PENNA TURN PIKE

TUSCARORA TUNNEL PROJECT UPDATE

JUNE 2020

Over the past several months, the contractor has been working in the eastbound tunnel under weekly closures. These weekly closings begin each Sunday night at 9 PM and the eastbound tunnel is re-opened at the end of each week by noon on Friday. During the eastbound tunnel closing, a single lane of eastbound traffic is diverted into the westbound tunnel. The westbound tunnel operates under bi-directional traffic during the weekly closures.

The contractor has also been removing the ceiling and the concrete haunches at the ceiling to wall interface for the length of the eastbound tunnel. The contractor has also removed the existing concrete barrier/walkway along the left side of the tunnel and existing concrete barrier along the right side of the tunnel. Temporary concrete barrier has been placed along both sides of the tunnel until the new concrete barrier wall is constructed.

The contractor is preparing shop drawings for customized manufactured items such as the new tunnel ventilation fans, emergency generators, and Tunnel Control System (TCS) including CCTVs. When the TCS is eventually installed, it will provide a state-of-the-art upgrade of the communications and life safety systems in the tunnels. The contractor is also finalizing detailed construction method plans for the required waterproofing system installation.

During the next several months, the contractor will excavate and install new drainage inlets and drainage pipes for the length of the tunnel. Temporary asphalt pavement will be placed to provide a transition from the existing pavement to the new inlets. After the new concrete liner for the walls and ceiling is placed, a new asphalt pavement will be placed throughout the tunnel creating a more pronounced cross-slope to allow water to drain towards the gutter line and into the new inlets. After the inlets are installed, the contractor will install a portion of the waterproofing and drainage barrier, followed by the new thinner concrete barrier.

After the new concrete barrier is placed along the left side of the tunnel, the contractor will shift traffic to the left onto the wider traffic lanes during construction in the eastbound tunnel. After the lane shift, the contractor will construct the new inlets, drainage, and a portion of the waterproofing system along with the new concrete barrier on the right side.

The contractor will also drill three 4-inch diameter drainage holes in the construction joints of the existing tunnel walls. This will allow a controlled outlet of water from behind the tunnel walls. This series of holes will allow the water to drain into the drainage mat, new waterproofing system and will outlet into the drainage pipes, inlets and the tunnel drainage gallery.

As work progresses in the eastbound tunnel, new electrical wiring and conduits will be installed in the westbound tunnel plenum area as well as temporary lighting. The existing water line system will also be modified in both tunnels. Upgrades to the portal buildings, including the electrical and mechanical systems, will continue.

During the summer months, the Contractor will resume weekly eastbound tunnel closures after the Independence Day holiday and continue through the end of July. This will be necessary to make up for lost time associated with the earlier COVID-19 shutdown.

After the Labor Day holiday, the contractor will resume weekly tunnel closures and will begin placement of the waterproofing system, lattice frames and reinforcing mesh that will serve as a

support for the new 8-inch concrete liner. The new concrete liner will be applied by a shotcrete method in two 4-inch layers. The new concrete liner will protect the waterproofing system and provide support for the new lighting and fire-life safety systems, including conduits and junction boxes.