC CIRCUMSTANCES

PROPOSED START DATE: \_\_\_\_\_ PROPOSED COMPLETION DATE: \_\_\_\_\_

PERMIT FEE: \$200 PER CUT CIVIL PENALTY: up to \$50 per day and/or a STOP WORK ORDER issued

**VIOLATIONS INCLUDE, BUT ARE NOT LIMITED TO, CUTTING A CITY STREET WITHOUT A PERMIT, NO TEMPORARY PATCHING, INADEQUATE REPAIRS, LACK OF PROPER TRAFFIC CONTROL, AND UNSAFE WORKING CONDITIONS**

HAS THE ROAD BEING CUT BEEN PAVED WITHIN THE LAST 5 YEARS, OR IS IT A COLLECTOR ROAD (AS DETERMINED BY THE COMMISSIONER OF PUBLIC SERVICES OR AUTHORIZED AGENT)? YES: \_\_\_\_\_ NO: \_\_\_\_\_  
(IF YES, \$10,000 SECURITY IS REQUIRED AND INFRARED REPAIRS WILL BE REQUIRED)

TYPE OF SECURITY:  CASH DEPOSIT  LETTER OF CREDIT  CHECK REQUIRED AMOUNT: \$ \_\_\_\_\_  
(**\$5,000 MIN. PER CUT LOCATION**)

**NOTE:** THIS PERMIT SHALL EXPIRE SIXTY (60) DAYS FROM DATE OF ISSUANCE. FAILURE TO BEGIN WORK WITHIN SIXTY (60) DAYS WILL REQUIRE A NEW PERMIT AND PAYMENT OF ALL APPROPRIATE FEES. ONE (1) YEAR WARRANTY IS REQUIRED AFTER FINAL ACCEPTANCE OF REPAIRS

**NOTE: WHEN STARTING WORK...CALL (615) 456-5989 FOR ALL INSPECTIONS.**

## APPLICANT ACKNOWLEDGEMENTS:

I HAVE READ AND UNDERSTAND THE REQUIREMENTS SET FORTH IN THE ROAD EXCAVATION PERMIT GUIDELINES INITIAL: \_\_\_\_\_

I HAVE READ AND UNDERSTAND THAT I MUST CALL TN ONE-CALL 72 HOURS MINIMUM PRIOR TO ROAD EXCAVATION INITIAL: \_\_\_\_\_

I UNDERSTAND THAT THE ISSUANCE OF THIS PERMIT IS FOR THE ABOVE STATED PROPERTY ONLY AND THAT THE PLANS AND SUPPORTING DATA HAVE OR SHALL BE PROVIDED AS REQUIRED. I FURTHER AGREE TO COMPLY WITH ALL APPLICABLE PROVISIONS OF ORDINANCE # 95-1411 AND ALL OTHER LAWS AND ORDINANCES AFFECTING THE PROPOSED DEVELOPMENT. REFER TO CITY OF LEBANON TYPICAL DETAIL ST-402 FOR PAVEMENT REPAIR DETAILS.

APPLICANT'S SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

ISSUED BY (STAFF USE): \_\_\_\_\_ DATE: \_\_\_\_\_

**DO NOT START WORK UNTIL PERMIT HAS BEEN ISSUED**

## DEPARTMENTAL USE ONLY

THE NOTED REPAIR WAS INSPECTED AND COMPLETED PER THE REQUIRED SPECIFICATIONS

CITY INSPECTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

# **ROAD CUT REPAIR GUIDELINES AND SPECIFICATIONS FOR THE PERMITTING PROCESS**

## **General Requirements**

All contractors and public utility agencies must obtain an Excavation Permit for any work performed within the public rights-of-way of the City of Lebanon. The storage of materials and equipment within the public rights-of-way also requires a permit.

To preserve the original investment of the street and roadway systems, minimize the disruption and maximize the safety to the traveling public caused by construction, and reduce future maintenance problems, it is the policy of some agencies to require the installation of new utilities across existing streets be done by boring or tunneling. Open cutting of existing streets for the installation of new utilities will be permitted only when it can be proven it is not possible to use boring or tunneling techniques.

Applicants for Excavation Permits must plan for adequate time for review and approval by City of Lebanon staff and any other involved agencies. Generally, the greater the scope of work, the longer the permit review and approval process will take. Definitions and Abbreviations are found in the Glossary in Appendix C.

Upon obtaining a permit and after making the cut, the applicants are required to repair the streets using a quality approach to preserve the value of the street.

## **Quality Requirements**

Every street and street repair situation is unique. Design criteria and construction standards cannot address every situation but, in order to maintain some form of consistency, these standards have been developed. In most cases, they provide the minimum acceptable standards for construction or repair. Consequently, when strictly applied, they will provide the minimally acceptable product. Therefore, these criteria have been developed to maintain the same integrity of the street pavement and subsurface condition prior to its being cut for utility installations.

The proposed criteria are guidelines to achieve the goal of "Quality" in street repairs. When used in conjunction with good planning and judgment, the repair methods will maintain the street at an acceptable condition with minimal patching failures.

Quality assurance measures, recommended further in this chapter, should be enforced to ensure the desired quality level.

## **Appearance of Road Cut Repairs**

The final appearance of the street after the repairs are made should be acceptable with an engineered appearance. Street repairs that are satisfactory from a functional point of view may produce a negative reaction from the public if they give the appearance of being poorly planned or executed. The public's perception of street repairs is based primarily on shape, size, and orientation--the geometry of a patch. Following are guidelines for the geometry of a quality patch:

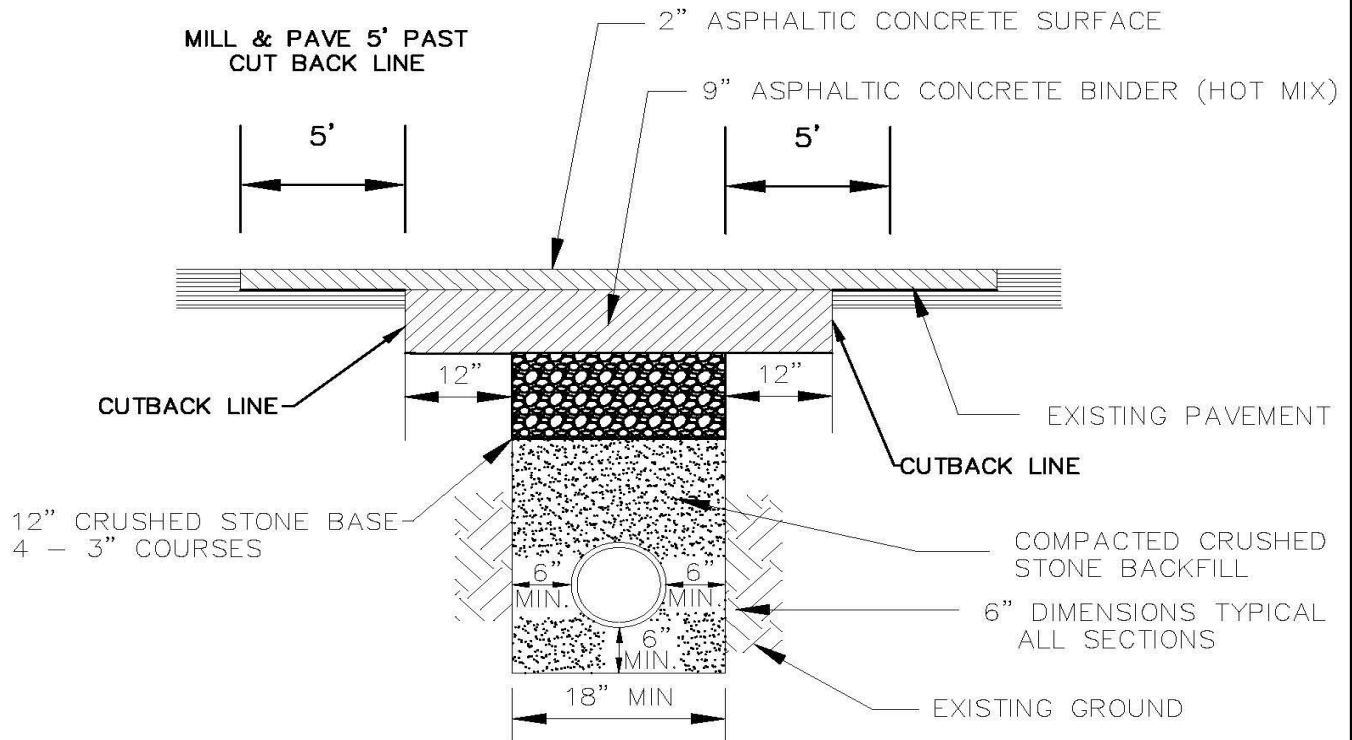
- Street repairs should leave a pavement in a condition at least as good as, if not better

