MOTT MACDONALD

Lytle Tunnel (HAM-71-0134) Inspection Report Fall 2020

PID 105470

November, 2020

Ohio Department of Transportation

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Contents

List of Figures

Executive Summary

General

The Lytle Tunnel (HAM-71-0134) is a cut-and-cover cast-in-place reinforced concrete tunnel on Interstate 71 that consists of three boxes running underneath Lytle Historic Park in downtown Cincinnati. The boxes are Northbound mainline, Southbound mainline, and Southbound exit ramp to 3rd Street.

The tunnel was originally built in 1967. Between 2015 and 2018, a fan room was added, new power and control systems were added, the plenum spaces re-configured, and portions of the tunnel were rehabilitated. At the time of the inspection, punch list items were being processed as part of the rehabilitation project.

Figures 1-1 through 1-5 below show the location of, and access to, the tunnel and the configuration of its various components. Figures 1-6 through 1-11 below show the inventory general view of the Northbound, 3rd Street exit ramp, and Southbound tunnels, looking in the direction of traffic from the entry portal, and against traffic from the exit portal.

This report presents the results of the Fall, 2020, annual inspection and maintenance work. Mott MacDonald personnel conducted the mechanical and electrical portions of the NTIS inspection for this period in accordance with the FHWA *Tunnel Operations, Maintenance, Inspection, and Evaluation* (TOMIE) *Manual*. Mott MacDonald personnel also observed the maintenance work covered by the items in the Operations & Maintenance Manual that are recommended for semi-annual or more frequent attention. Please see Appendix A of that Manual for detailed information.

The inspection and maintenance work was carried out across the week of 15/20-Sep-2020. Overnight closures were used for the work in the tunnels on Thursday the 17th for the Northbound tunnel, and Friday and Saturday the 18th and 19th for the Southbound and 3rd Street Ramp tunnels. An optional overnight closure for Sunday the 20th was not required.

Mechanical

Mott MacDonald performed extensive testing and inspection in accordance with National Tunnel Inspection Standards (NTIS) in conjunction with the test and balance contractor, DeBra-Kuempel. The testing was carried out from the 15th through the 19th of Sep-2020. The purpose of the work was to verify the condition and operation of life safety systems including tunnel ventilation, fire standpipe, and related supporting components and systems.

The tunnel ventilation system consists of three reversible fans and their corresponding attenuators, isolation dampers, alarm, and initiation devices (carbon monoxide detectors). The purpose of the inspection was to check the operation of the fans. Visual inspections were also performed during the functionality tests. There were no critical findings.

Carbon monoxide detectors located in the tunnels for ventilation system operation were tested and calibrated. Carbon monoxide detectors in the chamber area were also tested and calibrated. All the carbon monoxide detectors were found to be functional and in good working condition. There were no critical findings.

The fire standpipe system in the tunnels consist of 28 hose valves and 6 risers. A visual inspection and testing of the hose valves identified the need for general cleaning. A couple of valves were observed to be missing their caps. The valves operated correctly. There were no critical findings.

Heating, Ventilation, and Air Conditioning (HVAC) for the facility consists of an exhaust fan, electric unit heaters, and split-type air conditioning units serving the control and electrical rooms. Split-system air conditioning units are used for cooling the control and electrical rooms to acceptable ambient temperatures. The exhaust serves the electrical room and is initiated by a carbon monoxide detector. Air is made up and exhausted through ductwork that terminates at grade-level grates within Lytle Park. All units and corresponding controls were tested and visually inspected. There were no critical findings.

Plumbing systems in the ventilation building consist of drainage with dry sump. The system appeared to be working.

All data has been collected using Survey123 Connect for ArcGIS data collection system that allows you to create and publish advanced surveys in electronic environment.

Electrical

The Fall 2020 Lytle Tunnel electrical inspection was focused on both the Spring Maintenance and FHWA annual inspection requirements. It is understood that the Lytle tunnel electrical systems have been fully handed over to ODOT and the construction stage has concluded. It was understood by Mott MacDonald that all punch lists were fully completed, however this is not the case and there are original punch list items still outstanding.

The overall state of the tunnel electrical systems was found to be in good condition for both the Northbound and Southbound barrels as well as the Buildings. There were critical and non-critical items found, and which some still need to be addressed.

Five light fixtures in the Northbound Tunnel were found to be badly damaged from motor vehicle impact and deemed a critical finding since many of the light fixture supports were non-secure due to the impact damage and prone to potentially falling onto the roadway below. This was communicated to ODOT supervisory personnel in person during the 16-Sep-20 inspection shift and via email the next morning 17-Sep-20. The light fixtures were temporarily secured on the night and replaced the next day with new units by ODOT maintenance.

Several glass screens were found to be cracked in the Southbound and South Ramp Tunnels which appeared to be prone to shattering and falling on the roadway below. The ODOT maintenance crew replaced all damaged screens as well as any non-functioning light fixture LED boards during the 8-19-Sep-20 closures when these items were identified.

The main high voltage and low voltage power distribution junction boxes located inside the buildings and within the Southbound Tunnel were inspected subsequent to the electrical contractor carrying out separation work as recommended. It was found that the separation of low voltage and high voltage circuits has been fully completed as previously agreed with ODOT.

The Linear Heat Detection (LHD) system is visually in good condition with no notable physical or operational distress. This includes the linear heat detection fiber optic cables in the tunnels. MM did not receive any testing logs from ODOT for the Tunnel LHD System so no comment or appraisal can be made to the functionality condition of the system.

There are several non-critical punch list items which need to be addressed including corrosion on conduit fittings within the tunnels, inadequately supported emergency conduit, unfinished and untidy wiring in Instrumentation, Control, & Automation (ICA) cabinets, and labeling issues with the electrical panelboards.

Other minor items were found that can be addressed during routine or unscheduled maintenance cycles.

Structural

The tunnels are generally in fair condition, with most of the structural elements falling in condition state 1 or 2. The invert slab is covered and hidden by the asphalt wearing surface which is in good condition. There are scattered hairline cracks in the tiles throughout the tunnel walls and ceilings which are indicative of the condition of the structural concrete concealed behind.

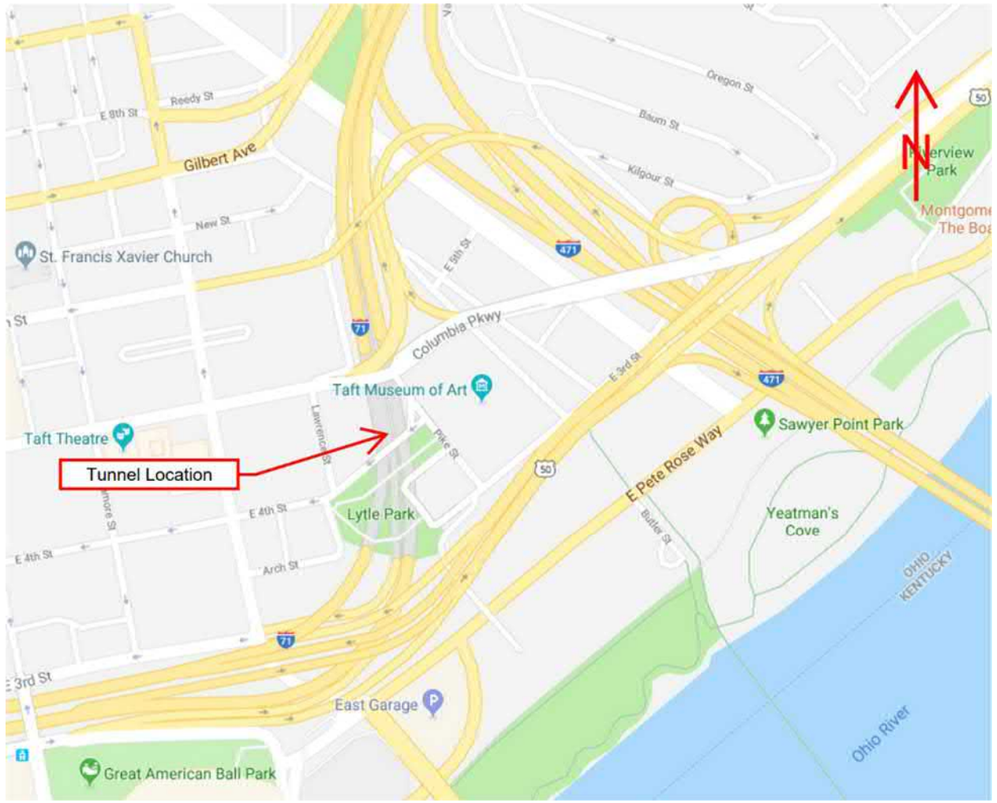
Each of the three tunnels is separated into roughly 150-foot-long segments separated by expansion joints. Each segment is further subdivided into three approximately 50-foot-long units. Northbound and the 3rd Street exit ramp share the same units. The Southbound tunnel, starting from the south end, consists of Units 1 through 9 which then combines with the Northbound and 3rd Street ramp tunnels, into Units 19 through 26. Starting from the south, the Northbound and the 3rd Street exit ramp are Units 10 through 18, then combining into Units 19 through 26.

The tunnel walls and ceilings are lined with ceramic tile and fireproofing with an asphalt roadway and cast in place traffic barrier on each side.

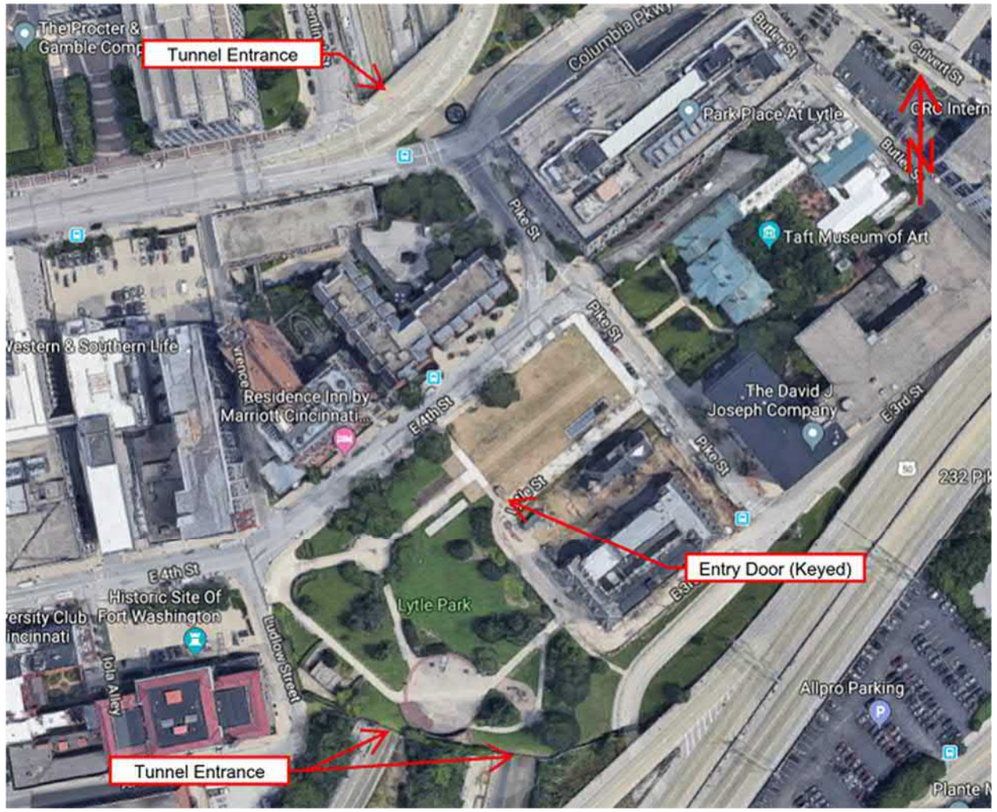
The fan room, electrical rooms and exhaust shaft is located alongside, the Northbound and 3rd Street ramp tunnels' Units 17, 18, and 19. The original plenum and the mechanical and electrical (MEP) rooms are above the same Northbound and 3rd Street ramp tunnels. The floors, walls, and ceilings of these rooms are exposed reinforced concrete. The MEP rooms existing above the tunnels are all suspended using steel tension columns hung from the roof of those units.

The significant or near-critical findings consist of deteriorating concrete on the South portal of the Southbound tunnel and loose stone masonry façade on the north portal of the Northbound tunnel.

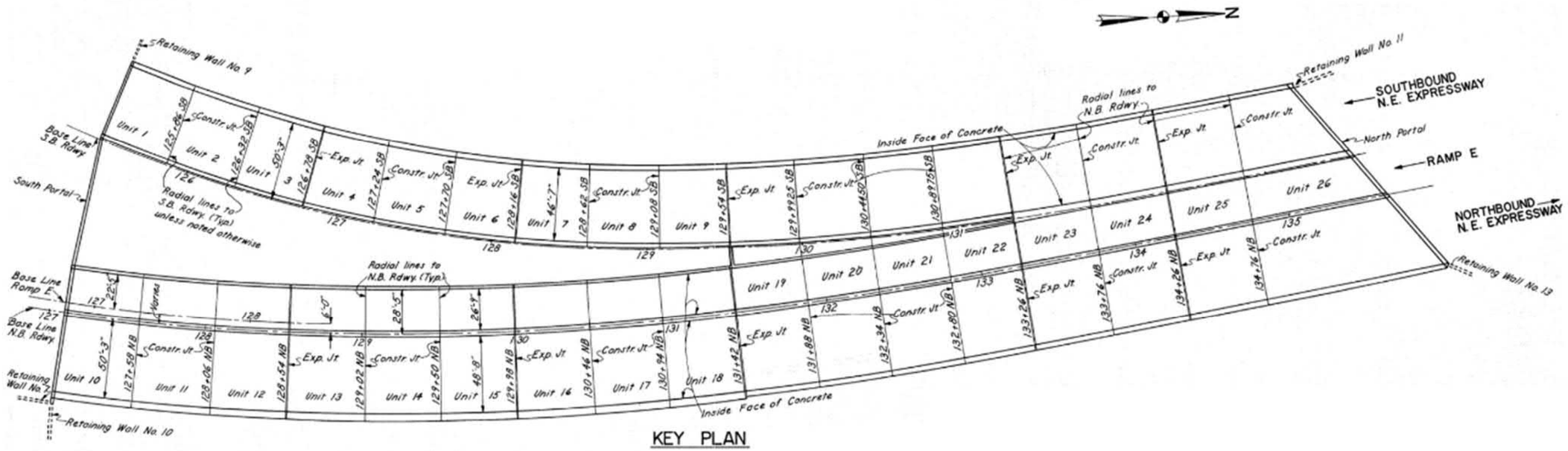
For the structural inspection, the I-71 Northbound barrel was closed to traffic overnight Thursday September 17th, the 3rd Street ramp was inspected while closed to traffic the following night Friday September 18th, and the Southbound barrel was inspected while closed to traffic Saturday September 19th.



1-1 Location

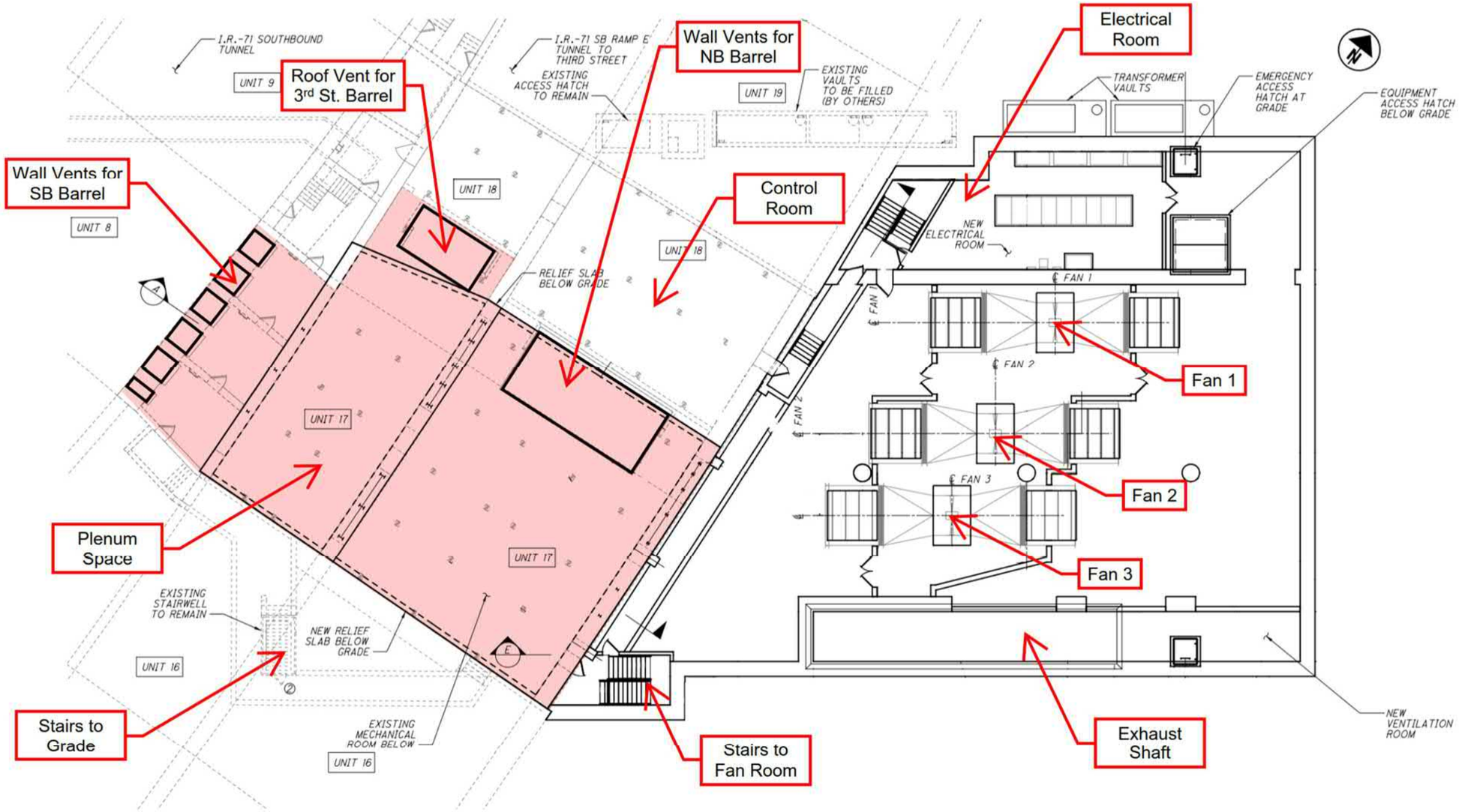


1-2 Tunnel Entrances

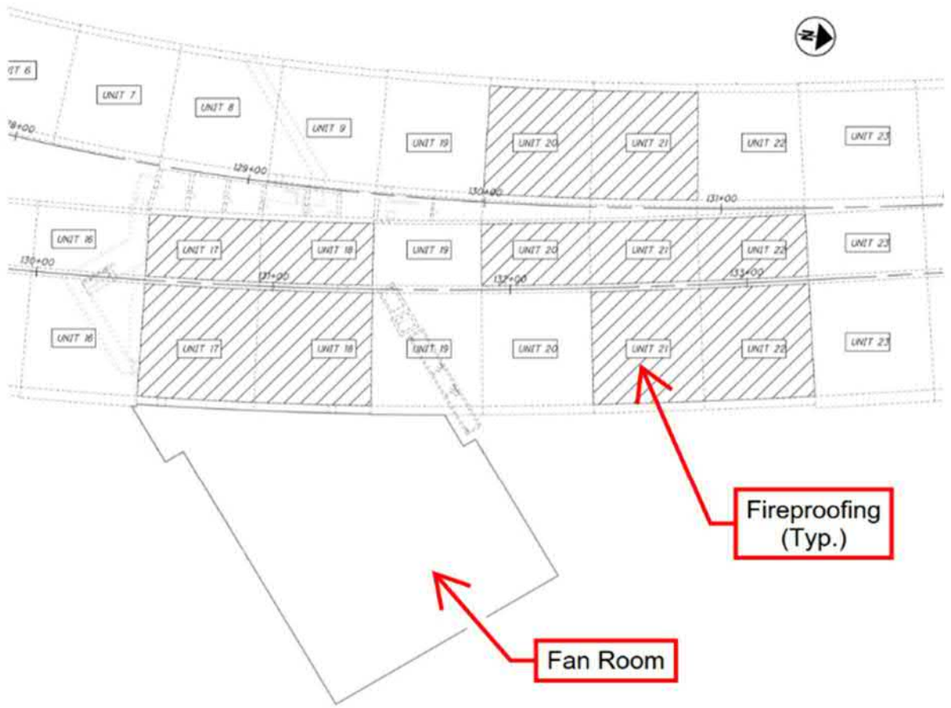


KEY PLAN

1-3 Layout of Tunnels

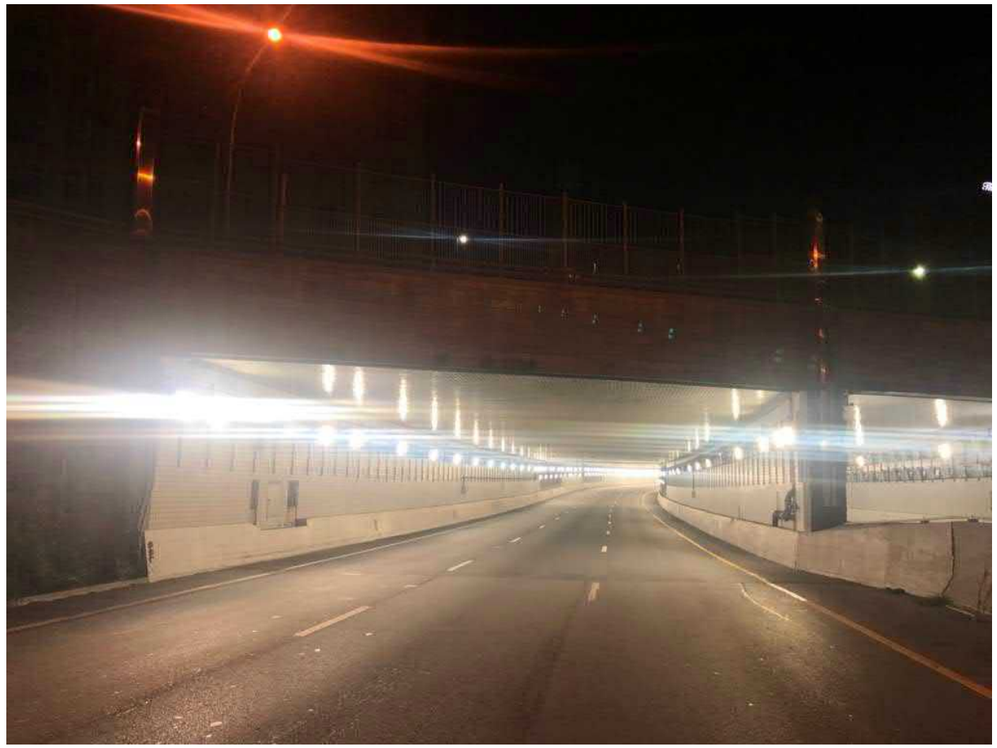


1-4 Layout of Fan Room, Plenums, and Electrical Spaces



1-5 Fireproofing Layout

1-6 Inventory Photo: Northbound Looking North



1-7 **Inventory Photo: Northbound Looking South**

1-8 **Inventory Photo: 3rd Street Ramp Looking South**

1-9 **Inventory Photo: 3rd Street Ramp Looking North**

1-10 **Inventory Photo: Southbound Looking South**

1-11 **Inventory Photo: Southbound Looking North**

1 General Appraisal

1.1 Overall Appraisal

The tunnel boxes, and the mechanical, electrical, and plenum (MEP) rooms, are generally in good to fair condition. The Mechanical systems are generally in good condition. Electrical systems are generally in good to fair condition. Structural components are in good to fair condition.

The cast-in-place concrete tunnel walls and roof are generally concealed by 4”x4” ceramic tiles or fireproofing. There are concrete interior walls between the Northbound and the 3rd Street exit ramp boxes, and between the exit ramp and Southbound mainline boxes, and the MEP room access stairs and ventilation louvers. The concrete base is covered by an asphalt wearing surface and could not be inspected. The masonry portal façade is generally in fair condition across the spandrels, and generally in poor to severe condition on the pilasters. The concrete portal headers are generally in fair condition. The portal wall cap of the South end of the Southbound tunnel is in poor condition and shows signs of deterioration. The concrete traffic barriers are in fair condition with scattered hairline cracks and occasional collision damage.

1.2 Mechanical Systems

1.2.1 Tunnel Ventilation System

Tunnel ventilation fans, isolation dampers, damper motors and related components including attenuators, ducts, fan housings, and vibration isolators are in good general condition for all three fans. The tunnel ventilation system is operating as designed. The operation of fans and dampers were tested. (see Appendix A pages 4-94 and pages 128-172). In each mode tested, fans and ancillaries were observed to operate within their normal range.

After testing and visually inspecting the fans, grease leaks were found in the fan motor housing around the motor bearings and under the motor for fans 1 and 2 (see Appendix A pages 4-94). TVF-2 leaks have resulted in grease travelling downstream with the airflow and accumulating on the sound attenuator.

The required communications with SCADA system were verified.

There were no significant findings other than the grease leaks. Refer to Section 3 for other findings.

1.2.2 Fire Standpipe

The standpipes in all three tunnels appeared to be in good condition. Fire department connections are capped and clear. All threads and caps were checked for any unusual or over torque condition. Two hose connections had missing caps (see Appendix A page 173-347). There were no critical findings. Refer to Section 3 for other findings.

1.2.3 Carbon Monoxide Detection System

The carbon monoxide detectors in all three tunnels and associated rooms were operational and in good condition. All the units have been tested with tubed samples and function as designed. Communication protocols with the SCADA system were verified (see Appendix A page 95-127). There were no critical findings. Refer to Section 3 for other findings.

1.2.4 HVAC

Air conditioning systems in the electrical and control rooms work as designed and maintain the room temperature at around 80°F. Minor corrosion and leaking on the return for the split unit HP-1B was recorded. Both wall-mounted thermostats are functional and are in good condition. Condensate piping has been properly pitched and discharges correctly. Exhaust and intake air ductwork, and corresponding components such as volume and fire/smoke dampers, are in good condition. Electric unit heaters are in good condition. See Appendix A pages 347-430.

1.3 Electrical Systems

The Lytle Tunnel electrical inspection was focused on both the maintenance and FHWA annual inspection requirements.

The overall state of the tunnel electrical systems was found to be in good condition for the Northbound and Southbound mainlines and the 3rd Street ramp. There were critical and non-critical items found, which need to be addressed by ODOT with various degrees of urgency for each item as outlined in this report.

Please see Appendix B.1 for a list of itemized issues, and Appendix B.3 for corresponding photos of these issues.

1.3.1 Critical Items

Two Critical Items were noted during the inspection which are detailed in Section 2 below.

The first was that several light fixtures were damaged by a vehicular strike. ODOT was notified on-site and by email; and repaired these during the closures.

The second was that the Northbound “Tunnel Closed” sign was not functioning. This was communicated to ODOT by email the following day.

1.3.2 Non-Critical Items

This section details the non-critical findings of the inspections which are categorized based on the TOMIE manual guidelines as follows:

1. Priority Repair – refers to conditions for which further investigations, design, and implementation of interim or long-term repairs should be undertaken on a priority basis, i.e. taking precedence over other scheduled work. These repairs will improve the durability and aesthetics of the structure or element and will reduce future maintenance costs. Elements that do not comply with code requirements are also priorities for repair.
2. Routine Repair – refers to conditions requiring further investigation or remedial work. This work can be undertaken as part of a scheduled maintenance program, scheduled project, or routine facility maintenance. Items identified in the preventive maintenance program can be put in this category.”

1.3.2.1 Priority Repair Items

The following list of items observed during the inspection were deemed to be priority repairs as defined by the TOMIE manual:

- Horn strobe in the plenum corridor that did not fire when one smoke detector was activated in the corridor. This issue will have to be resolved when ODOT chooses another Fire Alarm contractor to service the fire alarm system.

- Corrosion on conduit fittings. These fittings were painted using a corrosion resistant paint to prevent further corrosion; however, the painting of these fittings seems to be inconsistent, leaving portions of the fittings still exposed to further corrosion to the tunnel environment. Northbound, Southbound Mainline, and 3rd Street Tunnels.
- Corroded Light Fixture fixing bolts and washers – Northbound, Southbound Mainline and 3rd Street ramp Tunnels.
- Corroded Light Fixture front face – Northbound, Southbound Mainline and 3rd Street ramp Tunnels.
- Clean or repair foggy lens on lighting fixtures – Southbound Mainline Tunnel.
- Tunnel Lights not working ("Full On" Stage 6 Switching Mode) – Southbound Mainline Tunnel (19 No.) and 3rd Street ramp (9 No.). Additional lighting fixtures have a small amount of LED modules not operating. These issues have been resolved by ODOT maintenance crews during the tunnel closures, no further action needed.
- Loose side entry conduits – Northbound, Southbound Mainline, and 3rd Street ramp Tunnels light fixtures;
- Inadequately supported conduits and cables – Northbound, Southbound Mainline, and 3rd Street ramp Tunnels; and Electrical Room;
- Improper and missing distribution panel labelling – Main Electrical and Lighting Control Room;

Please see Appendix B.1 for a list of itemized issues, and Appendix B.3 for corresponding photos of these.

1.3.2.2 Routine Repair Items

The following list of items observed during the inspection were deemed to be routine repairs in line with the TOMIE manual:

- Untidy wiring in Fan PLC Pane, Linear Heat Detection Panel, and Tunnel Lighting Control Panel located in the Main Electrical Room ICA and COMMS cabinets.
- Untidy wiring and non-operational lights in the Outdoor Communication Panels.
- Repair Lighting Fixtures that are non-operational due to faulty ballasts and burnt out lamps within the Tunnel Ventilation Building.
- Corrosion of conduit and fixing hardware on 277 V AC panels in the tunnel spaces
- Repair internal space lighting for external COMMS cabinets located at the South and North portals.
- Please see Appendix B.1 for a list of itemized issues, and Appendix B.3 for corresponding photos of these.

1.4 Structural Systems

1.4.1 Overview of the Tunnel Components

For the original portions of the tunnel, the Condition Ratings are generally fair to good. Most are areas are Condition State 1 or 2. There are localized areas where water does appear to infiltrate. The Condition Ratings are good to very good in the new fan room and accessways. A previously observed leak in the stairwell at the interface with the original structure has apparently been corrected.

Of particular concern, though, is the ongoing condition of the stone facing on, and the concrete parapet above, the portals. These findings were noted in our 2018 Inspection Report; and communicated directly with ODOT personnel at that time. We removed as much loose concrete as we could, and the loose stone does not appear to be directly over traffic – so we have characterized these as significant, or near-critical findings. These are discussed below in Section 2 of this report. Please see Section 3 of this report for other findings.

The inspection of the Lytle Tunnel was broken into four parts, one for each of the three respective boxes and the MEP Rooms.

The separate parts that were inspected are the northbound mainline tunnel, southbound mainline tunnel, southbound 3rd Street exit ramp tunnel, and the MEP Rooms.

The components and elements inspected at the exterior and within the tunnels were the same across the three. For all charts in Appendix C, the notes for walls and barriers are separated to east and west charts for all the tunnels.

The first element, the portal of each tunnel is comprised of a concrete header, stone masonry façade, and a concrete wall cap.

The roadway for each tunnel is an asphalt wearing surface.

Through each tunnel bordering both sides of the roadway are reinforced concrete traffic barriers.

The interior ceiling and walls consisted of mostly tile with some areas of fireproofing where the plenums and MEP rooms are located. Some of these walls are Concrete interior walls while other sections are cast-in-place tunnel liners.

The MEP room walls and floors are reinforced concrete. The rooms are held up structurally by beam columns in tension. These rooms were illuminated by general lighting units throughout.

1.4.2 Vertical Clearance

The vertical clearance was recorded at the beginning of each unit along the east side of the road in each tunnel. The minimum height requirement of the tunnel is 15'-0". The lowest in the North Bound, South bound, and Exit ramp tunnel are 14'-11", 14'-11", and 14'-11½"respectively.

2 Critical/Significant Findings

Critical findings are any structural or safety-related deficiencies that require immediate follow-up inspection or action as defined in 23 CFR 650.305. Communication of critical findings to the owner (ODOT) is required as soon as practicable after their discovery.

Significant findings are other deficiencies that deserve priority attention. Communication of significant findings is herein.

2.1 Critical Findings

2.1.1 Northbound Tunnel

During the inspection on 16-Sep-20 it was observed that five LED tunnel lighting fixtures were severely damaged by a moving vehicle on the East wall of Northbound Tunnel, with a couple just hanging on one bolt fixing. ODOT night crew was informed immediately about these and used multiple heavy-duty zip-ties to hold them in place as a temporary safety measure. The next day ODOT crew replaced these five LED fixtures with the new ones, no further action needed.

2.1.1.1 Communication

The item noted above was communicated to ODOT via email on the next day, 17th of September. Please see Appendix B.2.

2.1.2 Northbound Tunnel Closure Sign

During testing on 16-Sep-20, it was observed that the Northbound “Tunnel Closed” sign did not operate.

2.1.2.1 Communication

The item noted above was communicated to ODOT via email on the next morning, 17-Sep-20. Please see Appendix B.2.

2.2 Significant Findings

2.2.1 Electrical Equipment and Panel Board Labeling

In both the Main Electrical Room and Lighting Control Room there are issues with the labelling of electrical equipment which included mainly panel boards. This is a carry-over from the last year’s inspection findings which has not been addressed.

Several panelboards contain labels next to breakers written on tape that are inconsistent with the panelboard schedules contained within the panel, whereas several panelboards miss the labels next to the breakers altogether. In the Main Electrical Room, a number of conduits leading to the panels are hand-written labels on a tape, instead of a printed label. Some space covers are missing and are covered using tape.

These issues need to be fixed sooner rather than later to avoid potential implications of electrical safety to maintenance personnel needing to work on electrical systems. Incorrect labelling could lead to electrocution if maintenance personnel unfamiliar with the installation believe a circuit has been de-energized when in reality it has not. Safe practice is to test a circuit to ensure that it is indeed de-energized before carrying out any work even when the breaker has locked and tagged out.

Please see Appendix B.1 for a list of itemized issues, and Appendix B.3 for corresponding photos of these.

2.2.2 Loose Masonry at Portals

2-1 Loose and Missing Masonry at Portals

Originally noted in August of 2018 one significant or near-critical finding is that the stone masonry veneer façade in the spandrels over, and the pilasters on either side of, the portals is loose in some areas.

On the North portal of the Northbound tunnel a piece of stone was knocked loose from the spandrel onto the roadway during our sounding. Since then further deterioration was noted with some portions of the stone façade being removed completely.

The immediate corrective action for this item is for ODOT to monitor and remove loose material as found until a permanent repair is implemented.

The recommended long-term corrective action would to be removed and replace loose areas of the veneer, and to install ties between the stone units and the concrete.

2.2.3 Deteriorating Concrete Cap at Southbound South Portal

2-2 Disintegrated Concrete Cap at Southbound South Portal

In the 2018 inspection heavy deterioration along the concrete portal cap on the Southbound South portal was evident. In the 2020 inspection the section of deteriorated concrete was much larger, but all loose concrete was removed leaving sound concrete behind. It is still recommended that the concrete at the portal cap be replaced.

2.2.4 Communication

These items have been noted in previous inspection and maintenance reports.

3 Other Findings

3.1 Overall

Overall, the tunnel, and its systems, are in fair to very good condition. Some deficiencies of note were observed. There are ongoing issues with the tunnel lighting supports, and with wiring and conduit throughout.

We confirmed that the Supervisory Control and Data Acquisition (SCADA) system correctly conveys data from remote sensors and equipment to the Human-Machine Interface (HMI). We used the SCADA's maintenance mode to conduct those tests.

The logic of the SCADA system was not tested itself as that is part of commissioning the system itself and beyond the scope of maintenance and inspection. We did observe that, while in maintenance mode, we could not manually turn on more than one fan at a time. (Please see Appendix A, SCADA Panel, p. 443.)

3.2 Mechanical

3.2.1 Priority Repair Items

3.2.1.1 Tunnel Ventilation Fans Grease Leak

At the TV-F1 and TV-F2– Ventilation fans, grease leaks were observed in fan housing and below the motor. While TV-F1 shows signs of a minor leak around the bearings, TV-F2 grease leak has resulted in grease travelling downstream with the airflow and creating grease stain spots on the surface of the sound attenuators. (see Appendix A pages 4-94).

3.2.1.2 North Tunnel Damper Actuator Oil Leak

TI-DN Rotork actuator on the left hand side (looking North) leaks at both the hand wheel and the gearbox. Actuator is currently out of warranty. (See Appendix A, page 128.)

3-1 Damper Actuator Oil Leak

3.2.2 Routine Repair Items

3.2.2.1 Electrical Room Split System

The AC heat pump (HP-2A) in the electrical room has a defective LED indicator of its run status. From visual inspection, it was confirmed that the heat pump is operating (See Appendix A, page 359).

3.2.2.2 Fire Standpipe

3-2 Missing Standpipe Riser Cap

One hose valve HC09 chain is broken, two hose valves, HC25 and HC26, were missing their caps. These are located at Stations 132+12 and 133+13 in the SB Tunnel. (See Appendix A, pages 329 & 333)

3.2.2.3 South Tunnel Damper Actuators Oil Leak

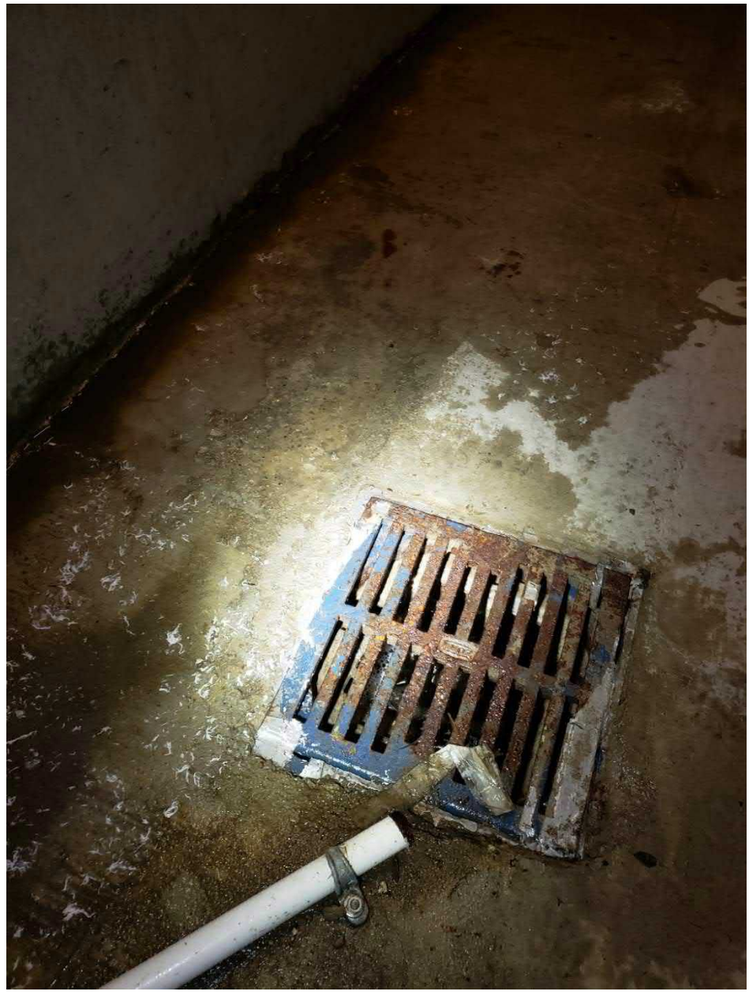
TI-DS damper actuators have minor leaks around actuator shaft underneath thermal insulation jacket. See Appendix A, page 145.

