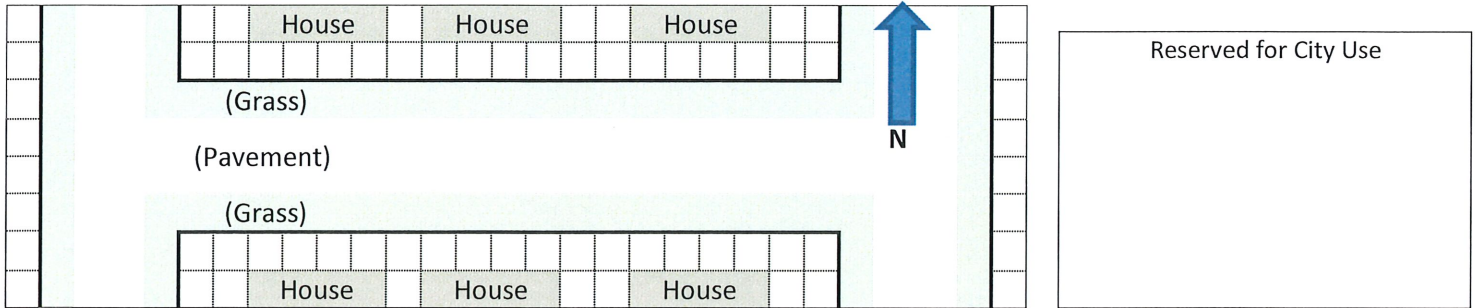


Excavation Permit Application

Permit # _____

City of Kirkwood
139 South Kirkwood Road
(314) 822-5822

Address of Excavation: _____
Reason for Excavation: _____
Start Date: _____ Estimated Completion Date: _____
Contractor Name: _____ Contractor License #: _____
Address: _____ City/State/Zip: _____
Phone: _____ Email Address: _____
24 Hour Emergency Contact: _____ 24 Hour Emergency Phone: _____



Label streets, show location of structures, excavation dimensions, temporary traffic control devices and any trees (public or private) within 20 feet of the work area. See Tree Protection Requirements on Notice.

Grass: Length _____ Feet x Width _____ Feet = Square Feet: _____ X \$5/SF _____ (\$250 Minimum)

Pavement: Length _____ Feet x Width _____ Feet = Square Feet: _____ X \$25/SF _____ (\$750 Minimum)

Deposit Amount: \$ _____ (\$5,000 Maximum) Excavation Permit Fee \$100

I have read and understand the ordinances of the City of Kirkwood pertaining to excavations and work in the public right-of-way and hereby agree to comply with all provisions of the ordinances of the City of Kirkwood and provide all safety devices and signs to warn and protect the public. I hereby certify I have the legal right to perform such work on the private or public utilities or other facilities with the full permission and understanding of the owner. The work shall be performed in accordance with the information on this permit application and all City codes.

**** Failure to request inspection within one year shall result in loss of full deposit. ****

Applicant's Signature

Applicant's Printed Name

Date

INSPECTIONS:

- Contact appropriate company, department or Building Commissioner's Office for an inspection of the utility work performed prior to backfilling.
- An initial inspection is required after the excavation has been backfilled and is ready for placement. **The Engineering Department shall be notified (314-822-5822) 48 hours prior to pavement replacement.** Deposits will be forfeited if pavement is placed without the proper inspection.
- After the work is complete, **the contractor shall notify the Engineering Department (314-822-5822) to perform a final inspection.** If the restoration passes the final inspection, the City shall release the deposit. If the restoration fails the final inspection, the contractor will be notified in order to address the deficiencies.

****Failure to request inspection within one year shall result in loss of full deposit.****

OFFICE USE ONLY

Approved by _____ on _____ Comments: _____

Contractor notified by _____ on _____

Deposit Paid/Refund Information:

Paid by: _____ Refund Address: _____

Date requested for Final Inspection: _____ By: _____

Final Inspection approved by: _____ Cost of repairs: \$ _____

Amount of Deposit Refund: \$ _____ Check #: _____ Date mailed _____

NOTICE TO CONTRACTORS

Contractors performing excavations in public right-of-way shall perform work in accordance with Chapter 20 of the Kirkwood Code of Ordinances. Failure to follow these conditions will result in a Stop Work Order until conditions are corrected or a forfeiture of the excavation deposit.