than, the condition prior to the repairs. In most cases, and particularly in the cases of extensive excavation and repairs, it is desirable to survey the existing pavement condition with a representative of the City of Lebanon prior to the work. After completion of the work, survey the pavement condition again to verify that the pavement condition has been maintained or improved. In the case of minor repairs, these pavement surveys can be made by visual observation.

- In the case of major projects that involve excessive haul of materials or unusually heavy construction equipment or activity, non-destructive testing of the pavement condition before and after construction may be required.
- Excavations and street repairs, even well-constructed street repairs, shorten a pavement's life. Several types of street distress, settlement, alligator cracking, and potholes, often show up around patches. Quality street repairs should attempt to reduce the occurrence of these types of distress.
- Avoid weakening or destroying the existing pavement around an excavation with heavy construction equipment, stockpiling, or delivery of materials, etc. When damage does occur, remove the damaged pavement, extending the limits of the street repair, before replacing the pavement. No stockpiling of backfill or road building materials is permitted on the pavement.

### **Road Cut Repair Details**

Figures through D.3 - D.5 show the acceptable methods for making road cut repairs in intersections. Figure D.3 is the case where the road cut is contained in only one quarter of the intersection; Figure D.4 is the case where the road cut encompasses more than one quarter but is contained in one half of the intersection. Figure D.5 is for the case where the road cut encompasses more than one half of the intersection.



TYPICAL SECTION ASPHALT PAVEMENT – TYPE A

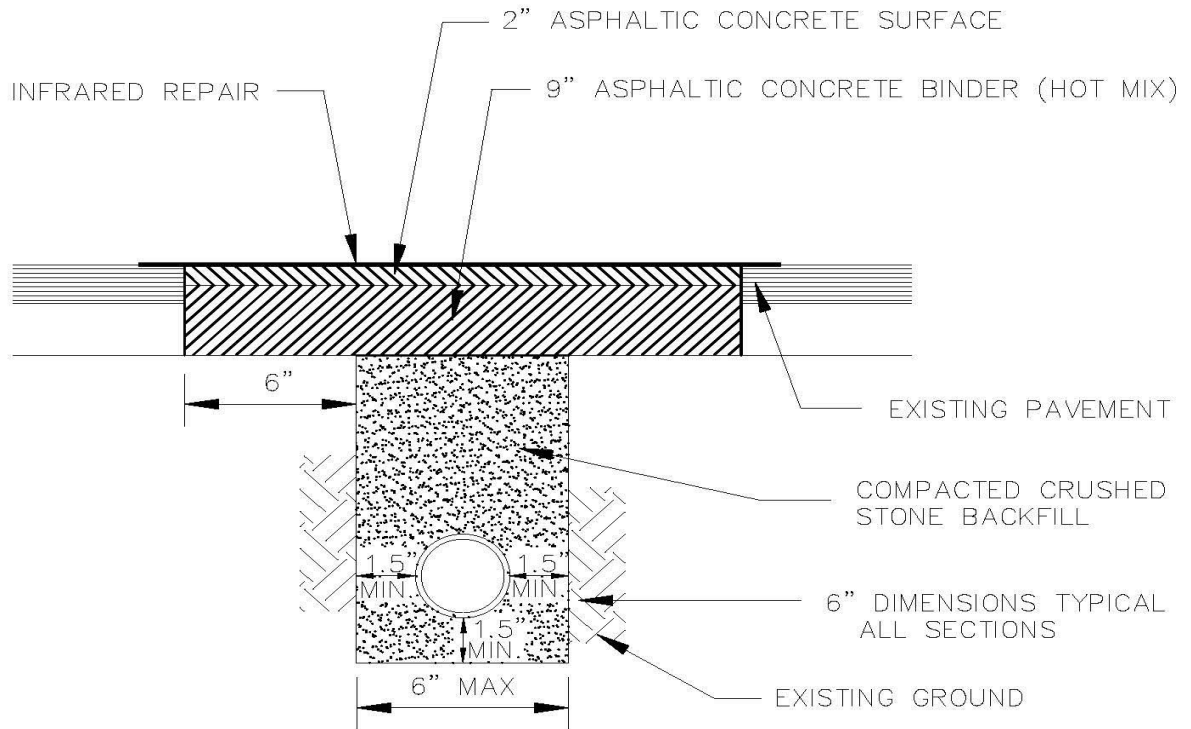
GENERAL NOTES

1. A CITY INSPECTOR IS TO BE PRESENT FOR TRENCH REPAIR INSTALLATION
2. ALL TRENCH REPAIR WORK SHALL HAVE A WARRANTY PERIOD OF 1 YEAR AFTER THE ACCEPTANCE DATE
3. EDGE OF PAVEMENT SHALL BE SAW CUT 12" PAST TRENCH ON ALL SIDES AS NECESSARY TO OBTAIN NEAT LINES
4. MINIMUM TRENCH WIDTH SHALL BE 18" TO ALLOW FOR PLATE COMPACTOR
5. ALL PAVEMENT MARKINGS AFFECTED BY CONSTRUCTIONS MUST BE REPLACED

NOT TO SCALE

	6/12/19 DATE	<b>CITY OF LEBANON</b>	DEP. OF PUBLIC SERVICES
E.I.T.	DATE		TRENCH REPAIR
	6/12/19 DATE		<b>ST-402</b>
ENG. DIRECTOR	DATE		

Figure D.1. Details of a trench repair.