3.2.2.4 Electric Unit Heater

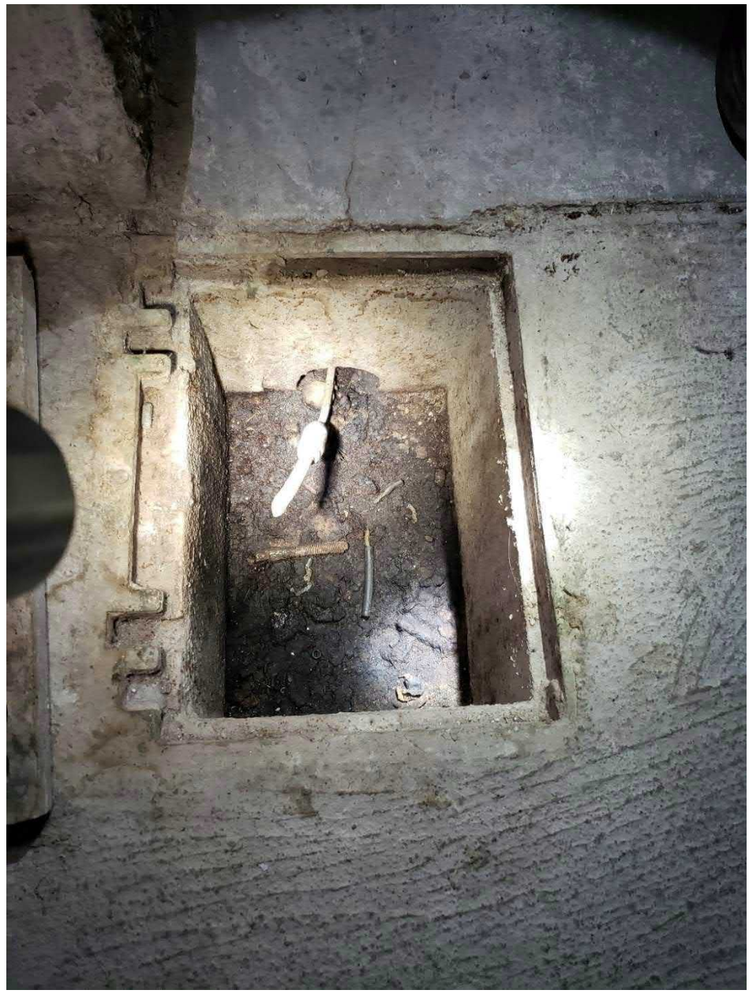
Electric Unit Heater EUH-3 does not turn off. See Appendix A, page 376.

3.2.2.5 Facility Floor Drains

Facility floor drains are clogged with debris which is preventing groundwater and condensate from draining properly.



3-3 Facility Floor Drain Water Pooling



3-4 Facility Floor Drain Debris Blockage

3.3 Electrical

This section explores the critical and other findings in more depth and detail. A full breakdown list can be found in Appendix B.1 where all inspection observations and photos are listed per area. Photos are provided in Appendix B.3.

3.3.1 Tunnel Wiring

The main high voltage and low voltage power distribution junction boxes located inside the buildings and within the Southbound Tunnel were inspected subsequent to the electrical contractor carrying out separation work as recommended. It was found that the separation of low voltage and high voltage circuits has been fully completed as previously agreed with ODOT.

3.3.2 Tunnel Lighting Controls

Tunnel lighting levels were manually tested in both the Northbound and Southbound tunnels with the assistance of the electrical contractor. Both tunnel lighting systems operated as intended with 6 distinct lighting levels observed. One issue with a lighting level value was encountered and corrected during the test. No other exceptions noted.

3.3.3 Tunnel Lighting Fixtures

A number of issues were observed with some of the lighting fixtures which include the following:

- Five fixtures on the West wall of the Northbound were severely damaged by a moving vehicle.
- Loose luminaire face clips (Southbound & Northbound Tubes); When found, these clips were re-engaged.
- Minor corrosion on stainless steel lighting fixture faces. (Southbound & Northbound Tubes)
- Some Corrosion on lighting fixture mounting hardware and washers. (Southbound & Northbound Tubes)
- Number of lighting fixtures had loose conduit fittings entering the fixture. (Southbound & Northbound Tubes)
- Southbound Mainline Tunnel – 19 light fixtures were found to be non-operational when full lighting mode No. 6 was initiated as part of the lighting control testing. All 19 lighting fixtures were observed to be repaired by ODOT maintenance staff during the shutdown.
- Ramp E Tunnel – 9 light fixtures were initially found to be non-operational when full lighting mode No. 6 was initiated as part of the lighting control testing. All 9 lighting fixtures were observed to be repaired by ODOT maintenance staff during the shutdown.
- Northbound Mainline Tunnel – 5 light fixtures were initially found to be non-operational when full lighting mode No. 6 was initiated as part of the lighting control test. All 5 lighting fixtures was observed to be repaired by ODOT maintenance staff during the shutdown.

Please see Appendices B.1 & B.3 for further details.

3.3.4 Tunnel Raceways & Cables

A large quantity of stainless steel and galvanized raceway components were found to exhibit corrosion levels. Specifically, the conduit fittings branching off the “T” conduit body and the conduit fittings entering into each lighting fixtures displayed a consistent level of moderate corrosion. The contractor painted these fittings with paint meant to prevent corrosion as part of last inspection findings, however the contractor did not paint the entirety of all fittings, leaving corrosion on the rear of fittings exposed to the tunnel conditions.

Corrosion was also found on the threaded connections between conduit and conduit bodies. Also a few conduit bodies had scratches, which seemingly removed the protective coating allowing corrosion to appear in the scratched locations.

Please see Appendices B.1 & B.3 for further details.

3.3.5 Lighting in Tunnel Ventilation Building

Functional tests were performed on the emergency lighting system within the control structure. All but five of the emergency fixtures operated correctly and which failed to operate due to failed ballast units in all five fixtures. This would be considered normal for lighting ballasts operating 24hrs 7days a week. This can be avoided in the future by reducing the operation of the lighting system when maintenance crews are not present inside the building, which will increase the lifespan of emergency lighting fixtures. A total of 17 lighting fixtures were observed as non-operational within the Tunnel Ventilation Building during the inspection. However, they did not have any major impact on the overall lighting levels within any rooms. It is recommended that new lighting ballasts be installed during the routine maintenance.

A number of light bulbs were out within the light fixtures inside the Tunnel Ventilation Building; however, they did not have any major impact on the overall lighting levels within any of the rooms. It was observed that contractor replaced these bulbs with the new ones during the maintenance period.

These were deemed as a non-critical item.

3.3.6 Electrical Equipment

The Automatic Transfer Switch was operated by Glenwood Electric by removal of each power source and by removal of all power sources to verify the operation of the UPS system. Both systems operated normally under all circumstances.

Electrical Switchgear and Panelboards were all tested and inspected by ECI and Glenwood Electric. No exceptions were noted.

Several panelboards contain labels next to breakers written on tape that are inconsistent with the panelboard schedules contained within the panel, with some panelboards missing the labels next to the breakers altogether.

In the Main Electrical Room, a number of conduits leading to the panels are labelled with hand-written pieces of tape, instead of a printed label. Some spare empty space covers are missing and are covered using tape instead of appropriate plastic blanking plates. Minor scratches are present on the outside of the panels near the handles. A few screws holding the front panel are found to be missing

Electrical Switchgear and Panelboards were all tested and inspected by ECI and Glenwood Electric. No exceptions were noted.

Please see Appendices B.1 & B.3 for further details.

3.3.7 ICA Systems

3.3.7.1 Central SCADA Node / OIT (Lighting Control Room)

No laminated instructions for emergency operations were found. Overall, very dusty. Top HMI was observed to be non-operational. Bottom HMI had number of touch buttons not showing full function of the buttons. This has not been rectified since the last Fall 2019 inspection.

3.3.7.2 Tunnel Closed Emergency Flashers

The emergency flashers for both Northbound and Southbound Tunnels were operated from the Central Comms HMI. Local indications at the HMI indicated that the flasher command was operating normally. However, the “Tunnel Closed” flashers for the Northbound Tunnel failed to illuminate. The fiber switch between the Central Comms and Southbound Portal cabinets did not appear to be communicating. ODOT has been informed of the issue and are trying to determine which department would be able to correct the communication problem. Both local and remote “Tunnel Closed” flasher sets for the Southbound Tunnel functioned correctly.

3.3.7.3 Fan PLC Panel (Main Electrical Room)

Wiring is untidy and not contained within the designated plastic raceway containment system; Several wireways do not contain wireway covers. The terminations on a number of wires are of poor quality i.e. in some places there is up 3/8” exposed copper wire from the respective terminal which could also be viewed as a potential safety concern to any maintenance personnel working on the panel; There are temporary bridging wires between terminals which indicate incomplete wiring.

Please see Appendices B.1 & B.3 for further details.

3.3.7.4 Fire Alarm System

As part of the Spring Maintenance inspection scope Glenwood Electric performed a functional test of all of the initiating and annunciating devices on the Fire Alarm System with the exception of the Heat Detectors that were not accessible. All devices functioned normally, with the exception of one horn strobe in the plenum corridor that did not fire when one smoke detector was activated in the corridor. The same device fired when all other initiating devices were activated, indicating an issue within the Fire Alarm Panel program. This issue will have to be resolved when ODOT commissions a Fire Alarm contractor to service the fire alarm system as part of annual testing and maintenance requirements.

3.3.7.5 Linear Heat Detection System & Cabinets

The LHD system is visually in good condition with no notable physical or operational distress. This includes the linear heat detection fiber optic cables in the tunnels. MM did not receive any testing logs from ODOT for the Tunnel Linear Heat Detection System so no comment or appraisal can be made to the functionality condition of the system.

There are some non-terminated loose cables internally within the Linear Heat Detection cabinets located in the Lighting Control Room.

Please see Appendices B.1 & B.3 for further details.

3.3.7.6 Outdoor CCTV Cameras

The CCTV camera at the South Portal of Southbound Tunnel is facing the wall, and there are bushes grown around it which blocks the camera’s view.

Please see Appendices B.1 & B.3 for further details.

3.3.7.7 Outdoor Communication Cabinets

A number of issues were observed with some of the Outdoor Communication Cabinets which include the following:

- For both Northbound and Southbound Tunnels, the cabinet lights inside the Outdoor Communication Cabinets are non-operational.
- For both Northbound and Southbound Tunnels, wiring is untidy and not contained within the designated plastic raceway containment system; a few of raceway containment covers have fallen off to the bottom of cabinet.
- For Northbound Tunnel, the ground cable outside the Outdoor Communication Cabinet has not been secured properly.
- For Northbound Tunnel, there is a bird’s nest inside the Outdoor Communication Cabinet.

Please see Appendices B.1 & B.3 for further details.

3.4 Structural

3.4.1 Leakage at Emergency Access Hatch

During the 2018 inspection considerable leakage was observed on the floor of the room at the north corner of the new fan room beneath the at-grade emergency access hatch due to a misaligned drain which was to be fixed as a punch-list item during the rehabilitation project.

During the 2020 inspection moisture was not present on the floor of the room and the circumstances have improved.

3.4.2 Leakage Along Construction Joint in Stairwell

3-5 Evidence of Leakage Along Construction Joint in Stairwell and Injection Ports

In the 2018 inspection the vertical construction joint at the south corner between the new fan room and the original tunnel wall in the stairwell is leaking. Water is pooling on the floor as there are no drains nearby. This leakage appears to be from groundwater intrusion.

In 2018 corrective action was suggested and prior to the 2020 inspection this was executed. In the photo above new injection ports are present from recent waterproofing along with a reduction in moisture.

3.4.3 Loose Tiles at Expansion Joints

3-6 Loose Tiles at Expansion Joints

Many new loose tiles were encountered at the tunnel segment expansion joints. We removed multiple tiles during our sounding operations.

Because of the effort removing these tiles additional corrective action does not appear warranted. Future structural inspections should focus attention on these areas; and remove any loose tiles while the roadway is closed.

3.4.4 Cast-in-Place Tunnel Liner (10001)

3-7 Typical Hairline Crack in Ceiling Tiles

The ceiling and walls of the cast-in-place liner were not visible for direct inspection due to the entire tunnel being lined with ceramic tiles or covered with fireproofing material. The most common deficiencies present throughout the tile walls are hollow or delaminated tiles and cracking. See Appendix C for a full list of deficiencies.

3.4.5 Steel Columns/Piles (10020)

Steel wide flange columns are present within the plenum area. These columns are in good condition.

3.4.6 Other Columns/Piles (10029)

Within the Southbound tunnel at the ventilation wall penetrations reinforced columns are present. None of the columns within the section show any deficiencies.

3.4.7 Concrete Interior Walls (10041)

3-8 10 LF Diagonal Hairline Crack with Strain Gauge on Control Room East Wall

There are scattered hairline cracks and multiple isolated small spalls and delamination on the interior walls within the control room and plenum areas. These are tabulated in Appendix C room deficiencies. The interior walls between tunnel walls are typically covered with either ceramic tiles, or fireproofing. Appendix C tabulates the deficiencies found on the interior walls. A large number of vertical hairline cracks in the tiles and hollow or delaminated tiles and fireproofing were encountered throughout the East and West walls of each barrel. The conditions of the tile are indicative of the condition of concrete concealed below. Most joints between units is where hollow sounding tiles were most common. In the Southbound tunnel, along the joint between Units 3 and 4, the entire height of tiles unraveled on the left wall, and a column of tiles on either side of the joint that are hollow sounding on the right wall.

3-9 Large Area of Efflorescence Present Between Units 16/17 in the Ramp Barrel

The concrete interior walls are present through all barrels of the tunnel. The concrete interior walls are covered in either tile or fireproof coating and rarely show any deficiencies besides cracking. In this case at the joint between Unit 16 and 17 in the 3rd Street exit ramp there is a large area of efflorescence with evidence of moisture. The efflorescence only exists when water is present, meaning there may be a minor leak in this area. Throughout the inspection areas around unit joints exhibit more deficiencies.

3-10 Area of Delamination and Spalling with Exposed Rebar in Cross Passageway

Between the Southbound tunnel and 3rd Street exit ramp is a cross passageway and a void space between the tunnels. The cross passageway exhibited some concrete deterioration and spalling along the floor with exposed rebar which can be seen in the image above. Within the void space the concrete interior walls exhibit full height vertical hairline cracks and visible concrete deterioration. Through the doorway in the passageway within the void spaced many vertical hairline cracks are present with some areas of deteriorating concrete.

3.4.8 Concrete Portal (10051)

3-11 Calcification Cracks and Stalactites at Southbound South Portal Header

For the exit ramp and on the North Portal, there are stalactites and hairline calcification cracks. There are also areas of standing drops and moisture staining throughout the portal face and header. The Northbound North Portal also exhibits stalactites, efflorescence, and glistening surfaces. There are isolated spalls, including a spall in the wall cap beam under the decorative fence on the right side. At the Southbound South Portal, there is an area of removed concrete about 15 feet wide by full height and up to 3 inches deep with exposed rebar. This section is in the Portal wall concrete cap. This item was previously a critical finding, but all loose concrete has been removed. All portal headers have typical calcification cracks, map cracking, efflorescence, and stalactites.

3.4.9 Masonry Portal (10055)

The portal at each end of the tunnels is lined with a masonry stone façade. The façade experiences hairline calcification cracking, map cracks, discoloration from weathering, and isolated delamination and spalling. This façade is separating from the concrete structure in some areas which may cause a falling hazard. Some pieces of the façade are fully removed from the wall leaving large gaps. The pilasters exhibit the most deterioration with multiple mortar joints failing.

3.4.10 Concrete Ceiling Slab (10061)

In Units 17 and 18, an air plenum exists above the travel lanes of the ramp and Northbound barrels. Between the travel lanes and the plenum is a concrete ceiling slab. The slab is concealed by fireproofing on the underside and could not be inspected.

3.4.11 Steel Hangers and Anchorages (10080)

Within the mechanical and electrical room suspended over the tunnels are a large quantity of several hangers (tension columns) supporting the room. These hangers are surrounded by cylindrical steel casings. These casings exhibit rusting near the floor, but do not exhibit any section loss.

3.4.12 Concrete Slab on Grade (10111)

The concrete slab on grade is covered by the asphalt wearing surface and could not be observed.

3.4.13 Gasket (10140)

In the Northbound tunnel at the start of Unit 16, there is some loose sagging gasket joint filler with a glistening surface. At the start of Unit 23 in the same tunnel, there is excess waterproofing at the joint. The loose tiles along the area have been removed. At the Unit 19 Joint in the southbound tunnel, over 120 tiles have been previously removed, any remaining tiles were stable. Over 120 tiles were previously removed at the joint between Units 22 and 23 as well. These two joints appear to be in the worst condition of all the joints inspected.

3.4.14 Asphalt Wearing Surface (10158)

Throughout all the tunnels, there is an asphalt wearing surface layered over the slab on grade below. The asphalt is in overall good condition with scattered cracking and one pothole in the Northbound Tunnel.

3.4.15 Concrete Traffic Barrier (10161)

3-12 Typical Vertical Hairline Crack in Barrier and Collision Scrapes

The traffic barrier along each roadway surface has typical full height shrinkage cracks separated at about every 5 LF, occasional spalling and the barriers have noticeable collision damage in numerous locations with multiple scrapes. The condition has worsened since the previous inspection. The deficiencies do not have any structural impact on the barriers.

3.4.16 Fire Protection Coating (10952)

Fireproof coating is present on the ceilings and walls throughout Units 20 and 21 in the Southbound Barrel. The exit ramp has fireproofing throughout Units 17, 18 and 20 through 22. Lastly the Northbound tunnel has fireproofing in Units 17, 18, 21 and 22. The fireproof coating exhibits map cracking throughout all sections, with scattered large areas of delamination.

Tabulated data are:

Tunnel	Total (SF)	Condition State 2 (SF)	Percent of Total
NB	14,212	2,350	16.5%
SB	6,909	1,180	17%
3rd St. Ramp	12,413	2,940	24%
Total	33,534	6,470	19%

4 Methods

4.1 General

The maintenance efforts were performed in six shifts across Tuesday through Saturday 15/19-Sep-20 to facilitate tunnel closures and complete the work. Three day shifts were used for mechanical testing and maintenance. Three overnight shifts were used for electrical inspection and maintenance and for structural inspection. The mechanical and electrical staff needed some overlap of days & nights to complete their work.

4.2 Mechanical

4.2.1 Dates and Time-Frames

4.2.1.1 Days Tuesday through Thursday, 15/17-Sep-2020

Tunnel Ventilation System

Fans, attenuators, fan housings, transition ductwork, and dampers were visually inspected. Fans have been started using the Motor Control Centers (MCCs), after following the appropriate lock-out-tag-out (LOTO) procedures. Dampers sequenced open and close through SCADA and local control panels.

See Appendix A pages 4-94 for corresponding tag, location and photos.

Fire Standpipes-Northbound Tunnel

All hose connection caps have been manually opened and visually checked.

See Appendix page 173-238 for corresponding tags, locations, photos, and condition statements.

Northbound Tunnel Carbon Monoxide Detectors

Calibration sample carbon monoxide tubes are connected to the detectors to see operation and communication with SCADA.

See Appendix A, pages 95 and 107, for corresponding tags, locations, photos, and condition statements.

4.2.1.2 Overnight Thursday through Saturday, 17/19-Sep-2020

Fire Standpipes-Southbound and 3rd Street Ramp:

All hose connection caps have been manually opened and visually checked.

See Appendix A, page 239-347, for corresponding tags, locations, photos, and condition statements.

Southbound Tunnel and 3rd Street Ramp Carbon Monoxide Detectors:

In addition to a visual inspection, calibration sample carbon monoxide tubes were connected to the detectors to see operation and communication with SCADA.

See Appendix A, pages 108-127, for corresponding tags, locations, photos, and condition statements.

4.2.1.3 HVAC systems:

In addition to visual inspection, air-conditioning units were turned on and off through the thermostat. Exhaust fan operation was initiated through the carbon monoxide detector using calibration sample carbon monoxide.

See Appendix A, page 277, for corresponding tags, locations, photos, and condition statements.

4.2.2 Access

Access to the fans, plenum, and other MEP rooms was through the at-grade entrance in Lytle Park, and from the doorways in the SB mainline and 3rd Street ramp tunnels. Tests of the systems in these spaces were performed during the weekdays.

Northbound Tunnel Access

Access to the Northbound tunnel assets was afforded to Mott McDonald. ODOT provided a full closure to I-71 NB for the work. Entry to the roadway was from the 2nd Street entrance ramp. Our team worked around the ODOT cleaning crew.

Southbound and 3rd Street Ramp Tunnel Access

Access to the Southbound and 3rd Street Ramp tunnel assets was afforded to Mott MacDonald. ODOT provided a full closure to I-71 SB for the work. Entry to the roadway was from the Reading Road entrance ramp. Our team worked around the ODOT cleaning crew.

4.2.3 Tools and Equipment

The mechanical crew consisted of two personnel. All inspection was visual. Inspection data was captures on tablet computers using a web-based system to coordinate test results with photographs documenting pertinent displays, components, or systems.

Additional items included:

- Tools
  - Flashlights
  - Cell Phones
- PPE
  - Hard Hats
  - Reflective Tearaway Vests
  - Steel Toe Cap Boots
  - Gloves
  - Face Masks

4.3 Electrical

4.3.1 Dates and Time-Frames

The inspection efforts consisted of a single inspection running across the week of September 14, 2020 to facilitate tunnel closures and inspection.

4.3.1.1 Northbound Tunnel Notes

The Mott McDonald electrical team mobilized to North Portal on 17-Sep-20 for the Northbound Tunnel inspection. The inspections officially commenced at approximately 11:00 PM on Thursday 17-Sep-20 once the road closures were confirmed as being in place. The Mott MacDonald electrical team began inspection starting from the West Wall of the North Portal, then switching to the East Wall beginning from the North Portal. The inspections concluded at approximately 04:00 AM on Friday morning 18-Sep-20.

4.3.1.2 Southbound 3rd Street Ramp Notes

The Mott McDonald electrical team mobilized to North Portal on 18-Sep-20 for the Southbound 3rd Street Ramp inspection. The inspections officially commenced at approximately 11:00 PM on Thursday 18-Sep-20 once the road closures were confirmed as being in place. The Mott MacDonald electrical team began inspection starting from the North Portal; and alternating between the West and East walls. The inspections concluded at approximately 04:30 AM on Friday morning 19-Sep-20.

4.3.1.3 Southbound Tunnel Notes

The Mott McDonald electrical team mobilized to North Portal on 19-Sep-20 for the Southbound Tunnel inspection. The inspections officially commenced at approximately 11:00 PM on Saturday 19-Sep-20 once the road closures were confirmed as being in place. The Mott MacDonald electrical team began inspection starting the North Portal, then switching to the East Wall beginning from the South Portal. The inspections concluded at approximately 05:30 AM on Sunday morning 20-Sep-20.

4.3.2 Access

Access keys were provided to Mott MacDonald personnel to allow entry to the Lytle tunnel facility through the Lytle park entry point.

4.3.2.1 Northbound Tunnel Inspection Access

Access to all areas and equipment was afforded to Mott MacDonald for the Northbound Tunnel inspection, including the Outdoor Communication Boxes.

Tunnel Lighting was accessed using a bucket truck with Mott MacDonald using the appropriate PPE and Fall Arrest Systems.

4.3.2.2 Southbound 3rd Street Ramp Inspection Access

Access to all areas and equipment was afforded to Mott MacDonald for the Southbound Tunnel inspection. including the Outdoor Communication Boxes.

Tunnel Lighting was accessed using a bucket truck with Mott MacDonald using the appropriate PPE and Fall Arrest Systems.

4.3.2.3 Southbound Tunnel Inspection Access

Access to all areas and equipment was afforded to Mott MacDonald for the Southbound Tunnel inspection.

Tunnel Lighting was accessed using a bucket truck with Mott MacDonald using the appropriate PPE and Fall Arrest Systems.

4.3.3 Tool and Equipment List

The Mott MacDonald electrical team made use of the following tools and equipment during their inspections:

- Tools
  - Walkie Talkies
  - Flashlights
  - Cell Phones
  - Bucket Truck
- PPE
  - Hard Hats
  - Reflective Tearaway Vests
  - Steel Toe Cap Boots
  - Gloves
  - Face Masks
  - Fall Arrests Systems

4.3.4 Inspection Methodology

Mott MacDonald adhered to the FHWA requirement of inspecting a reasonable sample of electrical equipment which is a sufficient representative of the average condition of the tunnel installation as a whole. The subsections elsewhere in this Report describe in more detail the level of inspection effort for different areas of the tunnel.

Johnson controls was also on site during both shutdowns for testing of the linear heat detection system and fire alarm system.

4.3.4.1 Tunnel Lighting

A total of 117 light fixtures were sampled in the Southbound Tunnel, 91 fixtures in the Southbound Ramp, and 90 fixtures in the Northbound Tunnel. Note that the early re-opening of the Northbound Tunnel on the morning of 8-Sep-20 reduced the amount of time that could be spent in the tunnel inspecting the tunnel lighting fixtures.

Note that corrosion was consistently found to be on the conduit fittings from the “T” condulet to the fitting entering the fixture, so it can be reasonably assumed that this corrosion is typical for most if not all conduit fittings entering the lighting fixtures. A visual inspection of all fixtures was performed while walking through the tunnel.

4.3.4.2 Electrical Equipment

All the panels in the Main Electrical Room and Lighting Control Room were inspected.

4.3.4.3 ICA Cabinets

All of the internal and external COMMS and SCADA cabinets were inspected.

4.3.4.4 Raceways

All the raceways in the Northbound and Southbound tunnels, and Southbound 3rd Street ramp were visually inspected. Likewise, all the raceways in all of the interior spaces of the Lytle Tunnel facility were inspected.

4.4 Structural

4.4.1 Dates and Time Frames

The I-71 mainline Northbound and Southbound tunnels, and the 3rd Street ramp tunnel, were closed during inspection and cleaning.

The closure times for the Northbound tunnel was September 17th from 10pm to 5am, the 3rd Street ramp and Southbound tunnel was closed September 18th from 10pm to 6am, and the 3rd Street ramp and Southbound tunnel was closed September 19th from 10pm to 6am.

4.4.1.1 Thursday, 17-Sep-2020

I-71 northbound was closed overnight on Thursday into Friday,17/18-Sep-2020. During this time electricians were also on-site replacing lighting fixtures.

4.4.1.2 Friday, 18-Sep-2020

The 3rd Street ramp was closed overnight along with I-71 southbound on Friday/Saturday, 18/19-Sep-2020. Our inspection effort for this night was focused on the 3rd Street ramp and MEP rooms. Electricians were on site replacing lighting fixtures and cleaning crews were cleaning the tunnels we were not in.

4.4.1.3 Saturday, 19-Sep-2020

I-71 southbound and the 3rd Street ramp were closed overnight on Saturday into Sunday,19/20-Sept-2020. For this night out inspection effort was focused on the southbound tunnel. Electricians were on site replacing lighting fixtures and cleaning crews were in the tunnels we were not inspecting

4.4.2 Access

Access for the Northbound Tunnel was gained by entering the road closure with our lift and service vehicles on the northbound ramp from 2nd Street.

Access for the Southbound mainline and the 3rd Street ramp tunnels was gained by entering the road closure with our lift and service vehicles by driving down the 3rd Street exit ramp.

Access to the fan, plenum, and other MEP rooms was through the doorways in the SB mainline and 3rd Street ramp tunnels.

4.4.3 Tool and Equipment List

The structures inspection crew consisted of two personnel and one Dodge RAM 5500 Diesel 41’ bucket truck.

Additional items included:

- Tools
  - Flashlights
  - Cell Phones
  - Masonry Hammers
  - Rubber Mallets
  - Tape Measures
  - Measuring Wheel
- PPE
  - Hard Hats
  - Reflective Tearaway Vests
  - Steel Toe Cap Boots
  - Gloves
  - Face Masks
  - Fall Arrests Systems

Notes of deficiencies and other findings were taken by hand. Photographs were logged. Notes can be found in Appendix C.

5 Recommended Actions and Estimated Costs

5.1 General

We have prepared a list of recommended action items and, if needed, estimated costs.

These costs do not include maintenance of traffic or contractor mobilization.

5.2 Mechanical

5.2.1 Critical/Significant Items

No critical findings were observed by Mott MacDonald personnel while on site.

5.2.1.1 Standpipe Caps

Provide caps on standpipes HC25 and HC26 (Stations 132+12 and 133+13 in the SB Tunnel).

5.2.1.2 Plumbing Fixtures

The plumbing fixtures in the abandoned bathroom should be removed and the drains and vents capped.

5.2.1.3 Tunnel Ventilation Fans Grease Leak

TV-F1 and TV-F2– Ventilation fans, grease leak was observed in fan housing and below the motor. While TV-F1 shows signs of a minor leak around the bearings, TV-F2 grease leak has resulted in grease travelling downstream with the airflow and creating grease stain spots on the surface of the sound attenuators. It is recommended that these seals are replaced.

5.2.1.4 North Tunnel Damper Actuator Oil Leak

TI-DN Rotork actuator leaks. Recommend servicing actuator, and replacing the bearings if deemed necessary.

5.2.1.5 Facility Floor Drains

It is recommended that the floor drains in the facility are cleaned of the debris that are clogging the pipe to allow for water to drain effectively.

5.2.2 Estimated Mechanical Costs

Estimated quantities and costs for the items noted above are:

Mechanical Item	Quantity	Unit Cost	Cost
Recommended			
Replace Standpipe Caps*	2 EA	$100	$200
Remove Abandoned Plumbing Fixtures and Cap Drains & Vents*	1 Lump Sum	$1,000	$1,000
Replace seals for TV-F1 & 2	2 EA	$6,000	$12,000
Replace seal for North Tunnel Damper Actuator	1 EA	$3,000	$3,000
Clean Facility Floor Drains*	1 Lump Sum	$300	$300
Subtotal – Recommended Items			**$16,500**

*Alternately, ODOT may perform this work with their own forces.

5.3 Electrical

5.3.1 Critical/Significant Items

5.3.1.1 “Tunnel Closed” Flasher Warning System

The Tunnel Closed flashers for the Northbound Tunnel failed to illuminate. It is recommended that ODOT determine which internal department is able to correct the communication problem or alternatively reach out to the system installer for support and resolution as soon as possible.

5.3.2 Other Items

The items listed in electrical priority and routine repair sections above should be added to the maintenance list and prioritized accordingly by ODOT. Items specifically related to the construction project for the tunnel should be added to the construction punch list and be addressed by the contractor.

5.3.2.1 Tunnel Light Fixture Issues

The inoperable and damaged lighting fixtures were replaced by ODOT crew during the night of tunnel closures. It is recommended that fixtures should be checked occasionally per maintenance schedule.

5.3.2.2 Building Light Fixture Failure Issues

It is recommended that the lights inside the tunnel ventilation building are switched off when maintenance personnel are not present to prevent premature failure of ballast units and extend the lifespan of the units. It is understood that the majority of these lights are currently being operated continuously 24 hours a day 7 days a week.

5.3.2.3 Conduit supports

The vertical liquid tight conduits connecting the 277 V AC lighting control remote dimming enclosure panels should be secured with proper metal or composite clamps and the existing temporary cable ties removed.

5.3.2.4 Corroded Conduit Fittings

The anti-corrosion paint that the contractor previously applied to the raceway system to remedy the issue has not been carried out properly and, in some places, not at all. It is recommended that these issues are addressed as soon as possible to prevent the condition of the raceways from deteriorating further over time.

5.3.2.5 Fire Alarm System - Buildings

It is recommended that the horn strobe in the Building plenum corridor that did not fire when one smoke detector was activated in the corridor be resolved as soon as possible. ODOT should mobilize a main testing contractor as soon as possible to test the Tunnel Linear Heat Detection and Building Main Fire Alarm System as part of full annual testing requirements. This should be done sooner rather than later to ensure safety of personnel during an emergency event.

5.3.2.6 Linear Heat Detection - Tunnels

MM did not receive any testing logs from ODOT for the Tunnel Linear Heat Detection System so no comment or appraisal can be made to the functionality condition of the system. ODOT should have this system fully tested as soon as possible to ensure full and correct operation of the system.

5.3.3 Estimated Electrical Costs

The cost for correcting electrical items noted are either already covered in the rehabilitation project closeout commitments from the contractor or are routine maintenance.

5.3.4 Testing Data

5.3.4.1 Electrical System

Please see Appendix B.4 for the reports on the electrical system testing.

5.3.4.2 Alarm System

Please see Appendix B.4 for the report on the alarm system testing.

5.3.4.3 Lighting Systems

See Appendix B.4 for summary testing report from contractor.

5.4 Structural

5.4.1 Critical/Significant Items

5.4.1.1 Masonry at the Portals

The stone veneer is installed in panels across the portals. The spandrels over the roadway are supported on a ledge that is integral and monolithic with the tunnel roof. The pilasters between the roadway's rests on the concrete at grade. These masonry panels are not monolithic with each other; and are separated by full height mortar joints.

The spandrels have, generally, not separated from the concrete below. Repairs to these areas would consist of installing ties between the stone veneer and the concrete. A representative product would be DryFix Asymmetric Ties manufactured by HelixFix/Halfen.

As the lower stone units of all the pilasters have separated and detached, the veneer should be removed and replaced.

Two wingwalls, that were not part of the inspection work, are adjacent. The stone veneer on these walls may be tied as part of that work if desired to minimize mobilizations and disruption to traffic.

5.4.1.2 Concrete Cap at South Portal

The precast concrete cap and fence should be removed and replaced. Replacement concrete should be specified for durability, including air entrainment and coated reinforcing steel.

5.4.2 Estimated Structural Costs

Estimated quantities and costs for the items noted above are:

Structural Item	Quantity	Unit Cost	Cost
Recommended			
Tie Stone Veneer at Spandrels	2,190 SF	$29.00 / SF	$63,510
Remove & Replace Stone Veneer at Pilasters	776 SF	$48.50 / SF	$37,636
Remove and Replace Concrete Cap and Re-Install Decorative Fence at South Portal	139 FT	$300 / FT	$41,700
Epoxy Inject Construction Joint	18 FT	$90 / FT	$1,620
Subtotal – Recommended Items			**$144,466**
Optional			
Tie Stone Veneer at Wingwalls	6,759 SF	$29.00 / SF	$196,011
Total - All Structural Items			**$340,477**

A. Mechanical Logs

APPENDICES LIST

Tunnel Fans and Corresponding Components Checksheet

Fan Assembly Checksheet

TV-F1

Inspection Date

September 17, 2020

Inspection Time

11:16

Inspection Team

KK/CM

Tag ID

TV-F1

Visual Inspection of Fan Assembly - To Include Motor/Dampers

Good general condition.

Unusual Noises/Vibrations during Fan Operation

No

Tunnel Side Attenuator Tag ID

TS-A1

Tunnel Side Attenuator

Good condition

Air Side Attenuator Tag ID

AS-A1

Air Side Attenuator

Grease found on the attenuator.

Verify Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

Locking collar has locking screws verified to 105 ft/lb torque rating

Impeller blades have cap bolts with 220 ft/lb torque rating

Decoder has a locking collar verified between 25-35 inches/lb

Bearing Temperature / Winding Temperature

Clean Fan Motor

Check Connecting Terminals, Bolts, Bearing, & Windings

Bearing purge and grease renewed

Review internal space heater amp draw.

Vibration transmitter testing tied to SCADA

Operate dampers and listen for unusual noises and vibrations

Damper Tag ID

FI-D1

Clean damper blades and linkages

Yes

Check tightness of mechanical connections

Test internal actuator heater and amp draw

MOTT MACDONALD

Comments

Attach Photo

Take Photo

MOTT MACDONALD

Photo Comment

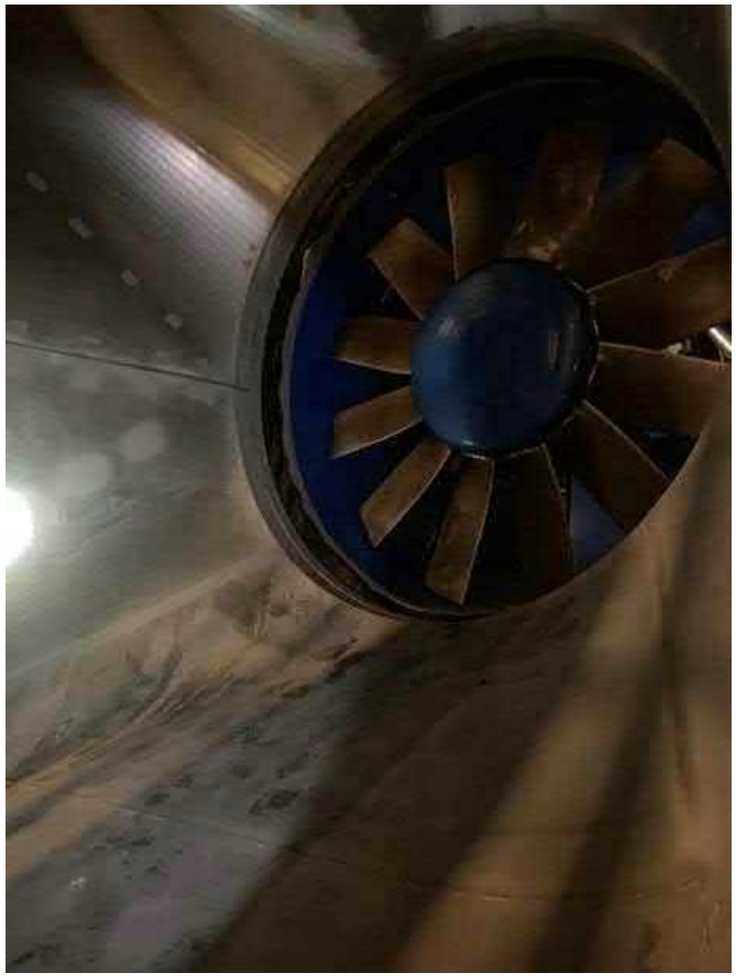
Take Photo

Photo Comment

Take Photo

Photo Comment

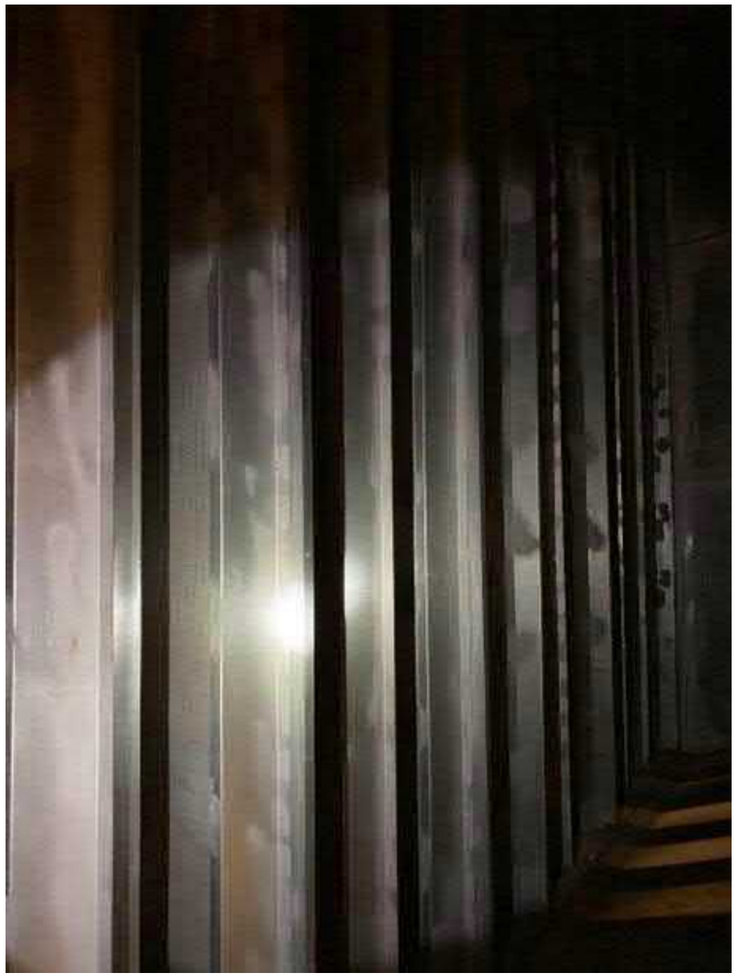
Take Photo



MOTT MACDONALD

Photo Comment

Take Photo



MOTT MACDONALD

Photo Comment

Take Photo

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MOTT MACDONALD

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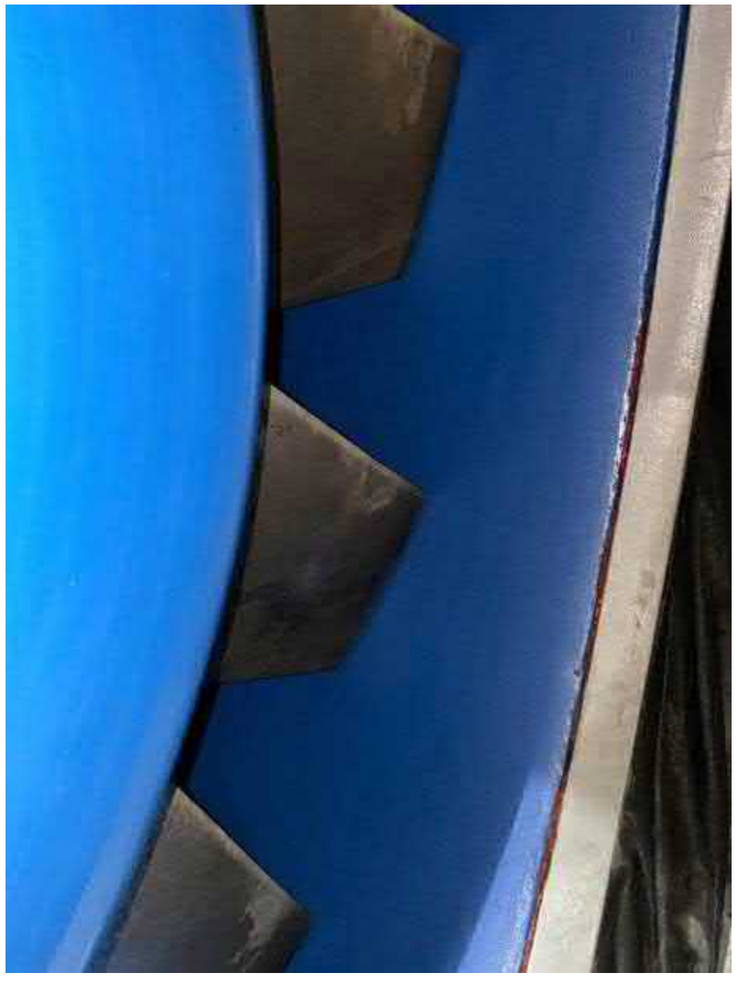

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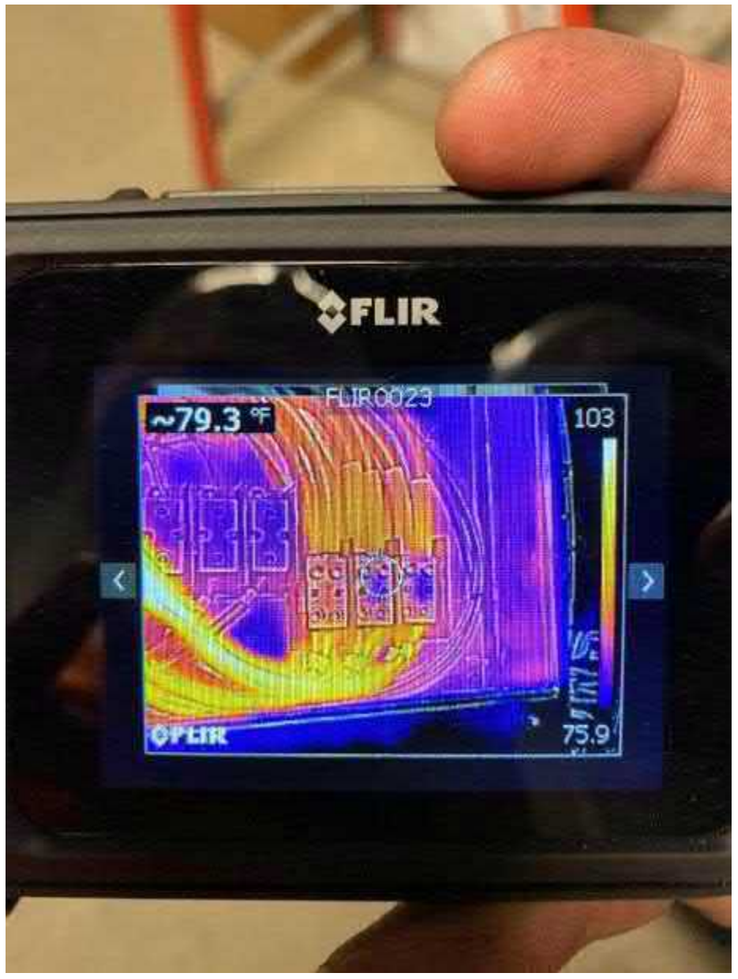

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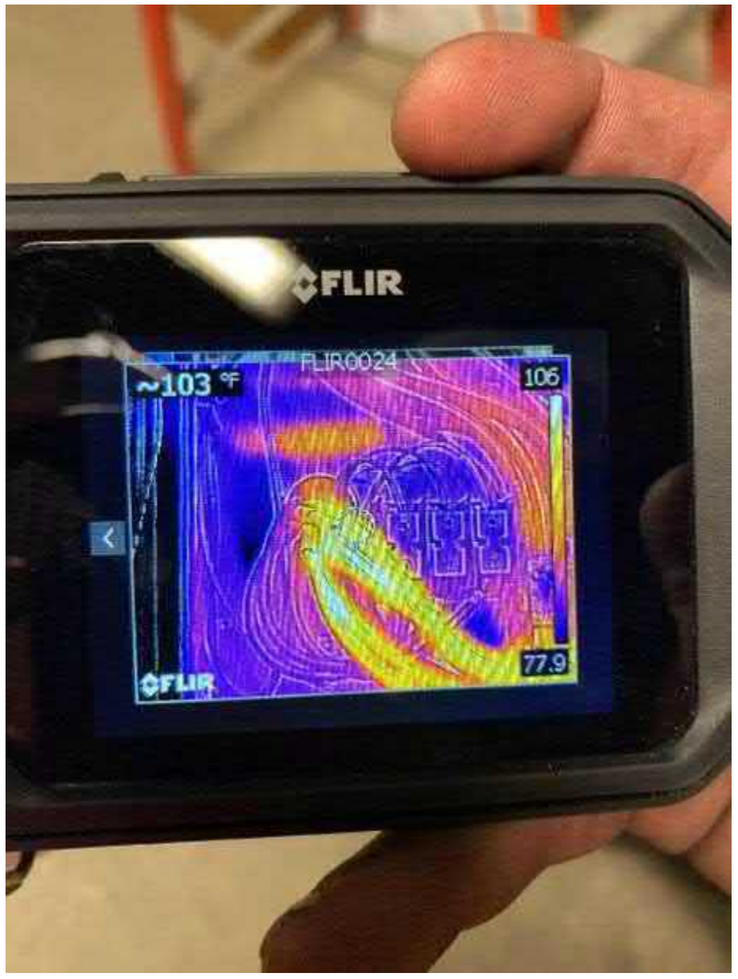

Photo Comment

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TV-F2
Fan Assembly Checksheet

Inspection Date

September 17, 2020

Inspection Time

09:56

Inspection Team

KK/CM

Tag ID

TV-F2

Visual Inspection of Fan Assembly - To Include Motor/Dampers

Good general condition with grease leaking at both motor bearings.