TREE PROTECTION REQUIREMENTS

- All trees, public or private, within 20' of the work area must be shown on the plans/sketch and protected according to Kirkwood Code of Ordinances Chapter 24, Tree Code.
- Work within 20' of public trees will be reviewed for protection, maintenance or removal recommendations by the Urban Forester. Recommendations must be followed.
- Requests for Removal of a public tree must be approved by the Urban Forestry Commission and the City Forester.
- All work on public trees other than tree protection must receive a permit to maintain/remove from the City Forester.
- **Failure to comply with tree protection requirements will result in penalties in accordance with the Kirkwood Code of Ordinances Chapter 24, Tree Code.**

TEMPORARY TRAFFIC CONTROL

- A site plan shall be submitted with the permit application showing the location and dimensions of proposed excavation and temporary traffic control device placement.
- Excavation operations which reduce the traveled **lane width** to less than 10' shall require flagmen and corresponding signage per the MUTCD, latest edition.
- If an excavation requires the closure of the entire roadway, the contractor shall submit a detour route with proposed detour signage on a City street map to the Engineering Department for approval prior to closure of the road. Minor streets may be closed during the hours of 9 a.m. to 4 p.m. All work on Kirkwood Road, Geyer Road, Dougherty Ferry Road, Woodlawn Avenue, Essex Avenue, and Woodbine Avenue shall only take place between the hours of 9 a.m. and 3 p.m.
- The contractor shall notify the Kirkwood Police Department at 314-822-5865 for road closures.
- Excavations that occur in the public sidewalk or cause the public sidewalk to be impassable shall be barricaded and "Sidewalk Closed" signage shall be placed at each block end and the excavation.
- All excavations shall be barricaded to protect the public from entering the work area.
- **Failure to properly pin, sign, and asphalt edge steel plates covering excavations open to traffic will result in the forfeiture of the excavation deposit. (See attached Standard Drawing)**

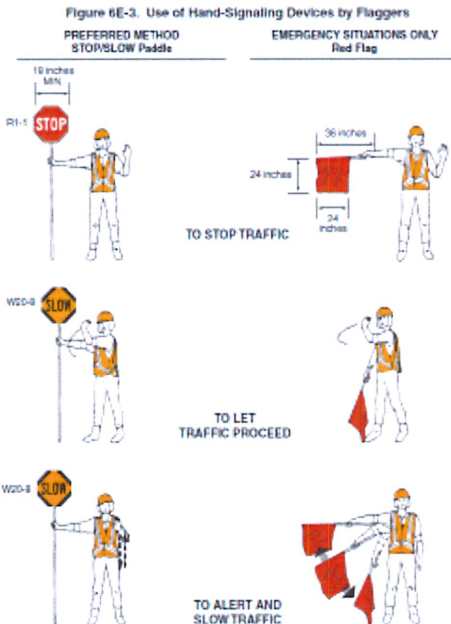
EXCAVATION, BACKFILL AND RESTORATION

- All excavated material shall be immediately removed from the site.
- After approval of the work, the excavation shall be filled with 2" minus crushed stone or 2" clean stone compacted in 6" lifts or flowable fill. Backfill material shall be on site and inspected by Engineering Department or Water Department when inspection of the work is performed.
- Asphaltic concrete pavement shall be full depth saw cut for a straight, square edge, 2' larger on all sides of the excavation. A 7" thick Portland cement concrete base shall be primed and capped with a 2" thick asphaltic concrete wearing surface. Meramec sand and "C" gravel required in all Portland cement concrete. **Joints between new pavement and existing pavement shall be sealed with a polymer-based hot-poured elastic-type meeting specification requirements of ASTM D6690 Type I and/or Type II5.**
- Concrete pavement shall be replaced with Portland cement concrete to a joint or saw cut edge 2' larger than the excavation on all sides. Meramec sand and "C" gravel required in all Portland cement concrete. **Joints between existing pavement and new pavement shall be sealed with a polymer-based hot-poured elastic-type meeting specification requirements of ASTM D1190 and/or ASTM D3405.**
- **Concrete pavement requires full panel replacement if** one or more of the following conditions exists: (1) Any arterial street less than 15 years old or any street less than ten years old; (2) any slab where the cut removes more than 1/3 of the slab; (3) any diagonal cut; (4) any slab where the proposed cut will leave the slab with three or more pieces; and (5) any trenching that transverses any arterial.
- Any pavement markings disturbed by the excavations shall be replaced to City standards.
- Parkways outside of the paved area shall be backfilled with compacted earth, fine graded, and returned to original condition by sodding. Sod shall be watered and maintained by contractor.
- Curbs shall be replaced with like material to the shape and style of the existing curbs to sawed cut straight edge or joint. Excavations within 3.5' of back of curb will require replacement of the pavement through the curb.
- Proper restoration shall be guaranteed by contractor for 30 days after completion.