TYPICAL SECTION ASPHALT PAVEMENT – TYPE A

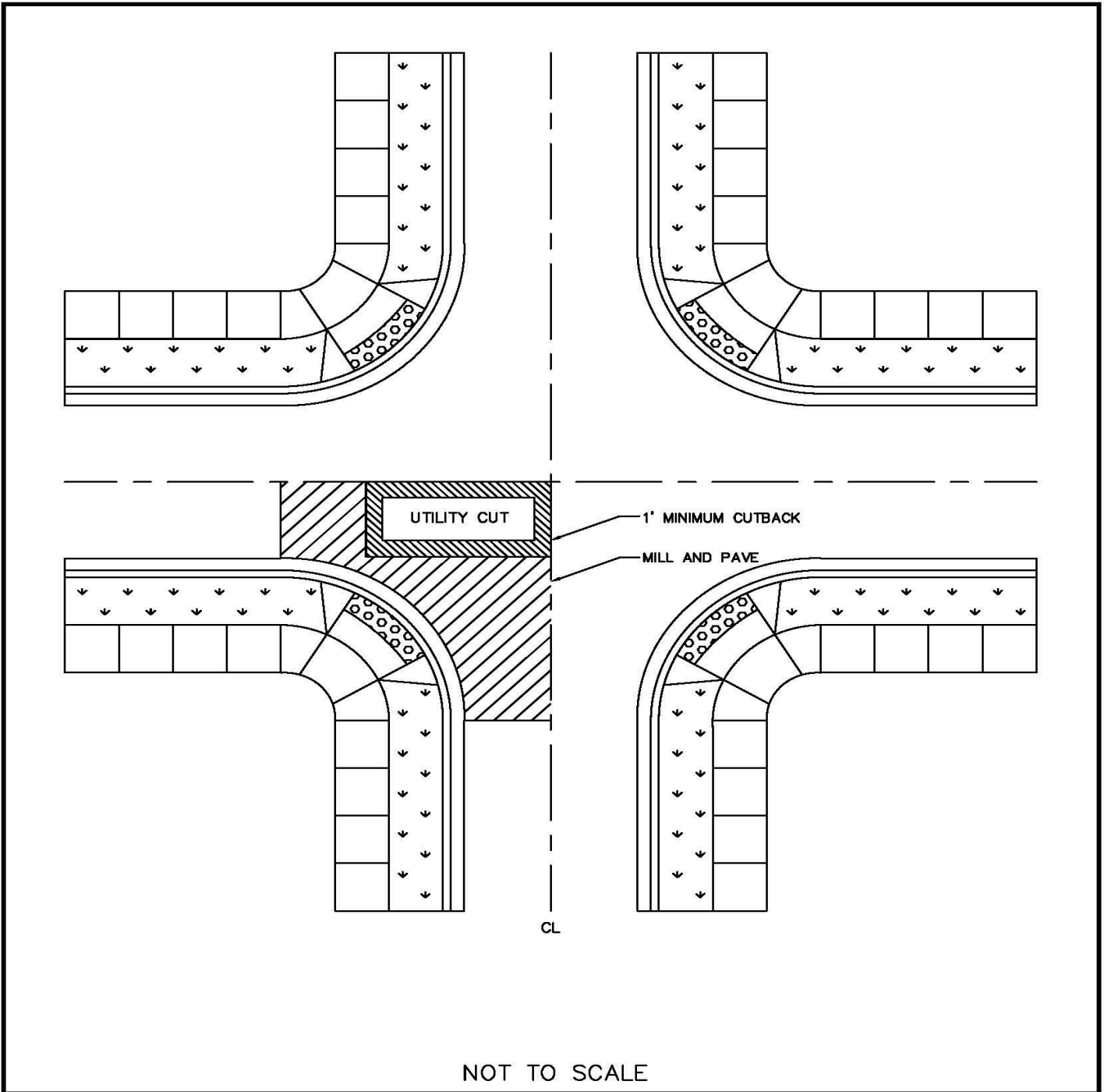
GENERAL NOTES

1. A CITY INSPECTOR IS TO BE PRESENT FOR TRENCH REPAIR INSTALLATION
2. ALL TRENCH REPAIR WORK SHALL HAVE A WARRANTY PERIOD OF 1 YEAR AFTER THE ACCEPTANCE DATE
3. EDGE OF PAVEMENT SHALL BE SAW CUT 12" PAST TRENCH ON ALL SIDES AS NECESSARY TO OBTAIN NEAT LINES
4. INFRARED REPAIR SHALL BE REQUIRED ON NARROW TRENCHES
5. ALL PAVEMENT MARKINGS AFFECTED BY CONSTRUCTIONS MUST BE REPLACED

NOT TO SCALE

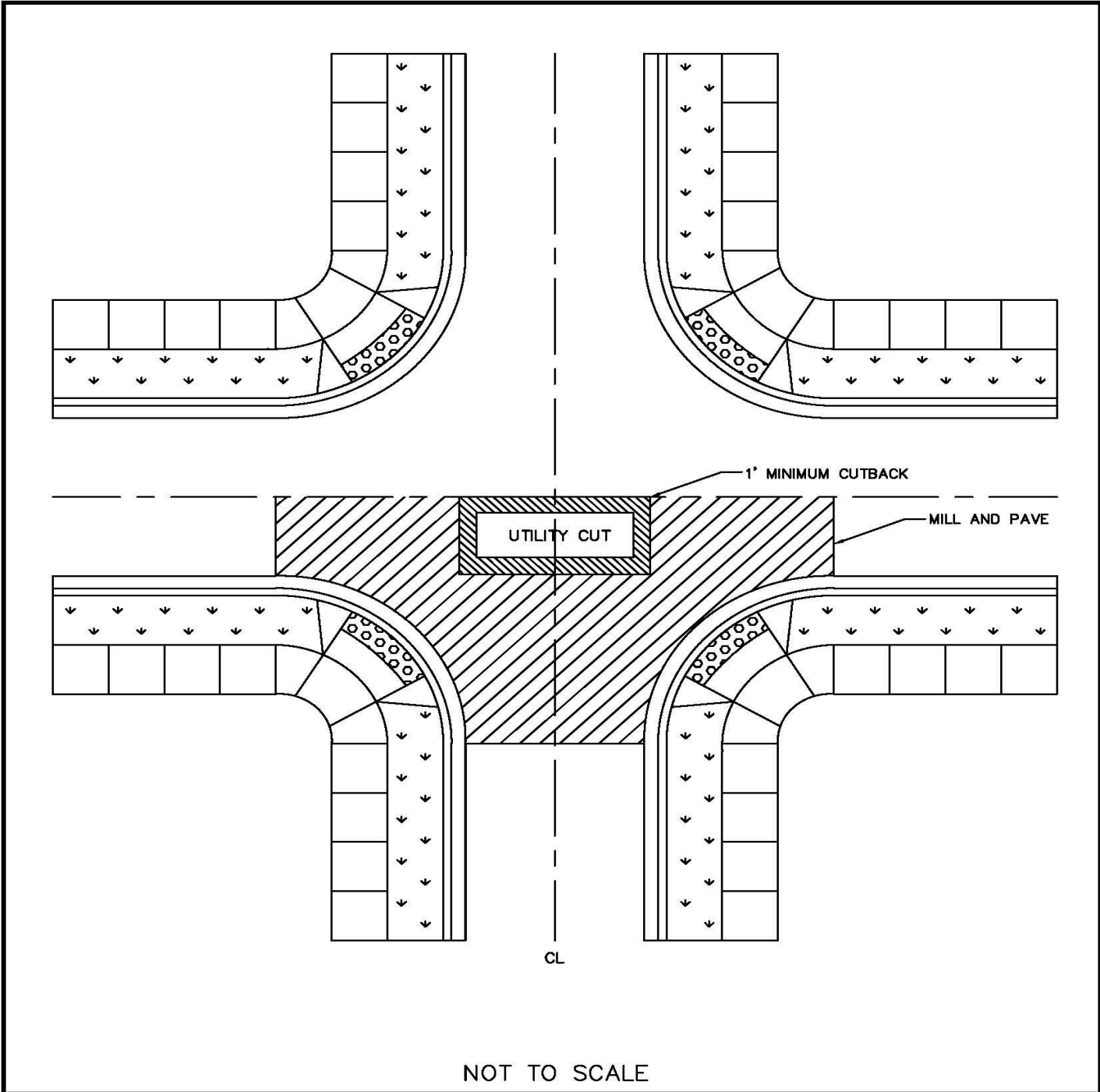
 6/12/19 E.I.T. DATE	<b>CITY OF LEBANON</b>	DEP. OF PUBLIC SERVICES
 6/12/19 ENG. DIRECTOR DATE		NARROW TRENCH REPAIR
		<b>ST-403</b>

Figure D.2. Details of a narrow trench repair.



