

Transport + Wooden Bridge = Near Miss

LESSONS SHARED



Narrative

On May 12, 2018, Division Supervisor (DIVS) Tim was staffing the Glover Fire in Briscoe County, Texas when he observed a dry lightning strike. Tim received approval to locate and size-up the new start. He met with the landowner and began scouting access into the fire. After 2 hours of searching, Tim located a 15-acre fire and named it the Prairie Grove Fire. Tim determined County Road (CR) 27 would be the most direct option for access. Tim observed several low water crossings and two bridges. The first bridge was 25 feet long and 10 feet high, had no weight-limit sign, was constructed of steel and concrete with a wooden deck and steel runners. The landowner told Tim that he had taken several pieces of large equipment and an 18-wheeler across the bridge with no issues. The second bridge was constructed completely with concrete. Having years of experience with heavy equipment, Tim felt comfortable that a bobtail transport with a dozer could cross the bridges. With minimal fire behavior and loss of daylight, Tim requested resources for the following morning.



The next morning, a strike team of dozers was assigned to the Prairie Grove Fire led by Strike Team Leader (STEQ) Larry and Heavy Equipment Boss (HEBQ) Howard. Around 09:30, resources arrived at CR 27 and Hwy 256 and met with Tim who provided a briefing of the fire and access route including the bridge crossings. Tim told resources there was no weight-limit sign but he had inspected the bridge and felt comfortable taking the equipment across. The strike team knew Tim's experience level and felt comfortable with his assessment. As the convoy approached the first bridge at 09:45, Tim instructed crews to keep their wheels on the steel runners. As the first transport crossed the bridge, the second slowed to let it clear and then proceeded across. After the first two crossed, Transport #3 (Phil) "felt confident" crossing the bridge and proceeded, focusing on keeping the tires on the steel runners. Phil was crossing the bridge when he felt the transport pull right. Realizing his rear right tires had broken through the wooden deck, he turned the wheel left to correct. The next thing he knew, the transport was resting in an embankment. Phil had made it across the bridge but the rear tires had veered off the metal runners and broken through a section of the wooden decking.



Carl, who was directly behind Phil, watched as the back of the transport and dozer began "bouncing". Suddenly it had a slight right lean and came to a stop, partially off the bridge. Carl calmly radioed to the overhead: "You guys might want to come back here.

resources turned around but didn't feel a sense of urgency from the radio message. Carl approached the transport to check on Phil. Phil was wearing his seat belt and didn't sustain any injuries. Phil was upset with

himself having driven large trucks for many years and that he had slowed operations and “let his team down.” When the overhead saw the transport and its position, their collective thought was “How the heck did that happen?” After checking on Phil, Larry and Howard began discussing a plan to secure the transport and dozer to keep it from falling off the bridge. Howard became the IC for the incident within an incident (IWI). Tim and the ICT3 moved away from the scene for cell coverage to notify dispatch, the agency administrator, and law enforcement.

Larry and Howard’s plan was to unload two dozers and clear the front of Phil’s transport by pushing dirt away from the front bumper. Then they would winch the transport back onto the road. The second dozer was staged to assist. The plan was successful and the transport was recovered back to the road. The transport had a damaged steering rod, front bumper, and hood and firefighters determined it would not be safe to travel any further. The dozers were loaded by 10:20 and the strike team continued to the Prairie Grove Fire.



Tim left Howard as IC (IWI) at the disabled transport to wait for law enforcement to complete an accident report. At 10:30, law enforcement arrived and called a heavy wrecker.

At 12:10, the heavy wrecker arrived and crossed the bridge. The dozer was unloaded from the transport and the transport was turned around and loaded onto the wrecker. The wrecker, carrying the transport, crossed the bridge. The dozer followed and tracked across the bridge. The transport was unloaded from the wrecker to reload the dozer and then reloaded back onto the wrecker. The transport was taken to a dealership for inspection and possible repair. At 12:20 a county official arrived to assess and mark the damaged bridge. The bridge was not closed.

Once suppression operations were completed, around 17:20, the strike team loaded dozers and discussed their egress from the fire. They determined the same way they came in was the best option since the heavy wrecker crossed and it was inspected by the county. Drivers were cautious on their way back and one driver described being “a little nervous we had to cross the bridge again”. The first transport crossed the bridge and when the second crossed, the driver felt a slight dip but no control issues with the transport. The ICT3, who was last in the convoy, noticed additional damage to the bridge on the opposite side and notified his resources over the radio. The second transport driver, thinking of the dip he felt, advised that he may have caused the additional damage. Due to the new damage, the ICT3 notified agency law enforcement who contacted county officials. The bridge was inspected again and closed to public use on the evening of May 13th.

Lessons Shared

Take it Slow and Size-Up the Entire Situation

As being the first resource on scene, Tim's experience came into play by not only sizing up the fire but taking the time "to slow down and look at the big picture." He knew that he needed to inspect the access route and confirm that the transports could make it. Realizing there was no weight limit sign for the bridge, Tim utilized local expertise and asked the landowner about the bridge's integrity. Tim's experience also factored into what resources would be capable of crossing the bridge.

Communication from the Top Down... and Back Up

From Tim's initial briefing and the ICT3 telling the crew to "stay on the metal runners," everyone was aware of the bridge's situation before crossing. Once the accident occurred, Carl notified supervisors to stop and return to the bridge. Proper notifications were made to dispatch, the agency administrator, and law enforcement. The IWI IC was also identified for all resources. The recovery plan was communicated and within an hour was executed successfully. Tim notified law enforcement who made contact with the county to close the bridge to public use. The constant flow of information between supervisors and resources was phenomenal. A future consideration for any resources crossing a similar bridge would be use a spotter in the front that can communicate visibly or with a radio to the driver. A extra set of eyes for the driver can go a long way toward mitigating driving risks.

Calm During Distress

Once the incident occurred, all personnel remained calm and accepted what had happened without blaming or finger-pointing. Although Phil felt upset, he maintained his composure to assist with the recovery. Larry noted that by everyone being calm, it helped "set the tone and build the team" which helped during the recovery of the transport and carried over into fire operations. Accidents will happen. Sometimes the circumstance will be out of our control, but our reactions can be controlled. Remaining calm can help with deliberate thoughts and actions to minimize further damage or exacerbate the situation.

Final Thoughts

Wildland fire operations, especially heavy equipment resources, are continuously challenged with access issues to fires. In a perfect world, all access routes would have signage providing weight and height limits but that's typically not the case. What factors determine our best route? What are some watch-outs for access routes? Are we providing our firefighters with sufficient training to identify these watch-outs?

Remember, that if no safe access route can be determined, firefighters have the right to refuse the risk and turn down the assignment (IRPG Pg.19). Unsafe access is out of control of the firefighter and organization. There should be no pressure from higher level leadership to engage if it unsafe to do so.

Additional Bridge Damage Reference Photos

Initial bridge damage when transports crossed bridge accessing the fire



Additional bridge damage after transports crossed bridge departing fire



Bridge Photos After Repairs Completed