Unusual Noises/Vibrations during Fan Operation

Tunnel Side Attenuator Tag ID

TS-A2

Tunnel Side Attenuator

Good condition

Air Side Attenuator Tag ID

AS-A2

Air Side Attenuator

Good condition with some grease residue due to bearing leaking and grease traveling with the airflow down to the sound attention.

Verify Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

Locking collar has locking screws verified to 105 ft/lb torque rating

Impeller blades have cap bolts with 220 ft/lb torque rating

Decoder has a locking collar verified between 25-35 inches/lb

Bearing Temperature / Winding Temperature

Clean Fan Motor

Check Connecting Terminals, Bolts, Bearing, & Windings

Bearing purge and grease renewed

Review internal space heater amp draw.

Vibration transmitter testing tied to SCADA

Operate dampers and listen for unusual noises and vibrations

Damper Tag ID

FI-D2

Clean damper blades and linkages

Yes

Check tightness of mechanical connections

Test internal actuator heater and amp draw

Comments

Attach Photo

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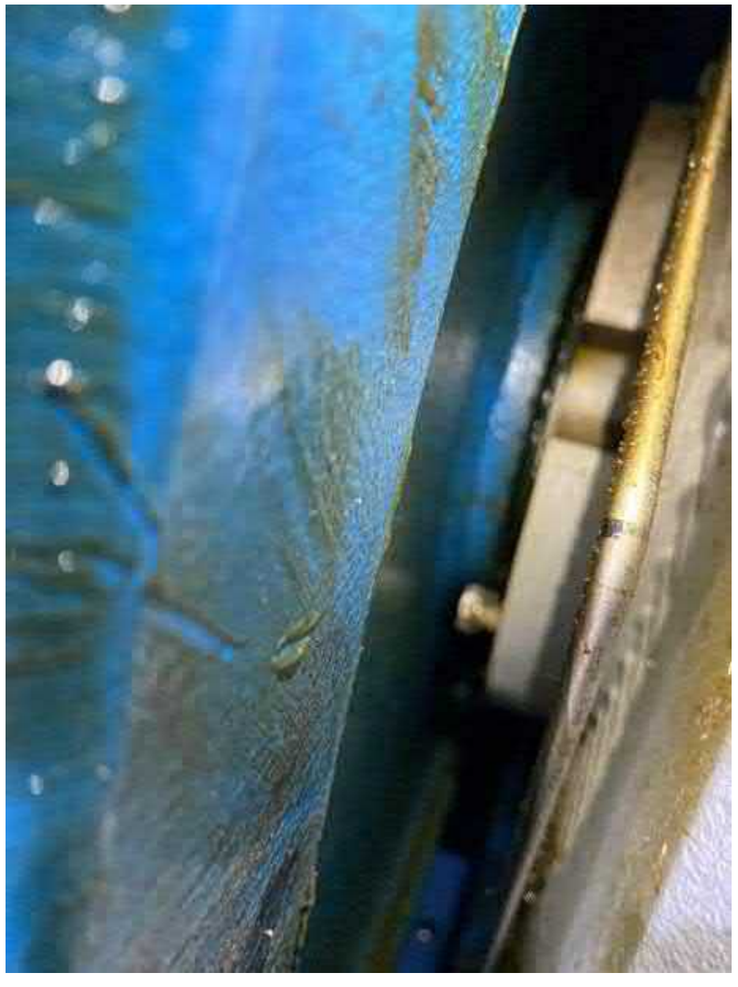

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Grease leaking down towards the sound attenuation

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MOTT MACDONALD

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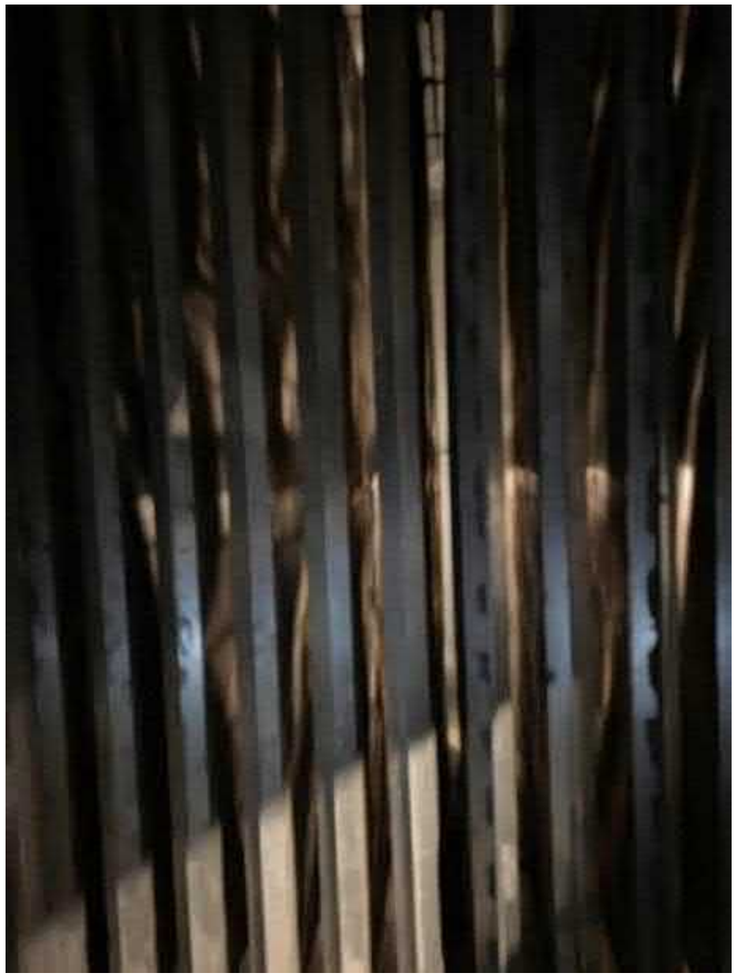

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MOTT MACDONALD

Photo Comment

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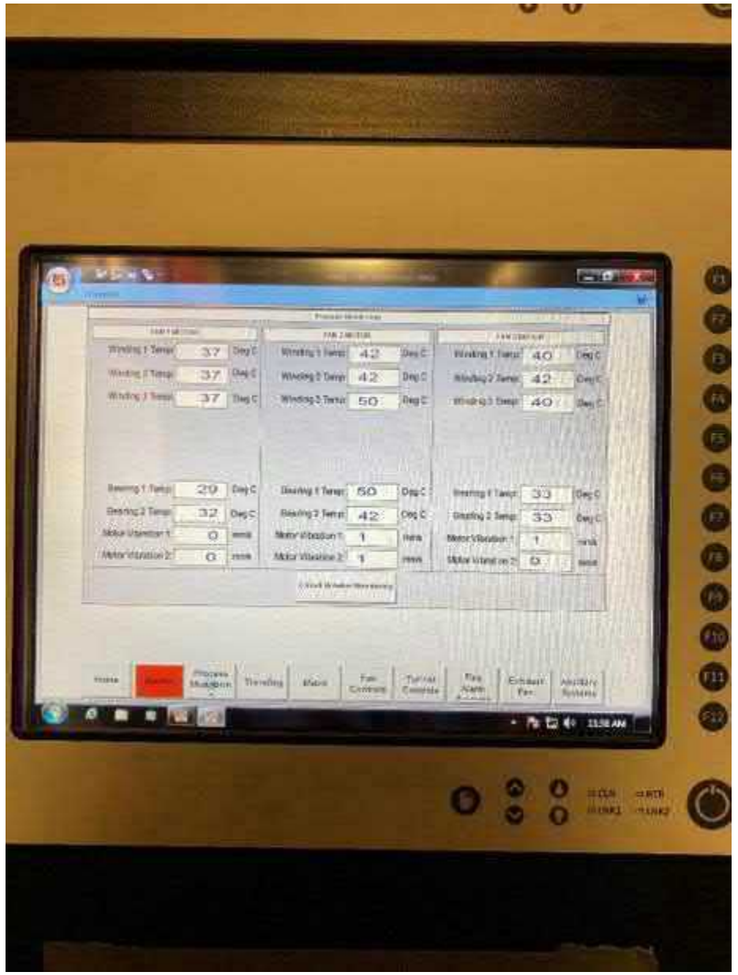

MOTT MACDONALD

Photo Comment

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TV-F3
Fan Assembly Checksheet

Inspection Date

September 17, 2020

Inspection Time

08:41

Inspection Team

KK/CM

Tag ID

TV-F3

Visual Inspection of Fan Assembly - To Include Motor/Dampers

Good condition. Very minor grease leaks.

Unusual Noises/Vibrations during Fan Operation

None

Tunnel Side Attenuator Tag ID

TS-A3

Tunnel Side Attenuator

Good condition. Clean and free of debris.

Air Side Attenuator Tag ID

AS-A3

Air Side Attenuator

Good condition. Clean and free of debris.

Verify Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

N/A

Locking collar has locking screws verified to 105 ft/lb torque rating

N/A

Impeller blades have cap bolts with 220 ft/lb torque rating

N/A

Decoder has a locking collar verified between 25-35 inches/lb

N/A

Bearing Temperature / Winding Temperature

See photos

Clean Fan Motor

Yes

Check Connecting Terminals, Bolts, Bearing, & Windings

N/A

Bearing purge and grease renewed

N/A

Review internal space heater amp draw.

Vibration transmitter testing tied to SCADA

Operate dampers and listen for unusual noises and vibrations

Damper Tag ID

FI-D3

Clean damper blades and linkages

Yes

Check tightness of mechanical connections

Test internal actuator heater and amp draw

Comments

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

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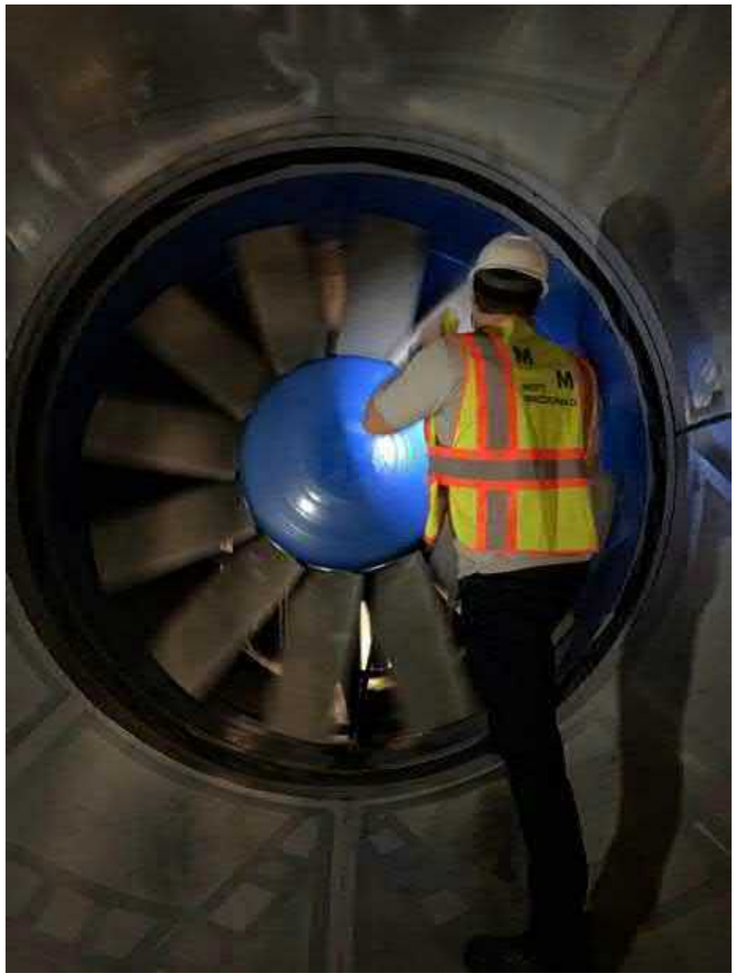

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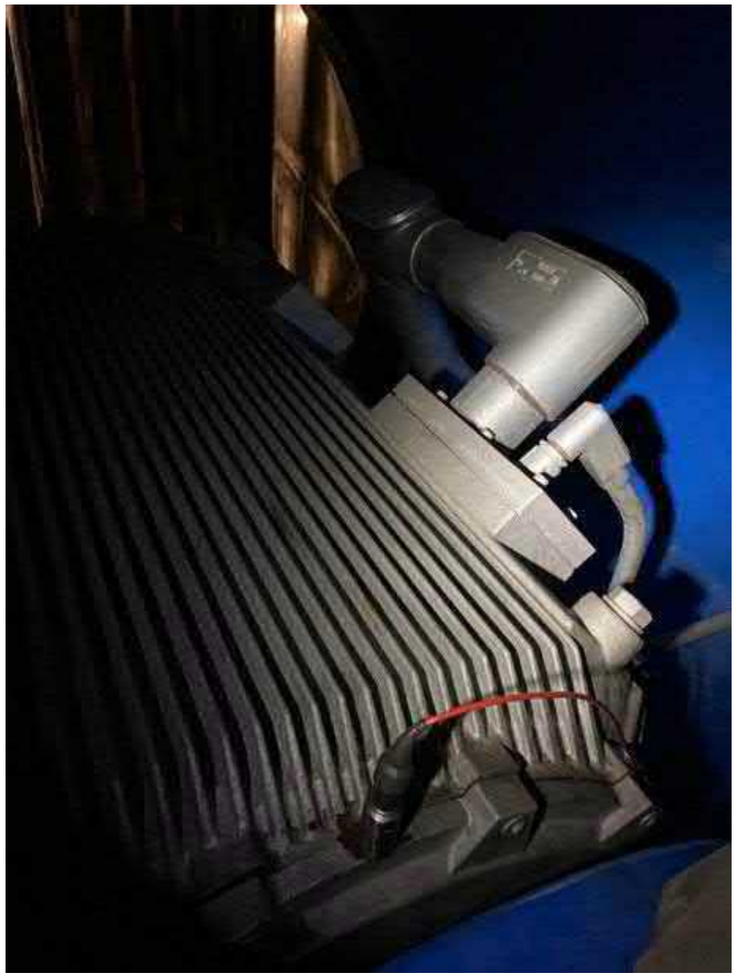

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MOTT MACDONALD

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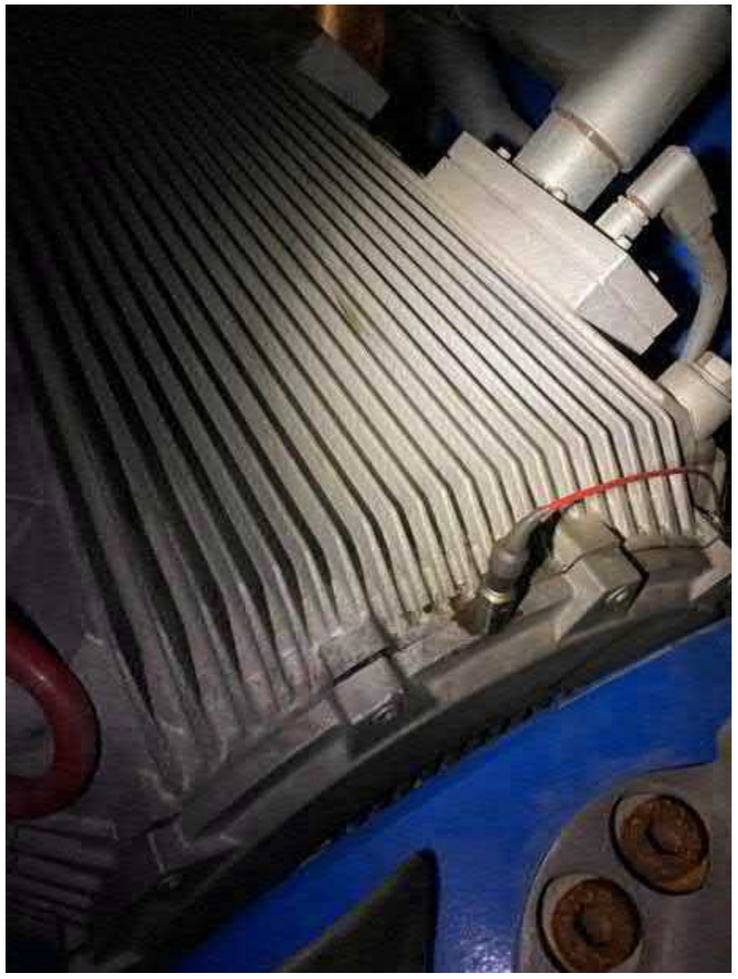

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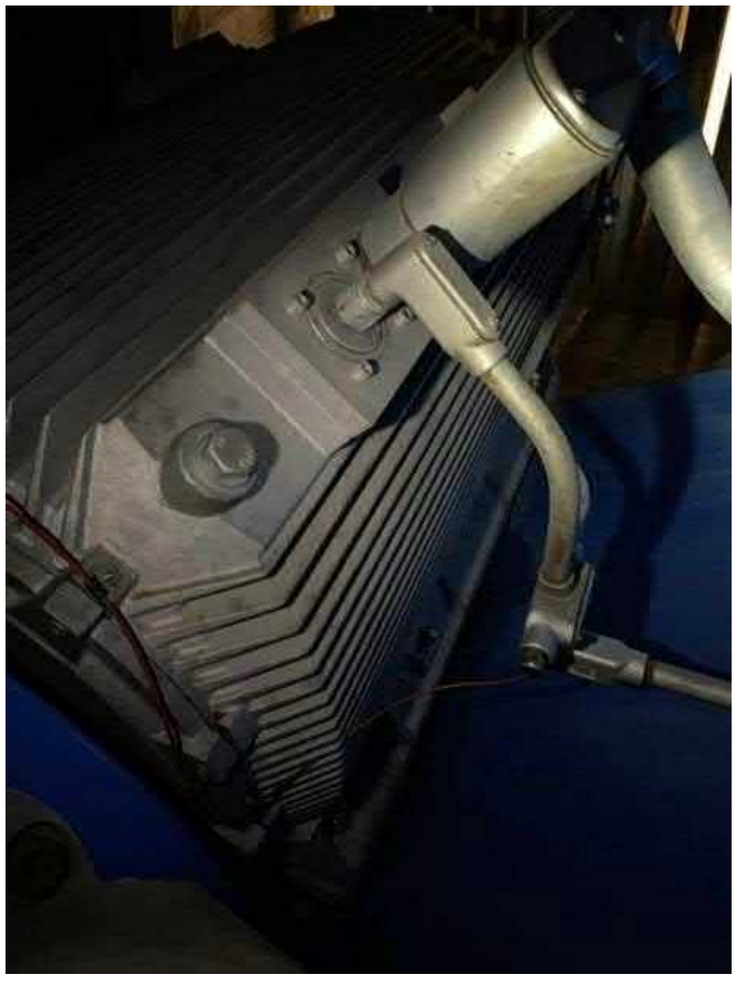

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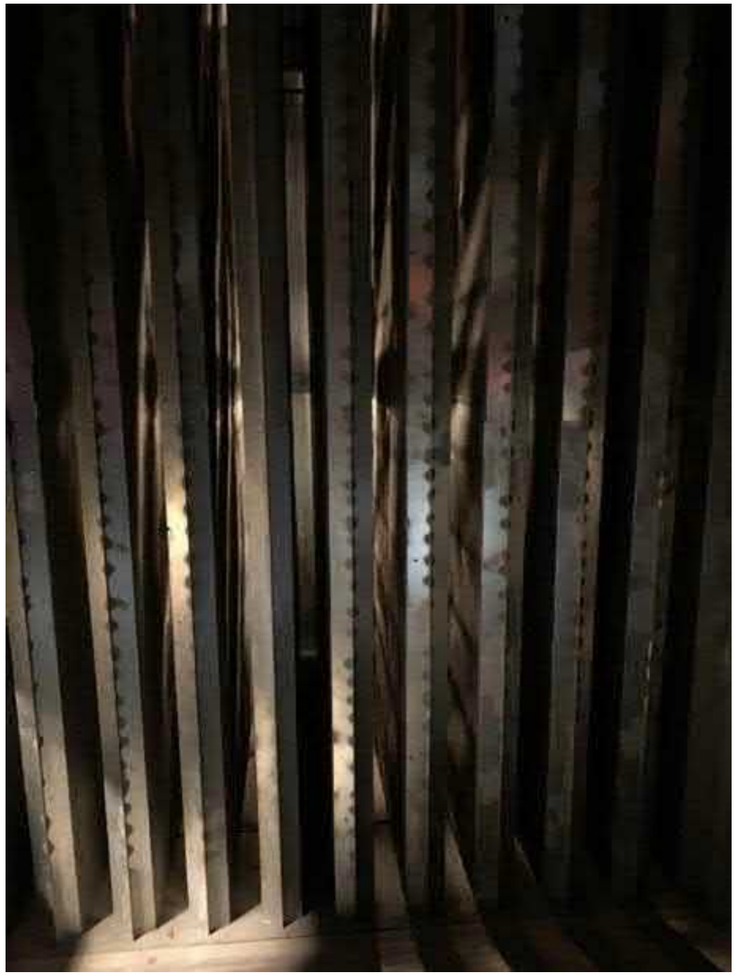

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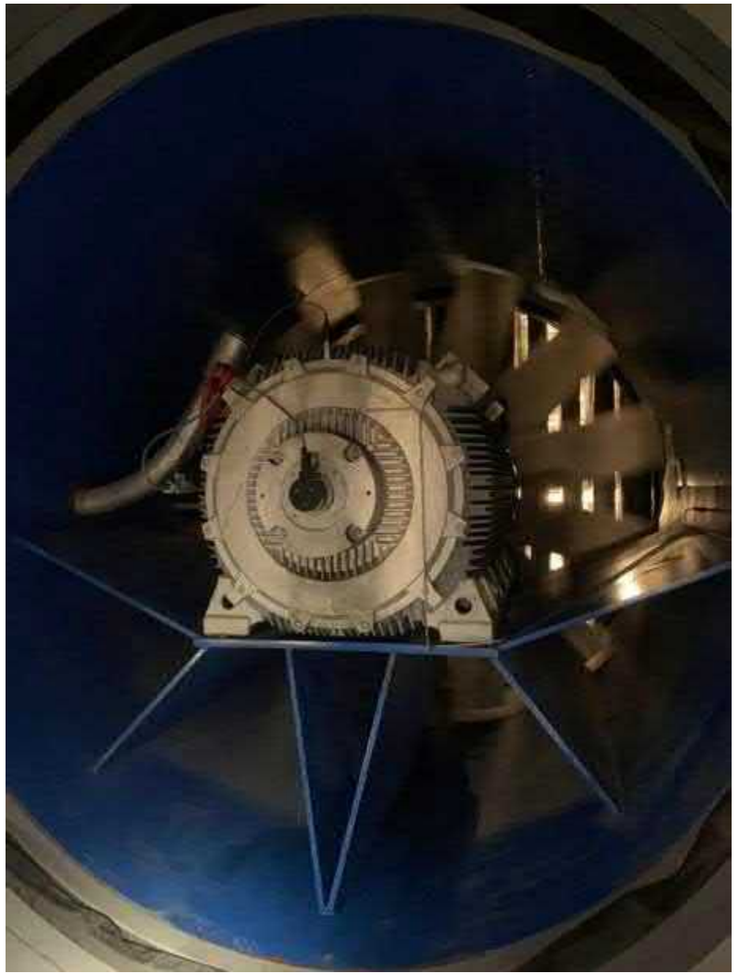

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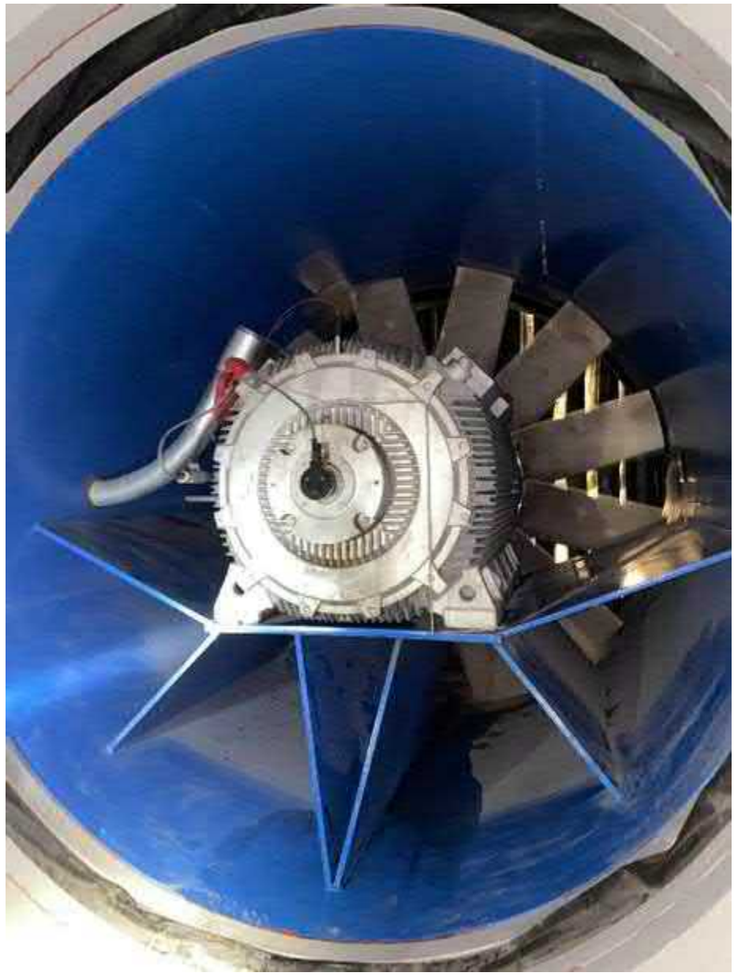

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Photo Comment

Winding temperatures

Take Photo

Photo Comment

Full load current

Take Photo

Photo Comment

Motor bearing temperature

Take Photo

Photo Comment

Fan 3 breaker

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

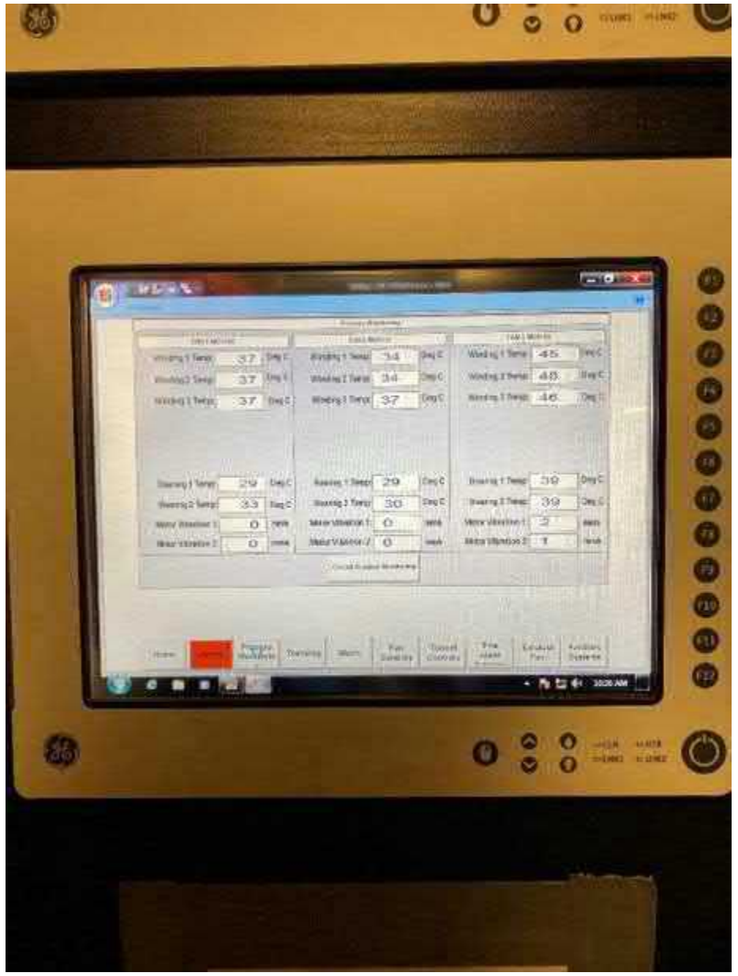

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Carbon Monoxide Detection System

CONB-1

Inspection Date

September 17, 2020

Inspection Time

22:52

Inspection Team

KK/CM

Tag ID

CO-NB1

Visual Inspection

Heavy residue from car exhaust.

Calibration

Yes

Signal Read PLC/SCADA

Yes

Comments

This sensor is noted on the drawings as NB2. SCADA says NB1. CS1

Attach Photo

Take Photo

Photo Comment

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Photo Comment

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Photo Comment

MOTT MACDONALD

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CONB-2

Inspection Date

September 17, 2020

Inspection Time

23:04

Inspection Team

KK/CM

Tag ID

CO-NB2

Visual Inspection

Residue from car exhaust

Calibration

Yes

Signal Read PLC/SCADA

Yes

Comments

On the drawings this is noted as sensor NB1. CS1.

Attach Photo

MOTT MACDONALD

Take Photo

Photo Comment

Take Photo

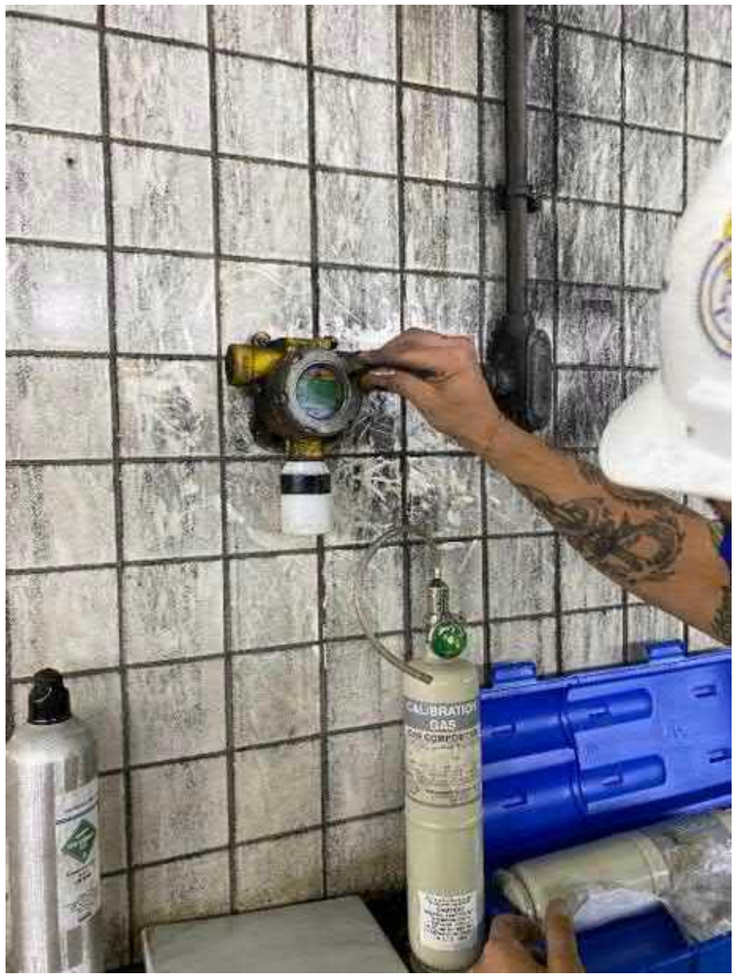

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

COSR-1

Inspection Date

September 18, 2020

Inspection Time

23:48

Inspection Team

KK / CM

Tag ID

COSR1

Visual Inspection

In good condition

Calibration

Pass

Signal Read PLC/SCADA

Pass

Comments

CS 1

Attach Photo

MOTT MACDONALD

Take Photo

Photo Comment

0 calibration pass

MOTT MACDONALD

Take Photo

Photo Comment

150 calibration

MOTT MACDONALD

Take Photo

Photo Comment

150 pass

MOTT MACDONALD

Take Photo

Photo Comment

35 test pass

COSR-2

Inspection Date

September 18, 2020

Inspection Time

23:39

Inspection Team

KK / CM

Tag ID

COSR2

Visual Inspection

In good condition

Calibration

Pass

Signal Read PLC/SCADA

Pass

Comments

CS 1

Attach Photo

Take Photo

Photo Comment

0 calibration

Take Photo

Photo Comment

150 calibration

Take Photo

Photo Comment

150 calibration pass

Take Photo

Photo Comment

35 test pass

COSB-1

Inspection Date

September 18, 2020

Inspection Time

22:49

Inspection Team

KK / CM

Tag ID

COSB1

Visual Inspection

Good condition

Calibration

Pass

Signal Read PLC/SCADA

33 PPM pass

Comments

CS 1

Attach Photo

MOTT MACDONALD

Take Photo

Photo Comment

0 test

MOTT MACDONALD

Take Photo

Photo Comment

150

MOTT MACDONALD

Take Photo

Photo Comment

150 pass

MOTT MACDONALD

Take Photo

Photo Comment

33 ppm

MOTT MACDONALD

COSB-2

Inspection Date

September 18, 2020

Inspection Time

22:59

Inspection Team

KK / CM

Tag ID

COSB2

Visual Inspection

In good condition

Calibration

Pass

Signal Read PLC/SCADA

Pass

Comments

CS 1

Attach Photo

MOTT MACDONALD

Take Photo

Photo Comment

0 test pass

Take Photo

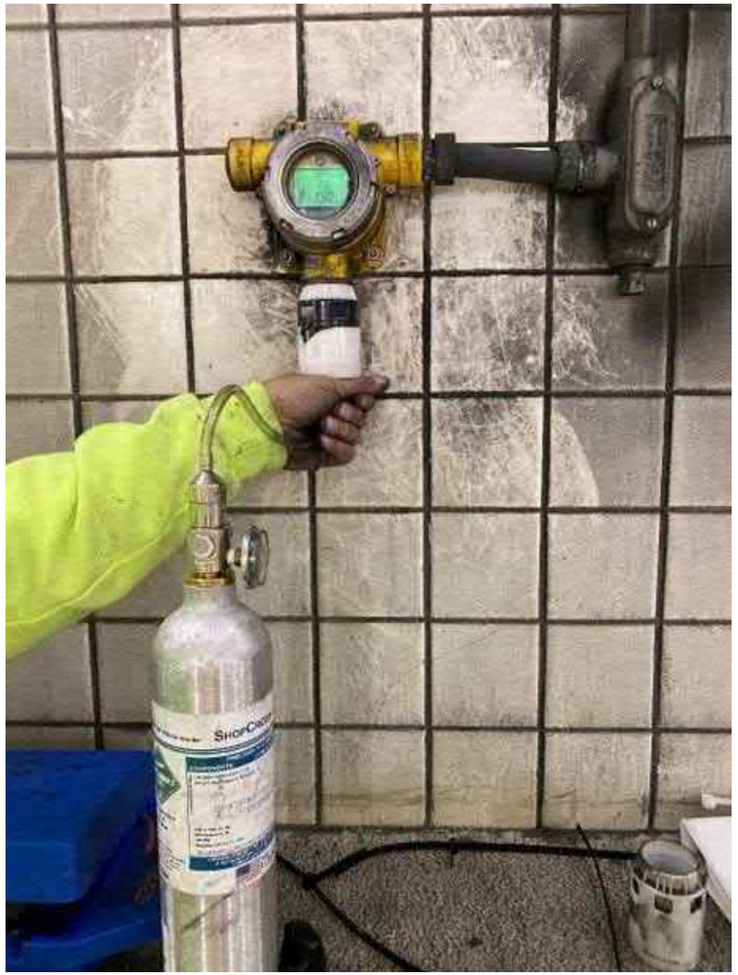

Photo Comment

150

Take Photo

Photo Comment

150 test pass

Take Photo

Photo Comment

35 test pass

Tunnel Isolation Dampers

TI-DN

Inspection Date

September 15, 2020

Inspection Time

08:58

Inspection Team

KK/CM

Tag ID

TI-DN

Visual Inspection

In good condition. No visual defects. Baffles in good condition too.