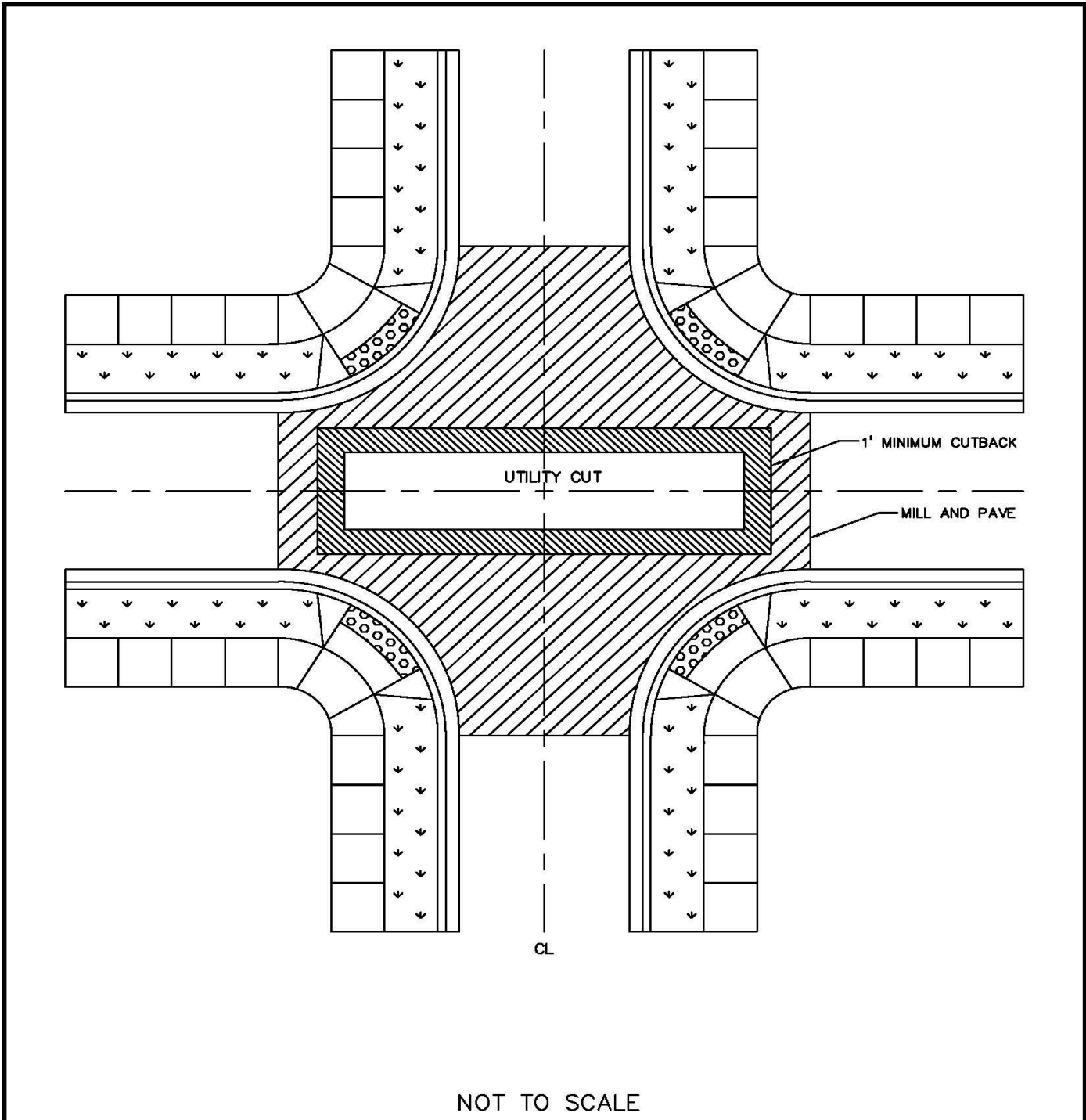
 E.I.T.	6/12/19 DATE	<b>CITY OF LEBANON</b>	DEP. OF PUBLIC SERVICES
 REGINA SANTANA ENG. DIRECTOR	6/12/19 DATE		1/4 INTERSECTION REPAIR
			<b>ST-404</b>

Figure D.3. Utility cut contained in one quarter of intersection



 E.I.T.	6/12/19 DATE	<b>CITY OF LEBANON</b>	DEP. OF PUBLIC SERVICES
 REGINA SANTANA ENG. DIRECTOR	6/12/19 DATE		1/2 INTERSECTION REPAIR
			<b>ST-405</b>

Figure D.4. Utility cut contained in one half of intersection.



 E.I.T.		<b>CITY OF LEBANON</b>	DEP. OF PUBLIC SERVICES
6/12/19	DATE		FULL INTERSECTION REPAIR
 REYNA SANTANA ENG. DIRECTOR			<b>ST-406</b>

Figure D.5. Utility cut contained encompasses more than one-half of intersection.

Some examples of repair methods that are not acceptable and the corresponding acceptable method are provided in the following Figures D.6 through D.18.

**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.

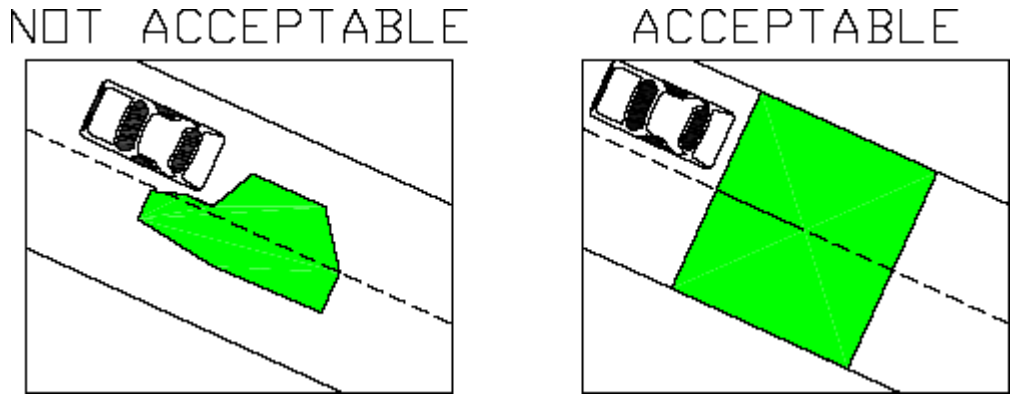


Figure D6. Example 1: Do not construct patches with angled sides and irregular shapes.

**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.

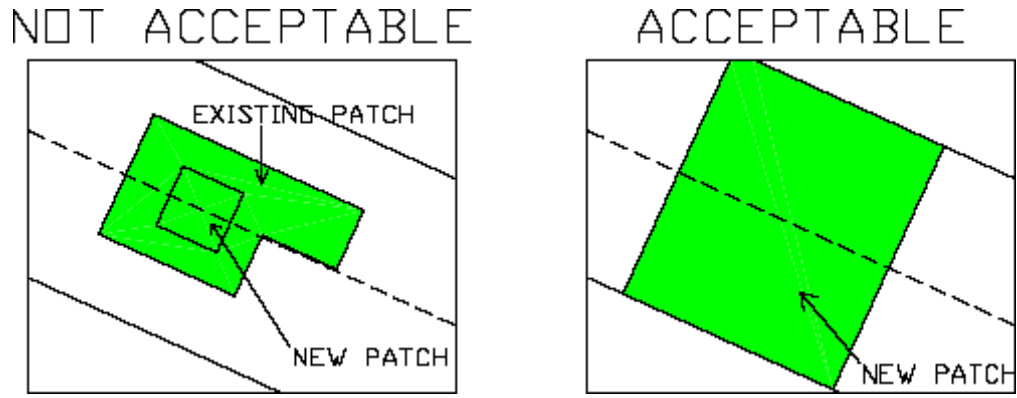


Figure D.7. Example 2: Avoid patches within existing patches.