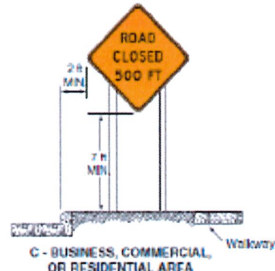


Temporary Traffic Control for Low Speed Urban Streets

The following is guidance only for the implementation of temporary traffic control for work zones in the City of Kirkwood. All entities working in the public right-of-way are required to meet the standards for temporary traffic according to the Manual on Uniform Traffic Control Devices (MUTCD), Latest Edition.



Sign Mounting Heights for Operations Lasting More Than 3 Days



Sign Mounting Heights for Operations Lasting Less than 3 Days

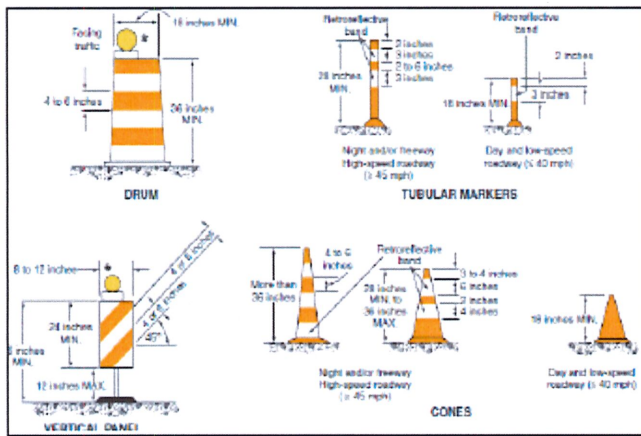
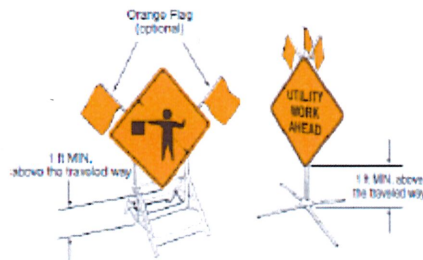


Table 6C-1. Recommended Advance Warning Sign Minimum Spacing

Road Type	Distance Between Signs**		
	A	B	C
Urban (low speed)*	100 feet	100 feet	100 feet
Urban (high speed)*	200 feet	350 feet	300 feet
Rural	500 feet	500 feet	500 feet
Expressway / Freeway	1,000 feet	1,500 feet	2,000 feet

* Speed category to be determined by the highway agency.
 ** The column headings A, B, and C are the dimensions shown in Figures 6H-4 through 6H-6. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

Figure 6H-10. Lane Closure on a Two-Lane Road Using Flaggers (TA-10)

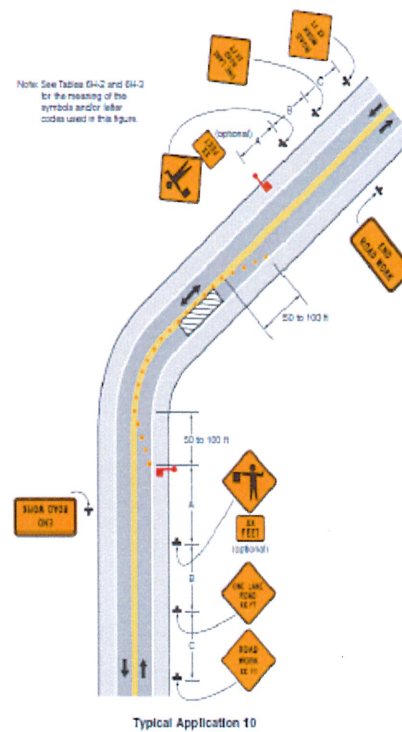


Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)