Operation

Good

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

Yes

Bearing grease Replacement - Chain Lubrication (if applicable)

Yes

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Rotork actuator on the left hand side (looking North) leaks are both the hand wheel and the gearbox. Actuator is currently out of warranty. CS2.

Attach Photo

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Photo Comment

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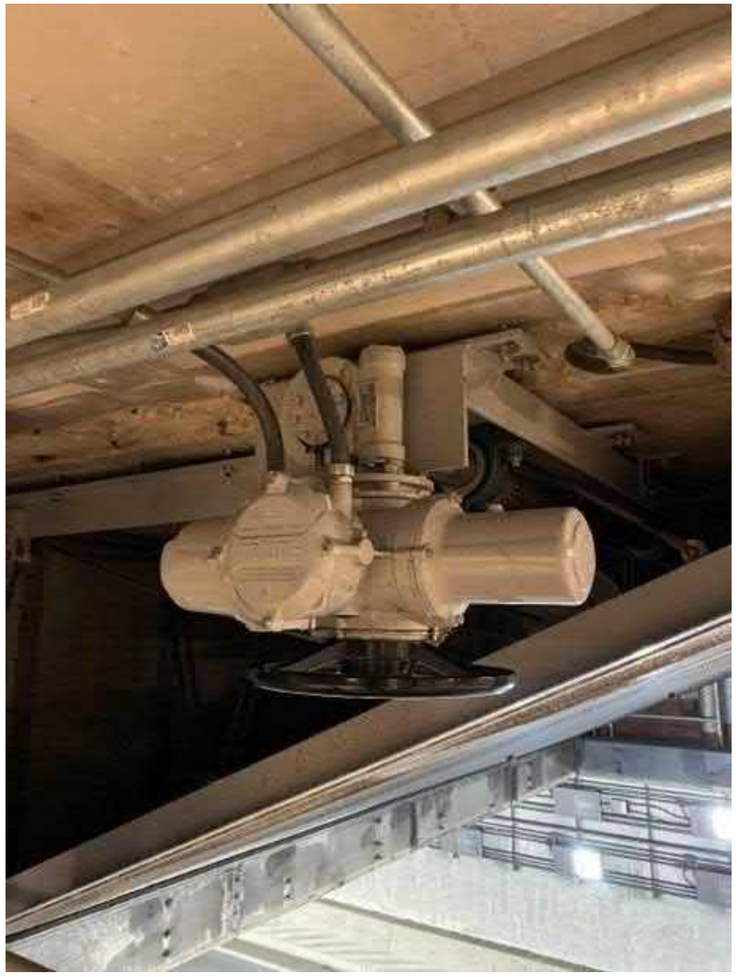

Photo Comment

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Photo Comment

TI-DR

Inspection Date

September 15, 2020

Inspection Time

09:08

Inspection Team

KK/CM

Tag ID

TI-DR

Visual Inspection

In good condition.

Operation

Good.

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes.

Check all bolts for tightness

Yes.

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

In good condition. No issues during opening. CS1.

Attach Photo

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Photo Comment

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Photo Comment

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Photo Comment

TI-DS

Inspection Date

September 15, 2020

Inspection Time

09:17

Inspection Team

KK/CM

Tag ID

TI-DS

Visual Inspection

In good condition. Damper actuators have minor leaks, see photos. No other signs of visual defects.

Operation

Good.

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes.

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

In good condition. Operates as intended. Minor leaks as shown in photos. CS2

Attach Photo

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Photo Comment

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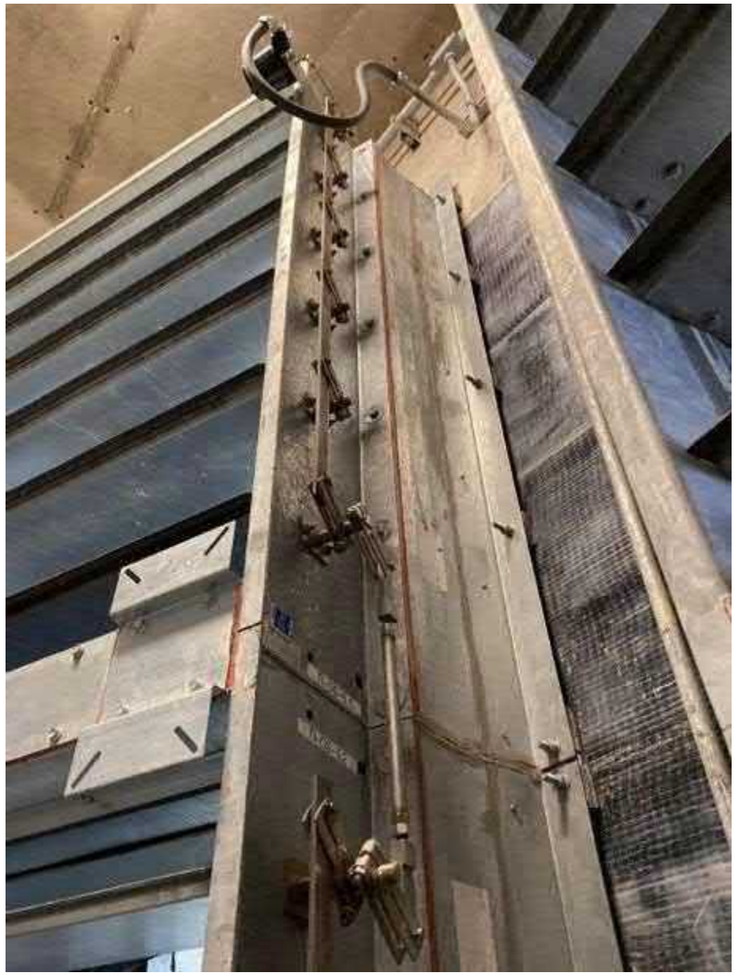

Photo Comment

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Photo Comment

Fan Isolation Dampers

FI-D1

Inspection Date

September 15, 2020

Inspection Time

10:09

Inspection Team

KK/CM

Tag ID

FI-D1

Visual Inspection

Good condition. No visual defects.

Operation

Good.

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes.

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Good condition. No issues. CS1

Attach Photo

Take Photo

Photo Comment

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Photo Comment

Take Photo

Photo Comment

FI-D2

Inspection Date

September 15, 2020

Inspection Time

10:28

Inspection Team

KK/CM

Tag ID

FI-D2

Visual Inspection

Good. Minor leaks on damper actuators.

Operation

Good.

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes.

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Good condition. Minor leaks. CS1.

Attach Photo

Take Photo

Photo Comment

Take Photo

MOTT MACDONALD

Photo Comment

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MOTT MACDONALD

Photo Comment

Take Photo

Photo Comment

Minor leak

FI-D3

Inspection Date

September 15, 2020

Inspection Time

10:37

Inspection Team

KK/CM

Tag ID

FI-D3

Visual Inspection

Good. Minor leaks on damper actuators.

Operation

Good.

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes.

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Good condition with minor leaks on actuators. CS1.

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Fire Standpipes

Northbound

NB-North Portal Riser & Gate Valve

Inspection Date

September 17, 2020

Inspection Time

23:56

Inspection Team

KK/CM

Tag ID

NB-North Portal Riser & Gate Valve

Location

NB-North Portal Riser & Gate Valve

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Minor surface rust on check valve, gate valve and riser. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Check valve

Take Photo

Photo Comment

Take Photo

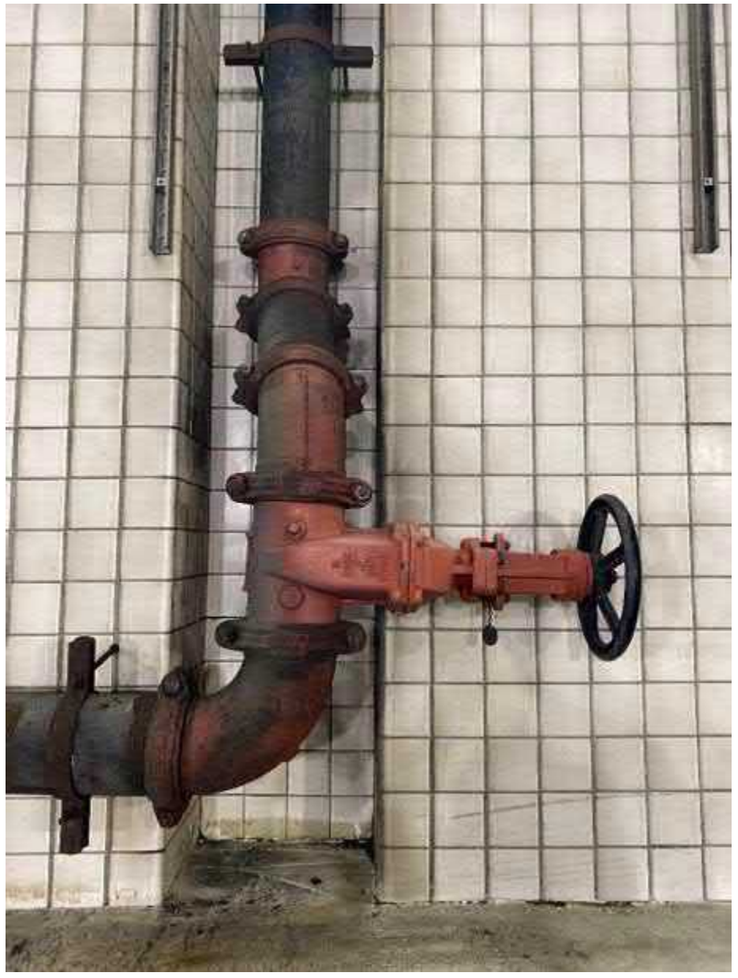

Photo Comment

NB Mid-tunnel Riser

Inspection Date

September 17, 2020

Inspection Time

23:35

Inspection Team

KK/CM

Tag ID

NB mid-channel riser

Location

NB tube

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

NB-South Portal Riser & Gate Valve

Inspection Date

September 17, 2020

Inspection Time

23:15

Inspection Team

KKCM

Tag ID

NB-South Portal Riser & Gate Valve

Location

NB-South Portal Riser & Gate Valve

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Riser and gate valve in good condition. CS1

Attach Photo

Take Photo

Photo Comment

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Photo Comment

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Photo Comment

Take Photo

Photo Comment

HC1

Inspection Date

September 17, 2020

Inspection Time

23:20

Inspection Team

KK/CM

Tag ID

HC1

Location

NB tube

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

MOTT MACDONALD

HC2

Inspection Date

September 17, 2020

Inspection Time

23:23

Inspection Team

Tag ID

HC2

Location

NB tube

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

MOTT MACDONALD

Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

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Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC3

Inspection Date

September 17, 2020

Inspection Time

23:26

Inspection Team

Tag ID

HC3

Location

NB tube

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

MOTT MACDONALD

Inspect piping, hose connections and couplings.

Yes

Comments

Recommend tightening the hose connection to the pipe. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC4

Inspection Date

September 17, 2020

Inspection Time

23:30

Inspection Team

KK/CM

Tag ID

HC4

Location

NB tube

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Inspection Date

September 17, 2020

Inspection Time

23:33

Inspection Team

KK/CM

Tag ID

HC5

Location

NB tube

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC6

Inspection Date

September 17, 2020

Inspection Time

23:37

Inspection Team

KK/CM

Tag ID

HC6

Location

NB tube

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC7

Inspection Date

September 17, 2020

Inspection Time

23:40

Inspection Team

KK/CM

Tag ID

HC7

Location

NB tube

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

MOTT MACDONALD

Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC8

Inspection Date

September 17, 2020

Inspection Time

23:44

Inspection Team

KK/CM

Tag ID

HC8

Location

NB tube

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC9

Inspection Date

September 17, 2020

Inspection Time

23:47

Inspection Team

KK/CM

Tag ID

HC9

Location

NB tube

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Southbound Ramp

HC10

Inspection Date

September 18, 2020

Inspection Time

23:30

Inspection Team

Tag ID

HC10

Location

SR Ramp

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC11

Inspection Date

September 18, 2020

Inspection Time

23:28

Inspection Team

Tag ID

HC11

Location

SR Ramp

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC12

Inspection Date

September 18, 2020

Inspection Time

23:26

Inspection Team

Tag ID

HC12

Location

SR Ramp

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

MOTT MACDONALD

HC13

Inspection Date

September 18, 2020

Inspection Time

23:23

Inspection Team

Tag ID

HC13

Location

SR Ramp

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

MOTT MACDONALD

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC14

Inspection Date

September 18, 2020

Inspection Time

23:21

Inspection Team

Tag ID

HC14

Location

SR Ramp

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC15

Inspection Date

September 18, 2020

Inspection Time

23:19

Inspection Team

Tag ID

HC15

Location

SR Ramp

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

MOTT MACDONALD

HC16

Inspection Date

September 18, 2020

Inspection Time

23:17

Inspection Team

Tag ID

HC16

Location

SR Ramp

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

MOTT MACDONALD

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC17

Inspection Date

September 18, 2020

Inspection Time

23:14

Inspection Team

Tag ID

HC17

Location

SR Ramp

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC18

Inspection Date

September 18, 2020

Inspection Time

23:11

Inspection Team

Tag ID

HC18

Location

SR Ramp

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

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Photo Comment

Take Photo

Photo Comment

Southbound Tunnel

SB-South Portal Riser & Gate Valve

Inspection Date

September 18, 2020

Inspection Time

22:43

Inspection Team

Tag ID

SB-South Portal Riser & Gate Valve

Location

SB tube

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Minor surface rust on gate and check valve. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

SB-Midtunnel Riser & Gate Valve

Inspection Date

September 18, 2020

Inspection Time

22:34

Inspection Team

Tag ID

SB-Midtunnel Riser & Gate Valve

Location

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Minor surface rust on gate and check valve . CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

MOTT MACDONALD

SB-North Portal Riser & Gate Valve

Inspection Date

September 18, 2020

Inspection Time

22:23

Inspection Team

Tag ID

SB-North Portal Riser & Gate Valve

Location

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

MOTT MACDONALD

Inspect piping, hose connections and couplings.

Comments

Good condition. Minor surface rust. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

HC19

Inspection Date

September 18, 2020

Inspection Time

22:41

Inspection Team

Tag ID

HC19

Location

SB tube

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC20

Inspection Date

September 18, 2020

Inspection Time

22:39

Inspection Team

Tag ID

HC20

Location

SB tube

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

MOTT MACDONALD

HC21

Inspection Date

September 18, 2020

Inspection Time

22:38

Inspection Team

Tag ID

HC21

Location

SB tube

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

MOTT MACDONALD

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC22

Inspection Date

September 18, 2020

Inspection Time

22:32

Inspection Team

Tag ID

HC22

Location

SB tube

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

MOTT MACDONALD

HC23

Inspection Date

September 18, 2020

Inspection Time

22:30

Inspection Team

Tag ID

HC23

Location

SB tube

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

MOTT MACDONALD

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HC24

Inspection Date

September 18, 2020

Inspection Time

22:28

Inspection Team

Tag ID

HC24

Location

SB tube

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

MOTT MACDONALD

Photo Comment

Take Photo

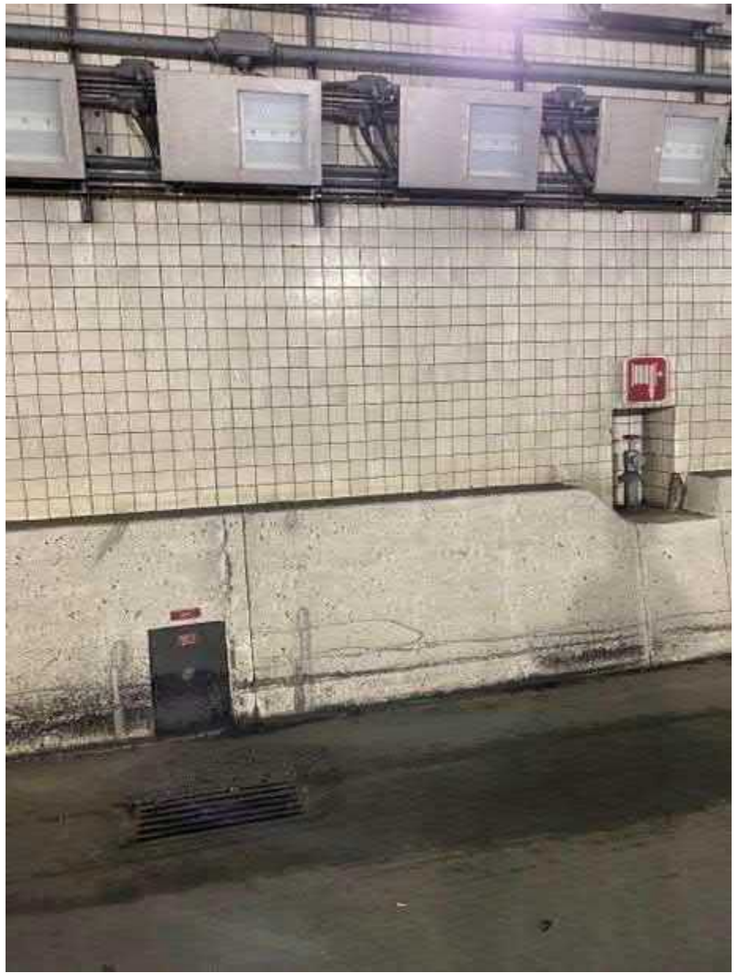

Photo Comment

Take Photo

Photo Comment

MOTT MACDONALD

HC25

Inspection Date

September 18, 2020

Inspection Time

22:26

Inspection Team

Tag ID

HC25

Location

SB tube

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

MOTT MACDONALD

Inspect piping, hose connections and couplings.

Comments

Missing cap and chain. CS2

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

MOTT MACDONALD

HC26

Inspection Date

September 18, 2020

Inspection Time

22:25

Inspection Team

Tag ID

HC26

Location

SB tube

Station

Fire Department Connections Capped and Clear

Confirm threads are undamaged and caps in place.

Confirm top nut and caps are tight but not over-torqued.

MOTT MACDONALD

Inspect piping, hose connections and couplings.

Comments

Missing cap and chain. CS2.

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Electrical Room/Staircase

HC1F

Inspection Date

September 15, 2020

Inspection Time

12:12

Inspection Team

KK/CM

Tag ID

HC1F

Location

Staircase by electrical room

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

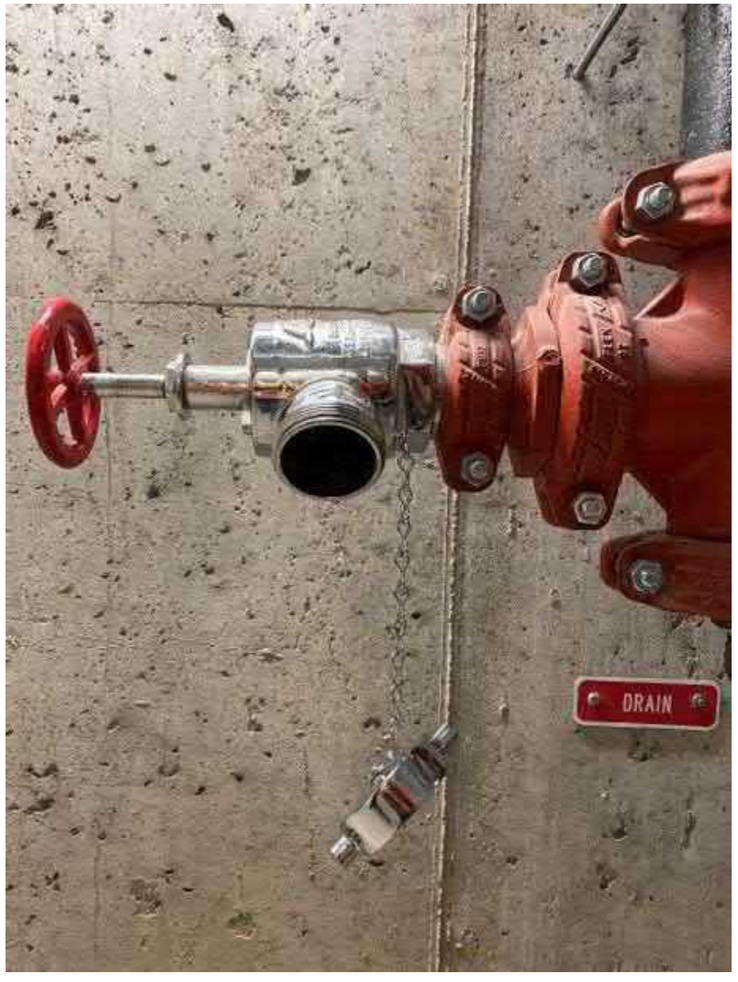

Photo Comment

Take Photo

Photo Comment

HC2F

Inspection Date

September 15, 2020

Inspection Time

11:46

Inspection Team

KK/CM

Tag ID

HC2F

Location

Outside of control room

Station

Fire Department Connections Capped and Clear

Yes

Confirm threads are undamaged and caps in place.

Yes

Confirm top nut and caps are tight but not over-torqued.

Yes

Inspect piping, hose connections and couplings.

Good condition

Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

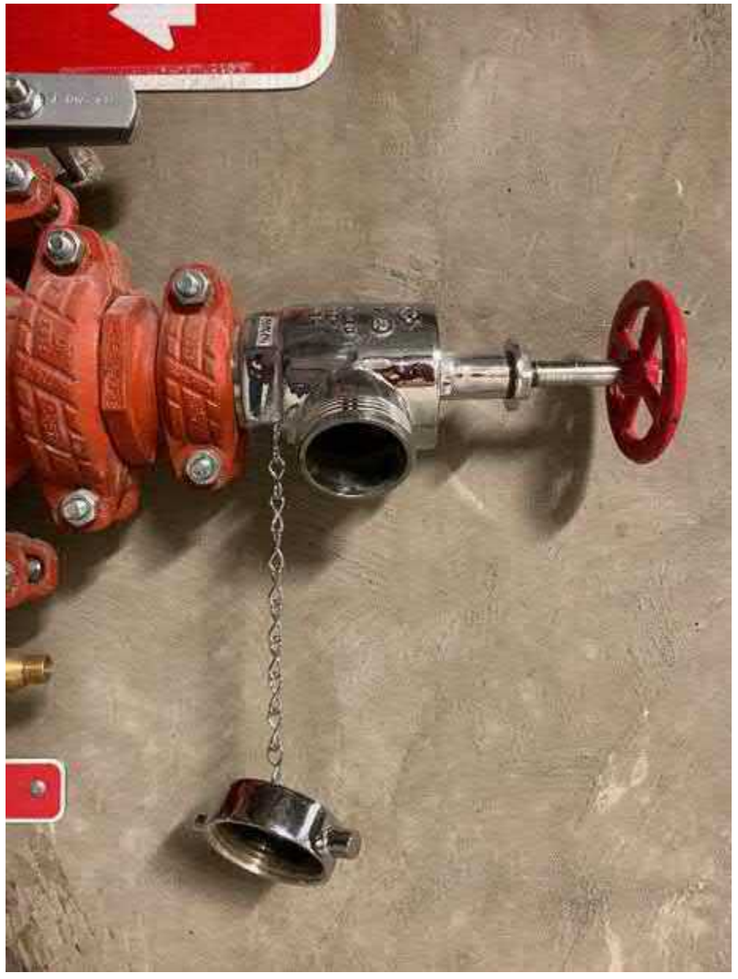

Photo Comment

Take Photo

Photo Comment

HVAC Units

HP-1A-Indoor Air Conditioning Unit

Inspection Date

September 15, 2020

Inspection Time

12:45

Inspection Team

KK/CM

Tag ID

HP-1A

Equipment Description

Split unit in the control room

Visual Inspection / Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

HP-1B Outdoor Condensing Unit

Inspection Date

September 15, 2020

Inspection Time

12:54

Inspection Team

KK/CM

Tag ID

HP-1B

Equipment Description

Condenser unit in fan plenum

Visual Inspection / Comments

Good working condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Minor corrosion and leaking on the return for the split unit.

HP-2B Outdoor Condensing Unit Electrical Room

Inspection Date

September 15, 2020

Inspection Time

12:57

Inspection Team

KK/CM

Tag ID

HP-2B

Equipment Description

Condenser unit in fan plenum

Visual Inspection / Comments

Good working condition. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

HP-2A Indoor Heat Pump

Inspection Date

September 15, 2020

Inspection Time

12:17

Inspection Team

KK/CM

Tag ID

HP-2A

Equipment Description

Split unit in electrical room with MCCs

Visual Inspection / Comments

Good condition. Works as intended. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

On/Off light bulb is not working

Take Photo

Photo Comment

EF-1 Exhaust Fan

Fan Assembly Checksheet

Inspection Date

September 17, 2020

Inspection Time

08:23

Inspection Team

KK/CM

Tag ID

EF-1

Visual Inspection of Fan Assembly - To Include Motor/Dampers

Good condition

Unusual Noises/Vibrations during Fan Operation

No

Tunnel Side Attenuator Tag ID

N/A

Tunnel Side Attenuator

N/A

Air Side Attenuator Tag ID

N/A

Air Side Attenuator

N/A

Verify Damper Inlocks and Operates Properly Through All Positions

Check all bolts for tightness

Locking collar has locking screws verified to 105 ft/lb torque rating

Impeller blades have cap bolts with 220 ft/lb torque rating

Decoder has a locking collar verified between 25-35 inches/lb

Bearing Temperature / Winding Temperature

Clean Fan Motor

Check Connecting Terminals, Bolts, Bearing, & Windings

Bearing purge and grease renewed

Review internal space heater amp draw.

Vibration transmitter testing tied to SCADA

Operate dampers and listen for unusual noises and vibrations

Damper Tag ID

Clean damper blades and linkages

Check tightness of mechanical connections

Test internal actuator heater and amp draw

Comments

Attach Photo

Take Photo

MOTT MACDONALD

Photo Comment

Take Photo

MOTT MACDONALD

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

EUH-1-Electric Unit Heater

Inspection Date

September 15, 2020

Inspection Time

12:28

Inspection Team

KK/CM

Tag ID

EUH-1

Equipment Description

Space heater in the electrical room

Visual Inspection / Comments

Good condition. CS1

Attach Photo

Take Photo

Photo Comment

EUH-2-Electric Unit Heater

Inspection Date

September 15, 2020

Inspection Time

12:31

Inspection Team

KK/CM

Tag ID

EUH-2

Equipment Description

Space heater in the fan room

Visual Inspection / Comments

Good condition. Works as intended.

Attach Photo

Take Photo

Photo Comment

EUH-3-Electric Unit Heater

Inspection Date

September 15, 2020

Inspection Time

12:59

Inspection Team

KK/CM

Tag ID

EUH-3

Equipment Description

Space heater in fan plenum

Visual Inspection / Comments

Space heater does not turn off. CS2

Attach Photo

Take Photo

Photo Comment

Ductwork

Fire/Smoke Damper 1

Inspection Date

September 16, 2020

Inspection Time

08:44

Inspection Team

KK/CM

Tag ID

FSD-1

Visual Inspection

Good condition

Operation

Good.

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Good condition. Works as intended. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

MOTT MACDONALD

Photo Comment

Take Photo

Photo Comment

Fire/Smoke Damper 2

Inspection Date

September 16, 2020

Inspection Time

08:50

Inspection Team

KK/CM

Tag ID

FSD-2

Visual Inspection

Good condition

Operation

Good

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Good condition. Works as intended. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

MOTT MACDONALD

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Fire/Smoke Damper 3

Inspection Date

September 16, 2020

Inspection Time

08:58

Inspection Team

KKCM

Tag ID

FSD-3

Visual Inspection

Good condition

Operation

Good

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes.

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Good condition. Works as intended. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

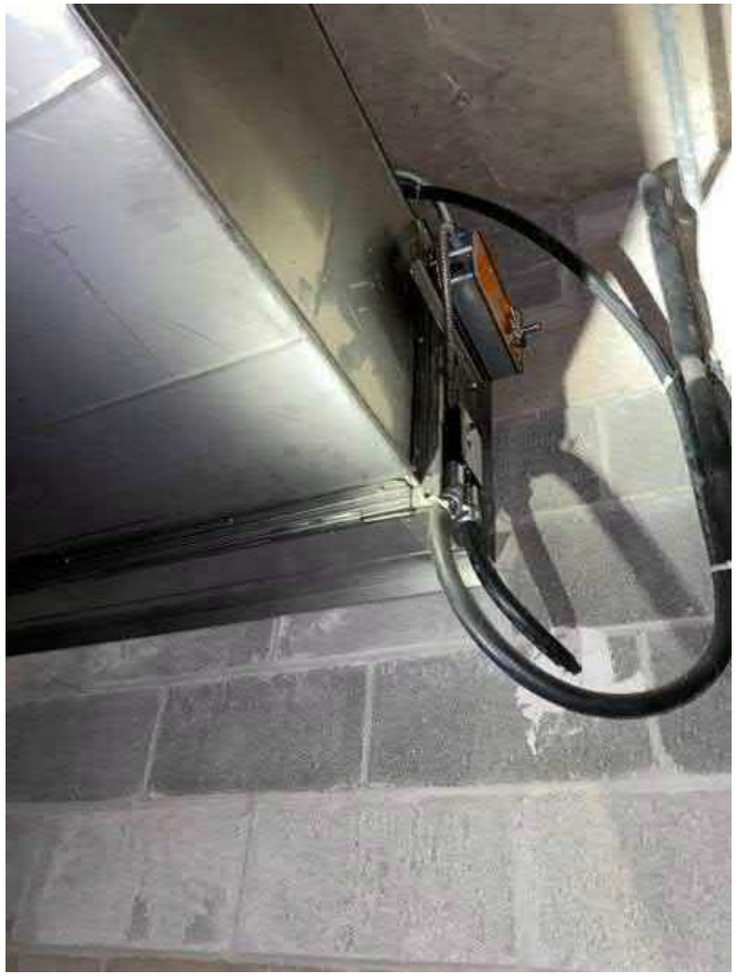

Photo Comment

Take Photo

Photo Comment

Take Photo

MOTT MACDONALD

Photo Comment

Take Photo

Photo Comment

Take Photo

MOTT MACDONALD

Photo Comment

Fire/Smoke Damper 4

Inspection Date

September 16, 2020

Inspection Time

09:03

Inspection Team

KK/CM

Tag ID

FSD-4

Visual Inspection

Good condition

Operation

Good

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Good condition. Works as intended. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

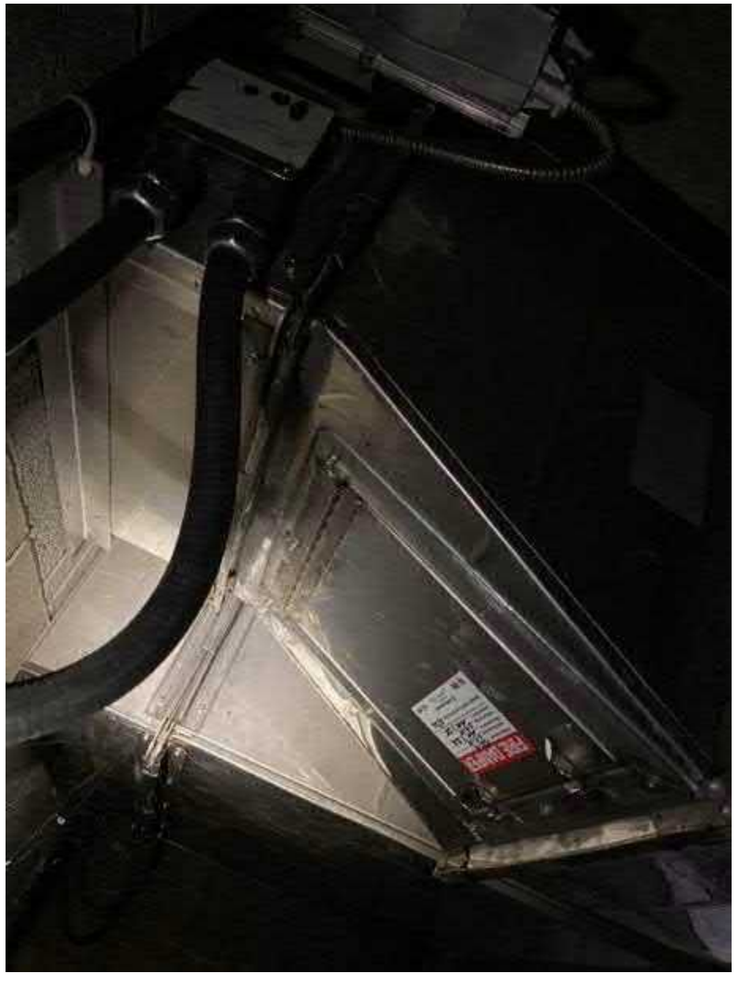

Photo Comment

Take Photo

MOTT MACDONALD

Photo Comment

Take Photo

Photo Comment

Fire/Smoke Damper 5

Inspection Date

September 16, 2020

Inspection Time

09:19

Inspection Team

KK/CM

Tag ID

FSD-5

Visual Inspection

Good condition

Operation

Good

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Good condition. Works as intended. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Fire/Smoke Damper 6

Inspection Date

September 16, 2020

Inspection Time

09:22

Inspection Team

KK/CM

Tag ID

FSD-6

Visual Inspection

Good condition

Operation

Good

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Good condition. Works as intended. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Fire/Smoke Damper 7

Inspection Date

September 16, 2020

Inspection Time

09:34

Inspection Team

KK/CM

Tag ID

FSD-7

Visual Inspection

Good condition

Operation

Good

Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.

Clean damper blades and linkages

Check tightness of mechanical connections (if applicable)

Test internal actuator heater and amp draw (if applicable)

Strength Test Steel Blades (if applicable)

Actuator Battery Replacement (if applicable)

Comments

Good condition. Works as intended. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Other

COFP-1

Carbon Monoxide Detection System Checksheet

Inspection Date

September 15, 2020

Inspection Time

10:47

Inspection Team

KK/CM

Tag ID

COFP1

Visual Inspection

Good condition.

Calibration

Yes, calibration done on site during inspection. See photos.

Signal Read PLC/SCADA

Yes.

Comments

Good condition. Calibration done during inspection. CS1.

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Carbon Monoxide Detection System Checksheet

Submitted By: IBR76596

COER-1

Inspection Date

September 15, 2020

Inspection Time

11:00

Inspection Team

KK/CM

Tag ID

COER1

Visual Inspection

Good condition.

Calibration

Yes, calibration done during inspection.

Signal Read PLC/SCADA

Yes.

Comments

Good condition. Calibration done during inspection. CS1

Attach Photo

Take Photo

Photo Comment

Take Photo

Photo Comment

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Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

MOTT MACDONALD

Miscellaneous Equipment Check

SCADA Panel
Miscellaneous Equipment Check

Inspection Date

September 18, 2020

Inspection Time

21:36

Inspection Team

KK/CM

Tag ID

TVS & SCADA

Equipment Description

Testing TVS & SCADA

Visual Inspection / Comments

Good condition. Could not turn all fans on high while fans are in maintenance mode.

Attach Photo

Take Photo

MOTT MACDONALD

Photo Comment

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

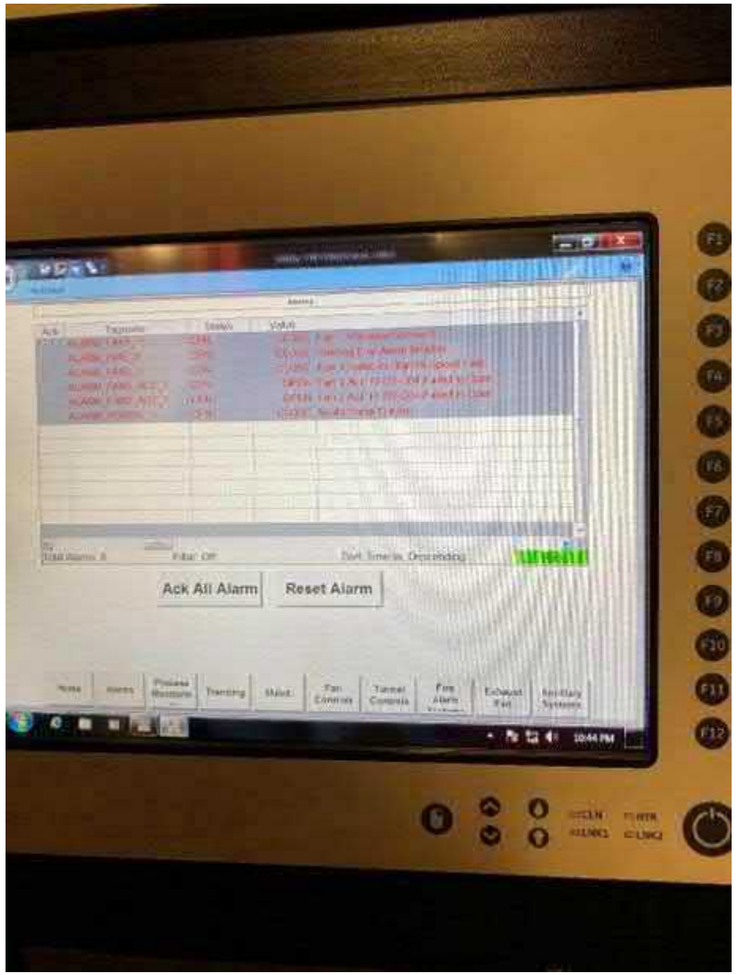


Photo Comment

TV-F1 Sound Proof Boards

Inspection Date

September 15, 2020

Inspection Time

12:48

Inspection Team

KK/CM

Tag ID

TV-F1 SOUND PROOF BOARDS

Equipment Description

Sound proof boards

Visual Inspection / Comments

Clean, good condition. CS!