### 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.

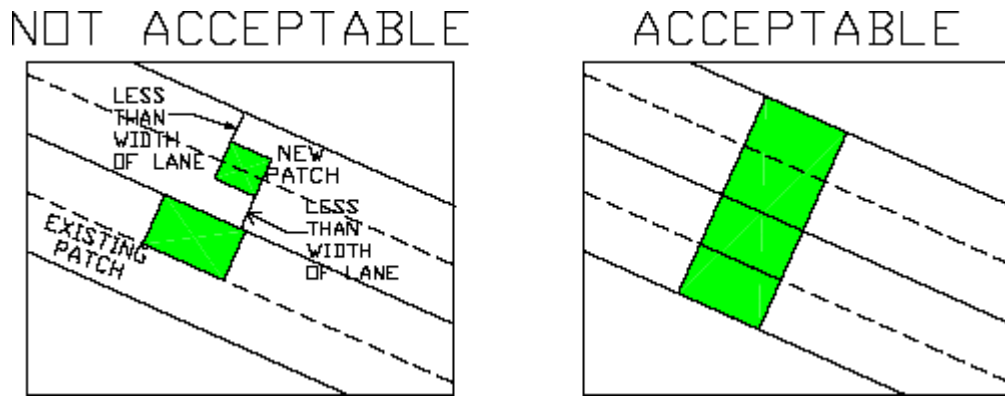


Figure D.8. Example 3: Do not leave strips of pavement less than one-half lane in width.

### Example 4

In concrete pavements, remove sections to existing joints, or new saw cut joints at mid-slab, that are in good repair. In damaged concrete, the limits of removal should be determined in the field by a City of Lebanon inspector.

CONCRETE PAVEMENT

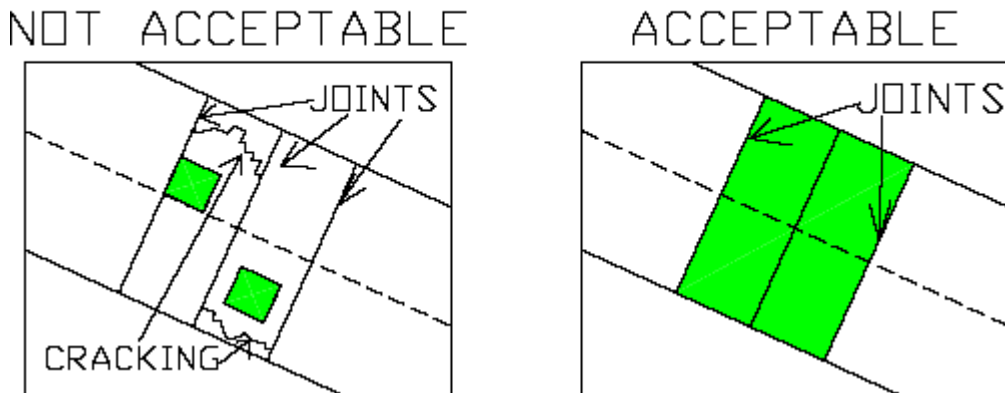


Figure D.9. Example 4: In concrete pavements, remove sections to existing joints.

### 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 equipment.

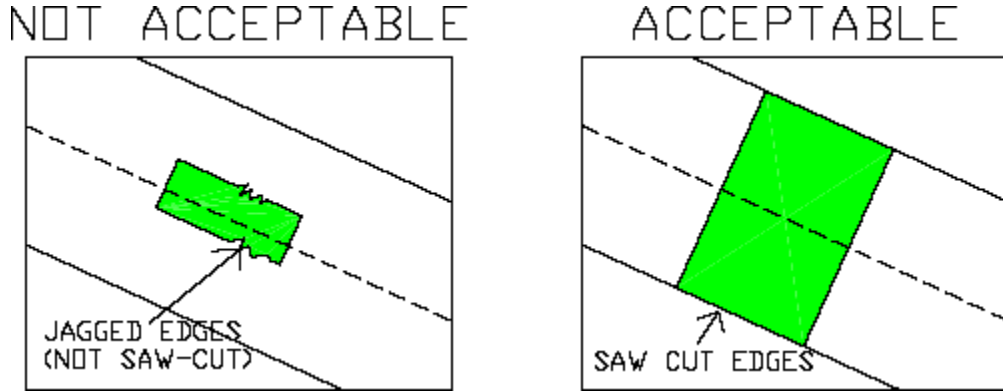


Figure D.10. Example 5: All edges shall be saw cut.

### 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 a City inspector. The separation of proposed utilities is determined by the City of Lebanon Utilities Department.

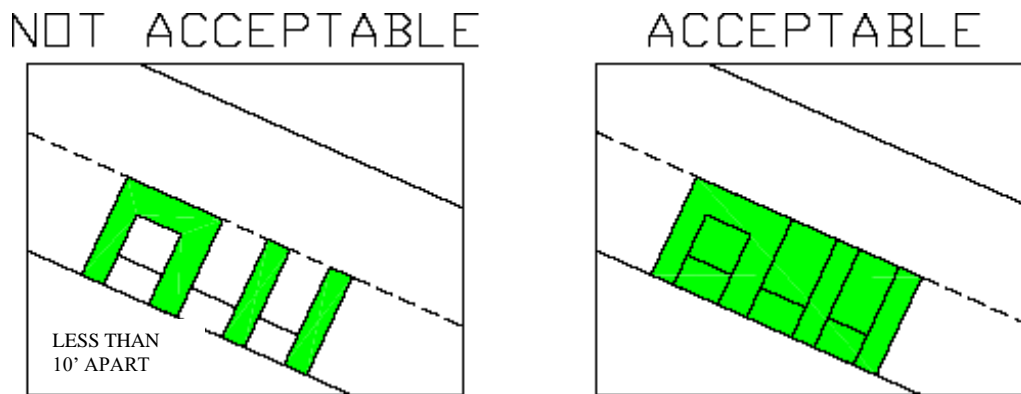


Figure D.11. Example 6: The patched area must include any existing patches within 10 feet.

### 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.

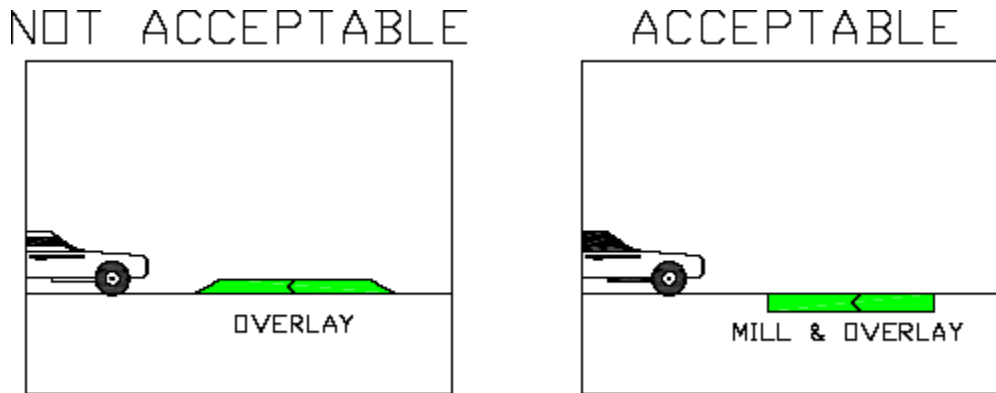


Figure D.12. Example 7: Patches may not decrease rideability.

### 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- ( $1/4$ -) inch.

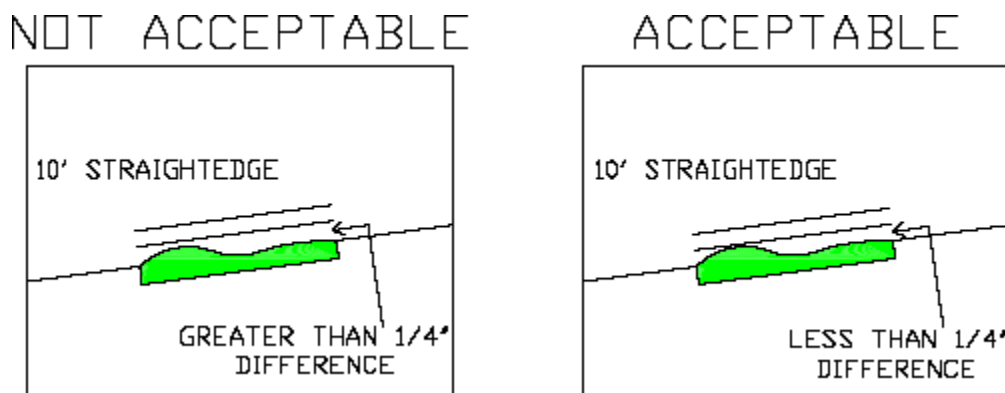


Figure D.13. Example 8: Surface tolerances for street repairs should meet the standard for new construction.

