TDOT Hardship Justification Examples and Guidelines

Provided to TUCA, June 2024

See attached for hardship justification examples and guidelines. I tried to leave out names to not incriminate or praise anyone directly. Keep in mind each of these is considered on a case by case basis and approved by one of four region directors and these justification are also accompanied by the plans, forms, and other permit application info that paint the total picture of work being proposed and applied for.

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Utility Hardship Definition:

A utility hardship situation exists only after all potential crossing options have been exhausted. A hardship justification is an official email, letter, or report outlining technical details of why an open cut is needed for utility installation vs a bore and should not be based solely on cost. Technical justifications could include elevations for gravity sewer, particular access locations or requirements, no access for bore pits like in highly urbanized areas, water quality issues, gas line safety requirements, etc. The requestor needs to provide information for a hardship request like what utilities are in the right of way to be crossed, where and at what expected depths are they, why a crossing at a better place to avoid other utilities cannot be done, why crossing near a manhole where lids can be removed to confirm elevations cannot be done, use of technology for boring like use of ground penetrating radar, why using sounding cable in an existing structure cannot be done, why crossing on a pole line rather than underground cannot be done, etc. Attention to details such as using the paving schedule or project information to schedule work should also be considered. All these situations still require a permit and Regional Director approval. Also, adherence to the 1680 rules (Rules and Regulations for accommodating Utilities on TDOT ROW) will still be required.

<u>Utility Hardship Justification Examples</u>

1) SR-11 Lane Closure Schedule Request- Encroachment Permit GA02007060591-2021

…Gas is requesting a hardship exemption to continue with construction efforts to make the necessary gas line tie-ins. Since the initial lane closure request work has been suspended a total of 14 nights because of weather events. Work restrictions for the Memorial Day holiday were also honored further delaying progress. Unforeseen utilities have also been encountered that have increased the size of the excavation footprint and depth. Most notably is at the intersection of Cowan and Spring Streets and along Spring Street where a communications utility line is resting overtop the existing 6inch and 12inch natural gas lines. Tie-in locations at the Spring Street regulator set and at the intersection will need to remain within the roadway to allow for a safe tie in process.

Tentatively, if work does not continue, the scheduled tie-in date would start June 21, 2021 and completed on June 25, 2021. Once the tie-in is complete, the excavation will be backfilled to sub-base and final surface pavement applied to TDOT standards. Should the work extend into the July 4th Holiday window, work restrictions will be implemented.

Additionally if work does not continue at this time, the excavation will be properly shored and plated for access once construction commences.

Positives: outlined physical constraints, existing lines in the road, and time constraints **Result:** Approved

2) Columbia Avenue Widening and Improvements Project

"The City is requesting approval of a utility relocation hardship for our locally managed Columbia Avenue (S.R. 6/U.S. 31) Widening and Improvements Project (PIN 121454.00). The city and TDOT met (virtually) in November of 2020 to discuss the city's next steps and procedures for the project's utility relocations. Within that meeting, and mentioned in a follow-up email chain, (TDOT HQ) stated we needed to pursue additional coordination with Region 3 because of the project's proposed utility relocations being shown within the roadway footprint (existing and proposed right-of-way). Any help with this request to allow the proposed utilities to remain as designed would be greatly appreciated. Below is some background to the project, and why the proposed utility relocations are designed the way they are…

- The widening of Columbia Avenue, from Mack Hatcher Parkway to Downs Blvd., is needed to accommodate the projected traffic volume and increase the mobility and safety to and from downtown. The roadway is typically being widened from 3 lanes with ditches, minimal curbing, and sporadic area drains to 5 lanes with sidewalks, curb & gutter, and a new storm sewer system (also widening from 5 lanes at Mack Hatcher Parkway to 7 lanes).
- The project includes relocations of potable water, reclaimed water, sanitary sewer, and gas lines within the existing and proposed roadway footprint. These utilities were designed to utilize their own travel lane where possible, to help keep proper utility separation.
- This is an older established commercial and industrial area of Franklin, with limited room outside of the proposed ROW for utilities. As you can imagine, widening from 3-lanes to 5-lanes with

new sidewalks within an older established commercial corridor already creates substantial impacts to the affected properties. Relocating the utilities outside of the existing and proposed roadway footprint further exacerbates the property impacts, and may force the city to purchase a few properties in full, requiring property/business owner relocations.