Attach Photo

Take Photo

Photo Comment

Soundproof boards

Take Photo

Photo Comment

Take Photo

Photo Comment

Take Photo

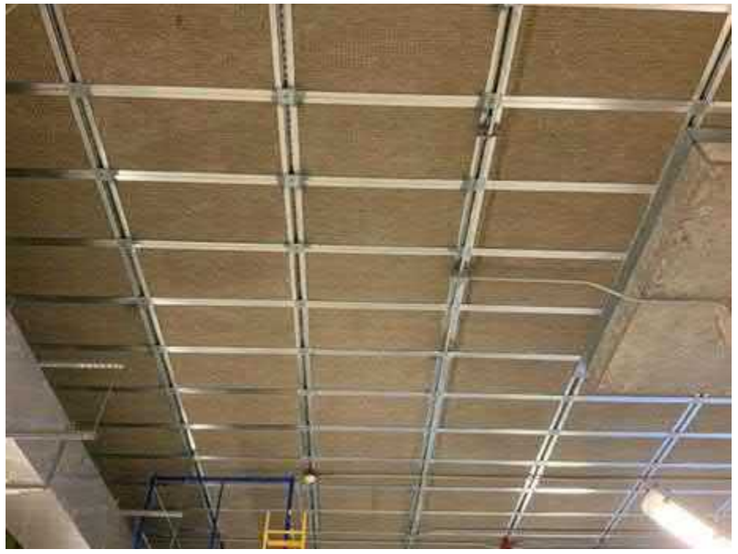


Photo Comment

B. Electrical Logs

B.1 Itemized Inspection Sheets with FHWA Equipment Condition Scoring, Observations, and Recommendations

2020 BASELINE FALL INSPECTION OF THE LYTLE TUNNEL
ELEMENT LEVEL RATING TABLE

Element Section	Element Type	Element Number	Element Name	Total Quantity	Unit	Quantities in Condition States				Inspection Findings		
						1	2	3	4	Routine	Priority	Critical
Electrical and Lighting Systems	Electrical Distribution	10500	Electrical Distribution System(s)	1	Each	1	-	-	-			
		10500.01	Switchgear	2	Each	2	-	-	-			
		10500.02	Switchboard(s)	2	Each	2	-	-	-			
		10500.03	Transformer(s)	2	Each	3	-	-	-			
		10500.04	Transfer Switches	NA	Each	1	-	-	-			
		10500.05	Panelboard(s)	2	Each	2	-	-	-			
		10500.06	Conduit & Raceway System(s)	1	Overall	1	-	-	-			
		10500.07	Soft Starter(s)	3	Each	3	-	-	-			
		10500.08	Disconnect(s)	1	Overall	1	-	-	-			
		10500.09	Control Panel(s)	1	Overall	1	-	-	-			
		10500.10	Enclosed Circuit Breaker(s)	1	Overall	1	-	-	-			
		10500.11	Pullbox/Junction box(s)	1	Overall	1	-	-	-			
	Emergency Distribution	10550	Emergency Distribution System(s)	1	Each	1	-	-	-			
	Tunnel Lighting	10600	Tunnel Lighting System(s)	3	Each	3	-	-	-			
		10600.01	Tunnel Lighting Control System(s)	2	Each	2	-	-	-			
		10601	Tunnel Lighting Fixture(s)	1,100	Each	80%	20%	-%	5%			
	Emergency Lighting	10620	Emergency Lighting System(s)	3	Each	1	-	-	-			
		10621	Emergency Lighting Fixture(s)	0	Each	NA	NA	NA	NA			

2020 BASELINE FALL INSPECTION OF THE LYTLE TUNNEL

ELEMENT LEVEL RATING TABLE

Element Section	Element Type	Element Number	Element Name	Total Quantity	Unit	Quantities in Condition States				Inspection Findings		
						1	2	3	4	Routine	Priority	Critical
Fire/Life Safety/Security Systems	Fire Detection	10650	Fire Detection System(s)	3	Each	1	-	-	-			
	Tunnel Linear Heat Detection	10650.01	Tunnel Linear Heat Detection	3	Each	3	-	-	-			
	Emergency Communications	10750	Emergency Communications System(s)	NA	Each	NA	NA	NA	NA			
	Operations and Security	10800	Tunnel Operations and Security System(s)	3	Each	3	-	-	-			
		10800.01	CCTV Camera(s)	12	Each	1	-	-	-			
		10800.02	CCTV Monitoring System(s)	1	Each	1	-	-	-			
Signs	Traffic Guidance	10850	Traffic Signs	2	Each	1	-	-	1			

Tunnel Element Quantities

Element Section	Element Number	Element Name	Unit	Tunnel	Start Sta.	End Sta.	Section Length (ft)	Area (ft^2) / Length (ft) / Row (Ea.) / No. (Ea.)	Total Area (ft^2) / Total Length (ft) / Total (Ea)
Electrical and Lighting Systems	10500	Electrical Distribution System(s)	Each	SB	125+40	133+57	817	No. 1	**1**
				SB Ramp	126+86	135+64.51	878.51		
				NB	127+10	135+74	864		
	10500.01	Switchgear	Each	SB				No. 2	**2**
				SB Ramp					
				NB					
	10500.02	Switchboard(s)	Each	SB				No. 2	**2**
				SB Ramp					
				NB					
	10500.03	Transformer(s)	Each	SB				No. 2	**2**
				SB Ramp					
				NB					
	10500.04	Transfer Switches	Each	SB				No. NA	**NA**
				SB Ramp					
				NB					
	10500.05	Panelboard(s)	Each	SB				No. 2	**2**
				SB Ramp					
				NB					
	10500.06	Conduit & Raceway System(s)	Overall	SB				No. 1	**1**
				SB Ramp					
				NB					
	10500.07	Soft Starter(s)	Each	SB				No. 3	**3**
				SB Ramp					
				NB					
	10500.08	Disconnect(s)	Overall	SB				No. 1	**1**
				SB Ramp					
				NB					
	10500.09	Control Panel(s)	Overall	SB				No. 1	**1**
				SB Ramp					
				NB					

Tunnel Element Quantities

Element Section	Element Number	Element Name	Unit	Tunnel	Start Sta.	End Sta.	Section Length (ft)	Area (ft^2) / Length (ft) / Row (Ea.) / No. (Ea.)	Total Area (ft^2) / Total Length (ft) / Total (Ea)
Electrical and Lighting Systems	10500.10	Enclosed Circuit Breaker(s)	Overall	SB				No. 1	**1**
				SB Ramp					
				NB					
	10500.11	Pullbox/Junction box(s)	Overall	SB				No. 1	**1**
				SB Ramp					
				NB					
	10550	Emergency Distribution System(s)	Each	SB				No. 1	**1**
				SB Ramp					
				NB					
	10600	Tunnel Lighting System(s)	Each	SB				No. 1	**3**
				SB Ramp				No. 1	
				NB				No. 1	
	10600	Tunnel Lighting Control System(s)	Each	SB	125+40	133+57	817	No. 1	**2**
				SB Ramp	126+86	135+64.51	878.51		
				NB	127+10	135+74	864	No. 1	
	10500	Disconnect(s)	Each	SB	125+40	133+57	817	No. 400	**1,100**
				SB Ramp	126+86	135+64.51	878.51	No. 300	
				NB	127+10	135+74	864	No. 400	
	10601	Tunnel Lighting Fixture(s)	Each	SB	125+40	133+57	817	No. 400	**1,100**
				SB Ramp	126+86	135+64.51	878.51	No. 300	
				NB	127+10	135+74	864	No. 400	
	10620	Emergency Lighting System(s)	Each	SB	125+40	133+57	817	No. 1	**3**
				SB Ramp	126+86	135+64.51	878.51	No. 1	
				NB	127+10	135+74	864	No. 1	
	10621	Emergency Lighting Fixture(s)	Each	SB	125+40	133+57	817	No. NA	**0**
				SB Ramp	126+86	135+64.51	878.51		
				NB	127+10	135+74	864		
				Building					

2018 BASELINE INSPECTION OF THE LYTLE TUNNEL

Tunnel Element Quantities

Element Section	Element Number	Element Name	Unit	Tunnel	Start Sta.	End Sta.	Section Length (ft)	Area (ft^2) / Length (ft) / Row (Ea.) / No. (Ea.)		Total Area (ft^2) / Total Length (ft) / Total (Ea)
Fire/Life Safety/Security Systems	10650	Fire Detection System(s)	Each	SB	125+40	133+57	817	No.	1	**4**
				SB Ramp	126+86	135+64.51	878.51	No.	1	
				NB	127+10	135+74	864	No.	1	
				Building				No.	1	
	10650.01	Tunnel Linear Heat Detection	Each	SB	125+40	133+57	817	No.	1	**3**
				SB Ramp	126+86	135+64.51	878.51	No.	1	
				NB	127+10	135+74	864	No.	1	
	10750	Emergency Communications System(s)	Each	SB				No.	NA	**NA**
				SB Ramp						
				NB						
	10800	Tunnel Operations and Security System(s)	Each	SB	125+40	133+57	817	No.	1	**3**
				SB Ramp	126+86	135+64.51	878.51	No.	1	
				NB	127+10	135+74	864	No.	1	
	10800.01	CCTV Camera(s)	Each	SB	133+51	125+46		No.	3	**12**
				SB Ramp	135+60	127+15		No.	3	
				NB	135+90	127+14		No.	3	
				Building				No.	3	
	10800.02	CCTV Monitoring System(s)	Each	SB				No.	1	**1**
				SB Ramp						
				NB						
				Building						
Signs	10850	Traffic Signs	Each	North Portal	134+86			No.	1	**2**
				South Portal	122+50			No.	1	

Element Number	Element Name	Quantity	Unit
10500	Electrical Distribution System(s)	1	Each

Inspection Results

The overall Electrical Distribution System is in good condition – no notable distress.

The majority of the electrical distribution equipment including panelboards, switchboards, disconnect switches, transformers and enclosed circuit breakers are in fair condition.

Observations:

- Junction boxes servicing conduits from ventilation building into the tunnels are not code compliant. This serves as a heavy risk for emergency systems. This warrants a critical finding.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
System Condition	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10500.01	Switchgear	2	Each

Inspection Results

The Switchgears are in good condition – no notable distress.

Observations:

- None

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Main 1 (left bus)	1			
Main 2 (right bus)	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	2	-	-	-

Element Number	Element Name	Quantity	Unit
10500.02	Switchboard(s)	2	Each

Inspection Results

The Switchboards are in good condition – no notable distress. This applies to both Main Bus 1 & Main Bus 2 and Bus-Tue. Main Bus 1 (left bus), Tie-Bus and Main Bus 2 (right bus) passed a maintenance inspection on 09/16/2020 as stated from a maintenance report.

Observations:

- None

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Main 1 (left bus)	1			
Main 2 (right bus)	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	2	-	-	-

Element Number	Element Name	Quantity	Unit
10500.03	Transformer(s)	2	Each

Inspection Results

The LV Transformers are in good condition – no notable distress.

Observations:

- None

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Component Housing or Enclosure	3			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	3	-	-	-

Element Number	Element Name	Quantity	Unit
10500.04	Transfer Switches	NA	Each

Inspection Results

The Transfer Switches are in good condition – no notable distress.

Observations:

- None

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Component Supports				
Corrosion				
Component Housing or Enclosure	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10500.05	Panelboard(s)	2	Each

Inspection Results

The Panelboards are in good condition – no notable distress. DP-E and DP-W passed a maintenance inspection on 09/16/2020 as stated from a maintenance report.

Observations:

- 'DP-W' - Minor scratches on the door.

- 'DP-E' - Panelboard Schedule need to be laminated.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
DP-E	1			
DP-W	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	2	-	-	-

Element Number	Element Name	Quantity	Unit
10500.06	Conduit & Raceway System(s)	1	Each

Inspection Results

The overall Conduit and Raceway System is in good condition – no notable distress.

Corrosion was apparent on majority of the conduit fittings and several conduit bodies throughout all three tunnels. Several locations where conduits entered conduit bodies showed signs of corrosion on the threads joining them

Observations:

- The conduit fittings branching off the “T” conduit body and the conduit fittings entering into each lighting fixtures displayed a consistent level of moderate corrosion. The contractor painted these fittings with paint meant to prevent corrosion as part of last inspection findings, however the contractor did not paint the entirety of all fittings, leaving corrosion on the rear of fittings exposed to the tunnel conditions.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Overall	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10500.07	Soft Starter(s)	3	Each

Inspection Results

The Stand-alone Motor Starters are in good condition. Ground cable connections are loose.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Vent fan #1	1			
Vent fan #2	1			
Vent fan #3	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	3	-	-	-

Element Number	Element Name	Quantity	Unit
10500.08	Disconnect(s)	1	Each

Inspection Results

The Disconnects are in good condition – no notable distress.

Observations:

- None

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Overall	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10500.09	Control Panel(s)	1	Each

Inspection Results

The Control Panels are in good condition – no notable distress.

Observations:

- Fan PLC Panel - Some covers were off. Uncapped cable. Some dust. No corrosioin or fault lights apparent.

- Networking central cabinet - Overall very dusty.

- SCADA OIT - No laminated instructions for emergency operations were found. Overall very dusty. Top HMI was observed to be non-operational. Bottom HMI had number of touch buttons not showing full function of the buttons.

- Networking North Portal Cabinet - Cabinet Lights non-operational on both sides of cabinet. Bird's nest inside the cabinet.

- Networking South Portal Cabinet - Cabinet Lights non-operational on both sides of cabinet. Some untidy wiring was noted, several wireway covers were missing.

- Networking North Portal Cabinet (existing) - Not Inspected

- Networking South Portal Cabinet (existing) - Not Inspected

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Overall	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10500.10	Enclosed Circuit Breaker(s)	1	Each

Inspection Results

All LV enclosed CB's are in good condition – no notable distress.

Observations:

- None

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Overall	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10500.11	Pullbox/Junction box(s)	1	Each

Inspection Results

All pullboxes and junction boxes are in good condition – no notable distress.

Observations:

- Junction boxes servicing conduits from ventilation building into the tunnels are not code compliant. This serves as a heavy risk for emergency systems. This warrants a critical finding.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Overall	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10550	Emergency Distribution System(s)	1	Each

Inspection Results

The overall Emergency Distribution System is in good condition – no notable distress.

The majority of the Emergency Distribution System equipment including panelboards, switchboards, disconnect switches, transformers and enclosed circuit breakers are in good condition.

Observations:

- 120VAC UPS Panelboard - Panelboard schedule missing. Handwritten incoming conduit and breaker labels.

- 480VAC UPS Panelboard - Panelboard schedule needs update. Handwritten incoming conduit and breaker labels.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
System Condition	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10600	Tunnel Lighting System(s)	3	Each

Inspection Results

The Panelboards are in good condition. No notable distress

Observations:

- Several panelboards contain labels next to breakers written on tape that are inconsistent with the panelboard schedules contained within the panel, whereas several panelboards miss the labels next to the breakers. In the Electrical Room, a number of conduits leading to the panels are hand-written labels on a tape, instead of a printed label. Some space covers are missing and are covered using tape. Minor scratches are present on the outside of the panel near the handles. A few screws holding the front panel are found to be missing.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Southbound	1			
Southbound Ramp	1			
Northbound	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	3	-	-	-

Element Number	Element Name	Quantity	Unit
10600.01	Tunnel Lighting Control System(s)	2	Each

Inspection Results

There are 2 lighting control systems, one for the Northbound tunnel and one controlling both the Southbound and Southbound ramp tunnels. No manual was readily available at what should happen at each stage.

Observations:

- None

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Southbound	1			
Southbound Ramp				
Northbound	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	2	-	-	-

Element Number	Element Name	Quantity	Unit
10601	Tunnel Lighting Fixture(s)	1,100	Each

Inspection Results

Observations:

- 9 Tunnel Lighting Fixtures within the Southbound Ramp tunnel and 19 within the Main Southbound tunnel are not operational. Multiple fixtures catergorized as a CS2 had slight corrosion initiating on the steel housing. Some of the fixtures had loose 90 degree fittings into the housing. This does not impact the operation of the system but was widely present and should be fixed. One fixture had a broken lens. Some Luminairs had loose face clippings, which wer re-engaged during inspection.

- 5 Tunnel Lighting Fixtures are severely damaged, possibly by a moving vehicle. These damaged fixtures were replaced next day following communication with ODOT.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Southbound	80	20		
Southbound Ramp	80	20		
Northbound	80	20		5

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	80	20	-	5

Element Number	Element Name	Quantity	Unit
10620	Emergency Lighting System(s)	3	Each

Inspection Results

The Emergency Lighting System in the building was not tested. Fixtures seemed to be operational.

The Emergency Lighting System in all 3 tunnels were not tested. Fixtures seemed to be fully operational as far as power distribution and circuiting.

Observations:

- One issue with malfunctioning lighting level value was encountered, which was corrected during the test.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Southbound	1			
Southbound Ramp	1			
Northbound	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10621	Emergency Lighting Fixture(s)	0	Each

Inspection Results

Emergency Lighting Fixtures in the building were inspected. The tunnel lighting fixtures are dual purpose and are not counted.

Observations:

- One issue with malfunctioning lighting level value was encountered, which was corrected during the test.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
General Condition				

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	NA	NA	NA	NA

Element Number	Element Name	Quantity	Units
10650	Fire Detection System(s)	3	Each

Inspection Results

The Fire Protection System is in good condition - no notable distress. The ventilation building includes manual pull stations, smoke detectors and heat detectors. The extent of this system was a visual inspection only.

Note:

- MM and Glenwood Electric performed a functional test of all of the initiating and annunciating devices on the Fire Alarm System with the exception of the Heat Detectors that were not accessible. All devices functioned normally, with the exception of one horn strobe in the plenum corridor that did not fire when one smoke detector was activated in the corridor. The same device fired when all other initiating devices were activated, indicating an issue within the Fire Alarm Panel program. This issue will have to be resolved when ODOT chooses another Fire Alarm contractor to service the fire alarm system. MM was not supplied any field logs or maintenance reports for the fire alarm control panel.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
System Condition	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Units
10650.01	Tunnel Linear Heat Detection	3	Each

Inspection Results

The LHD system is in good condition - no notable distress. This includes the linear heat detection fiber optic cables in the tunnels.

Observations:

- There are some non-terminated loose cables in the cabinets. MM did not receive any testing logs from ODOT for the Tunnel Linear Heat Detection System.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Southbound	1			
Southbound Ramp	1			
Northbound	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	3	-	-	-

Element Number	Element Name	Quantity	Units
10750	Emergency Communications System(s)	NA	Each

Inspection Results

The Emergency Communications System was not inspected as MM did not find any system in place.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
System Condition				

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	NA	NA	NA	NA

Element Number	Element Name	Quantity	Unit
10800	Tunnel Operations and Security System(s)	3	Each

Inspection Results

The Tunnel Operations and Security System is in overall good condition - no notable distress.

Observations:

- Tunnel Lighting Control Panels: One issue with malfunctioning lighting level value was encountered, which was corrected during the test.

- SCADA Node / OIT (Lighting Control Room): No laminated instructions for emergency operations were found. Overall very dusty. Top HMI was observed to be non-operational. Bottom HMI had number of touch buttons not showing full function of the buttons.

- Fan PLC Panel (Electrical Room): Wiring is untidy and not contained within the designated plastic raceway containment system; The terminations on a number of wires are of poor quality i.e. in some places there is up 3/8" exposed copper wire from the respective terminal which could also be viewed as a potential safety concern to any maintenance personnel working on the panel; There are temporary bridging wires between terminals which indicate incomplete wiring.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
Southbound	1			
Southbound Ramp	1			
Northbound	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	3	-	-	-

Element Number	Element Name	Quantity	Unit
10800.01	CCTV Camera(s)	12	Each

Inspection Results

All CCTV Cameras are in good condition.

Observations:

- The CCTV camera at the South Portal of Southbound Tunnel is facing the wall, and there are bushes grown around it which blocks the view.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
General Condition	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10800.02	CCTV Monitoring System(s)	1	Each

Inspection Results

The CCTV Systems are in good condition. Minor dirt observed.

Observations:

- None

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
General Condition	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	-

Element Number	Element Name	Quantity	Unit
10850	Traffic Signs	2	Each

Inspection Results

No inspection of anchorage was on overhead stuctures.

Observations:

- For the Northbound Tunnel, "Tunnel Closed Do Not Enter When Flashing" sign is non-operational and did not flash during testing which could result in a dangerous situation for the ODOT working crew. For the Southbound Tunnel, both the "Tunnel Closed Do Not Enter When Flashing" signs are operational as intended. This warranted a critical finding.

Condition State Defect Assessment

Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4
North Portal				1
South Portal	1			

Condition State Quantities

	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	-	-	1

B.2 Critical Findings Correspondence to ODOT

Jaymin Pancholi

From: Adrian Pasca
Sent: Thursday, October 15, 2020 10:19 AM
To: Jaymin Pancholi
Subject: FW: Lytle Tunnel Fall 2020 Inspections - 09.16.2020 - Critical findings - NB Tunnel

Importance: High

From: Michael Russell <Michael.Russell@mottmac.com>
Sent: Thursday, September 17, 2020 10:54 AM
To: Jeffery.Meyer@dot.ohio.gov; Brandon.Collett@dot.ohio.gov
Cc: Adrian Pasca <Adrian.Pasca@mottmac.com>
Subject: FW: Lytle Tunnel Fall 2020 Inspections - 09.16.2020 - Critical findings - NB Tunnel
Importance: High

Jeff & Brandon,

There are two critical items we need to report.

To clarify the responsibility for correcting the first item, the disconnect is a comms problem between the human-machine interface (HMI) cabinet in the control room and the signage itself. Resolving that is not part of the electrical inspection & maintenance, so would require specialized services which Glenwood is not poised to provide.

With respect to the damaged tunnel lights, I believe ODOT has forces on hand planned to address such issues.

Please advise.

Mike

Michael A. Russell, PE, SE, MLSE
Principal Project Manager

D +1 216 535 3653 C +1 216 213 0662
michael.russell@mottmac.com

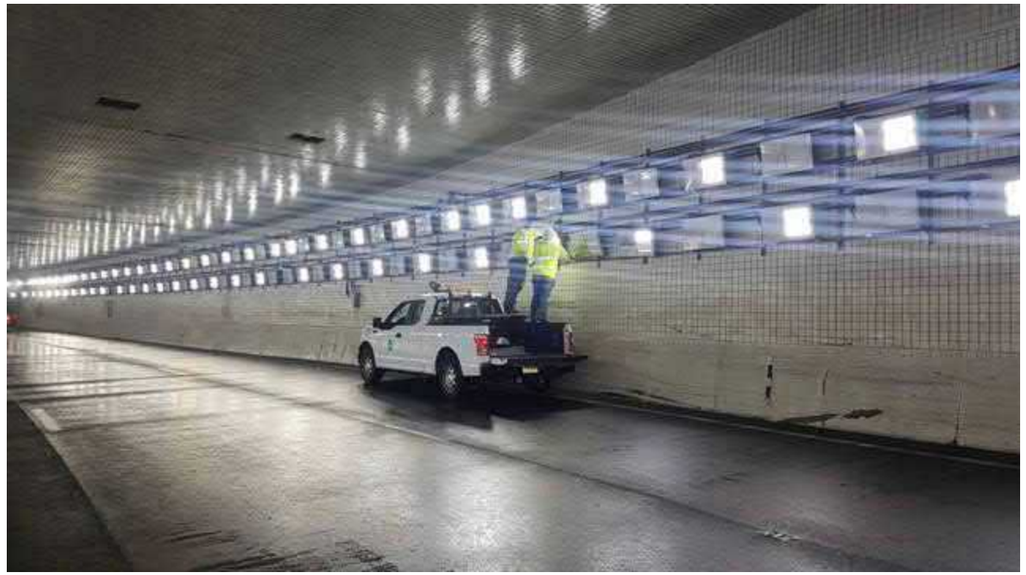
From: Adrian Pasca <Adrian.Pasca@mottmac.com>
Sent: Thursday, September 17, 2020 10:11 AM
To: Michael Russell <Michael.Russell@mottmac.com>
Subject: Lytle Tunnel Fall 2020 Inspections - 09.16.2020 - Critical findings - NB Tunnel
Importance: High

Good Morning Mike,

We did a pre-cursor inspection of the NB tunnel during last night's cleaning shift and found the following critical items that need to be reported to ODOT:

1. The NB "Tunnel Closed" signage located at the South Portal does not operate when in the "ON" position back at the HMI cabinet in the control room. Glenwood tracked the potential problem to the HMI cabinet where some optic fiber ports do not seem to be communicating with comms interfaces at the portal. He said he would contact ODOT as this would be part of their scope to investigate and resolve.

2. North Bound Tunnel Lighting Fixtures #15-19 on the bottom row of the east wall at the south portal have been struck and are badly damaged with one fixture nonoperational and one half – operational. Two fixtures (#16 & #18)) are being held by only 1 bolt, two fixtures (#17 & #19) are being held by only 2 bolts and #15 is being held by 3 bolts. There is no telling when the remaining bolts on #16-#19 are going to fail due to the impact they received after which the only thing that would prevent them from falling onto the roadway are the flexible side entry conduits. I flagged this to an ODOT gentleman on duty (Zack Gillespie I believe) and they addressed the issue temporarily with multiple heavy duty cable ties per loose bracket. It is strongly recommended that ODOT replace these damaged units ASAP, I see they have spares ready to go in the control room – the ODOT gentleman did mention that he thinks these are scheduled for replacement but wasn't 100% sure.



Let me know if you have any questions.

Thanks,
Adrian

Kind Regards,

Adrian S Pasca
MSc. Eng, BSc. (Hons), NCTI
Senior Project Manager | Team Leader
Electrical / Power | Instrumentation | Controls | Automation

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B.3 Inspection Photos

Inspection Report

Project Name:	Lytle Tunnel Fall 2020 Inspection	Inspection Date:	09/15/2020 10:00 AM
Project Number:			
Project Description:			
Client Name:	ODOT		
Inspection by:	Adrian Pasca/Jaymin D. Pancholi		
Location:	Cincinnati, OH		

Site Contacts	Company, Title, Phone Number

Lighting Control Section

Is the lighting control system operating as intended?		Are there any light fixtures not working while Full-On mode is on?	

General Lighting Section

Lighting Information		
Type of lighting control: Description:	Emergency exterior door lighting type: Description:	Description of roof top lighting present:

Are battery wall pack lighting fixtures on the same circuit as adjacent normal lighting fixtures?		Is the emergency lighting power source unswitched?		Does the test button on the battery backup lighting indicate proper operation?		Are the exit signs provided with battery backup power?	

Malfunctioning Exit Sign Description:	Exit Sign Image:

Low Voltage Section

Panel Information		Panel Ratings	
Name or Tag:	DP-W	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	36220488-006	**Amperage:**	600
Panel Location Description:	Lighting Control Room	**Phase:**	34
		Wire:	
Additional information: Scratch on door.			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	Yes	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	NW-DN	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880110001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the schedule			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	Yes	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

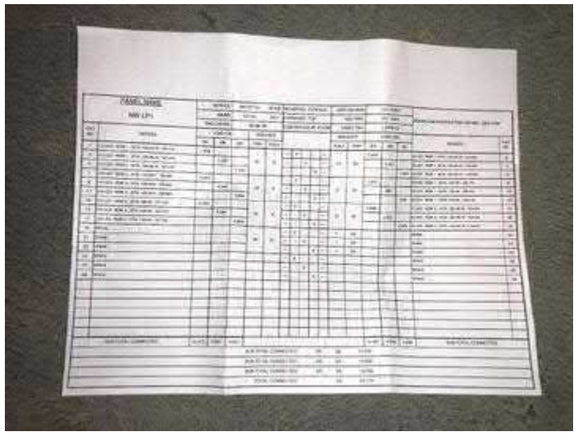
Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	NW-LP1	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880120001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule Panel achedule inconsistent with breaker arrangement			

Low Voltage Panel Images:



Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

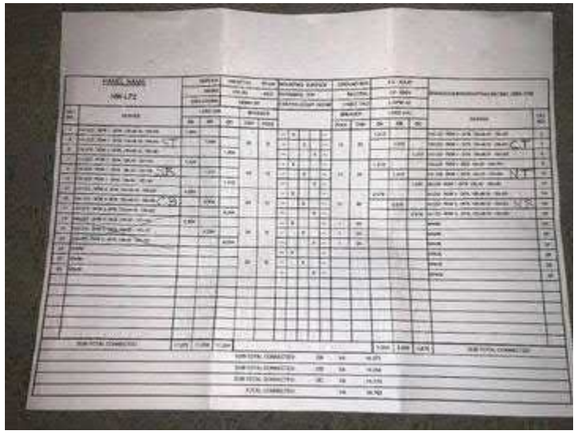
Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	NW-LP2	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880100001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule Panel schedule inconsistent with breaker arrangement Handwritten changes on panel schedule			

Low Voltage Panel Images:



Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	RW-DN	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880240001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule Handwritten changes on panel schedule			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	Yes	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	RW-LP1	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880250001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule Panel schedule missing			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	No

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	RW-LP2	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880260001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule Panel schedule inconsistent with breaker arrangements			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	Yes	NA

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	SW-DN	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880170001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	Yes	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

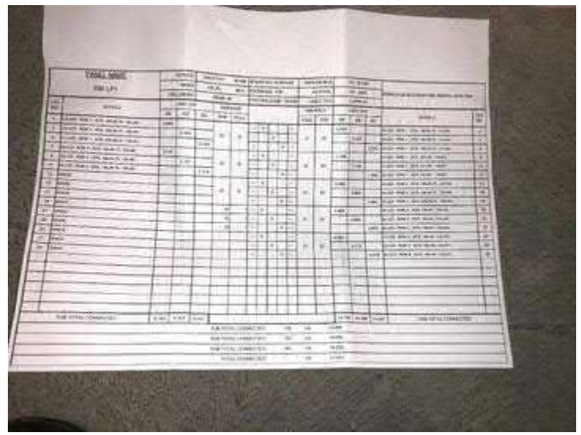
Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	SW-LP1	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880180001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule Panel schedule inconsistent with breaker arrangement			

Low Voltage Panel Images:



Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	SW-LP2	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880190001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	NA	NA	Yes	NA

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	LP	**Voltage:**	208Y/120V
Serial Number and/or Manufacturing Date:	12362204880320001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Handwritten Labels Scratches on door Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement Handwritten panel schedule Missing Screws			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	NA	No	No

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	LP-2	**Voltage:**	208Y/120V
Serial Number and/or Manufacturing Date:	12362204880340001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: No Printed Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement Handwritten panel schedule Missing Screws			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	NA	No	No

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	LP-DP	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880280001	**Amperage:**	400
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Handwritten Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement Handwritten panel schedule Missing Screws			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	No

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	LP-PP	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880290001	**Amperage:**	400
Panel Location Description:	Electrical Room	**Phase:**	3
		Wire:	4
Additional information:			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

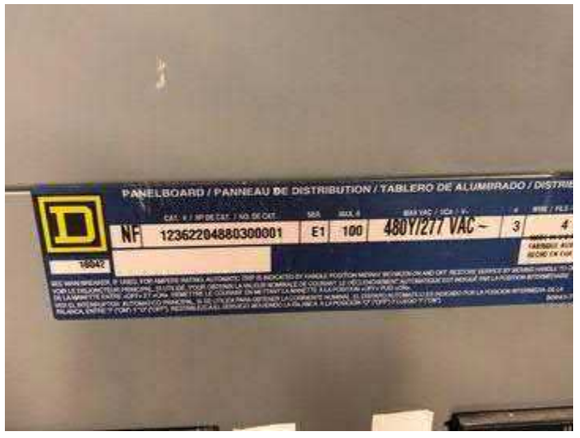
Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	480VAC-UPS	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880300001	**Amperage:**	100
Panel Location Description:	Electrical Room	**Phase:**	3
		Wire:	4
Additional information: Handwritten Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement Missing Screws Handwritten Incoming Conduit Labels			

Low Voltage Panel Images:



Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	No

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	120VAC-UPS	**Voltage:**	208Y/120V
Serial Number and/or Manufacturing Date:	12362204880310001	**Amperage:**	100
Panel Location Description:	Electrical Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement Handwritten panel schedule Missing Screws Handwritten Incoming Conduit Labels			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes		No

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	LP-1	**Voltage:**	208Y/120V
Serial Number and/or Manufacturing Date:	12362204880330001	**Amperage:**	225
Panel Location Description:	Electrical Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement Handwritten panel schedule Missing Screws Handwritten Incoming Conduit Labels			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	No

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	DP-E	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	36220488-005	**Amperage:**	600
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Transparent pocket cant show full panel schedule			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	NA	Yes	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	NE-DN	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880070001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches on Door Transparent pocket cant show full panel schedule			

Low Voltage Panel Images:


PANELBOARD / PANNEAU DE DISTRIBUTION / TABLERO DE ALUMBRADO / DISTRIBUCION
NF
480Y/277 VAC ~
3
4
DANGER
PELIGRO
DANGER
WARNING
ADVERTENCIA
AVERTISSEMENT
SEISMIC QUALIFIED
CLASIFICACIÓN SÍSMICA
CLASSIFICATION SISMIQUE

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	NE-LP1	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880080001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No		Yes	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	RE-DN	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880210001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule			

Low Voltage Panel Images:


PANELBOARD / TABLERO DE ALUMBRADO / DISTRIBUCION
NF
480Y/277 VAC ~
DANGER
PELIGRO
DANGER
WARNING
ADVERTENCIA
AVERTISSEMENT
SEISMIC QUALIFIED
CLASIFICACIÓN SÍSMICA
CLASIFICATION
ANTISISMIQUE

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	No	Yes	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

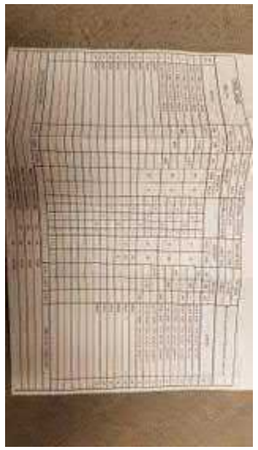
Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	RE-LP1	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880220001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement			

Low Voltage Panel Images:



Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	NE-LP2	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880090001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	RE-LP2	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880230001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	Yes	No

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

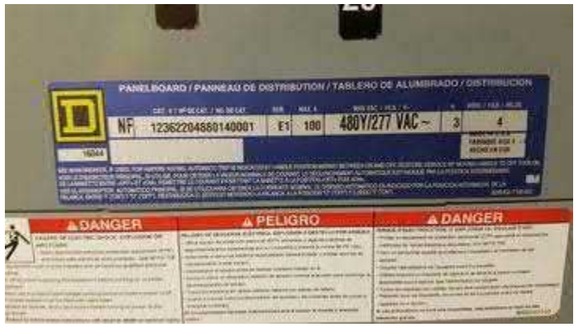
Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	SE-DN	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880140001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule No18 is installed as a spare CB, panel shcedule shows space			

Low Voltage Panel Images:



Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	SE-LP1	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880150001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement - 26,28,30 shown as off position			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	SE-LP2	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880160001	**Amperage:**	100
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement - 20-30 shown in off position			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	No

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	N-EM	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880130001	**Amperage:**	100
Panel Location Description:	Missing Labels Scratches Transparent pocket cant show full panel schedule	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	Yes	No

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	R-EM	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880270001	**Amperage:**	60
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement -13 & 15 shown as aspace			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	Yes	No	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Panel Information		Panel Ratings	
Name or Tag:	S-EM	**Voltage:**	480Y/277V
Serial Number and/or Manufacturing Date:	12362204880200001	**Amperage:**	60
Panel Location Description:	Lighting Control Room	**Phase:**	3
		Wire:	4
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement Blank Plates covered with Tape			

Low Voltage Panel Images:

Does the surge protector function properly?	Is a surge protector provided for the panel?	Are there any tripped circuit breakers?	Are all spare breaker blanking plates intact and installed?	Are the panel schedules correct and consistent with the circuit breaker arrangement?	Is the front panel secure with no missing screws?
	No	No	No	No	Yes

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1601	**Impedance:**	5.2
Panel Location Description:	Electrical Room	**Rated Power:**	75kVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible Damage			

Panel Image and Nameplate

Transformer Information			
Type:	D-Y	**Primary Voltage:**	480
Manufacturing Name:	Square D	**Secondary Voltage:**	208Y/120V
Manufacturing Year:	1602	**Impedance:**	4.9
Panel Location Description:	No Visible Damage	**Rated Power:**	15KVA
Primary Switch or Breaker?	No	**Rated Frequency:**	60
Additional Information: No visible damage			

Panel Image and Nameplate

Standalone Equipment Information	
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	
Additional information:	

Standalone Equipment Image

Inspection Report

Project Name:	Lytle Tunnel Fall 2020 Inspection	Inspection Date:	09/17/2020 11:00 PM
Project Number:			
Project Description:			
Client Name:	ODOT		
Inspection by:	Adrian Pasca/Jaymin D. Pancholi		
Location:	Cincinnati, OH		

Site Contacts	Company, Title, Phone Number

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 1A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	Top right springnut misaligned. Conduit corrosion

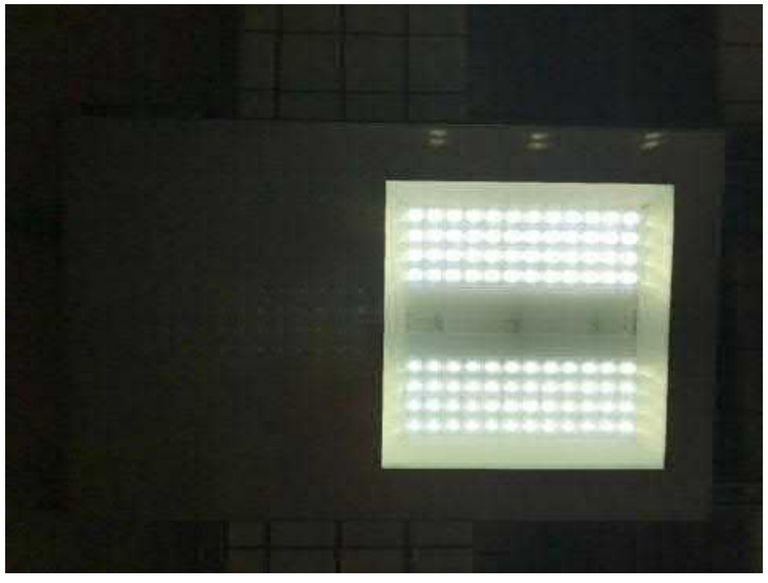
Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 1B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	Corrision on fixture. T corroded

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	Yes	Yes	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 6A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T corrosion Side conduit L corrision Fixture corrosion Bottom right housing clip misaligned

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	Yes
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 5B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T corrosion Side entry L corrision Fixture corrision

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

No	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 11A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Corrision Side Conduit L corrision Fixture corrision

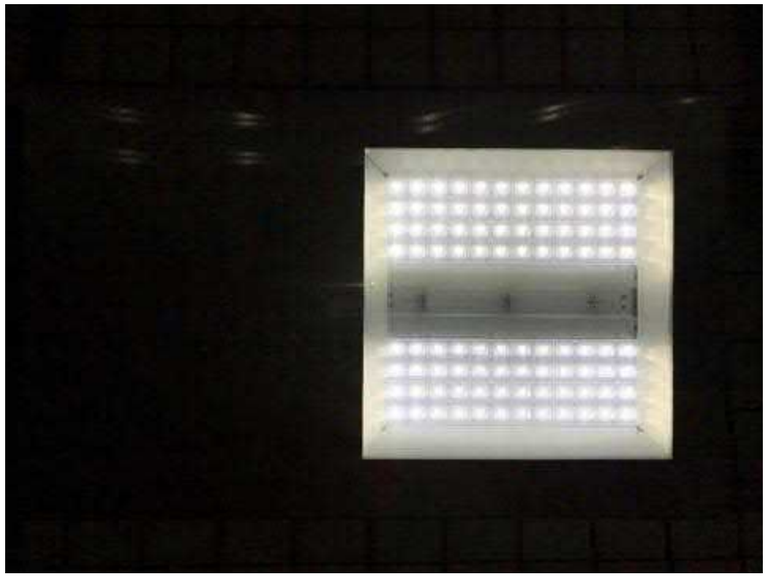
Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 11B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Corrision Side Conduit L Corrision Fixture Corrision

Are there any signs of corrosion evident on the tunnel lighting system raceways?
Are the side entry conduits into the fixture tightly secured?
Are there any signs of corrosion on the fixture?
Is there any damage to the component housing or enclosure?
Is the light fixture secure to the mounting channels?
Long channel springnut misaligned?
Long channel springnut cracked?
Trans channel springnut misaligned?
Trans channel springnut cracked?
Trans channel wireway clip?
Housing clip disengaged?
Housing clip missing?
Lens clip disengaged?
Lens clip broken?
Lens cover cracked?
Wireway ears broken?
Luminaire functioning?

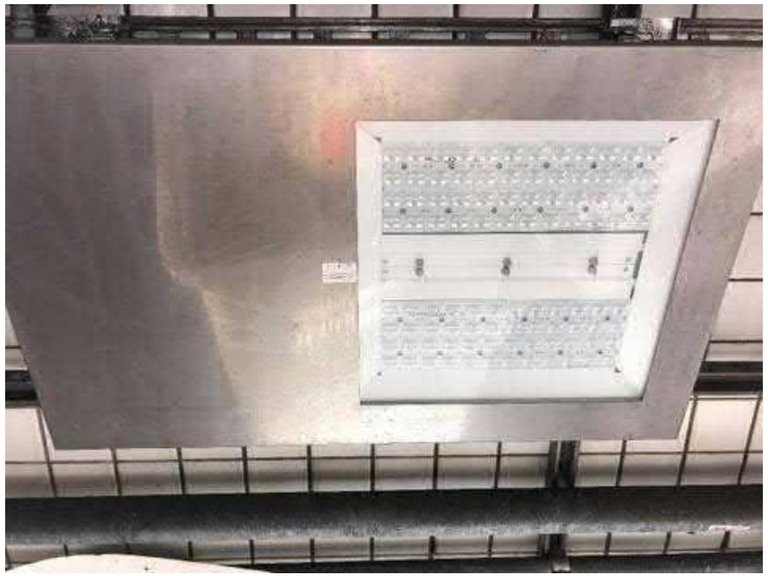
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	Yes	Yes	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 16A
Tunnel Direction and Side:	NB - West Wallt Corrisio
Additional Information:	T Corrision Side Entry L Corrision Fixture Corrision Top right misaligned Bottom Left Misaligned

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 16B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Corrision Side Entry L Corrision Fixture Corrision Bottom Right Misaligned

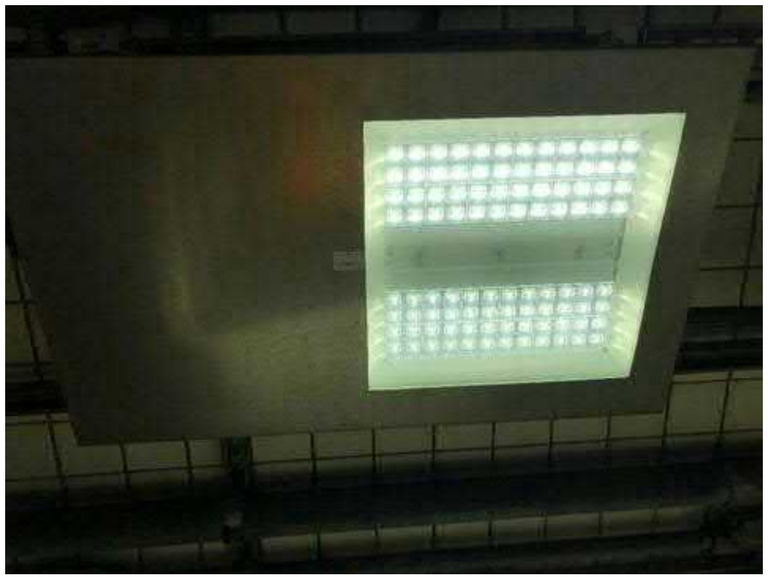
Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 21A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Corrision Side Entry L Corrision Fixture Corrision Bottom Left Misaligned

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	Yes	Yes	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 21B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Corrision Side Entry L Corrision Fixture Corrision Top Right Corrision

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes		No	Yes	No	Yes	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 26A
Tunnel Direction and Side:	NB - West Wall -l
Additional Information:	Right clip disanged Top Right Musaligned

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	Yes
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 26B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Side Entry Bottom Left misaligned

Are there any signs of corrosion evident on the tunnel lighting system raceways?
Are the side entry conduits into the fixture tightly secured?
Are there any signs of corrosion on the fixture?
Is there any damage to the component housing or enclosure?
Is the light fixture secure to the mounting channels?
Long channel springnut misaligned?
Long channel springnut cracked?
Trans channel springnut misaligned?
Trans channel springnut cracked?
Trans channel wireway clip?
Housing clip disengaged?
Housing clip missing?
Lens clip disengaged?
Lens clip broken?
Lens cover cracked?
Wireway ears broken?
Luminaire functioning?