### Example 9

If allowed, 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.

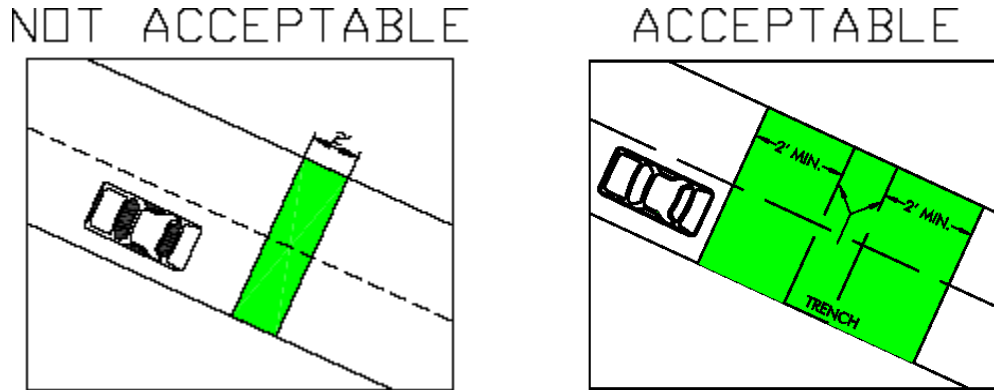


Figure D.14. Example 9: Trenches must be patched using a T-Patch.

### 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.

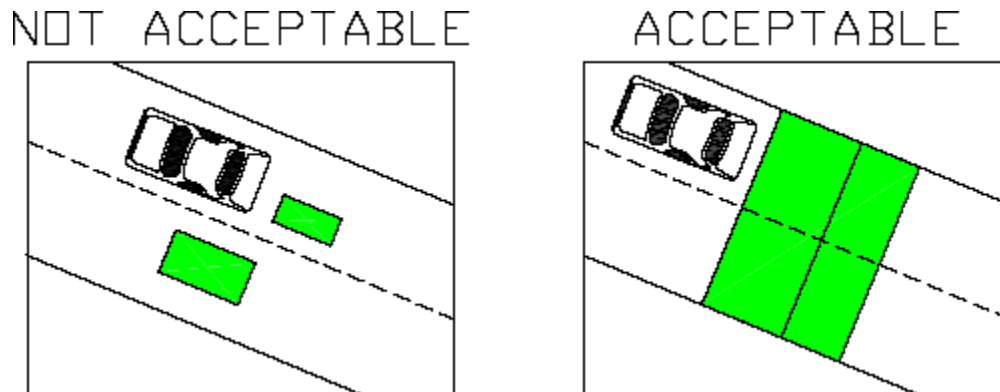


Figure D.15. Example 10: Do not allow the edges of patches to fall in wheel paths.

### 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.

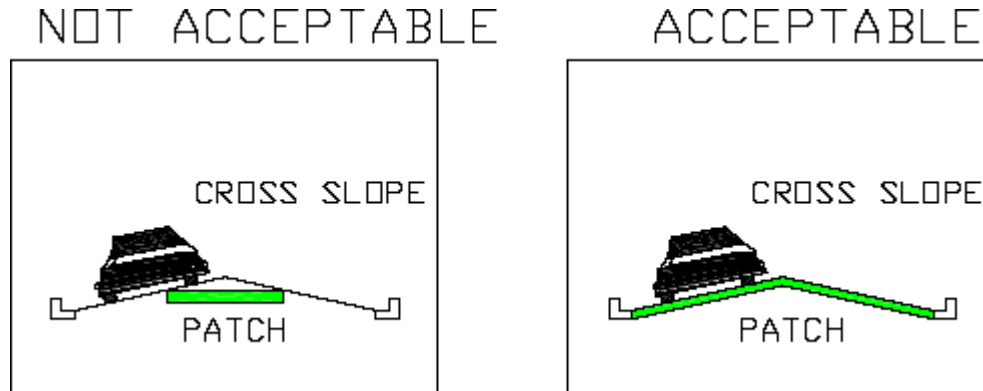


Figure D.16. Example 11. Patch slope and grade must match existing pavement.

### 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 City inspector.

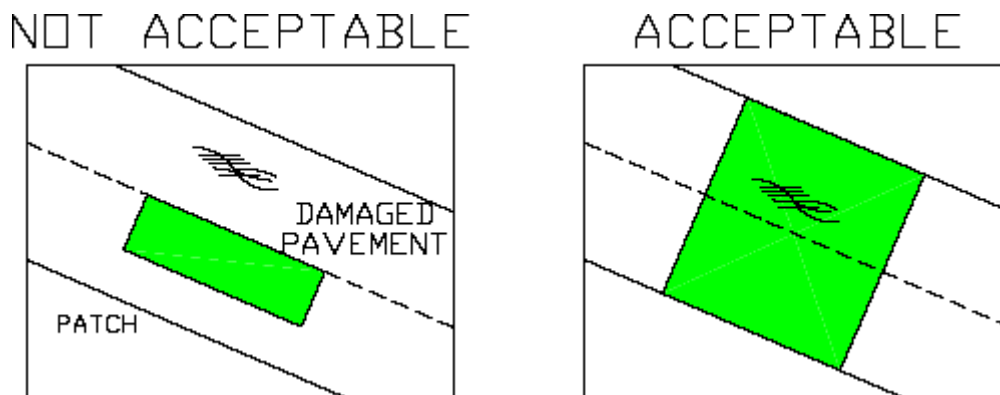


Figure D.17. Example 12: Damaged pavement within 10 feet of a patch must also be patched.

### Example 13

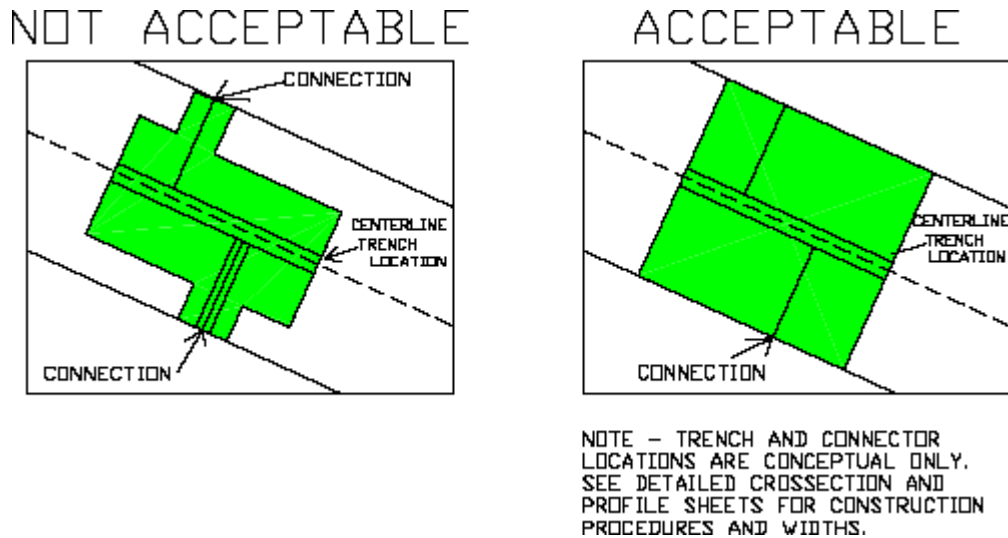


Figure D.18. Example 13: Patches must avoid frequent width changes.

