MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

EMERGENCY BRIDGE AND CULVERT REPLACEMENT PERMIT REQUIREMENTS

GUIDANCE FOR PUBLIC TRANSPORTATION AUTHORITIES

A permit is required from the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division (WRD) for emergency replacement of bridges or culverts. Failure to submit the proper paperwork may result in the loss of state and federal emergency funding for the replacement work. An unpermitted replacement could become a liability to a Public Transportation Agency (PTA), resulting in civil or criminal litigation. If the structure is not acceptable, it is possible that it will need to be replaced with at structure that is.

In the event of a bridge or culvert failure, the PTA is required to notify the WRD's Transportation Review Unit (TRU) Specialist covering covering their area or the TRU supervisor as soon as possible. If the TRU staff cannot be reached (i.e., after hours or on the weekends), the PTA must notify the TRU the next business day, ideally before replacing the structure to assure that it meets requirements and can be permitted.

TRU staff will assist the PTA with the emergency permitting process. Depending on the timeframe and situation, the following steps can be taken:

1. Contact the TRU Specialist to discuss the emergency situation and timeframe needed to reopen the road.
2. Submit a Transportation Joint Permit Application (JPA) via MiWaters completed with as much information as possible; be sure to indicate that the application is an emergency. The submission should provide as much information as possible including plans, profile, cross sections, and photos. (Note that hand drawings are acceptable.) It is understood that in emergency situations, all information may not be known to fully complete the JPA. The JPA can be revised with additional information as it becomes available.
3. The TRU specialist will review the JPA.
    a. If the proposed work meets a minor project category (e.g., spans bankfull width of the stream) and is determined acceptable by the TRU Specialist, a Minor Permit will be issued. Further follow up will not be required.
    b. If the proposed structure **does not** meet the minor project category, an emergency conditional permit can be issued via email if the road needs to be reopened immediately and the permit application will be processed as an after-the-fact Individual Permit (including being placed on public notice). The expectation is that structures are replaced with bankfull-spanning structures unless there are specific reasons a bankfull structure cannot be used.

c. If a temporary structure is proposed to reopen the road while the PTA designs a permanent crossing, the TRU Specialist can issue a conditional permit for the temporary structure that will require submission of another JPA for the permanent structure when the design is completed (the additional JPA should be submitted under the same Site created in MiWaters when the first JPA is submitted).

On streams/drains with a drainage area of two square miles or more, the replacement cannot cause additional backwater on upstream properties without a signed damage waiver from the affected property owner or a hydraulic certification indicating no harmful interference. If the stream or drain has a contributing drainage area at the crossing of two square miles or more, the review will also be coordinated internally with a TRU hydraulic engineer. The PTA should take time to examine why the crossing failed and determine if there were any problems with the existing/former structure at the crossing; i.e., scour holes, poor alignment, or undersized structure. The design should correct problems, if possible, to assure infrastructure resiliency.

The TRU Specialist will perform a field inspection of the site to ensure that the replacement structure is adequately sized and constructed, and that proper soil erosion controls are in place. Depending on site conditions, restoration of the stream in the vicinity of the structure failure may be required. For example, removing road base material from the stream that was deposited as a result of the structure failure. Stream restoration should not be performed without consulting with the TRU Specialist and obtaining a permit for the work.
Some common mistakes that should be avoided during the emergency replacement include:

1. Putting in a culvert that does not properly match the stream size.
2. Putting in a smaller structure - this will likely cause additional backwater and increase the potential for future failure.
3. Failure to properly bury the culvert that may cause the culvert to become perched over time.
4. Raising the road grade - this will likely cause additional backwater and erosion if water previously or currently goes over the road during a flood event.
5. Improper alignment - this may cause additional stream bank erosion and future failure.
6. Improper soil erosion measures - once the floodwaters have receded, it is required that the site be stabilized within five days to prevent more soil from entering the stream. Proper stabilization will also help to prevent future failures.

Should you have any questions, please contact the TRU Specialist for your area or James Watling, TRU Supervisor, at 517-599-9002 or WatlingJ@Michigan.gov.