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes		No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 31A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	Top 6 inch Tee T Side entry Top Right Bottom Right

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	Yes	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	Yes	Yes	Yes


45

Tunnel Lighting Section

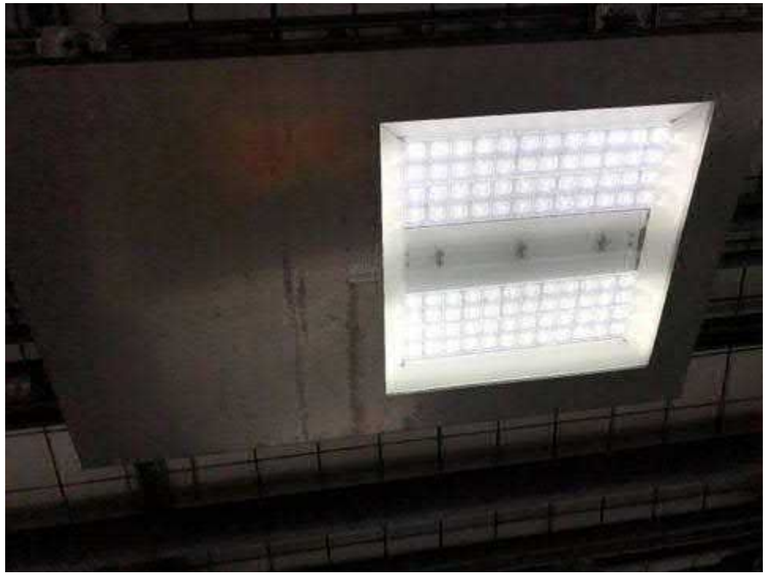
Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 31B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	Bottom 6 inch t Sude entry l Fuxture Bottom Left

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 40A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Sude Fuxture

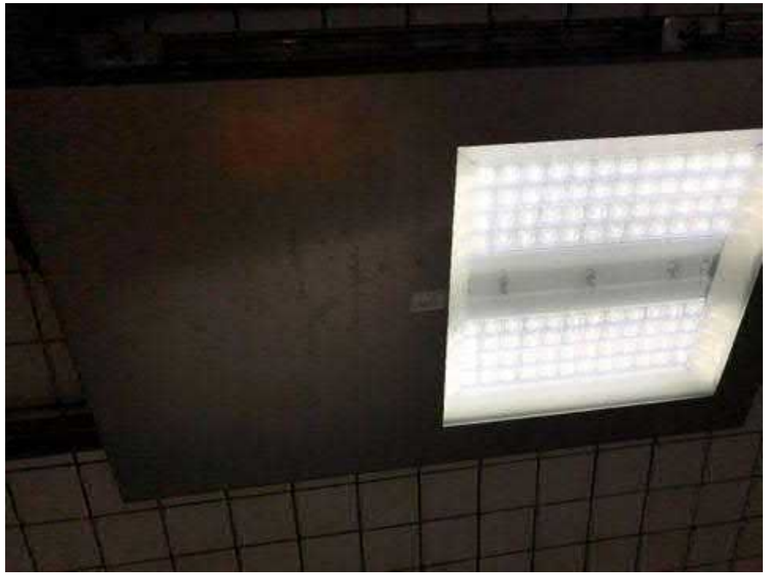
Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 40B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	Side T Fuxture

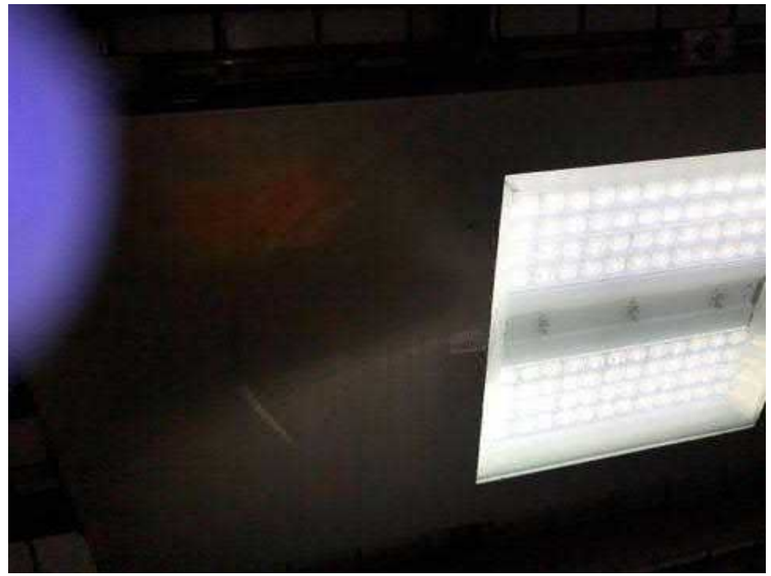
Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	Yes	Yes	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 49A
Tunnel Direction and Side:	NB - West Wall -
Additional Information:	T Side entry Bittom sude wntry loose

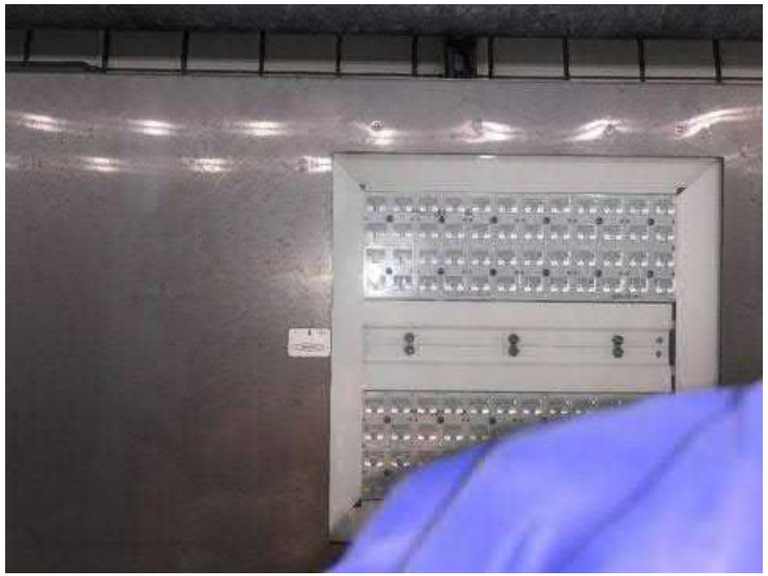
Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 49B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Side entry Top sode emtry looose Fixture Top left

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	No	Yes




APPLETON

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 58A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	Side entry Fixture

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 58B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Side emtry Fixture

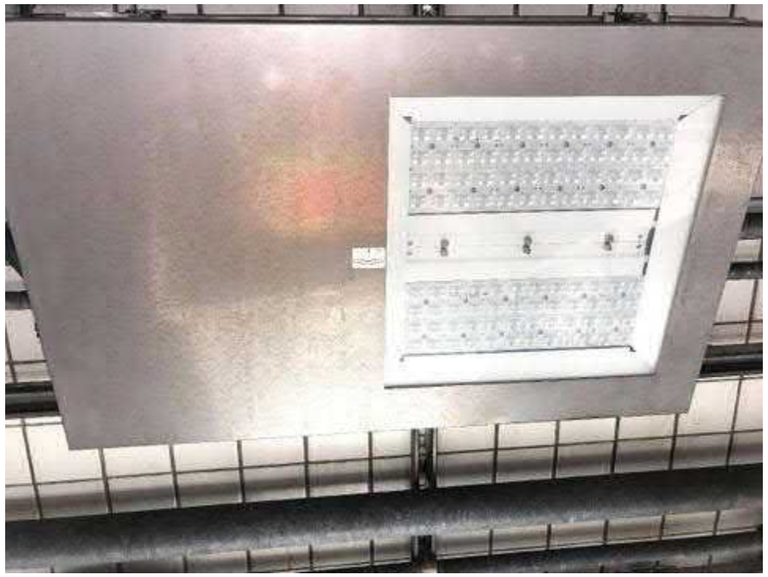
Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	Yes	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 67A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Side Entry Fixture Top side entry loose

Luminaire functioning?	**Wireway ears broken?**	**Lens cover cracked?**	**Lens clip broken?**	**Lens clip disengaged?**	**Housing clip missing?**	**Housing clip disengaged?**	**Trans channel wireway clip?**	**Trans channel springnut cracked?**	**Trans channel springnut misaligned?**	**Long channel springnut cracked?**	**Long channel springnut misaligned?**	**Is the light fixture secure to the mounting channels?**	**Is there any damage to the component housing or enclosure?**	**Are there any signs of corrosion on the fixture?**	**Are the side entry conduits into the fixture tightly secured?**	**Are there any signs of corrosion evident on the tunnel lighting system raceways?**

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	Yes	No	Yes



Tunnel Lighting Section

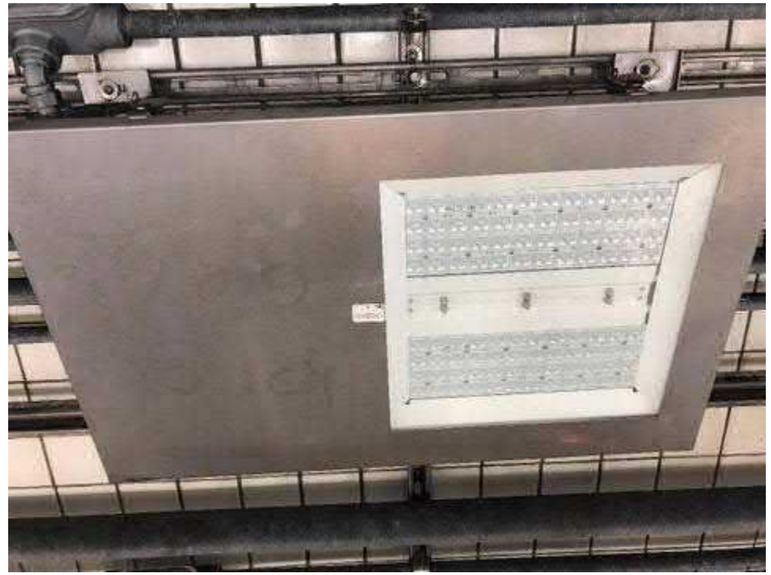
Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 67B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	Sode entry All misaligned Top side entry Fuxture

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway cars broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 76A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Side entry Both side entry loose Fuxture Both Bottom misaligned

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	No
Luminaire functioning?	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 76B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Side entry l Fuxture

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	
Lens cover cracked?	Yes
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 85A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Side entry L Fixture

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	Yes	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 85B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Side entry L Fixture Top right misaligned Bottom right

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway cars broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 94A
Tunnel Direction and Side:	NB - West Wall T
Additional Information:	T Side entry L Fixture

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	Yes	Yes	Yes

Tunnel Lighting Section

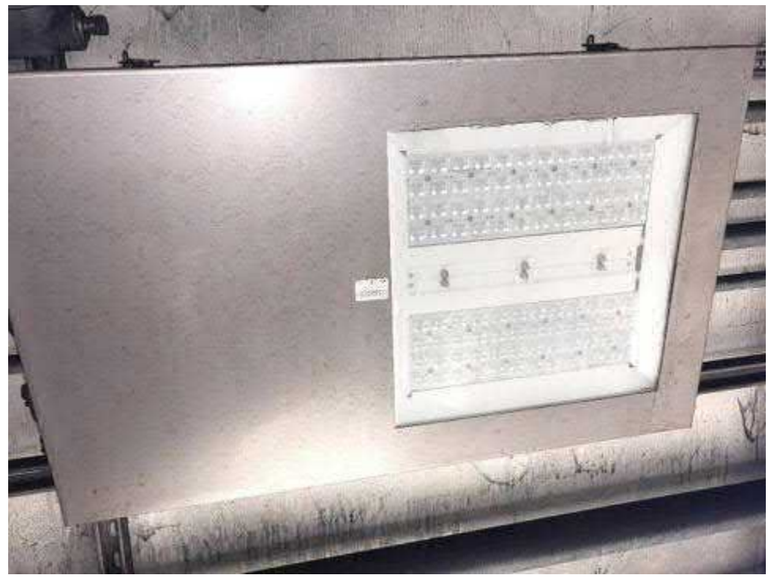
Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 94B
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Sude Entry L Fixture

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 103A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Fixture

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	Yes
Luminaire functioning?	No

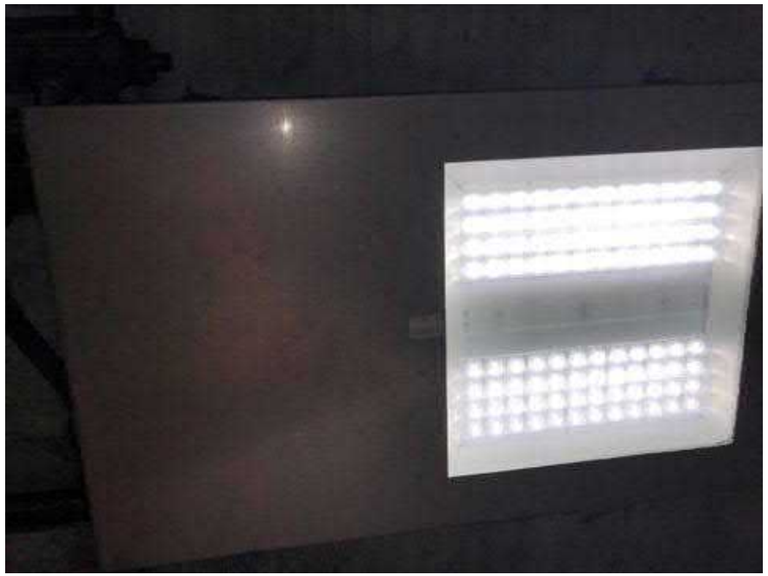


Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 103B
Tunnel Direction and Side:	NB - West Wall - 85A
Additional Information:	T Side entry Conduits Fuxture

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

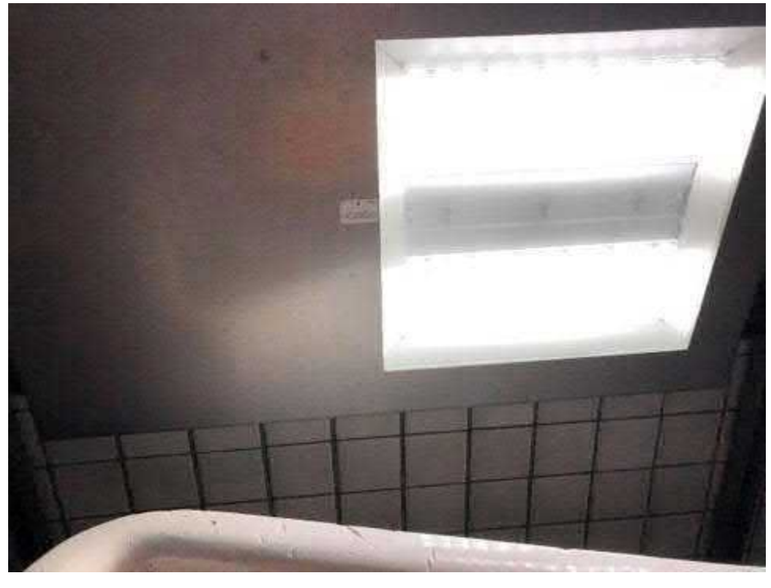
Yes	No	No	No	No	No	No	No	No	No	No	No	Yes		Yes		Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 112
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Side Entry L Fuxture

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	Yes
Luminaire functioning?	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - West Wall - 121
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Side Entry L Fixture Bottom Right

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 7B
Tunnel Direction and Side:	NB - East Wall
Additional Information:	T Side Entry L Fixture

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	Yes
Lens cover cracked?	No
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 16 B
Tunnel Direction and Side:	NB - East Wall
Additional Information:	T Sude Entry L Top Left

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No		No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 25B
Tunnel Direction and Side:	NB - East Wall
Additional Information:	T Side Entry L Fixture

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 34B
Tunnel Direction and Side:	NB - East Wall - 7B
Additional Information:	Side Entry L Fixture Both Top misaligned

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	Yes	Yes	No	Yes	No	No	Yes	No	Yes	Yes	No

Tunnel Lighting Section

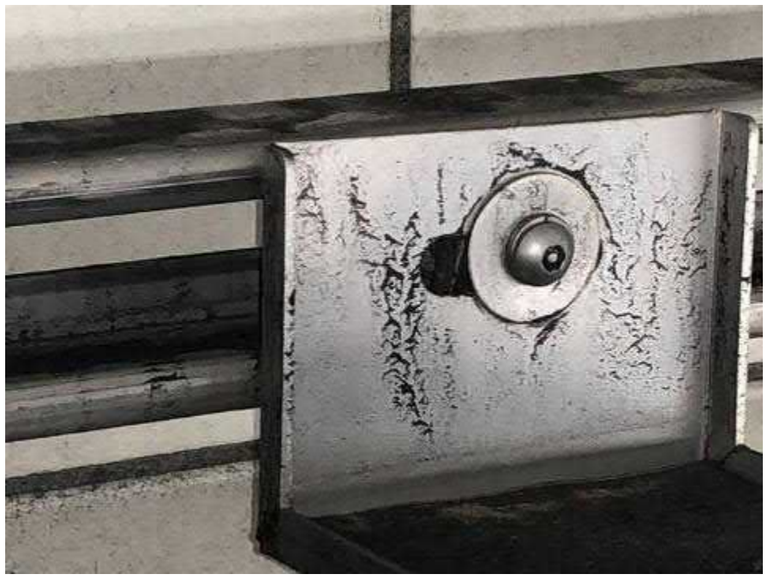
Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 42B
Tunnel Direction and Side:	NB - East Wall
Additional Information:	T Fixture Top Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	Yes
Lens cover cracked?	No
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 51B
Tunnel Direction and Side:	NB - East Wall
Additional Information:	T Both Top misaligned Fuxture

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	Yes	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 60B
Tunnel Direction and Side:	NB - East Wall
Additional Information:	T

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 69B
Tunnel Direction and Side:	NB - East Wall
Additional Information:	T Side Entry L

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 78B
Tunnel Direction and Side:	NB - East Wall
Additional Information:	T

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 87B
Tunnel Direction and Side:	NB - East Wall
Additional Information:	T Side entry L Side Entry top loose

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	NB - East Wall - 96B
Tunnel Direction and Side:	NB - East Wall
Additional Information:	T Side Entey L

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	
Tunnel Direction and Side:	
Additional Information:	T Side entry L Side entry loose

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	Yes
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Lighting Control Section

Are there any light fixtures not working while Full-On mode is on?		Is the lighting control system operating as intended?	

General Lighting Section

Lighting Information		
Type of lighting control: **Description:**	**Emergency exterior door lighting type:** **Description:**	**Description of roof top lighting present:**

Are battery wall pack lighting fixtures on the same circuit as adjacent normal lighting fixtures?		Is the emergency lighting power source unswitched?		Does the test button on the battery backup lighting indicate proper operation?		Are the exit signs provided with battery backup power?	

Malfunctioning Exit Sign Description:	Exit Sign Image:

Low Voltage Section

Inspection Report

Project Name:	Lytle Tunnel Fall 2020 Inspection	Inspection Date:	09/18/2020 11:00 PM
Project Number:			
Project Description:			
Client Name:	ODOT		
Inspection by:	Adrian Pasca/Jaymin D. Pancholi		
Location:	Cincinnati, OH		

Site Contacts	Company, Title, Phone Number

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 1A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	Side Entey Conduit Corrision

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	No

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 1A
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L Top Right Side Entry Bottom loose

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 6A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 6A
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L Top Right Misaligned Bottom Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 11A
Tunnel Direction and Side:	SBR - West Wall -
Additional Information:	T Side Entry L

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 11B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Top Left Bottom Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 11A
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L Side Entry Loose Bottom Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway cars broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 11B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L Top Left Both Bottom

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 18A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	Side Entry L Bottom Side Entry Loose Top Right Bottom Right

Are there any signs of corrosion evident on the tunnel lighting system raceways?	**Are the side entry conduits into the fixture tightly secured?**	**Are there any signs of corrosion on the fixture?**	**Is there any damage to the component housing or enclosure?**	**Is the light fixture secure to the mounting channels?**	**Long channel springnut misaligned?**	**Long channel springnut cracked?**	**Trans channel springnut misaligned?**	**Trans channel springnut cracked?**	**Trans channel wireway clip?**	**Housing clip disengaged?**	**Housing clip missing?**	**Lens clip disengaged?**	**Lens clip broken?**	**Lens cover cracked?**	**Wireway ears broken?**	**Luminaire functioning?**

Yes	No	No		No	No	No	Yes	No	Yes	No	No	No	No	No	No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 18B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Side Entry L

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 18A
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No		No	No	No	No	Yes	No	No	No		Yes	No	Yes	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 18B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L Top Left

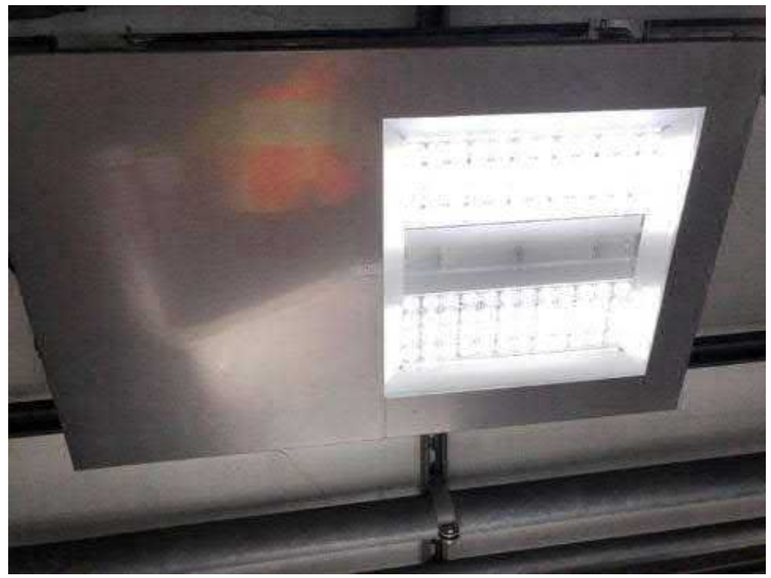
Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

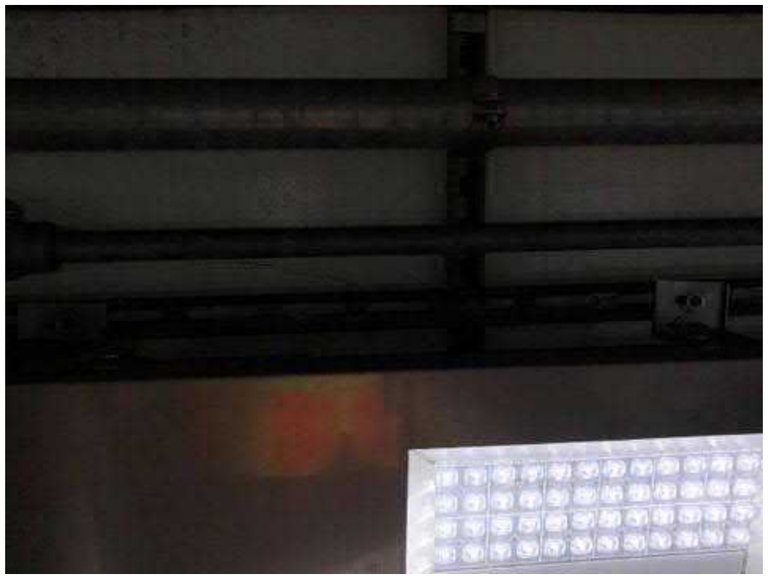
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 22A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Top Left Top Fixture Hooks MIsaligned

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	No
Luminaire functioning?	Yes





Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 22B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Side Entry L Both Top

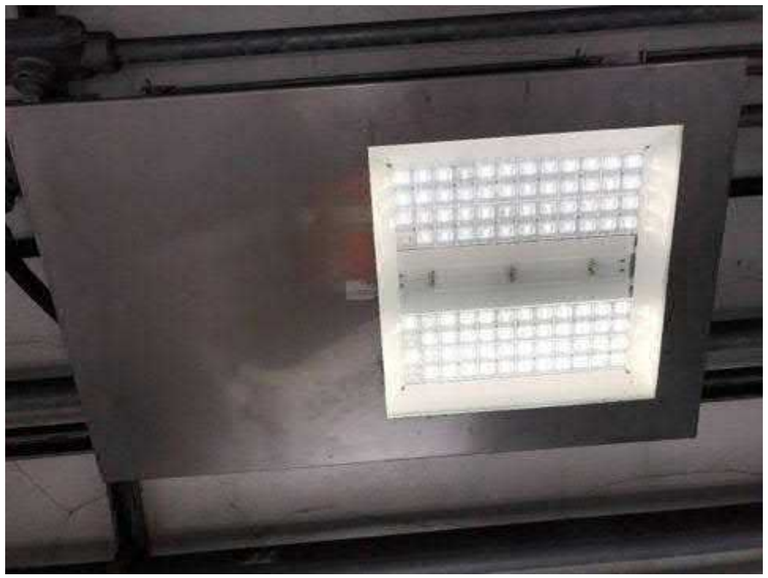
Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 22A
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L

Are there any signs of corrosion evident on the tunnel lighting system raceways?
Are the side entry conduits into the fixture tightly secured?
Are there any signs of corrosion on the fixture?
Is there any damage to the component housing or enclosure?
Is the light fixture secure to the mounting channels?
Long channel springnut misaligned?
Long channel springnut cracked?
Trans channel springnut misaligned?
Trans channel springnut cracked?
Trans channel wireway clip?
Housing clip disengaged?
Housing clip missing?
Lens clip disengaged?
Lens clip broken?
Lens cover cracked?
Wireway ears broken?
Luminaire functioning?

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 22B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L

Are there any signs of corrosion evident on the tunnel lighting system raceways?	No
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 28A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Both Side Entry Loose Bith Bottom

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 28B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Both Side Entry Loose Both Top Misaligned Both Bottom Hooks Misaligned

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	Yes
Lens cover cracked?	Yes
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

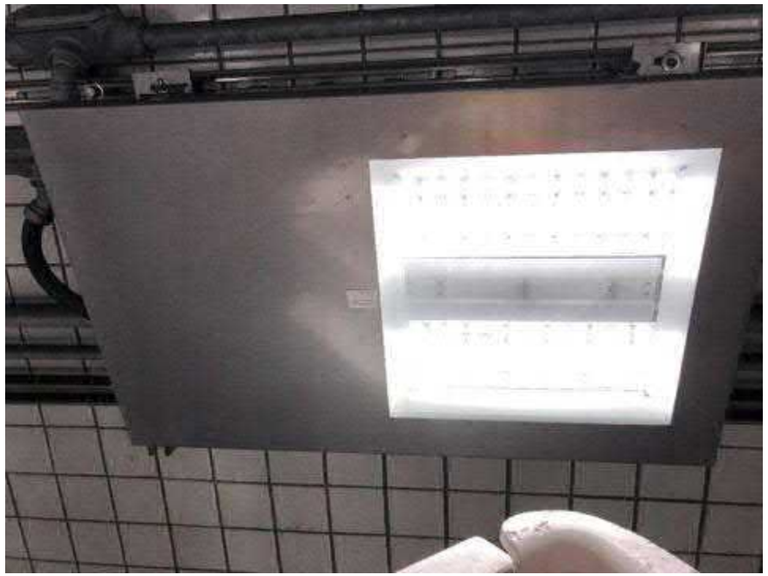
Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 28A
Tunnel Direction and Side:	SBR - East Wall - 28A
Additional Information:	Side Entry L Top Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 28B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L Side Entry Loose Top Right Bottom Right

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 33A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	Side Entry Both Bottom

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 33B
Tunnel Direction and Side:	SBR - West Wall t
Additional Information:	T Side Entry L Left lens Clip Top Left

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No	No	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 33A
Tunnel Direction and Side:	SBR - East Wall - 33A
Additional Information:	T Side Entry L Bottom Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 33B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L Top Right

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	Yes	

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 38A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Both Side Entry Loose

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 38B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Both Top

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 38A
Tunnel Direction and Side:	SBR - East Wall - 38AT
Additional Information:	Side Entry L Side Entry Loose Top Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	Yes
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 38B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry Loose Both Bottom

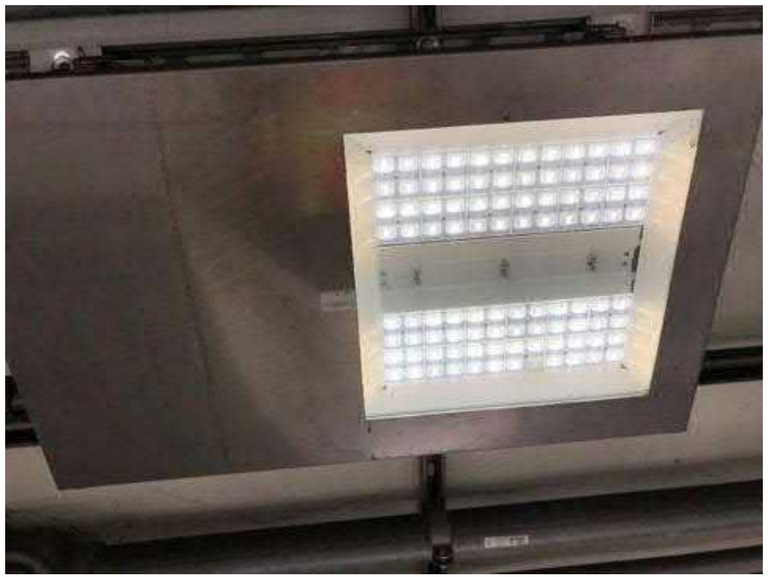
Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway cars broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 43A
Tunnel Direction and Side:	SBR - West Wall -
Additional Information:	Side Entry L Bottom Right

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 43B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Side Entry Loose

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 43A
Tunnel Direction and Side:	SBR - East Wall - 43A
Additional Information:	T Side Entry L Top Left Bottom Right

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	NA	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 43B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 48A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 48B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	Top Right Bottom Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	No
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 48A
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Fixture Corrision

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 48B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L

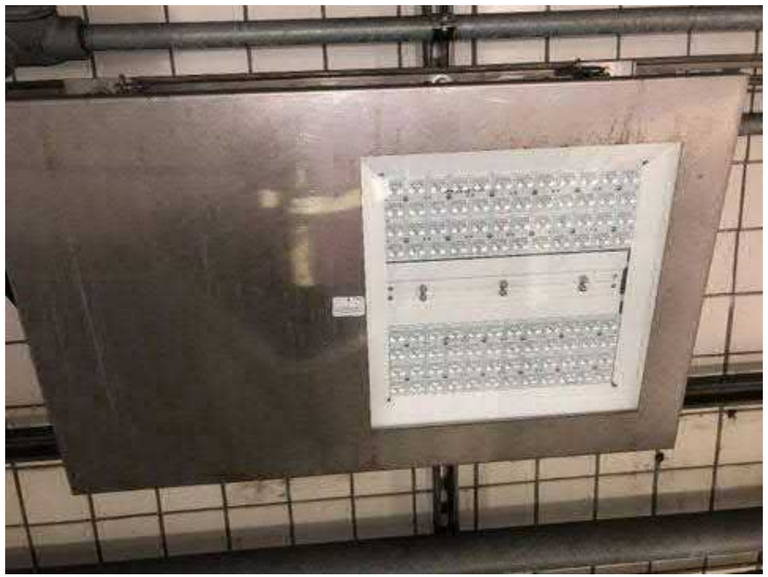
Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No		Yes	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 53A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Side Entry Loose

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	No		No	Yes	No	No	No	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 53B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	Side Entry Loose Both Top

Are there any signs of corrosion evident on the tunnel lighting system raceways?	**Are the side entry conduits into the fixture tightly secured?**	**Are there any signs of corrosion on the fixture?**	**Is there any damage to the component housing or enclosure?**	**Is the light fixture secure to the mounting channels?**	**Long channel springnut misaligned?**	**Long channel springnut cracked?**	**Trans channel springnut misaligned?**	**Trans channel springnut cracked?**	**Trans channel wireway clip?**	**Housing clip disengaged?**	**Housing clip missing?**	**Lens clip disengaged?**	**Lens clip broken?**	**Lens cover cracked?**	**Wireway ears broken?**	**Luminaire functioning?**

Yes	No	No	No		No	No	No	No	Yes	No	No	Yes	No	No	No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 53A
Tunnel Direction and Side:	SBR - East Wall - 53A
Additional Information:	T Side Entry L

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 53B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 59A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	Side Conduit L Bottom Right

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 59B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Bottom Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 59A
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	Top Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 59B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L Bottom Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 64A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 64B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Side Entry L

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 64A
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L

Are there any signs of corrosion evident on the tunnel lighting system raceways?
Are the side entry conduits into the fixture tightly secured?
Are there any signs of corrosion on the fixture?
Is there any damage to the component housing or enclosure?
Is the light fixture secure to the mounting channels?
Long channel springnut misaligned?
Long channel springnut cracked?
Trans channel springnut misaligned?
Trans channel springnut cracked?
Trans channel wireway clip?
Housing clip disengaged?
Housing clip missing?
Lens clip disengaged?
Lens clip broken?
Lens cover cracked?
Wireway ears broken?
Luminaire functioning?

Yes	No	No	No	No	No	No	Yes	No	No	No		Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 64B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L Top Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 69A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Side Entry Loose Top Left Bottom Left

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No		Yes	Yes

Tunnel Lighting Section

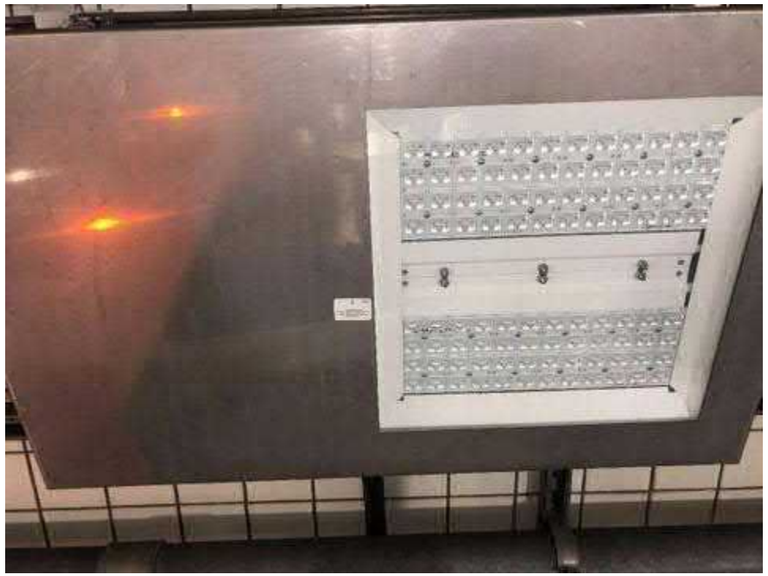
Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 69B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Side Entry L Side Entry Loose Top Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 69A
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	Side Emtry L Both Top

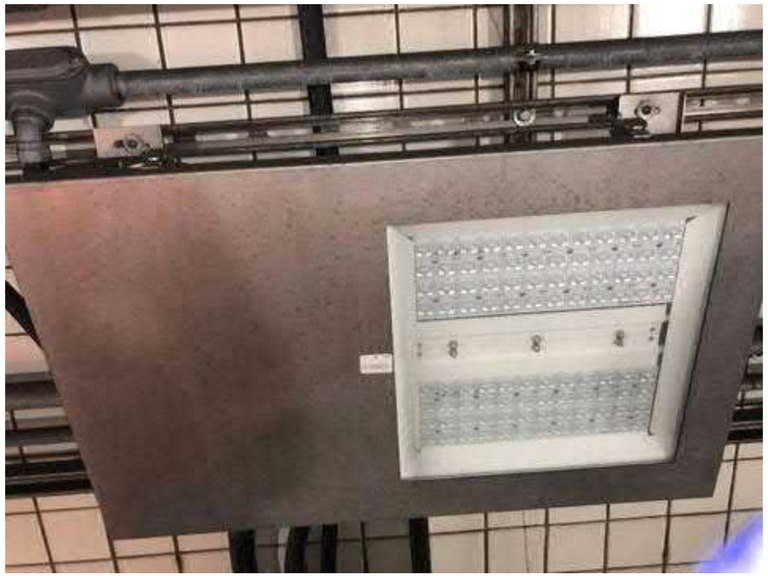
Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No		Yes	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 69B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry L Top Left

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 82A
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Side Entry

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - West Wall - 82B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	T Side Entry L

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	No

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 82A
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	Side Entry L Bottom Left

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SBR - East Wall - 82B
Tunnel Direction and Side:	SBR - East Wall
Additional Information:	T Side Entry Bottom Right

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes		No	Yes	Yes

Lighting Control Section

Is the lighting control system operating as intended?		**Are there any light fixtures not working while Full-On mode is on?**	

General Lighting Section

Lighting Information		
Type of lighting control: **Description:**	**Emergency exterior door lighting type:** **Description:**	**Description of roof top lighting present:**

Are battery wall pack lighting fixtures on the same circuit as adjacent normal lighting fixtures?		**Is the emergency lighting power source unswitched?**		**Does the test button on the battery backup lighting indicate proper operation?**		**Are the exit signs provided with battery backup power?**	

Malfunctioning Exit Sign Description:	**Exit Sign Image:**

Low Voltage Section

Inspection Report

Project Name:	Lytle Tunnel Fall 2020 Inspection	Inspection Date:	09/19/2020 11:00 PM
Project Number:			
Project Description:			
Client Name:	ODOT		
Inspection by:	Adrian Pasca/Jaymin D. Pancholi		
Location:	Cincinnati, OH		

Site Contacts	Company, Title, Phone Number

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 1A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 6A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T Top Right Fixture Hooks Misaligned

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	Yes	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 6B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	SEL T

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway cars broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 11A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE Loose Both Bottom

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes


27

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 11B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 16A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP LEFT BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 16B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL BOTTOM RIGHT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 21A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 21B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL BOTTOM RIGHT SCREW HEAD RUSTING

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 26A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP LEFT BOTTOM LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No		Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

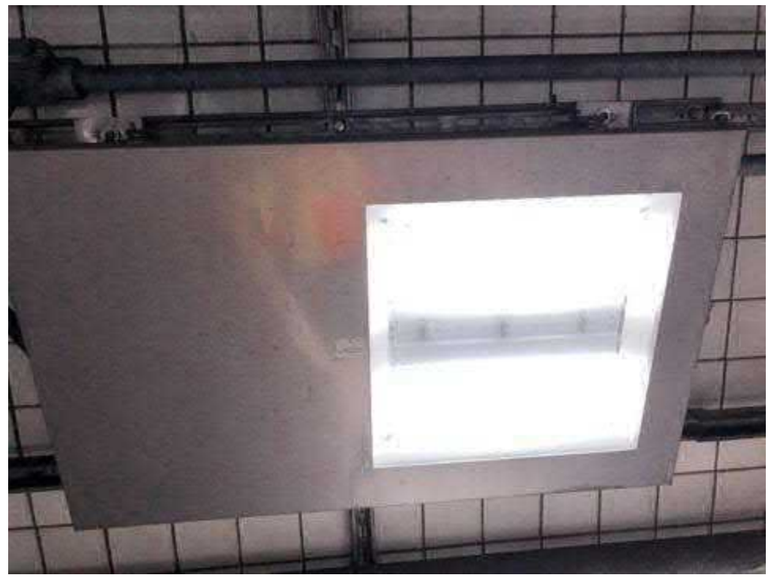
Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 26B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL BOTH TOP

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No		No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 31A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL RIGHT CLIP

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway cars broken?	Yes
Luminaire functioning?	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 31B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE TOP LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes		No	No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 36A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE TOP RIGHT