- In working with our elected city officials and the affected Columbia Avenue property/business owners, this project was met with many "hurdles" because of the impacts to existing businesses along the corridor. Numerous public meetings were held to help address the project impacts and try to alleviate owner concerns. Encumbrances of utilities outside of the roadway or ROW, but within private parking lots, may impair existing business use, and would ultimately impact the future redevelopment potential of the corridor.

The City is now ready to begin the right-of-way acquisition phase, as we recently received the notice-to-proceed by Local Programs. If there is anything that we can do to help with this utility hardship request, thereby allowing the utilities to be installed per our current design, please let us know. "

Positives: outlined physical constraints with older buildings up against the sidewalk and road ROW, existing lines in the road, storm drain impacts, ROW impacts and redevelopment issues explored, and prior city coordination **Result:** Approved

3) Water Line - Nolensville Pike

"We have a project down on Nolensville Pike, just south of Lennox Village in Nashville. It is an apartment complex that needs to tap the existing water main in Nolensville Pike. We spoke previously and I explained to the contractor and everyone that we will have to bore unless we have a significant hardship. On this project, we believe we may have that hardship. The plans have been approved by Metro.

I've attached the utility exhibit for reference, and we believe we have a hardship for the following reasons:

1. Most important reason – the water line is under the pavement. If we have to bore the road, we would end up tearing up more of the road and pavement just to dig the bore pit. It is impossible to access the water line without opening up at least that portion of the pavement, so no matter what happens a good chunk of pavement will have to be removed to access the water line. We believe a strip across the road is less impactful than opening up a large bore pit in the road.
2. There are other utilities to cross and the contractor believes that there will be a combination of solid rock and dirt under the road. This may create difficulties in trying to line up the bore exactly and make sure we avoid the other utilities.
3. The contractor informed us the open cut method would be much quicker and efficient rather than a longer time of being exposed with the bore pit.
4. The contractor offered to perform the work at night to reduce any impact to the traffic.

We fully understand and respect TDOT's position on wanting to bore the road. In this instance, because of the reasons above, we are respectfully asking if TDOT would consider allowing this water line be installed by open cut and we could perform the work at night."

Positives: outlined physical constraints with longitudinal bore in the road, existing lines in the road, and time constraints, offered to do work at night to help with traffic **Result:** Approved

4) **Fiber install**

Request:

Good Morning!

In the approved permit it is stated that "No asphalt is to be disturbed". When boring across the street at Sam Ridley and at Jefferson we want to be able to disturb the asphalt. Can we get that changed? And what should we say in our future permits to make sure that is understood?

Answer:

Please see attached excerpt from the 1680 Rules for accommodating utilities. We will need written justification in the form of a letter / email that provides an explanation as to why the work cannot be performed without disrupting the road surface.

The permit application should contain as much detail as possible pertaining to the installation. The permit is only good for the work specifically described in the application.

Positives: None. **Negatives:** Did not describe constraints physical or time, wants general approval to disturb pavement on future work, did not address repairs or traffic needs **Result:** Denied. Permit for bore stands as written.

5) **Fiber install for Permit GA-2007070097-2023**

To close the loop on this thread, we would like to pursue the request to disturb the asphalt for Permit GA-2007070097-2023. After calling in locates we found that we would need to daylight a single 10" water main on South Lowry St.