## TESTING AND INSPECTION

If repairs to a road excavation (permitted or otherwise) are not witnessed by City inspectors, the City reserves the right to require third-party signoff prior to releasing the contractor's bond or signing off on the repair. The testing firm chosen to perform this signoff must be qualified and selected from the City's preapproved list of firms. The costs of any testing, as required, shall be borne by the contractor. If deficiencies are found, the full section of the repair will be required to be removed and reinstalled.

### Inspection Requirements

All construction work within the public rights-of-way shall be subject to inspection by City of Lebanon staff. Certain types of work may be required to have continuous inspections if deemed necessary. It shall be the responsibility of the contractor to provide safe access for the inspector to perform the required inspections.

It shall be the responsibility of the person performing the work authorized by the Permit to notify the City inspector(s) that such work is ready for inspection. Every request for inspection is to be received at least twenty-four (24) hours before such inspection is desired.

City staff may make or require other inspections of any work as deemed necessary to ascertain compliance with the provisions of these guidelines. Any work performed without the required inspections shall be subject to removal and replacement at the contractor's expense, regardless of the quality of the work.

Where large scale projects exceed the ability of the City to provide inspection, the contractor or utility company will incur the cost of a private inspection firm. This inspection firm will be mutually agreed upon by the Permit applicant and City staff prior to issuance of the Permit.

## **CONSTRUCTION DETAILS**

The conditions described below apply to all work done within the public rights-of-way such as utility line installation or repairs performed by any contractor or utility department, public or private.

### **Protection of Existing Improvements**

The contractor shall at all times take proper precautions and be responsible for the protection of existing street and alley surfaces, driveway culverts, street intersection culverts or aprons, irrigation systems, mailboxes, driveway approaches, curb, gutter and sidewalks and all other identifiable installations that may be encountered during construction.

The contractor shall at all times take proper precautions for the protection of existing utilities, the presence of which are known or can be determined by field locations of the utility companies. The contractor shall contact Tennessee 811 to have underground utilities located a minimum of three (3) working days prior to the proposed start of work, excluding weekends and holidays.

Existing improvements to adjacent property such as landscaping, fencing, utility services, driveway surfaces, etc., which are not to be removed shall be protected from injury or damage resulting from the contractor's operations.

The contractor shall at all times take proper precautions for the protection of property pins/corners and survey control monuments encountered during construction. Any damaged or disturbed survey markers shall be replaced by a registered land surveyor at the contractor's expense.

The repair of any damaged improvements as described above shall be the responsibility of the permit holder.

Throughout construction, the contractor shall make adequate provisions to assure that traffic and adjacent property owners experience a minimum of inconvenience. MUTCD compliant traffic control plans and/or detour plans are required for any and all lane or road closures. Plans must be designed and submitted by a licensed engineer or traffic control company. Signage should comply to all MUTCD requirements. Professional flaggers are required for any closures. Please refer to the lane closure section of these guidelines for additional information on the process.

All work shall be done in an expedient manner. Repairs shall be made as rapidly as is consistent with high-quality workmanship and materials. For repairs 12 feet or less in length, completion of the work including replacement of pavement and cleanup shall normally be accomplished within two (2) weeks after the repair work or activity involving the cut is done. For repairs greater than 12 feet in length, the final surface shall not be placed for a minimum of 30 days from the placement of the binder material. Extension of time for completion, including winter and other weather delays, shall be permitted with approval from City staff. If the repairs are not completed in the allotted time, the City has the right to repair the street at the contractor's expense.

### **Temporary Surfaces Required**

When the final surface is not immediately installed, it shall be necessary to place a temporary asphalt surface on any street cut opening. The temporary surface installation and maintenance shall be the responsibility of the Permittee until the permanent surface is completed

and accepted. It shall be a minimum of 4” of either hot mix or cold mix asphalt paving material. Temporary surfaces shall be compacted, rolled smooth, and sealed to prevent degradation of the repair and existing structures during the temporary period. Permanent patching shall occur within one (1) month unless otherwise permitted by the City of Lebanon Engineering Department due to weather or other factors. Repair may be required sooner depending on the size, location, amount of traffic, or other factors. Temporary repairs must be maintained as needed or required by City staff. If temporary repairs are not maintained, the City reserves the right to make the repair at the expense of the contractor/permittee. In certain instances, a road cut may need to remain unpatched overnight. In this scenario, the engineering department or inspectors can approve the backfilling of the cut with 67 stone with a traffic-rated steel plate. The plate material and installation must be in accordance with TDOT standards and securely fastened to prevent movement.

### **Pavement Patches**

All permanent pavement patches and repairs shall be made with "in kind" materials. For example, concrete patches in concrete surfaces, full depth asphalt patches with full depth asphalt, concrete pavement with asphalt overlay patches will be expected in permanent "overlaid" concrete streets, etc. In no case is there to be an asphalt patch in concrete streets or concrete patch in asphalt streets. Any repair not meeting these requirements will be removed and replaced by the contractor at no expense to the City.

### **Removal and Replacement of Unsatisfactory Work**

Removal and replacement of unsatisfactory work shall be completed within seven (7) calendar days of notification of the deficiency unless deemed an emergency requiring immediate action. In the event that the replacement work has not been completed, the City reserves the right to take action and repair at the expense of the contractor/permittee.

### **Warranty for Satisfactory Work**

The utility company will be held responsible for a 12-month warranty period ~~for any defects in the patch that may result in a PCI of 85 or less as defined by ASTM D6433 as modified for this study.~~

## **REMOVALS**

### **Paved Streets**

Bituminous pavement removal areas shall be saw cut to clean, straight lines that are perpendicular or parallel to the flow of traffic.

In existing pavement, all excavations within 36 inches of the edge of the asphalt shall require removal and replacement from the edge of asphalt to the excavation edge.

Concrete pavement, driveways, streets, and alleys shall be removed to neatly sawed edges cut to full depth.

### **Gravel Streets**

When trenches are excavated in streets or alleys that have only a gravel surface, the contractor shall replace such surfacing on a satisfactory compacted backfill with gravel conforming to TDOT specification aggregate base course as shown in Appendix D. Gravel replacement shall be one (1) inch greater in depth to that which originally existed, but not less than four (4) inches in total depth. The surface shall conform to the original street grade and follow original drainage patterns. Where the completed surface settles, additional gravel base shall be placed and compacted by the Contractor within seven (7) calendar days after being

notified by City staff to restore the roadbed surface to finished grade.

Some streets may have been treated with a special surface treatment to control dust and/or bind the aggregates together. In these cases, the Contractor is responsible for installing the gravel surface in the same manner as what was existing. Such surface treatments shall be of the same chemical composition as what existed prior to the excavation work. City staff shall note on the permit the surface treatment that will be required.

### **Concrete Curb, Gutter and Sidewalk**

Concrete shall be removed to neatly sawed edges to full depth for sidewalks and curb and gutter and shall be saw-cut in straight lines either parallel to the curb or perpendicular to the alignment of the sidewalk or curb. Any removal shall be done to the nearest joint. Replaced sections may require doweling connections as required by City staff.

## **BACKFILL**

### **Flowable-Fill**

Flowable-fill may be required as utility trench backfill as specified by the City of Lebanon Utilities Department. This requirement applies to all pavement and gravel locations. Compaction will be as specified in Appendix D. Flowable fill mix design must meet any requirements listed in the City's water and/or sewer specifications.

Flowable-fill or flash-fill shall be prohibited as a temporary or permanent street surface. Trenches shall initially be backfilled to the level of the original surface. After the flowable-fill has cured, the top surface of the flowable-fill shall be removed and the temporary or permanent surface shall be placed.

Bridging and cutback requirements as described in these standards may still be required if the street failures indicate a clear need.

Repair of failed trenches will be the responsibility of the party requiring the trench.