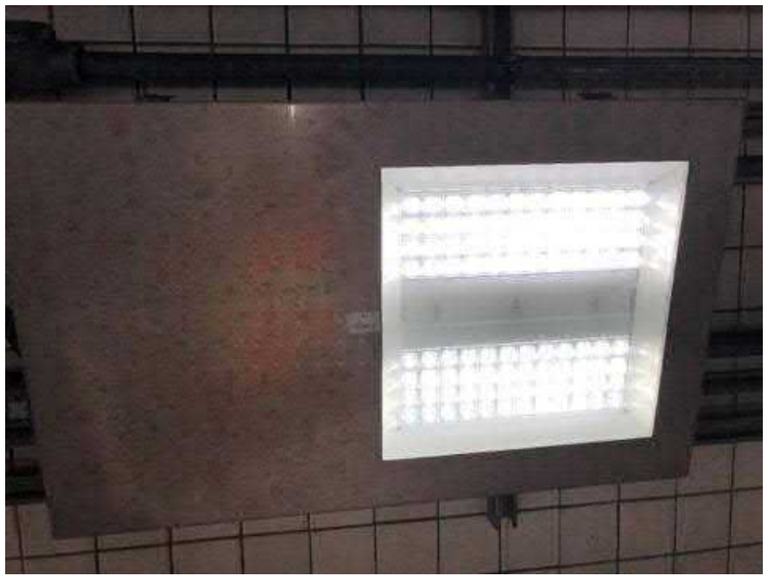
Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway cars broken?	Yes
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 36B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 41A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway cars broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 41B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE TOP LEFT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
No	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes

Tunnel Lighting Section

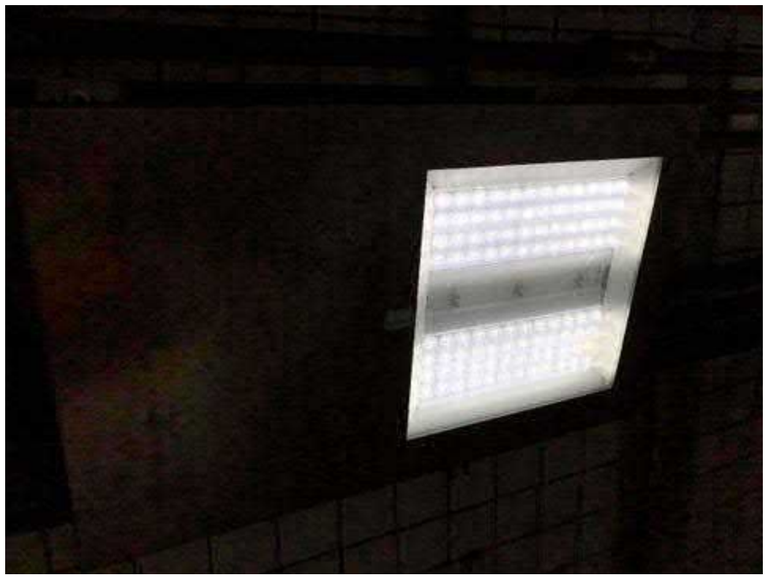
Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 46A
Tunnel Direction and Side:	SB - West Wall - 46A
Additional Information:	T SEL SE LOOSE

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 46B
Tunnel Direction and Side:	
Additional Information:	T SEL SE LOOSE BOTTOM LEFT

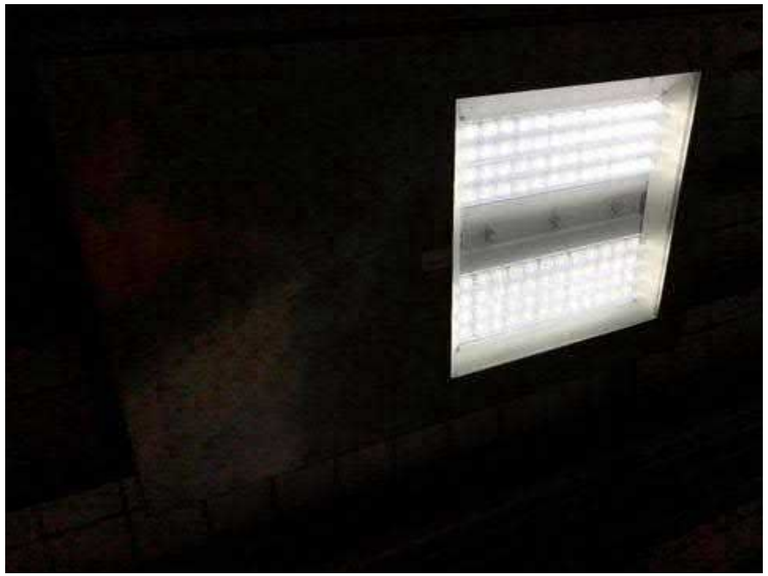
Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 51A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP LEFT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 51B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP LEFT BOTTOM LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 56A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP LEFT BOTH BOTTOM

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

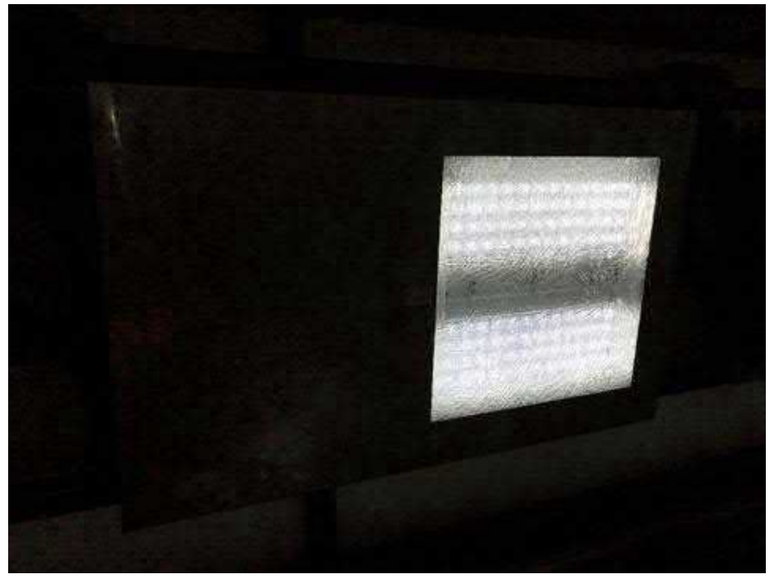
Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 56B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP LEFT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 61A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE TOP RIGHT BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 61B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 66A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE TOP RIGHT BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes		No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 66B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP RIGHT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 71A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	Yes
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 71B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL BOTTOM LEFT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 76A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE BOTTOM LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 76B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE

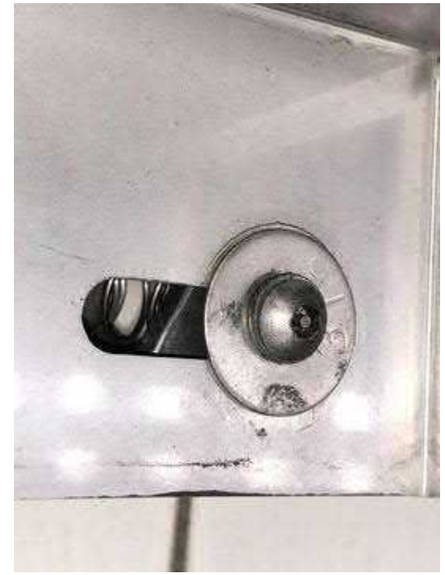
Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	NA	No	No	No	No	No	No	Yes	No	No	No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 85A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE TOP RIGHT BOTH BOTTOM

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 85B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 94A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL SE LOOSE BOTTOM LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway cars broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 94B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP RIGHT BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 103A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T TOP RIGHT BOTTOM RIGHT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No		Yes	No	Yes	No	No	No	No	No	Yes	No

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 103B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL BOTTOM LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 112A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 112B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 121A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 121B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP RIGHT BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 130A
Tunnel Direction and Side:	
Additional Information:	T SEL TOP LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - West Wall - 130B
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL TOP LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	Yes
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 144A
Tunnel Direction and Side:	SB - East WallTT
Additional Information:	T

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 144B
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion on the fixture?	Is there any damage to the component housing or enclosure?	Is the light fixture secure to the mounting channels?	Long channel springnut misaligned?	Long channel springnut cracked?	Trans channel springnut misaligned?	Trans channel springnut cracked?	Trans channel wireway clip?	Housing clip disengaged?	Housing clip missing?	Lens clip disengaged?	Lens clip broken?	Lens cover cracked?	Wireway ears broken?	Luminaire functioning?
Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 135A
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 135B
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 126A
Tunnel Direction and Side:	SB - East Wall - 18A
Additional Information:	T SEL BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 126B
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL BADLY TOP LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 117A
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL BOTTOM RIGHT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 117B
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

No	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 108A
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL FUXTURE TOP RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	Yes
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 108B
Tunnel Direction and Side:	SB - East Wal
Additional Information:	T SEL

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 99A
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL SE LOOSE BOTTOM LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 99B
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 90A
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL SE LOOSE BOTTOM LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 90B
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL BOTTOM RIGHT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	No

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 81A
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 81B
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL SE LOOSE TOP RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	**Are the side entry conduits into the fixture tightly secured?**	**Are there any signs of corrosion on the fixture?**	**Is there any damage to the component housing or enclosure?**	**Is the light fixture secure to the mounting channels?**	**Long channel springnut misaligned?**	**Long channel springnut cracked?**	**Trans channel springnut misaligned?**	**Trans channel springnut cracked?**	**Trans channel wireway clip?**	**Housing clip disengaged?**	**Housing clip missing?**	**Lens clip disengaged?**	**Lens clip broken?**	**Lens cover cracked?**	**Wireway ears broken?**	**Luminaire functioning?**
Yes	Yes	Yes	No	Yes	No	No	No	No	No	No	No	No	No	No	No	Yes

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB - East Wall - 72A
Tunnel Direction and Side:	SB - East Wall
Additional Information:	T SEL SE LOOSE TOP LEFT CLIP DISENGAGED

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	No
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 63A
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL BOTTOM LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	Yes
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 63B
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL BOTTOM RIGHT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 54A
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL TOP RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 54B
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 45A
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL TOP RIGHT BOTTOM LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 45B
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL BOTTOM LEFT

Luminaire functioning?	Wireway ears broken?	Lens cover cracked?	Lens clip broken?	Lens clip disengaged?	Housing clip missing?	Housing clip disengaged?	Trans channel wireway clip?	Trans channel springnut cracked?	Trans channel springnut misaligned?	Long channel springnut cracked?	Long channel springnut misaligned?	Is the light fixture secure to the mounting channels?	Is there any damage to the component housing or enclosure?	Are there any signs of corrosion on the fixture?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion evident on the tunnel lighting system raceways?
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 36A
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 36B
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL SE LOOSE

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 27A
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	No
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

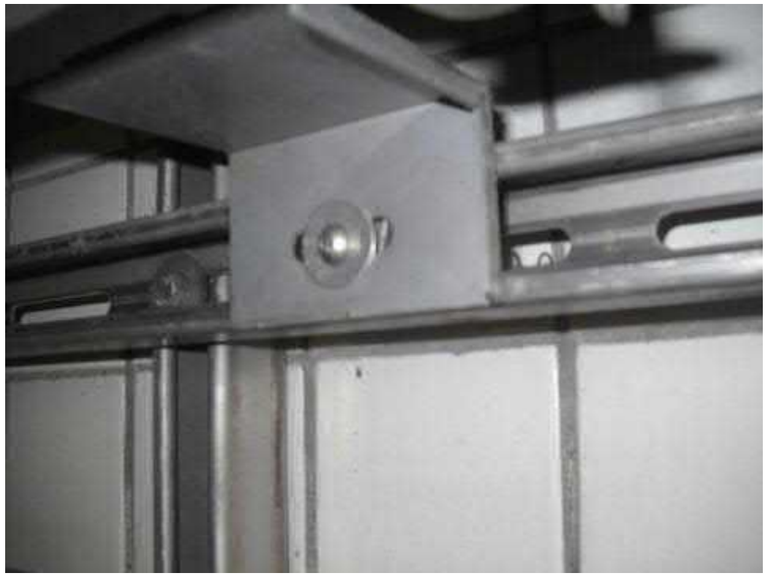
Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 27B
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL BOTTOM LEFT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 18A
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL BOTH BOTTOM

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	No
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	No
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	Yes
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	Yes
Luminaire functioning?	Yes



Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 18B
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL BOTTOM RIGHT

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL – 9A
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL TOP RIGHT BOTH BOTTOM

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Yes
Are the side entry conduits into the fixture tightly secured?	Yes
Are there any signs of corrosion on the fixture?	No
Is there any damage to the component housing or enclosure?	No
Is the light fixture secure to the mounting channels?	Yes
Long channel springnut misaligned?	No
Long channel springnut cracked?	No
Trans channel springnut misaligned?	Yes
Trans channel springnut cracked?	No
Trans channel wireway clip?	Yes
Housing clip disengaged?	No
Housing clip missing?	No
Lens clip disengaged?	No
Lens clip broken?	No
Lens cover cracked?	No
Wireway ears broken?	No
Luminaire functioning?	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL – 9B
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	T SEL

Are there any signs of corrosion evident on the tunnel lighting system raceways?	
Are the side entry conduits into the fixture tightly secured?	
Are there any signs of corrosion on the fixture?	
Is there any damage to the component housing or enclosure?	
Is the light fixture secure to the mounting channels?	
Long channel springnut misaligned?	
Long channel springnut cracked?	
Trans channel springnut misaligned?	
Trans channel springnut cracked?	
Trans channel wireway clip?	
Housing clip disengaged?	
Housing clip missing?	
Lens clip disengaged?	
Lens clip broken?	
Lens cover cracked?	
Wireway ears broken?	
Luminaire functioning?	

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

Tunnel Lighting Section

Lighting Fixture Information	
Luminaire Tag or Number:	SB EAST WALL - 1A
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	SEL

Are there any signs of corrosion evident on the tunnel lighting system raceways?	Are the side entry conduits into the fixture tightly secured?	Are there any signs of corrosion on the fixture?	Is there any damage to the component housing or enclosure?	Is the light fixture secure to the mounting channels?	Long channel springnut misaligned?	Long channel springnut cracked?	Trans channel springnut misaligned?	Trans channel springnut cracked?	Trans channel wireway clip?	Housing clip disengaged?	Housing clip missing?	Lens clip disengaged?	Lens clip broken?	Lens cover cracked?	Wireway ears broken?	Luminaire functioning?

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes

B.4 Testing Data Received from Contractor

Electrical Certification Incorporated
*P.O. Box 53368 * Cincinnati, Ohio 45253*
*Office: (513) 662-7500 * Fax: (513) 662-6610*
*Cell: (513) 604-2431 * Email: ECInc@cinci.rr.com*

Report Summary 2020-758
Date: September 22, 2020

Heath Weddle
Glenwood Electric

Re: Lytle Tunnel – Cincinnati, Ohio
Subject: 2020 Preventative Maintenance

Mr. Weddle,

Electrical Certification Incorporated performed inspection, calibration, cleaning, and testing on the switchgears and associated equipment. Inspection, calibration, and testing was performed in accordance with specified requirements, the Manufacturers maintenance guide lines, and NFPA 70B Electrical Equipment Maintenance where applicable. The following is a list of the equipment included in this project.

Equipment List

(4) 480V Circuit Breakers – Main 1 (Left Bus)
(4) 480V Circuit Breakers – Main 2 (Right Bus)

All inspection and test data was recorded on numbered test sheets identified as items 20-758-01 thru 20-758-10 and are enclosed for your review and records. All the equipment tested was found to be within the manufacturers acceptable tolerances.

Summary

Except as noted in this report all the other equipment tested was found or left in good working condition and suitable for use as intended.

Electrical Certification Incorporated appreciates the opportunity to perform this project. If you have any questions concerning this report, or require additional assistance please call any time for prompt professional service.

Sincerely,

Jeffrey Jones
General Manager

Electrical Certification Incorporated
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Low Voltage Circuit Breaker

Customer	Glenwood Electric							**Job #**	2020-758		
Location	Lytle Tunnel							**Date**	09/16/2020		
Identification	Main 1 (Left Bus)										
Mfg	Square D	**Type**	Masterpact		**Style**	NW 32H1		**Voltage**	480	**ASYM**	65
Serial	085325377502		**Frame**	3000	**OC**	ML 6.0P		**Coil**	3000	**Plug**	3000

Settings	***Available***	***As Found***	***As Left***	***As Tested***
Long Time Pick-up		1		
Long Time Delay		2		
Short Time Pick-up		6	6	4
Short Time Delay		0.4 I^2T Off		
Ground Fault Pick-up		J		
Ground Fault Delay		0.4 I^2T Off		
Instantaneous		6		

Circuit Breaker Test	***Test Amps***	***% Settings***	***A Phase***	***B Phase***	***C Phase***
Long Time	9000		7.373		
Short Time	15000		0.414		
Ground Fault	2400				0.403
Instantaneous	22500	90% - 75%	0.036		
Instantaneous		110%-125%			
Insulation Resistance @ 1KVDC Across Open Pole P-Trip Unit			**A-Gr** / **A-B** / **A**	**B-Gr** / **B-C** / **B**	**C-Gr** / **A-C** / **C**
Contact Resistance (μΩ)			12	12	13

Comments

- All functions passed

Technician Ken Powell

Electrical Certification Incorporated

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Low Voltage Circuit Breaker

Customer	Glenwood Electric	**Job #**	2020-758
Location	Lytle Tunnel	**Date**	09/16/2020
Identification	Panel DP-E		

Mfg	Square D	**Type**	Masterpact	**Style**	NW 08H1	**Voltage**	480	**ASYM**	65
Serial	085325378002	**Frame**	800	**OC**	ML 6.0P	**Coil**	800	**Plug**	600

Settings	***Available***	***As Found***	***As Left***	***As Tested***
Long Time Pick-up		0.83		
Long Time Delay		12		
Short Time Pick-up		6	6	4
Short Time Delay		0 I^2T Off		
Ground Fault Pick-up		J		
Ground Fault Delay		0.2 I^2T Off		
Instantaneous		8		

Circuit Breaker Test	***Test Amps***	***% Settings***	***A Phase***	***B Phase***	***C Phase***
Long Time	1500		44.138		
Short Time	3400		0.038		
Ground Fault	1200		0.159		
Instantaneous	6000	90% - 75%	0.043		
Instantaneous		110%-125%			
Insulation Resistance @ 1KVDC Across Open Pole P-Trip Unit			**A-Gr** / **A-B** / **A**	**B-Gr** / **B-C** / **B**	**C-Gr** / **A-C** / **C**
Contact Resistance (μΩ)			14	13	14

Comments

- All functions passed

Technician Ken Powell / John Coletta

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Low Voltage Circuit Breaker

Customer	Glenwood Electric	**Job #**	2020-758
Location	Lytle Tunnel	**Date**	09/16/2020
Identification	Vent Fan #1		

Mfg	Square D	**Type**	Masterpact	**Style**	NW 08H1	**Voltage**	480	**ASYM**	65
Serial	085325377103	**Frame**	800	**OC**	ML 6.0P	**Coil**	800	**Plug**	800

Settings	***Available***	***As Found***	***As Left***	***As Tested***
Long Time Pick-up		1		
Long Time Delay		12		
Short Time Pick-up		10	10	6
Short Time Delay		0.4 I^2T Off		
Ground Fault Pick-up		J		
Ground Fault Delay		0.2 I^2T Off		
Instantaneous		10		

Circuit Breaker Test	***Test Amps***	***% Settings***	***A Phase***	***B Phase***	***C Phase***
Long Time	3467		19.855		
Short Time	6400		0.411		
Ground Fault	1600		0.158		
Instantaneous	10000	90% - 75%	0.035		
Instantaneous		110%-125%			
Insulation Resistance @ 1KVDC Across Open Pole P-Trip Unit			**A-Gr** / **A-B** / **A**	**B-Gr** / **B-C** / **B**	**C-Gr** / **A-C** / **C**
Contact Resistance (μΩ)					

Comments

- All functions passed

Technician Ken Powell / John Coletta

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Low Voltage Circuit Breaker

Customer	Glenwood Electric	**Job #**	2020-758
Location	Lytle Tunnel	**Date**	09/16/2020
Identification	Vent Fan #2		

Mfg	Square D	**Type**	Masterpact	**Style**	NW 08H1	**Voltage**	480	**ASYM**	65
Serial	085325377101	**Frame**	800	**OC**	ML 6.0P	**Coil**	800	**Plug**	800

Settings	***Available***	***As Found***	***As Left***	***As Tested***
Long Time Pick-up		1		
Long Time Delay		12		
Short Time Pick-up		10	10	6
Short Time Delay		0.4 I^2T Off		
Ground Fault Pick-up		J		
Ground Fault Delay		0.3 I^2T Off		
Instantaneous		10		

Circuit Breaker Test	***Test Amps***	***% Settings***	***A Phase***	***B Phase***	***C Phase***
Long Time	3467		20.082		
Short Time	6400		0.411		
Ground Fault	1600		0.263		
Instantaneous	10000	90% - 75%	0.035		
Instantaneous		110%-125%			

Insulation Resistance @ 1KVDC Across Open Pole P-Trip Unit	**A-Gr**		**B-Gr**		**C-Gr**	
	A-B		**B-C**		**A-C**	
	A		**B**		**C**	
Contact Resistance (μΩ)						

Comments

- All functions passed

Technician Ken Powell / John Coletta

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Low Voltage Circuit Breaker

Customer	Glenwood Electric	**Job #**	2020-758
Location	Lytle Tunnel	**Date**	09/16/2020
Identification	Panel LP-DP		

Mfg	Square D	**Type**	Masterpact	**Style**	NW 08H1	**Voltage**	480	**ASYM**	65
Serial	085327017701	**Frame**	800	**OC**	ML 6.0P	**Coil**	800	**Plug**	400

Settings	***Available***	***As Found***	***As Left***	***As Tested***
Long Time Pick-up		1		
Long Time Delay		2		
Short Time Pick-up		6	6	4
Short Time Delay		0 I^2T Off		
Ground Fault Pick-up		J		
Ground Fault Delay		0.3 I^2T Off		
Instantaneous		6		

Circuit Breaker Test	***Test Amps***	***% Settings***	***A Phase***	***B Phase***	***C Phase***
Long Time	1200		7.036		
Short Time	2000		0.047		
Ground Fault	800		0.262		
Instantaneous	3000	90% - 75%	0.044		
Instantaneous		110%-125%			

Insulation Resistance @ 1KVDC Across Open Pole P-Trip Unit	**A-Gr**		**B-Gr**		**C-Gr**	
	A-B		**B-C**		**A-C**	
	A		**B**		**C**	
Contact Resistance (μΩ)	16		18		14	

Comments

- All functions passed

Technician Ken Powell / John Coletta

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Low Voltage Circuit Breaker

Customer	Glenwood Electric						**Job #**	2020-758	
Location	Lytle Tunnel						**Date**	09/16/2020	
Identification	Tie								
Mfg	Square D	**Type**	Masterpact	**Style**	NW 32H1	**Voltage**	480	**ASYM**	65
Serial	085325377701	**Frame**	3200	**OC**	ML 6.0P	**Coil**	--	**Plug**	3000

Settings	***Available***	***As Found***	***As Left***	***As Tested***
Long Time Pick-up		1		
Long Time Delay		2		
Short Time Pick-up		6	6	4
Short Time Delay		0.4 I^2T Off		
Ground Fault Pick-up		J		
Ground Fault Delay		0.4 I^2T Off		
Instantaneous		6		

Circuit Breaker Test	***Test Amps***	***% Settings***	***A Phase***	***B Phase***	***C Phase***
Long Time	9000		7.228		
Short Time	15000		0.414		
Ground Fault	2400		*Protection Off		
Instantaneous	22500	90% - 75%	0.035		
Instantaneous		110%-125%			
Insulation Resistance @ 1KVDC Across Open Pole			**A-Gr**	**B-Gr**	**C-Gr**
			A-B	**B-C**	**A-C**
			A	**B**	**C**
Contact Resistance (μΩ)			14	15	14

Comments
- All functions passed
- *Neutral (A) Neutral CT protection off

Technician	Ken Powell / John Coletta

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Low Voltage Circuit Breaker

Customer	Glenwood Electric						**Job #**	2020-758	
Location	Lytle Tunnel						**Date**	09/16/2020	
Identification	Main 2 (Right Bus)								
Mfg	Square D	**Type**	Masterpact	**Style**	NW 32H1	**Voltage**	480	**ASYM**	65
Serial	085325377501	**Frame**	3200	**OC**	ML 6.0P	**Coil**	3000	**Plug**	3000

Settings	***Available***	***As Found***	***As Left***	***As Tested***
Long Time Pick-up		1		
Long Time Delay		2		
Short Time Pick-up		6	6	4
Short Time Delay		0.1 I^2T Off		
Ground Fault Pick-up		J		
Ground Fault Delay		0.4 I^2T Off		
Instantaneous		6		

Circuit Breaker Test	***Test Amps***	***% Settings***	***A Phase***	***B Phase***	***C Phase***
Long Time	9000		7.329		
Short Time	15000		0.111		
Ground Fault	2400		0.403		
Instantaneous	22500	90% - 75%	0.036		
Instantaneous		110%-125%			
Insulation Resistance @ 1KVDC Across Open Pole P-Trip Unit			**A-Gr**	**B-Gr**	**C-Gr**
			A-B	**B-C**	**A-C**
			A	**B**	**C**
Contact Resistance (μΩ)			13	13	15

Comments
- All functions passed

Technician	Ken Powell / John Coletta

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Low Voltage Circuit Breaker

Customer	Glenwood Electric						**Job #**	2020-758	
Location	Lytle Tunnel						**Date**	09/16/2020	
Identification	Vent Fan #3								
Mfg	Square D	**Type**	Masterpact	**Style**	NW 08H1	**Voltage**	480	**ASYM**	65
Serial	085325377102	**Frame**	800	**OC**	ML 6.0P	**Coil**	--	**Plug**	800

Settings	***Available***	***As Found***	***As Left***	***As Tested***
Long Time Pick-up		1		
Long Time Delay		12		
Short Time Pick-up		10	10	6
Short Time Delay		0.4 I^2T Off		
Ground Fault Pick-up		J		
Ground Fault Delay		0.2 I^2T Off		
Instantaneous		10		

Circuit Breaker Test	***Test Amps***	***% Settings***	***A Phase***	***B Phase***	***C Phase***
Long Time	3467		20.054		
Short Time	6400		0.412		
Ground Fault	1600		0.160		
Instantaneous	10000	90% - 75%	0.035		
Instantaneous		110%-125%			
Insulation Resistance @ 1KVDC Across Open Pole P-Trip Unit			A-Gr / A-B / A	B-Gr / B-C / B	C-Gr / A-C / C
Contact Resistance (μΩ)			18	18	19

Comments

- All functions passed

Technician Ken Powell

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Low Voltage Circuit Breaker

Customer	Glenwood Electric						**Job #**	2020-758	
Location	Lytle Tunnel						**Date**	09/16/2020	
Identification	Panel DP-W								
Mfg	Square D	**Type**	Masterpact	**Style**	NW 08H1	**Voltage**	480	**ASYM**	65
Serial	085325378001	**Frame**	800	**OC**	ML 6.0P	**Coil**	--	**Plug**	600

Settings	***Available***	***As Found***	***As Left***	***As Tested***
Long Time Pick-up		0.83		
Long Time Delay		12		
Short Time Pick-up		6		
Short Time Delay		0 I^2T Off		
Ground Fault Pick-up		J		
Ground Fault Delay		0.2 I^2T Off		
Instantaneous		8		

Circuit Breaker Test	***Test Amps***	***% Settings***	***A Phase***	***B Phase***	***C Phase***
Long Time	2167		20.202		
Short Time	3900		0.045		
Ground Fault	1200		0.159		
Instantaneous	6000	90% - 75%	0.036		
Instantaneous		110%-125%			
Insulation Resistance @ 1KVDC Across Open Pole P-Trip Unit			A-Gr / A-B / A	B-Gr / B-C / B	C-Gr / A-C / C
Contact Resistance (μΩ)			16	19	16

Comments

- All functions passed

Technician Ken Powell / John Coletta

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Low Voltage Circuit Breaker

Customer	Glenwood Electric					**Job #**	2020-758		
Location	Lytle Tunnel					**Date**	09/16/2020		
Identification	Panel LP-PP								
Mfg	Square D	**Type**	Masterpact	**Style**	NW 08H1	**Voltage**	480	**ASYM**	65
Serial	085325378101	**Frame**	800	**OC**	ML 6.0P	**Coil**	--	**Plug**	400

Settings	***Available***	***As Found***	***As Left***	***As Tested***
Long Time Pick-up		1		
Long Time Delay		8		
Short Time Pick-up		8	8	4
Short Time Delay		0 I^2T Off		
Ground Fault Pick-up		J		
Ground Fault Delay		0.3 I^2T Off		
Instantaneous		8		

Circuit Breaker Test	***Test Amps***	***% Settings***	***A Phase***	***B Phase***	***C Phase***
Long Time	1200		28.769		
Short Time	2400		0.044		
Ground Fault	800		0.270		
Instantaneous	4000	90% - 75%	0.043		
Instantaneous		110%-125%			
Insulation Resistance @ 1KVDC Across Open Pole P-Trip Unit			**A-Gr** / **A-B** / **A**	**B-Gr** / **B-C** / **B**	**C-Gr** / **A-C** / **C**
Contact Resistance (μΩ)			20	19	22

Comments	
- All functions passed	
Technician	Ken Powell / John Coletta

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*Cell: (513) 604-2431 * Email: ECInc@cinci.rr.com*

Job # 2020-758 – Report Summary
Date: September 22, 2020

Heath Weddle
Glenwood Electric
12250 Chandler Drive
Walton, KY 41094

Re: Lytle Tunnel
Subject: Infrared Inspection

Mr. Weddle,

I have enclosed the results of the infrared inspection conducted at the Lytle Tunnel, Cincinnati, OH. Great care was taken to provide you a report with problems and recommendations that are well defined and logically explained and easy to locate. Priority codes are included for common equipment, to help you to determine if you wish to repair or replace existing parts. Thermal graphic images are provided for each problem area found. Thermal graphic images are not provided for those items viewed, operating within normal temperatures.

If for any reason the results are unclear, uncertain or simply not adequately explained for your determination of what corrective actions are necessary, please call at (513) 662-7500. If the results can't be completely clarified by phone, we will return at your request (at no charge) to provide additional information necessary to ensure that the information was derived correctly, logically and was adequately explained to include re-inspection of the item in question. We can't guarantee that a clerical or inspection error will never be made, but we can guarantee our diligence in providing you complete satisfaction.

Please refer to the provided CRITERIA FORMS to demonstrate why the priority code (highlighted temperature blocks on your report) have been chosen. These have been provided in an attempt to further quantify the identified problems and assist your determination of corrective action. Also included is a section on CORRECTIVE ACTION that has been found to be helpful to better describe some of the more common corrective actions and their unique requirements.

Electrical Certification Incorporated appreciates the opportunity to provide our services to you. If we can be of any assistance to you in correcting any of the reported problems, please call any time for prompt professional service.

Sincerely,

Jeffrey Jones
General Manager

Electrical Certification Incorporated
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*Cell: (513) 604-2431 * Email: ECInc@cinci.rr.com*

Severity Code Descriptions

The images and temperatures depicted in this report determine the severity of each anomaly found during the inspection. The temperature rise determines the severity of each hot spot.

Severity:

Level 0 — Corrective action required at next scheduled outage.
- Temperature Rise = 1°C to 7°C
- Will not be highlighted, but noted in the Severity column

Level 1 — Corrective action required as soon as possible.
- Temperature Rise = 8°C to 15°C
- Will be noted in the Severity column, and highlighted in YELLOW.

Level 2 — Corrective action required IMMEDIATELY.
- Temperature Rise = 16°C + (and higher)
- Will be noted in the Severity column, and highlighted in RED.

The intention of this report is to assist your company in reducing the possibility of loss to property by bringing to your attention hazards and lack of protection. It is not intended to imply that all other hazards and conditions are under control at time of inspection. No liability is assumed by reason of this report or the inspection upon which it is based as it is only advisory in nature and you must make the final decision.

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Customer: Glenwood Electric | **Location:** Lytle Tunnel - Cincinnati, OH

Job # 2020-758

Image #	Location	Equipment Inspected	Severity
	Lytle Tunnel	Main 1A	No Issues
	Lytle Tunnel	Panel DP-E	No Issues
	Lytle Tunnel	Vent Fan #2	No Issues
	Lytle Tunnel	Vent Fan #1	No Issues
	Lytle Tunnel	Panel LP-DP	No Issues
	Lytle Tunnel	TIE	No Issues
	Lytle Tunnel	Vent Fan #3	No Issues
	Lytle Tunnel	Panel DP-W	No Issues
	Lytle Tunnel	Panel LP-PP	No Issues
	Lytle Tunnel	Main 2B	No Issues
	Lytle Tunnel	120 VAC UPS	No Issues
	Lytle Tunnel	LP-1	No Issues
	Lytle Tunnel	LP-PP	No Issues
	Lytle Tunnel	480 VAC UPS	No Issues
	Lytle Tunnel	LP1 Transformer	No Issues
	Lytle Tunnel	SW-LP2	No Issues
	Lytle Tunnel	SW-LP1	No Issues
	Lytle Tunnel	SW-DN	No Issues
	Lytle Tunnel	RW-LP2	No Issues
	Lytle Tunnel	RW-LP1	No Issues
	Lytle Tunnel	RW-DN	No Issues
	Lytle Tunnel	NW-LP2	No Issues
	Lytle Tunnel	NW-LP1	No Issues
	Lytle Tunnel	NW-DN	No Issues
	Lytle Tunnel	DP-W	No Issues
	Lytle Tunnel	Contactor NW-C1	No Issues
	Lytle Tunnel	Contactor NW-C2	No Issues
	Lytle Tunnel	Contactor RW-C1	No Issues
	Lytle Tunnel	Contactor RW-C2	No Issues
	Lytle Tunnel	Contactor SW-C1	No Issues
	Lytle Tunnel	Contactor SW-C2	No Issues
	Lytle Tunnel	LP-2	No Issues
	Lytle Tunnel	LP-2 Transformer	No Issues
	Lytle Tunnel	LP	No Issues
	Lytle Tunnel	Contactor SE-C2	No Issues
	Lytle Tunnel	Contactor SE-C1	No Issues
	Lytle Tunnel	Contactor RE-C2	No Issues
	Lytle Tunnel	Contactor RE-C1	No Issues
	Lytle Tunnel	Contactor NE-C2	No Issues
	Lytle Tunnel	Contactor NE-C1	No Issues

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Cell: (513) 604-2431 * Email: ECInc@cinci.rr.com

Customer: Glenwood Electric | **Location:** Lytle Tunnel - Cincinnati, OH

Job # 2020-758

Image #	Location	Equipment Inspected	Severity
	Lytle Tunnel	DP-E	No Issues
	Lytle Tunnel	NE-DN	No Issues
	Lytle Tunnel	NE-LP1	No Issues
	Lytle Tunnel	NE-LP2	No Issues
	Lytle Tunnel	RE-DN	No Issues
	Lytle Tunnel	RE-LP1	No Issues
	Lytle Tunnel	RE-LP2	No Issues
	Lytle Tunnel	SE-DN	No Issues
	Lytle Tunnel	SE-LP1	No Issues
	Lytle Tunnel	SE-LP2	No Issues
	Lytle Tunnel	N-EM	No Issues
	Lytle Tunnel	R-EM	No Issues
	Lytle Tunnel	S-EM	No Issues
	Lytle Tunnel	LP-DP	No Issues

C. Structural Logs

C.1 Northbound Mainline Tunnel

C.1.1 Condition State Summary

C.1.2 Inspection Logs

C.1.2.1 Portals

C.1.2.2 Walls

C.1.2.3 Ceiling

C.1.2.4 Barriers

C.1.2.5 Lighting

EL#	Element Name	Units	Total Q	State 1	State 2	State 3	State 4
10001	**Cast-in-Place Tunnel Liner**	sq feet	57713	57661	52.5		
	Delamination/Spall/Patched area	sq feet			52.5		
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet					
	Leakage (Liners)	sq feet					
	Cracking (Liners)	sq feet		264			
10041	**Concrete Interior Walls**	sq feet	13456	13403	53	0	0
	Delamination/Spall/Patched area	sq feet			53		
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet					
	Cracking (Liners)	sq feet		124			
10051	**Concrete Portal**	sq feet	192	100	89.5	2	0.5
	Delamination/Spall/Patched area	sq feet			21.5	2	0.5
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet			22		
	Cracking (Liners)	sq feet			46		
10055	**Masonry Portal**	sq feet	1331		921	410	
	Efflorescence/Rust Staining	sq feet					
	Mortar Breakdown	sq feet					
	Split/Spall	sq feet			29	2	
	Patched Area	sq feet					
	Masonry Displacement	sq feet				408	
10061	**Concrete Ceiling Slab**	sq feet	4946	4946			
	Delamination/Spall/Patched area	sq feet					
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet					
	Cracking	sq feet					
10111	**Concrete Slab on Grade**	sq feet	47251	47251			
	Delamination/Spall/Patched area	sq feet					
	Exposed Rebar	sq feet					
	Cracking (Liners)	sq feet					
10140	**Gasket**	ft	250	197	53		
	Leakage	ft			15		
	Seal Adhesion/Damage/Crack	ft					
	Debris Impaction	ft					
	Adjacent Deck/Header	ft			38		
10158	**Asphalt Wearing Surface**	sq feet	38823	38694	121	8	0
	General Condition	sq feet			121		
	Effectiveness	sq feet				8	
10161	**Concrete Traffic Barrier**	ft	1738	1724	13	1	0
	Delamination/Spall/Patched area	ft			3	1	
	Exposed Rebar	ft					
	Efflorescence/Rust Staining	ft			9		
	Cracking	ft		799	1		
10601	**Tunnel Lighting Fixture**	each	478	292	140	40	6
	Component Supports	each		292	140	40	6

	Component Housing or Enclosure	each					
10952	**Fire Protection Coating**	sq feet	14959	12770	2189		
	Effectiveness	sq feet			2189		

Northbound West Wall			
Unit	station	Deficiency Description	Photo
10	00+00	2 SF hollow tiles	
10	00+40	6 cracked tiles above barrier	
11	00+00	3 cracked tiles, 3 broken, 1 lose/removed	
11	00+18	10 LF Vertical Hairline crack	
11	00+18	6 LF verical hairline crack at top of wall	
11	00+31	2; 2 LF Hairline crack at bottom	
11	00+31	6 LF vertical hairline crack at mid wall	
11	00+31	4 LF vertical hairline crack at top of wall	
12	00+00	2 SF of hollow tile, minor collision damage with 2 broken tiles	
12	00+12	2 LF vertical hairline crack	
12	00+20	4 LF vertical hairline crack with 2 cracked tiles	
13	00+00	12 SF delaminated tile around joint	
13	00+11	4 LF vertical hairline crack	
13	00+28	5 SF delaminated tile above parapet	
13	00+30	2 LF vertical hairline crack above parapet	
14	00+25	2 LF vertical hairline crack at stand pipe	
14	00+37	4 LF vertical hairline crack	
15	00+15	2 LF vertical hairline crack	
15	00+25	3 LF vertical crack above parapet	
15	00+36	2 LF vertical hairline crack above parapet	
16	00+00	1 SF delaminated tile at joint	
16	00+40	4 LF vertical hairline crack	
17	00+02	4 SF delamination of fireproofing	
17	00+09	3 SF delamination of fireproofing	
17	00+15	8 SF delamination of fireproofing	
17	00+20	3 SF delamination of fireproofing	
17	00+30	3 SF delamination of fireproofing	
17	00+35	4 SF delamination of fireproofing	
17	00+40	6 SF delamination of fireproofing	
18	00+08	3 SF delamination of fireproofing	
18	00+24	1 SF delamination of fireproofing	
18	00+32	2 SF delamination of fireproofing	
18	00+40	10 SF delamination of fireproofing	
19	00+00	Full height delaminated tile 1 LF wide (12 SF)	
19	00+20	2 LF vertical hairline crack	
19	00+34	4 LF vertical hairline crack	
20	00+37	4 LF vertical hairline crack behind lights	
20	00+40	10 SF delaminated tile	
22	00+48	2 SF delamination of fireproofing	
22	00+49	Loose tiles, 10 total removed	
23	00+21	3 LF vertical hairline crack	
23	00+30	3 LF vertical hairline crack	
23	00+30	1 LF vertical hairline crack at mid height	
23	00+45	2 LF vertical hairline crack	
24	00+00	2 LF hairline crack	

Northbound West Wall			
Unit	station	Deficiency Description	Photo
24	00+08	6 LF vertical hairline crack	
24	00+29	1 LF vertical hairline crack	
24	00+48	8 SF delaminated tile	
25	00+32	8 LF vertical hairline crack	
26	00+07	6 LF vertical hairline crack	
26	00+18	8 LF vertical hairline crack	
26	00+30	2 LF vertical hairline crack	
26	00+30	3 LF vertical hairline crack	
26	00+57	8 LF vertical hairline crack	
26	00+76	2 LF vertical hairline crack	