At the crossing location we found the asphalt is cracked near a valve for the water main (photo attached). If allowed, we would be able to cross close enough to the valve to repair the asphalt at that location with our infrared patch. As highway 41 bisects the town, and based on our investigation of other crossing locations, we believe this site would have the least impact to TDOT's right of way while allowing us to serve the east side of Smyrna

We reached out to the City of Smyrna water department and they're willing to bring that valve to grade whenever the asphalt has been opened. My team would be happy to do the final coordination to get that fixed. It sounds like a small amount of work for them and would not have a significant impact on the lane closure time and no increase in the amount of excavation needed.

Positives: considered location to minimize utility and traffic impacts, repairs would improve existing pavement condition, contacted city for cooperation with repair work **Result:** Approved

6) **Cumberland City low Transmission water main project – SR-24 and SR-255**

27 page routing study report June 2015 – Conclusions:

"The ultimate goal of the Cumberland City Low Transmission Water Main Dual Feed project is to provide a dual feed and operational redundancy throughout the eastern region of the MWS distribution system. MWS and GS&P developed three alignment alternatives and conducted a routing study to determine which route will be the most feasible solution. The study revealed that Route A along Lebanon Pike is the optimal solution for many reasons, with the most important reason being water quality and the protection of public health and safety. MWS is committed to providing safe, clean drinking water to the community and better serving its customers; the Route A transmission main is instrumental in achieving that mission."

Positives: The routing study performed as a result of a meeting with TDOT personnel evaluated three alternative alignments based on water quality, permitting, property acquisition, constructability, cost, and schedule, had a public outreach plan involving TDOT PIO, involved local public officials in process
Result: Approved

7) **Franklin Road gas pipeline project PERMIT GA-2007061550-2021**

"Based on comments provided on our second submittal for an encroachment agreement request date January 11th, 2021, Gas has evaluated the comments and conditions provided and are re-submitting our permit request.

Gas is proposing to install a new 16-inch gas line (at a minimum of 36-inch depth under the roadway) by conventional open trench methods within the lane of traffic along Franklin Pike. Gas intends to utilize temporary lane closures by implementing mobile work zones along open cut sections. Per TDOT direction, Gas will utilize a phased approach to allow for no more than 1,000-foot lengths maximum open road at one time; with tapered barriers this is anticipated to result in an overall traffic adjustment of no more than 1,500-feet within the northbound traffic lanes, thus minimizing impact as much as possible.

Excepted to the open trench method is the intersection of Franklin Pike and Harding Place, which will be performed by Horizontal Directional Drilling (HDD) methods to reduce the surficial disturbance through this intersection. The anticipated duration of continuous temporary lane closures at either side of the bore will be about 45 days depending on the conditions encountered during the drilling process. Examples of recent HDD projects completed in this area can be provided upon request.

Based on ongoing communications with both TDOT and City of Oak Hill representatives, Gas normal working hours are anticipated to be between 9am to 6pm with no work on Sundays or major holidays. Traffic lane closures between 9am to 3pm will allow a minimum of one open northbound and one open southbound lane. Traffic lane closures after 3pm will allow a minimum of one open northbound lane and two open southbound lanes to reduce impact to evening commuter traffic. Gas requests the option of overnight work for sections not within residential areas. Gas will target execution and completion of work around schools during the summer months.

Gas has evaluated implementation of an additional HDD to cross the intersection of Franklin Pike and Thompson lane, which has been reviewed with TDOT representatives. Due to the significant increase for construction time (>2 months versus <2 weeks using open cut methods) and extended lanes closures through this area, which would also require excavation for positive identification of a 36-inch water line in the area, as well as excavation back to the critical tie-in point on the north side of the overpass; Gas is proposing to maintain the open cut approach through this area. The entry ramp access will remain open and accessible throughout project construction by sequencing construction activities, and the current proposed route will remain within the eastern-most northbound lane to reduce ramp disturbance.