### **Conventional Backfill (Other Than Flowable-Fill)**

Backfill in existing or proposed streets, curbs, gutters, sidewalks and alleys is divided into three (3) categories: initial, intermediate and final lifts as defined below:

- The INITIAL LIFT, comprised of washed, clean gravel material which meets City specifications, consists of the section from the bottom of the excavation to a point six to twelve (6 - 12) inches above the top of the installation as required by the City inspector. Placement and compaction of the initial layer shall be as specified by the utility department to protect their installation.
- The INTERMEDIATE LIFT, generally comprised of #67 crushed stone and crush and run, consists of the section above the initial layer to a point within eleven (11) inches of the surface, as shown in the City of Lebanon standard trench repair detail.
- The FINAL LIFT includes both road base and asphalt surfacing. Binder material should be brought up flush with the existing roadway surface and allowed to settle for a period. Once the binder has settled, the top two (2) inches should be milled and overlaid with final topping as shown in these guidelines and standard details. All road material shall meet all specifications for aggregate base course as specified in Appendix D. All densities, compactions, and mix designs should be in accordance with Section 307 of the current TDOT specifications as required in Appendix D.

## **RESTORATION**

### **Bore Holes - Vertical and Horizontal**

For openings less than or equal to 6 inches in diameter, bore holes shall be filled with patching material (cold mix is not acceptable) to prevent entry of moisture. Patching material used shall be in all cases compatible with the existing surface. Subgrade shall be replaced with flowable fill or suitable backfill to provide necessary support to the surface. The sealing of bore holes is the responsibility of the contractor or persons making the bore. For openings greater than 6 inches in diameter, the limits of repair shall be identified in the permit. The completed job shall be flush with the surrounding pavement and have no indentations, pockets, or recesses that may trap and hold water.

### **Subgrade**

The subgrade for the pavement structure shall be graded to conform to the cross sections and profile required by the construction plans or existing roadway. Prior to the placement of aggregate base course or sub-course, the subgrade should be properly prepared. The subgrade should be scarified to a minimum depth of six (6) inches, moisture adjusted as necessary, and recompacted.

Prior to approval to place the base or sub-base course, all utility main and service trenches shall be compacted. The density requirement also applies to all utility trenches within the public rights-of-way from a point four (4) feet beyond the edge of asphalt and descending at 1:1 outward.

### **Asphalt Surfacing**

Any damage, even superficial, to the existing asphalt surface in the vicinity of the work shall be repaired at the expense of the Contractor, including but not limited to gouges, scrapes, outrigger marks, backhoe bucket marks, etc. A slurry seal type covering will be considered the minimum repair. Patching may be required, at the discretion of the City inspector.

The depth of asphalt patches in asphalt streets shall be according to the City of Lebanon Standard detail ST402.

The asphalt patch area for street excavations that fall within the wheel path of the vehicular travel lane shall be increased in size to the center of the lane or adjacent lane. In no circumstance will the edge of a patch area be allowed to fall within the wheel path.

In streets that have been paved within the last five (5) years or are classified as collector roads or higher, the City reserves the right to deny any street excavation or require repairs that are over and above these specifications including but not limited to, infrared surface repairs, extended mill and overlay limits, or other methods deemed necessary by City staff.

## **CONCRETE SURFACING AND PATCHING**

The concrete pavement shall be replaced with 4,000 psi concrete to match the finish and thickness of the existing pavement, but not less than eight (8) inches thick. All concrete construction shall be protected from vehicular traffic, including contractor vehicles, until the concrete has achieved eighty (80) percent of its ultimate strength. Concrete shall be coated and sealed with a uniform application of membrane curing compound applied in accordance with manufacturer's recommendations.

The use of quick-curing concrete (3000 psi strength within 48 hours) shall be used on all arterial and collector streets when repair areas are less than 500 square feet or when temperatures are below 40° F. Quick-curing concrete repairs may be opened to traffic within two (2) days or when the concrete has achieved eighty (80) percent of its ultimate strength.

Where existing cracks or damage is adjacent to the area being repaired, the repair area shall include the cracked or damaged concrete. Pavement repairs shall include all areas of damage, including leak test holes, ~~pot holes~~ potholes, equipment, and/or material scarring of the exiting surface.

When repairing concrete, removal perimeter shall be saw-cut, and replacement concrete shall be doweled into the old concrete as directed by City staff. (Needed?)

### **Traffic Control and Lane Closures**

Any Road Excavation Permit requiring the closure of a lane, road, or sidewalk will require the City review and approval of a traffic control plan designed to MUTCD requirements (current edition). The traffic control plan must be prepared by a licensed engineer or traffic control company and be project-specific. Traffic control plans should be submitted via email to Kristen Rice ([Kristen.rice@lebanontn.org](mailto:Kristen.rice@lebanontn.org)) and Jake Pruitte ([jake.pruitte@lebanontn.org](mailto:jake.pruitte@lebanontn.org)) for approval.

At least one week prior to beginning road excavation and after City approval of the traffic control plan, a lane/road closure notification must be sent out via email to the street closure list. A sample of the body of the email can be found below, as well as the list of contacts who should be notified. The allowable work hours are determined by City staff depending on the location of the project. Any closures on state routes must also follow TDOT's lane closure process and requirements.

### **Sample Email**

#### **“NOTICE OF LANE CLOSURE**

**{Road name} will have lane closures between {adjacent road name} and {adjacent road name} from {date} to {date} from {time}am to {time}pm for road work (weather dependent). All businesses and residents will have access during construction. Please use caution when traveling in the area. The emergency contact is {name} with {construction company}. {emergency contact number}.”**

## Street Closure Notification List

Agency	Contact Name & Title	Phone	E-mail
Lebanon Public Services Administration	Jeff Baines, Public Services Commissioner	443-2824	<a href="mailto:jeff.baines@lebanontn.org">jeff.baines@lebanontn.org</a>
Lebanon Utilities Department	Regina Santana, Utilities Director	444-0825	<a href="mailto:Regina.santana@lebanontn.org">Regina.santana@lebanontn.org</a>
Lebanon Street Department	Lee Clark, General Services Administrator	444-0825 ext. 5101	<a href="mailto:lee.clark@lebanontn.org">lee.clark@lebanontn.org</a>
Lebanon Engineering Department	Kristen Rice, Transportation/Traffic Engineer	443-2839 ext 2334	<a href="mailto:Kristen.rice@lebanontn.org">Kristen.rice@lebanontn.org</a>
Lebanon Engineering Department	Jake Pruitte, Project Engineer	443-2839 ext 2332	<a href="mailto:jake.pruitte@lebanontn.org">jake.pruitte@lebanontn.org</a>
Lebanon Engineering Department	Danny Turnbull, Construction Project Manager	443-2839 ext 2319	<a href="mailto:dannyt@lebanontn.org">dannyt@lebanontn.org</a>
Lebanon Police Department	Mike Justice, Police Chief	444-2323	<a href="mailto:mike.justice@lebanontn.org">mike.justice@lebanontn.org</a>
	Dispatch	"	<a href="mailto:PDDispatch@lebanontn.org">PDDispatch@lebanontn.org</a>
	Traffic Division	"	<a href="mailto:PDTraffic@lebanontn.org">PDTraffic@lebanontn.org</a>
Lebanon Fire Department	Jason Baird, Fire Chief	443-2903 ext. 3116	<a href="mailto:jason.baird@lebanontn.org">jason.baird@lebanontn.org</a>
Wilson Co. Sheriff's Office	Barbara McNabb, Staff Sergeant	444-1412	<a href="mailto:bmcnabb@wco95.org">bmcnabb@wco95.org</a>
Wilson Co. Emergency Management	Marty Heckman, Logistics Division Chief	444-8799	<a href="mailto:heckmanm@wilsonema.com">heckmanm@wilsonema.com</a>
Lebanon Special School District	Brian Hutto, Director of Schools	449-6060	<a href="mailto:brian.hutto@lssd.org">brian.hutto@lssd.org</a>
Wilson County Schools	Pam Peery, Administrative Assistant to Dir. of Schools	453-7296	<a href="mailto:peeryp@wcschools.com">peeryp@wcschools.com</a>