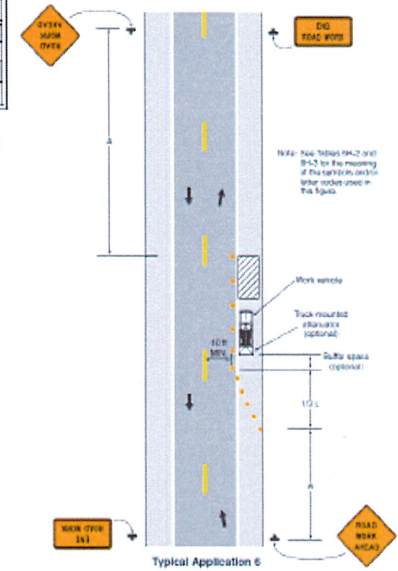
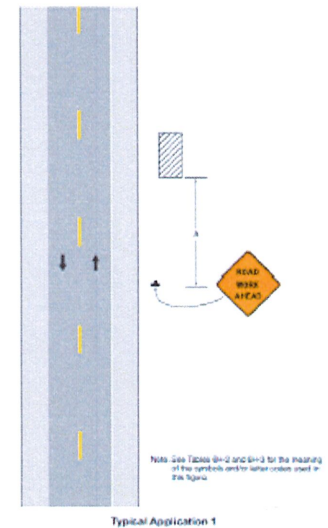
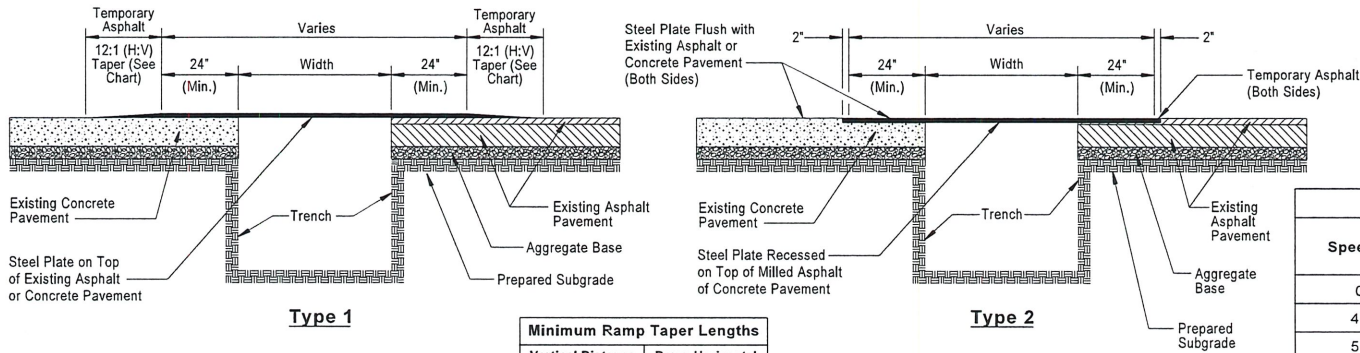


Figure 6H-1. Work Beyond the Shoulder (TA-1)





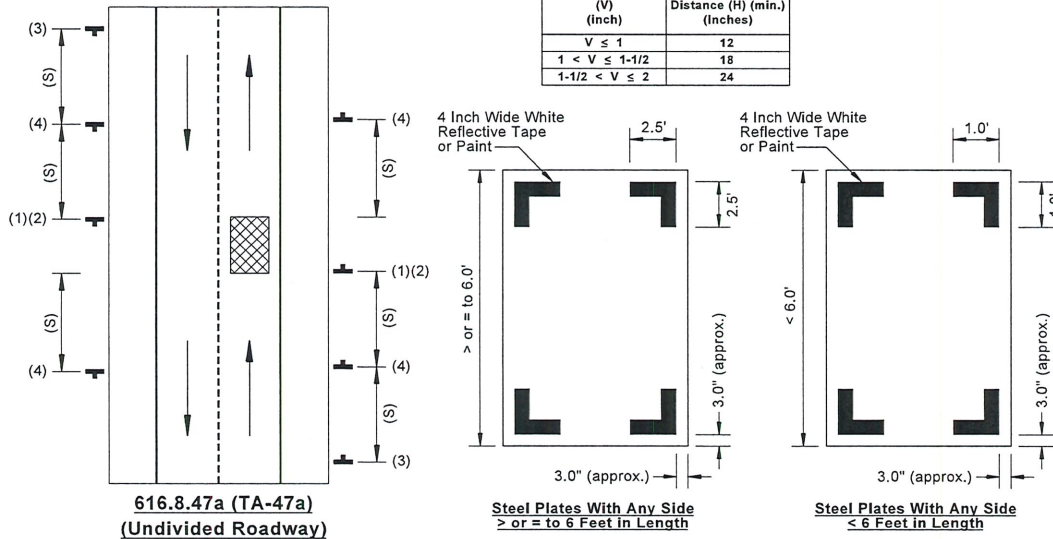
Steel Plate Installation	Posted Speed Limit
Type 1	45 MPH or Less
Type 2	Greater than 45 MPH