At this time, a construction team member has not been selected to complete this project. In order to implement a safe construction zone, this construction team member will be required to utilize a prequalified traffic control team as well as demonstrate TDOT compliance to the planning and implementation of this proposed infrastructure improvement project. The construction team members will be required to develop an approach-specific engineered traffic control plan that will be submitted to TDOT for comment and approval. All temporary traffic control measures will be designed and implemented per TDOT and MUTCD standards.

All excavations will be secured throughout construction to maintain a safe working environment for all parties. All backfill and restoration activities will be completed per TDOT specifications. Additionally, a tinted yellow flowable fill will be utilized in the upper section as a warning method for future excavations along this area. The construction team member will be required to utilize a prequalified pavement team to complete pavement and stripping restoration associated with this project."

Positives: This letter captures discussions from multiple meetings with TDOT personnel in office and the field, considers permitting impacts to the Harding Place intersection that was paved less than 3 years prior, property acquisition in historic neighborhood, constructability, and schedule impacts, and involved local public officials in process **Result:** Approved

8) **Franklin Road gas service line installation –** permit to bore was issued with no pavement disturbance – this section of road was widened with the construction project completed 8 months before this request

"Gas requests a hardship exception for the daylighting of utilities in order to connect a customer's natural gas service at Franklin Road. The ability to daylight utilities prior to commencing a directional drill is a foundational safety practice. Multiple utilities are in the path of a proposed directional drill in this location and the hardship presented is that the customer will be unable to utilize natural gas service absent the granting of an exception as Gas will be unable to install the natural gas service."

Positives: Identified utilities needing to be daylighted in cover letter in turn lane and one traffic lane. Specified repairs according to TDOT requirements. **Negatives:** Did not describe efforts to identify utility locations and depths on recent installations for a recently completed TDOT project, did not offer up use of nondestructive testing methods, did not meet 1680 3 year pavement disturbance requirement **Result:** Denied.

Open Cut Utility General instructions:

Each Utility will be responsible for maintaining the pavement patch once the work is completed for a period of three years. Failure to comply could result in the forfeiture of permit authorizations for future or other work. Also, if the utility doesn't repair the patch in a timely manner or adequately according to standard repair details then TDOT will repair it and bill the utility for materials, equipment, and labor according to GA and/or U&O agreements.

When requesting a permit to open cut or pothole or daylight, the Utility will be required to provide in the permit application as much information as possible. Examples:

- What other utilities are involved or impacted?
- Where are the other utilities approximate locations and depths?
- Have non-destructive methods of locating existing utilities been done? Why not?
- What safety or traffic control concerns were identified?
- Which utilities were communicated with and their response?
- Are there other alternatives for crossing such as aerial or at another location?
- Is daytime or night work preferred? Why or why not?

Other:

Depths and horizontal locations should be surveyed in state plane coordinates and GPS coordinates provided to TDOT so that TDOT will know the extent and specific location of the work. Latitude and longitude for the permitted area are already required in the regular permit application.

According to 1680 rules, approval of the permit to open cut or pothole or daylight a TDOT Roadway will require a hardship justification and approval from the Regional Director or designee.

According to 1680 rules, no pavement cut including open cuts, potholing, or daylighting is allowed in roadways constructed, reconstructed or resurfaced within previous 3 years except in extreme hardship cases approved by the region director.

Holes shall be backfilled with an excavatable or early strength flowable fill with a minimum 100 psi following TDOT Construction Specifications 204.06-1 to standard repair detail height.

Asphalt patch for potholing and daylighting operations to be installed with Infrared heaters (max heat of 350 degrees) used to tie into surrounding existing pavement.

Refer to TDOT utility repair standard details for more information on acceptable roadway repairs for open cut, pothole, and daylighting operations once approved.

This will not eliminate the need for utilities to do SUE work as covered in the TCA code (TCA 54-5-854 (b)) that utilities have to provide TDOT horizontal and vertical locations of utilities on the right of way.