Sign Spacing for Excavations with Steel Plate		
Speed (MPH)	Sign Spacing (S) (in feet)	
	Undivided Roadway	Divided Roadway
0 - 35	200	* (see note below)
40 - 45	350	* (see note below)
50 - 55	500	* (see note below)

Sign height shall be on 1-foot portable stand or 7-foot post.

* For divided roadways use MoDOT standard drawing 616.8.47b (TA-47b).

Minimum Ramp Taper Lengths	
Vertical Distance (V) (inch)	Ramp Horizontal Distance (H) (min.) (inches)
$V \leq 1$	12
$1 < V \leq 1-1/2$	18
$1-1/2 < V \leq 2$	24



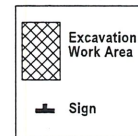
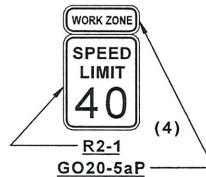
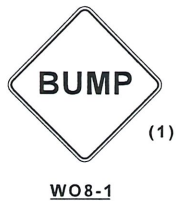
616.8.47a (TA-47a)
(Undivided Roadway)

Steel Plates With Any Side
> or = to 6 Feet in Length

Steel Plates With Any Side
< 6 Feet in Length

Signage (MUTCD)

Note: Speed limit reduction requires Director's approval prior to use.



- Do not scale drawing, follow dimensions.
- Use TYPE 1 plate installation where posted speed limit 45 MPH or less. Use TYPE 2 plate installation where posted speed limit greater than 45 MPH.
- For TYPE 2 plate installation, the steel plate shall be recessed by milling into the existing asphalt or concrete to set flush with the surface of the existing asphalt or concrete. Full depth cutting of pavement section outside of trench is not permitted. Milling depth shall match thickness of plate. The gap between the edge of the plate and the adjacent existing asphalt or concrete pavement must be filled with temporary asphalt.
- For trench widths less than or equal to 4.0 feet as determined in the direction of travel, the plate thickness shall be a minimum of 1-inch. For a trench width greater than 4.0 feet in width, a structural design shall be submitted to the Engineer for review and approval before use.
- Structural design shall be in accordance with Section 626.2.2.2 for trench spans greater than 4.0 feet as measured in the direction of travel.
- Plates shall be fabricated from ASTM A36 steel (minimum).
- Plates shall be secured from lateral movement and vertical vibration (associated noise) while in use by temporary asphalt (cold mix). An approved mechanical fastened ramp may be used in place of asphalt wedging as approved by the Engineer.
- Plate reflectivity marking tape shall be in accordance with Section 621.2.3 of the Standard Specifications.
- Plate materials, design, skid resistance, installation and maintenance shall be in accordance with Standard Specifications Manual Section 626, "Temporary Steel Plate Trench Bridging".

ISSUE DATE 03/09/2020	THIS IS NOT A CERTIFIED DOCUMENT	Saint Louis COUNTY TRANSPORTATION <small>1050 NORTH LINDBERGH BLVD. ST. LOUIS, MISSOURI 63132</small>	STANDARD DRAWING TEMPORARY STEEL PLATE TRENCH BRIDGING		
REVISIONS			EFFECTIVE 05/01/2020	SHEET 1 OF 1	DRAWING C613.05