Northbound East Wall			
Unit	station	Deficiency Description	Photo
10	00+00	3 LF vertical hairline crack	
10	00+05	Damaged tiles in recessed box	
10	00+35	4 LF vertical hairline crack	
10	00+49	4 LF vertical hairline crack	
11	00+35	1 LF vertical hairline crack	
12	00+20	2 SF delaminated tiles	
12	00+35	cracked tile	
13	00+00	6 SF delaminated tile	
13	00+49	1 LF vertical hairline crack at barrier	
13	00+49	0.5 SF delamination	
14	00+00	2 SF delaminaion, map cracking with weak tiles	
14	00+30	3 LF vertical hairline crack	
15	00+15	4 damaged tiles	
15	00+28	2; 2LF vertical hairline cracks	
15	00+30	5 LF vertical hairline crack	
15	00+40	3 LF vertical hairline crack	
16	00+00	12 removed tiles	
16	00+20	8 LF vertical hairline crack	
16	00+25	6 LF vertical hairline crack 1/16" wide	
16	00+30	6 LF vertical hairline crack	
16	00+40	6 LF vertical hairline crack	
16	00+45	3 LF vertical hairline crack	
18	00+02	4" x 2" x 1/2" deep spall	
18	00+49	2 SF delamination	
19	00+00	3 SF delamination 15 removed tiles	
19	00+05	3 LF diagonal hairline crack	
19	00+15	3 LF vertical hairline crack	
23	00+00	6 SF delaminated tile	
23	00+15	2 SF delamination at barrier	
23	00+20	4 LF vertical hairline crack	
24	00+10	3 LF vertical hairline crack	
24	00+49	2 SF delaminated tiles	
25	00+00	6 LF vertical hairline crack at joint	
25	00+10	3 LF vertical hairline crack	
25	00+25	3 LF vertical hairline crack	
26	00+05	12 LF vertical hairline crack	
26	00+20	12 LF vertical hairline crack	
26	00+25	4 LF vertical hairline crack	
26	00+37	4 LF vertical hairline crack	
26	00+65	2 LF vertical hairline crack	
26	00+70	12 LF vertical hairline crack	
26	00+87	12 LF vertical hairline crack	
26	01+00	12 LF vertical hairline crack	
26	01+05	3 LF vertical hairline crack	
26	01+15	2 LF vertical hairline crack	

Northbound Portals			
Unit	station	Deficiency Description	Photo
South Portal			
		Right side mortar and block appear delaminated with 1/8" gap to concrete portal wall behind	
		Right side at base of portal wall there is missing and damaged stone with delaminated mortar	
		Vertical hairline crack 20 LF over right two lanes	
		2" x 3" x 1" deep spall at top right corner of portal	
		Left side at bottom two feet, stone fascade delaminated with gap up to 1-1/2"	
		12 SF mapcracking in concrete portal header over left shoulder and left lane	
		5 SF mapcracking over left shoulder and left lane of portal cap	
North Portal			
		Stone over left lane delaminated and was removed 2 SF 1" deep	
		Typical delamination of façade at left portal wall	
		12 SF Moderate efflorescense with stalagtites over left lane	
		Glistening surfaces at stalagtites	
		10 SF of moisture staining over center lane lower concrete portal	
		Typical right side stone and mortar is delaminated	
		Spall at concrete cap	
		9 SF area with diagonal hairline crack through façade at right wall	
		10" x3" x3" Spall in cap beam at top of right side under fence post. Loose mortar removed	

Northbound Ceiling unit 10-12			
Unit	station	Deficiency Description	Photo
East Side to Middle			
10	00+10	20 LF diagonal hairline crack	
10	00+20	3 SF delaminated tile	
10	00+25	25 LF diagonal hairline crack	
10	00+25	3 broken tiles with 3" x 6" x 1" deep spall	
10	00+30	2 SF delamination	
10	00+40	3 removed loose tiles	
10	00+40- 00+50	10 LF diagonal hairline crack	
11	00+00	2 removed loose tiles	
11	00+05	20 SF map cracking over right lane	
11	00+05	4 LF longitudinal hairline crack over right lane	
11	00+05	3 LF longitudinal hairline crack over right lane	
11	00+10	4 LF longitudinal hairline crack over right lane	
11	00+10	4 LF longitudinal hairline crack over middle lane	
11	00+10	5 SF delaminated tile	
11	00+10	4 LF longitudinal hairline crack over right lane	
11	00+10	2; 2 LF diagonal hairline crack over right shoulder	
11	00+30	5 SF delaminated tile over right lane	
11	00+30	3 LF longitudinal hairline crack over right lane	
11	00+30	5 LF longitudinal hairline crack over middle lane	
11	00+40	4 LF transverse hairline crack over right lane	
11	00+40	5 LF transverse hairline crack over middle lane	
11	00+45	5 LF transverse hairline crack over middle lane	
12	00+00	1 SF delamination over middle lane	
Middle to West Side			
10	00+45	4 LF hairline crack over left lane	
10	00+49	10 SF delaminated tile, 1 SF delamination over right lane at joint	
11	00+25	2 pieces of loose tile removed	

Northbound Ceiling West Shoulder			
Unit	station	Deficiency Description	Photo
12	00+00	1 SF delamination	
12	00+25	2; 3 LF transverse hairline cracks	
12	00+48	removed 7 loose tiles	
13	00+20	3 SF delamination	
13	00+00	3 tiles removed that were loose	
13	00+48	7 SF delaminated tile with 1/2 tile removed	
15	00+25	1 LF transverse hairline crack	
15	00+48	1 tile removed	
17	00+00	1 SF delaminated fireproofing	
19	00+00	1 SF delaminated tile	
19	00+35	2 LF transverse hairline crack	
20	00+00	1 SF delaminated tile	
20	00+45	2 LF diagonal hairline crack	
22	00+00-00+50	Map cracking over left lane	
23	00+10	3 LF diagonal hairline crack	
23	00+20	1 SF delaminated tile	
23	00+40	1 SF delaminated tile	
24	00+25	3 LF longitudinal hairline crack	
25	00+48	6 tiles removed	
26	00+20	2 SF delaminated tile	
26	00+25	1 SF delaminated tile	
26	00+55	1 SF delaminated tile	

Northbound Ceiling West Lane			
Unit	station	Deficiency Description	Photo
12	00+05	4 LF longitudinal hairline crack	
12	00+20	1 SF delamination	
12	00+45	2 hollow sounding tiles adjacent to excess waterproofing	
13	00+00	1 SF delamination with 5 missing tiles	
13	00+40	2 SF delaminated tile	
14	00+05	1 SF delaminated tile	
14	00+15	2 LF transverse hairline crack	
14	00+35	3 LF transverse hairline crack	
15	00+20	3 LF longitudinal hairline crack	
15	00+40	4 LF longitudinal hairline crack	
16	00+20	2 SF delamination	
16	00+35	1 SF delamination	
17	00+00	4 SF delamination at start of fireproofing	
17	00+30	1 SF delamination of fireproofing	
17	00+30-00+50	Small bubbles in fireproofing coating	
17	00+10-00+50	map cracking throughout fireproofing	
18	00+48	24 SF delamination in fireproofing	
19	00+00	removed one loose tile	
19	00+10	1 SF delamination at drain	
19	00+20	1 SF delaminated tile	
19	00+30	3 SF of delaminated tile	
19	00+48	6" x 3" x 1" deep spall with 5 broken tiles	
19	00+48	3 SF of delaminated tile	
20	00+05	3 LF longitudinal hairline crack	
21	00+00-00+50	Map cracking throughout fireproofing over left lane	
22	00+00-00+50	Map cracking throughout fireproofing over left lane	
23	00+00	1 LF longitudinal hairline crack	
23	00+15	2 LF longitudinal hairline crack	
24	00+08	Removes 2 loose tiles, 11 total missing or damages	
24	00+15	2 LF transverse hairline crack	
24	00+15	2 SF delaminated tile	
24	00+25	1 SF delaminated tile	
26	00+00	3 and 1/2 loose tiles removed	
26	00+00	2 SF delaminated tile	
26	00+20	5 SF delaminated tile	
26	01+00	2 LF transverse hairline crack	
26	01+10	2 SF delaminated tile at portal	

Northbound Ceiling Middle Lane			
Unit	station	Deficiency Description	Photo
12	00+00	2 LF hairline crack	
12	00+15	4 LF longitudinal hairline crack	
12	00+15	2 LF longitudinal hairline crack	
12	00+15	2 LF transverse hairline crack	
12	00+25	2 LF transverse hairline crack	
12	00+30	2 LF longitudinal hairline crack	
12	00+49	4 SF delamination with light efflorescense, 3 tiles removed	
12	00+49	4" x 8" x 1" deep spall	
13	00+30	2 LF longitudinal hairline crack	
13	00+40	2 LF longitudinal hairline crack	
15	00+20	4 LF longitudinal hairline crack	
15	00+35	4 LF longitudinal hairline crack	
15	00+35	4 LF transverse hairline crack	
15	00+45	4 LF longitudinal hairline crack	
17	00+00	Delaminated fireproofing with spalling and rust spots at joint	
17	00+05	1 SF delaminated fireproofing	
17	00+10-00+50	map cracking over middle lane 15 LF wide	
19	00+00	Fireproofing material removed at joint	
19	00+25	10 SF delamination of tile	
19	00+49	2 LF longitudinal hairline crack	
19	00+49	5 SF delaminated tile	
20	00+10	2 LF longitudinal hairline crack	
21	00+05	1 SF delaminated fireproofing	
21	00+50	2 SF delaminated fireproofing	
23	00+25	2 LF longitudinal hairline crack	
23	00+30	2; 2 LF longitudinal hairline cracks	
24	00+10	2; 1 LF longitudinal hairline cracks	
25	00+20	2 LF longitudinal hairline crack	
26	00+40	2 LF longitudinal hairline crack	
26	00+80	3 LF transverse hairline crack	

Northbound Ceiling East Lane			
Unit	station	Deficiency Description	Photo
12	00+05	2 LF longitudinal hairline crack	
12	00+05	1 LF longitudinal hairline crack	
12	00+05	1 LF transverse hairline crack	
12	00+15	4 SF delamination	
12	00+15	2 LF diagonal hairline crack	
12	00+49	4 SF delamination with light efflorescense	
13	00+00	15 missing tiles	
13	00+15	2 LF transverse hairline crack	
13	00+15	2 LF longitudinal hairline crack	
13	00+30	4 LF longitudinal hairline crack	
13	00+40	2 LF longitudinal hairline crack	
14	00+00	1 SF delaminated tile	
14	00+20	8 SF delaminated tile	
15	00+00	2 LF longitudinal hairline crack	
15	00+05	2 LF longitudinal hairline crack	
15	00+20	2 LF longitudinal hairline crack	
15	00+20	3 LF longitudinal hairline crack	
15	00+25	5 LF longitudinal hairline crack	
15	00+40	4 LF longitudinal hairline crack	
16	00+00	loose joint filler with glistening surface, 2 loos tiles and joint filler removed	
16	00+25	2 LF longitudinal hairline crack	
16	00+40	20 SF delaminated tiles	
16	00+40	40 SF light efflorescense and moisture staining	
16	00+49	5 SF delaminated tile	
16	00+49	30 SF light efflorescense moisture stains	
17	00+30	2 SF delaminated fireproofing	
18	00+15	Bolts damaged at louver	
18	00+25	1 SF delaminated fireproofing	
19	00+00	1 SF delaminated tile	
19	00+30	2 SF delaminated tile around old lights	
19	00+40	4 LF longitudinal hairline crack	
20	00+30	missing tiles, 1" x2" x 1" deep spall	
23	00+15	3 LF longitudinal hairline crack	
23	00+20	4; 1 LF longitudinal hairline crack	
23	00+20	3 LF longitudinal hairline crack	
23	00+25	2 LF longitudinal hairline crack with broken tile	
23	00+30	2 LF longitudinal hairline crack	
23	00+30	3 LF transverse hairline crack	
26	00+25	2 LF longitudinal hairline crack	
26	00+25	3 LF transverse hairline crack	
26	00+50	2 LF longitudinal hairline crack	
26	00+60	3 LF transverse hairline crack	
26	00+70	3 LF transverse hairline crack	
26	00+90	20 SF delaminated tile	

Northbound Ceiling East Lane			
Unit	station	Deficiency Description	Photo
26	01+10	20 SF moisture staining at portal	

Northbound Ceiling East Shoulder			
Unit	station	Deficiency Description	Photo
12	00+00	1.5 LF diagonal hairline crack	
12	00+08	6 LF transverse hairline crack	
12	00+20	3; 1 LF transverse hairline crack	
12	00+35	1.5 LF longitudinal hairline crack	
12	00+40-00+50	8 missing tiles with no hollow sound	
12	00+45	3 LF longitudinal hairline crack	
12	00+45	1 LF hairline crack	
13	00+00	4 SF delamination with 15 missing tiles, no loose tiles	
13	00+10	3 LF transverse hairline crack	
13	00+15	5 LF transverse hairline crack	
13	00+15	1 SF delamination	
13	00+35	2; 2 LF transverse hairline crack	
13	00+45	2 LF transverse hairline crack	
14	00+45	3 LF diagonal hairline crack	
15	00+00	2 SF delamination	
15	00+05	3 LF transverse hairline crack	
15	00+25	4 LF longitudinal hairline crack	
15	00+40	10 LF longitudinal hairline crack to joint	
16	00+00	1/2 SF delaminated tiles	
16	00+05	4; 1 LF longitudinal hairline crack	
16	00+05	3 LF diagonal hairline crack	
16	00+15	2; 1.5 LF longitudinal hairline crack	
16	00+25	3; 1 LF longitudinal hairline crack	
16	00+40	2; 1 LF longitudinal hairline crack	
16	00+49	1 SF delamination before joint	
17	00+01	10 SF map cracking and hollow sound at top right	
18	00+20	2 SF delamination of fireproofing	
19	00+00	2 SF delamination	
19	00+20	9 SF delamination	
19	00+25	2 LF longitudinal hairline crack	
19	00+25	3 LF transverse hairline crack	
20	00+10	1 LF longitudinal hairline crack	
20	00+35	3 LF longitudinal hairline crack	
20	00+49	2 SF delamination at joint	
23	00+00	excess waterproofing at joint	
23	00+05	3 LF diagonal hairline crack	
23	00+05	6 LF diagonal hairline crack	
23	00+05	6 LF transverse hairline crack	
23	00+10	broken tile, not loose	
23	00+15	8 LF transvere hairline crack, 2 tiles removed	
23	00+20	3 LF longitudinal hairline crack	
23	00+20	3; 1 LF longitudinal hairline crack	
23	00+40	2; 1 LF longitudinal hairline crack	
24	00+25	3 LF longitudinal hairline crack	

Northbound Ceiling East Shoulder			
Unit	station	Deficiency Description	Photo
24	00+40	2 LF longitudinal hairline crack	
25	00+15	5 LF transverse hairline crack	
25	00+15	3 LF transverse hairline crack	
25	00+40	2 LF longitudinal hairline crack	
25	00+40	2 LF diagonal hairline crack	
26	00+25	4 LF transverse hairline crack	
26	00+30	2; 4 LF transverse hairline crack	
26	00+60	3 LF transverse hairline crack	
26	00+75	4 LF transverse hairline crack	
26	00+75	2 LF longitudinal hairline crack	
26	01+00	1 SF delaminated tile	
26	01+15	5LF diagonal hairline crack at portal	

Northbound Roadway			
Unit	station	Deficiency Description	Photo
10	00+00	25 LF tranverse crack up to 1/4" wide	
16	00+00	22 LF transverse crack in center and right lanes	
19	00+00	12 LF transverse crack in right lane	
19	00+00	2' x 4' pothole up to 2" deep with map cracks	
23	00+00	Full width transverse crack	
25	00+00	Transverse crack in left and right lane	

Northbound West Traffic Barrier			
Unit	station	Deficiency Description	Photo
10	00+00-00+50	4.5 LF vertical hairline crack about every 5 ft	
10	00+10	4.5 LF vertical hairline crack	
10	00+15	4.5 LF vertical hairline crack	
10	00+15	3 missing barrier reflectors	
11	00+00-00+50	4.5 LF vertical hairline crack about every 5 ft	
11	00+05	4.5 LF vertical hairline crack with light efflorescense	
11	00+20	3 missing barrier reflectors	
12	00+00-00+50	4.5 LF vertical hairline crack about every 5 ft	
12	00+20	3 missing barrier reflectors	
13	00+10	4.5 LF vertical hairline crack with light efflorescense	
13	00+15	4.5 LF vertical hairline crack	
13	00+20	3 missing barrier reflectors	
13	00+20	4.5 LF vertical hairline crack with light efflorescense	
13	00+25-00+50	4.5 LF vertical hairline crack about every 5 ft	
14	00+00-00+50	4.5 LF vertical hairline crack about every 5 ft	
14	00+13	4" x 10" x 1/2" deep spall with collision damage	
14	00+23	3 missing barrier reflectors	
15	00+24	3 missing barrier reflectors	
15	00+32	3' x 4" x 1" deep spall with collison damage	
15	00+38-00+40	3' x 4" x 1" deep spall with collison damage	
15	00+00-00+50	4.5 LF vertical hairline crack about every 10ft	
16	00+00-00+50	4.5 LF vertical hairline crack about every 10 ft	
16	00+20	3 missing barrier reflectors	
17	00+05	4.5 LF vertical hairline crack	
17	00+10	4.5 LF vertical hairline crack	
17	00+30	3 missing barrier reflectors.	
17	00+33	4.5 LF vertical hairline crack	
17	00+36	6" x 4" x 1/2" deep spall from collision damage	
17	00+36	4.5 LF vertical hairline crack	
18	00+00	4.5 LF vertical hairline crack	
18	00+12	4.5 LF vertical hairline crack	
18	00+15	4.5 LF vertical hairline crack	
18	00+19	4.5 LF vertical hairline crack	
18	00+35	1 missing barrier reflector	
18	00+38	4.5 LF vertical hairline crack	
19	00+00	3 LF horizontal hairline crack from construction joint to form joint	
19	00+03	3 LF vertical hairline crack	

Northbound West Traffic Barrier			
Unit	station	Deficiency Description	Photo
19	00+07	3 LF vertical hairline crack	
19	00+10	3 LF vertical hairline crack	
19	00+20	4.5 LF vertical hairline crack	
19	00+30	2 missing barrier reflectors	
19	00+33	4.5 LF vertical hairline crack	
20	00+05	4.5 LF vertical hairline crack	
20	00+20	4.5 LF vertical hairline crack	
20	00+29	4.5 LF vertical hairline crack	
20	00+38	2 missing barrier reflectors	
21	00+05	4.5 LF vertical hairline crack	
21	00+07	4.5 LF vertical hairline crack	
21	00+12	4.5 LF vertical hairline crack	
21	00+20	4.5 LF vertical hairline crack	
21	00+30	4.5 LF vertical hairline crack	
21	00+35	4.5 LF vertical hairline crack with light efflorescense	
21	00+40	4.5 LF vertical hairline crack	
21	00+42	2 missing barrier reflectors	
22	00+05	4.5 LF vertical hairline crack	
22	00+10	4.5 LF vertical hairline crack	
22	00+20	4.5 LF vertical hairline crack	
22	00+40	3 missing barrier reflectors	
22	00+49	4.5 LF vertical hairline crack	
23	00+08	4.5 LF vertical hairline crack	
23	00+20	4.5 LF vertical hairline crack	
23	00+25	4.5 LF vertical hairline crack	
23	00+30	4.5 LF vertical hairline crack	
23	00+35	4.5 LF vertical hairline crack	
23	00+40	4.5 LF vertical hairline crack	
23	00+45	2 missing barrier reflectors	
24	00+05	3.5 LF vertical hairline crack	
24	00+29	4.5 LF vertical hairline crack	
24	00+44-00+49	5 LF horizontal hairline crack	
25	00+10	4.5 LF vertical hairline crack	
25	00+20	4.5 LF vertical hairline crack with light efflorescense	
25	00+25	4.5 LF vertical hairline crack	
25	00+40	4.5 LF vertical hairline crack	
25	00+43	3 missing barrier reflectors	
26	00+05	4.5 LF vertical hairline crack	
26	00+09	4.5 LF vertical hairline crack	
26	00+20	4.5 LF vertical hairline crack at form joint	
26	00+25	4.5 LF vertical hairline crack	
26	00+43	3 missing barrier reflectors	
26	00+60	4.5 LF vertical hairline crack	
26	00+65	4.5 LF vertical hairline crack	

Northbound West Traffic Barrier			
Unit	station	Deficiency Description	Photo
26	00+75	4.5 LF vertical hairline crack at pipe encasement	
26	00+83	4.5 LF vertical hairline crack	
26	00+86	4.5 LF vertical hairline crack	
26	00+90	3 missing barrier reflectors	

Northbound East Traffic Barrier			
Unit	station	Deficiency Description	Photo
10	00+10	3 LF vertical hairline crack	
10	00+15	3 LF vertical hairline crack	
10	00+18	One missing barrier refector one broken	
10	00+25	4.5 LF vertical hairline crack	
10	00+30	4.5 LF vertical hairline crack	
10	00+40	4.5 LF vertical hairline crack	
10	00+47	4.5 LF vertical hairline crack	
11	00+05	4.5 LF vertical hairline crack	
11	00+10	4.5 LF vertical hairline crack	
11	00+15	3 Missing barrier reflectors	
11	00+25	4.5 LF vertical hairline crack	
11	00+43	4.5 LF vertical hairline crack	
12	00+05	4.5 LF vertical hairline crack	
12	00+15	Damage to reflectors	
12	00+25	4.5 LF vertical hairline crack	
12	00+27	4.5 LF vertical hairline crack	
12	00+36	4.5 LF vertical hairline crack	
13	00+10	4.5 LF vertical hairline crack	
13	00+15	4.5 LF vertical hairline crack	
13	00+18	Damage to reflectors	
13	00+25	4.5 LF vertical hairline crack	
13	00+28	4.5 LF vertical hairline crack	
13	00+36	4.5 LF vertical hairline crack	
13	00+40	4.5 LF vertical hairline crack	
14	00+29	4.5 LF vertical hairline crack at form joint	
14	00+40	4.5 LF vertical hairline crack	
14	00+42	4.5 LF vertical hairline crack	
15	00+10	4.5 LF vertical hairline crack	
15	00+12	Damage to reflectors	
15	00+25	4.5 LF vertical hairline crack	
15	00+40	4.5 LF vertical hairline crack at form joint	
15	00+45	4.5 LF vertical hairline crack	
16	00+10	4.5 LF vertical hairline crack	
16	00+25	4.5 LF vertical hairline crack	
16	00+40	4.5 LF vertical hairline crack	
16	00+49	4.5 LF vertical hairline crack	
17	00+05	1 LF horizontal crack 1/16"	
17	00+15	Damage to reflectors	
17	00+25	4.5 LF vertical hairline crack	
17	00+30	4.5 LF vertical hairline crack	
17	00+35	4.5 LF vertical hairline crack	
17	00+40	4.5 LF vertical hairline crack	
17	00+45	4.5 LF vertical hairline crack	
18	00+00	4.5 LF vertical hairline crack at form joint	
18	00+15	Damage to reflectors	

Northbound East Traffic Barrier			
Unit	station	Deficiency Description	Photo
18	00+30	4.5 LF vertical hairline crack	
19	00+05	4.5 LF vertical hairline crack	
19	00+10	Damage to reflectors	
19	00+20	4.5 LF vertical hairline crack	
19	00+25	4.5 LF vertical hairline crack	
19	00+30	4.5 LF vertical hairline crack at form joint	
19	00+40	4.5 LF vertical hairline crack	
19	00+45	4.5 LF vertical hairline crack at form joint	
20	00+05	4.5 LF vertical hairline crack at form joint	
20	00+15	One missing barrier refector	
20	00+25	4.5 LF vertical hairline crack	
20	00+32	4.5 LF vertical hairline crack	
20	00+40	4.5 LF vertical hairline crack	
21	00+08	4.5 LF vertical hairline crack	
21	00+20	4.5 LF vertical hairline crack	
21	00+25	4.5 LF vertical hairline crack	
21	00+40	4.5 LF vertical hairline crack	
22	00+00	4.5 LF vertical hairline crack	
22	00+08	4.5 LF vertical hairline crack	
22	00+15	4.5 LF vertical hairline crack	
22	00+28	4.5 LF vertical hairline crack	
23	00+00	Minor cracks at construction joint	
23	00+25	4.5 LF vertical hairline crack	
23	00+38	4.5 LF vertical hairline crack	
23	00+45	4.5 LF vertical hairline crack	
24	00+05	4.5 LF vertical hairline crack	
24	00+10	4.5 LF vertical hairline crack	
24	00+20	2 missing barrier reflectors	
24	00+25	4.5 LF vertical hairline crack	
24	00+28	4.5 LF vertical hairline crack	
24	00+40	4.5 LF vertical hairline crack	
24	00+45	4.5 LF vertical hairline crack	
25	00+00	Typical cracking at construction joint	
25	00+10	4.5 LF vertical hairline crack	
25	00+20	Damage to reflectors	
25	00+35	4.5 LF vertical hairline cracks	
26	00+05	4.5 LF vertical hairline crack at form joint	
26	00+10	4.5 LF vertical hairline crack	
26	00+25	4.5 LF vertical hairline crack	
26	00+42	4.5 LF vertical hairline crack	
26	00+50	4.5 LF vertical hairline crack	
26	00+60	4.5 LF vertical hairline crack	
26	00+65	4.5 LF vertical hairline crack	
26	00+75	4.5 LF vertical hairline crack	
26	00+80	4.5 LF vertical hairline crack	

Northbound East Traffic Barrier			
Unit	station	Deficiency Description	Photo
26	00+85	4.5 LF vertical hairline crack	
26	00+92	4.5 LF vertical hairline crack	
26	01+00	Rusted door in wall	
26	01+07	3 LF vertical hairline crack	
26	01+13	4.5 LF vertical hairline crack	
26	01+20	Damage to reflectors at end	

C.2 Southbound Mainline Tunnel

C.2.1 Condition State Summary

C.2.2 Inspection Logs

C.2.2.1 Portals

C.2.2.2 Walls

C.2.2.3 Ceiling

C.2.2.4 Barriers

C.2.2.5 Lighting

EL#	Element Name	Units	Total Q	State 1	State 2	State 3	State 4
10001	**Cast-in-Place Tunnel Liner**	sq feet	59488	59367	121		
	Delamination/Spall/Patched area	sq feet			121		
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet					
	Leakage (Liners)	sq feet					
	Cracking (Liners)	sq feet		615			
10029	**Other Columns/Piles**	each	5	5			
	General Condition	each		5			
10041	**Concrete Interior Walls**	sq feet	8895	8871	24		
	Delamination/Spall/Patched area	sq feet			24		
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet					
	Cracking (Liners)	sq feet		160			
10051	**Concrete Portal**	sq feet	186	119	55	4	8
	Delamination/Spall/Patched area	sq feet			11.5	4	8
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet			10		
	Cracking (Liners)	sq feet			33.5		
10055	**Masonry Portal**	sq feet	996		498		
	Efflorescence/Rust Staining	sq feet					
	Mortar Breakdown	sq feet			498		
	Split/Spall	sq feet					
	Patched Area	sq feet					
	Masonry Displacement	sq feet					
10111	**Concrete Slab on Grade**	sq feet	43980	43980			
	Delamination/Spall/Patched area	sq feet					
	Exposed Rebar	sq feet					
	Cracking (Liners)	sq feet					
10140	**Gasket**	ft	250	142	108		
	Leakage	ft					
	Seal Adhesion/Damage/Crack	ft					
	Debris Impaction	ft					
	Adjacent Deck/Header	ft			108		
10158	**Asphalt Wearing Surface**	sq feet	35277	35065	212		
	General Condition	sq feet			212		
	Effectiveness	sq feet					
10161	**Concrete Traffic Barrier**	ft	1560	649.75	16.25		
	Delamination/Spall/Patched area	ft			1		
	Exposed Rebar	ft					
	Efflorescence/Rust Staining	ft			4		
	Cracking	ft		649.75	11.25		
10952	**Fire Protection Coating**	sq feet	6909	5729	1180		
	Effectiveness	sq feet			1180		

Southbound West Wall			
Unit	station	Deficiency Description	Photo
1	00+15	heavy rusting on cabinet door	
1	00+18	12 LF vertical hairline crack	
1	00+32	12 LF vertical hairline crack	
1	00+43	12 LF vertical hairline crack	
2	00+00	12 LF vertical hairline crack	
2	00+10	10 LF vertical hairline crack	
2	00+20	5 LF vertical hairline crack	
2	00+30	10 LF vertical hairline crack	
3	00+00	1 SF hollow tiles	
3	00+30-00+35	Minor impact damage to tiles	
4	00+00	8 SF delamination at top 4 LF of wall. Entire height of tiles removes	
6	00+25	12 LF vertical hairline crack	
6	00+45	3 LF vertical hairline crack	
7	00+00	12 SF hollow tiles along full height. 10'H x 6"W x 2" deep spall. Full height vertical hairline crack and full height missing tiles.	
7	00+25	3 LF vertical hairline crack	
7	00+35	3 LF vertical hairline crack	
8	00+00	3 LF vertical hairline crack	
8	00+11	12 LF vertical hairline crack	
9	00+16	6 LF vertical hairline crack	
9	00+30	3 LF vertical hairline crack	
		Unit 9 ends and unit 19 begins	
19	00+00	Spall 2'H x 4"W x 1" Deep. Full height of tiles removed and vertical hairline crack	
19	00+17	10 LF vertical hairline crack	
19	00+25	12 LF vertical hairline crack	
19	00+32	8 LF vertical hairline crack	
20	00+00	map cracking begins and is consistent throughout fireproofing	
20	00+11	8 LF vertical hairline crack	
22	00+20	10 LF vertical hairline crack, 2 tiles removed	
22	00+35	6 LF diagonal hairline crack	
23	00+00	12 hollow tiles, 11 removed tiles. 4 LF vertical hairline crack	
23	00+35	4 LF vertical hairline crack	
24	00+12	4 LF vertical hairline crack	
24	00+25	12 LF vertical hairline crack	
24	00+35	10 LF vertical hairline crack	
25	00+00	two full height column of tiles removed with full height vertical hairline crack	
25	00+08	6 LF diagonal hairline crack	
25	00+10	5 LF vertical hairline crack	
25	00+20	7 LF vertical hairline crack	
25	00+35	3 LF vertical hairline crack	
25	00+45	2 LF vertical hairline crack	
26	00+02	4 LF diagonal hairline crack	

Southbound West Wall			
Unit	station	Deficiency Description	Photo
26	00+10	3 LF vertical hairline crack	
26	00+15	10 LF vertical hairline crack	
26	00+25	4 LF vertical hairline crack	
26	00+28	7 LF vertical hairline crack	

Southbound East Wall			
Unit	station	Deficiency Description	Photo
1	00+11	5 LF vertical hairline crack	
1	00+17	12 LF vertical hairline crack	
1	00+27	3 LF vertical hairline crack	
1	00+32	8 LF verrtical hairline crack	
2	00+25	8 LF vertical hairline crack	
2	00+35	12 LF vertical hairline crack	
3	00+15	6 LF vertical hairline crack	
3	00+26	3 LF vertical hairline crack	
4	00+00	1 column of hollow tiles on each side of joint and 3 LF vertical hairline crack	
4	00+38	8 LF vertical hairline crack	
5	00+00	4 LF vertical hairline crack	
5	00+10	12 LF vertical hairline crack	
5	00+36	12 LF vertical hairline crack	
6	00+00	4 LF vertical hairline crack	
6	00+25	8 LF vertical hairline crack	
7	00+00	Entire column of tiles removed with full height vertical hairline crack	
7	00+15	4 LF vertical hairline crack	
7	00+26	2 LF and 3 LF vertical hairline crack	
7	00+37	6 LF vertical hairline crack	
9	00+10	3 LF vertical hairline crack	
9	00+30	4 LF vertical hairline crack	
		Unit 9 ends and unit 19 begins	
19	00+00	Full height vertical hairline crack. 3/4 height of one tile column removed. 9 other cracked tiles.	
19	00+18	12 LF vertical hairline crack	
19	00+29	3 LF vertical hairline crack	
19	00+35	3 LF vertical hairline crack	
20	00+00	begin map cracking throught fireproofing	
22	00+10	12 LF vertical hairline crack	
22	00+18	12 LF vertical hairline crack	
23	00+00	10 tiles removed, delaminated fireproofing on both sides of joint. Full height vertical hairline crack	
24	00+12	4 LF vertical hairline crack	
24	00+27	3 LF vertical hairline crack	
25	00+00	12 SF delaminated tile full height at joint with 6 cracked tiles. Full height vertical hairline crack	
25	00+30	6 LF vertical hairline crack	
26	00+12	3 LF vertical hairline crack	
26	00+22	12 LF vertical hairline crack	
26	00+30	8 LF vertical hairline crack	
26	00+40	12 LF vertical hairline crack	

Southbound Portals			
Unit	station	Deficiency Description	Photo
North Portal			
		Hairline cracking in facade block around embeded conduit over shoulder	
		Vertical hairline cracks in facade masonry over left shoulder	
		2 SF calcification cracks over left shoulder in header	
		1" x1" x1" deep spall over lane divider in header	
		Typical light efflorescense along top of portal header and base of stone fascade	
		General Note: scattered slaking stone throughout portal	
South Portal			
		1.5 LF vertical hairline crack in façade stone over center of left lane	
		2 SF of delamination in façade concrete header over lane markers with areas of spalling, Spall 6" x 2" x 1" deep, Spall 3" x 1" x 3/4" deep with exposed rebar	
		8 SF of Calcification cracks with stalagtites and standing drops on concrete portal header over lane divider.	
		Void and separation with spalling at portal over left wall	
		2 SF calcification cracking with efflorescense and moisture staining over left shoulder on portal header	
		2 SF delamination and calcification cracks in portal header over right lane	
		2 SF calcification cracks, with 3 SF area of map cracking over right Shoulder, 1 SF delamination over right lane	
		15 LF by full height area of concrete up to 6" deep of removed loose concrete over both lanes	
		6SF of delamination and map cracking on right concrete portal wall	
		Typical random moisture staining and discoloration	

Southbound Ceiling West Shoulder			
Unit	station	Deficiency Description	Photo
2	00+04	15 hollow tiles	
2	00+45	2 LF longitudinal hairline crack, 3 LF transverse hairlien crack	
3	00+15	4 LF transverse hairline crack	
3	00+20	4 LF transverse hairline crack	
4	00+25	2; 2 LF transverse hairline crack	
4	00+30	2 LF transverse hairline crack	
4	00+40	4 LF transverse hairline crack	
4	00+45	4 LF transverse hairline crack	
5	00+00	1 hollow tile	
5	00+10	6 LF diagonal hairline crack	
5	00+40	4 LF diagonal hairline crack, 4 LF longitudinal hairline crack	
6	00+15	20 LF transverse hairline crack	
6	00+30	2; 4 LF transverse hairline crack	
6	00+40	3 LF longitudinal hairline crack	
6	00+45	5 LF diagonal hairline crack	
7	00+00	4 loose tiles removed	
7	00+15	4 hollow tiles	
7	00+48	15 delaminated tiles	
8	00+00	hollow tiles along joint	
8	00+05	2; 3 LF driagonal hairline	
8	00+40	20 hollow tiles around unistrut, 3; LF longitudinal hairline crack	
8	00+48	15 hollow tiles	
9	00+00	10 removed tiles , 5 hollow tiles	
9	00+45	3 LF diagonal hairline crack	
9	00+49	3 LF diagonal hairline crack	
		Unit 9 ends and unit 19 begins	
19	00+00	4 tiles removed, 5 hollow tiles	
22	00+00	hollow tiles along fireproof at joint	
23	00+05	15 hollow tiles	
23	00+15	2 hollow tiles	
24	00+05	5 LF diagonal hairline crack	
26	00+00	6 hollow tiles	
26	00+40	4 LF, 2; 3 LF transverse hairline crack	
26	00+55	20 hollow tiles	

Southbound Ceiling West Lane			
Unit	station	Deficiency Description	Photo
3	00+25	2; 3 LF trasnverse hairline crack	
3	00+30	15 hollow tiles	
4	00+30	2 LF and 3 LF longitudinal hairline crack	
5	00+00	3 hollow tiles	
5	00+10	4 LF diagonal hairline crack	
5	00+15	4 LF longitudinal hairline crack	
5	00+20	4 LF transverse hairline crack	
5	00+35	4 LF diagonal hairline crack	
6	00+05	3 LF transverse hairline crack	
6	00+40	3 LF diagonal hairline crack	
7	00+00	4 tiles removed	
7	00+15	20 hollow tiles	
8	00+00	20 hollows tiles around joint	
8	00+30	3 LF diagonal hairline crack	
9	00+00	1 removed tile, 5 hollow tiles	
		Unit 9 ends and unit 19 begins	
19	00+00	70 removed tiles with 20 hollow tiles	
20	00+20	Map crack in fireproofing throughout remainder of section (20-00+20 to 22-00+00)	
21	00+10	1 SF delamination	
21	00+40	2 SF delamination	
22	00+00	1 removed tile, 6 hollow tiles	
23	00+05	40 hollow tiles	
23	00+35	3 tiles removed over left lane	
24	00+00	5 hollow tiles	
26	00+00	6 tiles removed over	
26	Portal	5 SF of hollow tile	

Southbound Ceiling East Lane			
Unit	station	Deficiency Description	Photo
1	00+00	5 LF diagonal hairline crack	
2	00+00	2 hollow tiles	
2	00+30	3 LF longitudinal hairline crack, 2 LF transverse hairline crack, 5 LF longitudinal hairline crack	
3	00+00	5 removed tiles, 10 hollow tiles	
4	00+00	2 hollow tiles along joint	
4	00+40	4 LF transverse hairline crack, 4 LF longitudinal hairline crack	
5	00+00	missing tile and small spall over right lane	
5	00+05	10 LF diagonal hairline crack	
5	00+35	10 LF transverse hairline crack	
6	00+00	1 SF delamination, 1" deep spall, 10 hollow tiles, 8 hollow tiles and 1 removed tile	
6	00+15	5 LF and 2 LF transverse hairline crack, 3 LF and 4 LF longitudinal hairline crack	
6	00+20	3 LF transverse hairline crack, 3 LF longitudinal hairline crack	
7	00+00	8 removed tiles and 6 hollow tiles	
7	00+10	10 LF transverse hairline crack	
7	00+48	5 LF and 4 LF longitudinal hairline crack	
8	00+00	40 removed tiles all cracked tiles are stable over right shoulder	
8	00+05	5 LF longitudinal hairline crack	
9	00+00	3 hollow tiles	
9	00+10	8 LF transverse hairline crack	
9	00+15	5 LF transverse hairline crack	
9	00+49	5 LF transverse hairline crack	
		Unit 9 ends and unit 19 begins	
19	00+00	50+ hollow tiles	
20	00+00	2 removed tiles, 6 hollow tiles	
21	00+00	Hairline crack and delamination across joint in fireproofing	
22	00+00	throughout fireproofing (20-00+00 to 22-00+00) map cracking over both lanes	
23	00+00	77 loose tiles removed or partially removed	
24	00+00	15 hollow tiles, 1 removed	
25	00+00	25 hollow tiles	
26	00+00	15 tiles hollow, 1 removed	

Southbound Roadway			
Unit	station	Deficiency Description	Photo
1	00+00	Transverse crack 3/4 width of roadway	
4	00+00	19 LF transverse crack in right lane	
7	00+00	Full width transverse crack	
10	00+00	Transverse crack 33 LF across rumble strip shoulder to shoulder	
22	00+00	Full width transverse crack	
22	00+03	2 patched cores in right lane	
25	00+00	33 LF transverse crack	
25	00+24	2 patched cores in right lane	
26	00+40	8 LF diagonal crack	

Southbound East Traffic Barrier			
Unit	station	Deficiency Description	Photo
1	00+05	4.5 LF vertical hairline crack	
1	00+15	4.5 LF vertical hairline crack	
1	00+28	4.5 LF vertical hairline crack	
1	00+35	4.5 LF vertical hairline crack	
1	00+45	4.5 LF vertical hairline crack	
2	00+05	4.5 LF vertical hairline crack	
2	00+08	4.5 LF vertical hairline crack	
2	00+20	4.5 LF vertical hairline crack	
2	00+27	4.5 LF vertical hairline crack	
2	00+39	4.5 LF vertical hairline crack	
3	00+05	4.5 LF vertical hairline crack at form joint	
3	00+10	4.5 LF vertical hairline crack	
3	00+20	4.5 LF vertical hairline crack at form joint	
3	00+25	4.5 LF vertical hairline crack	
3	00+33	4.5 LF vertical hairline crack	
3	00+38	4.5 LF vertical hairline crack	
4	00+08	4.5 LF vertical hairline crack at form joint	
4	00+23	4.5 LF vertical hairline crack	
4	00+27	4.5 LF vertical hairline crack	
4	00+36	4.5 LF vertical hairline crack	
4	00+35	1 missing barrier reflector	
4	00+40	4.5 LF vertical hairline crack at form joint	
5	00+05	4.5 LF vertical hairline crack	
5	00+25	4.5 LF vertical hairline crack	
6	00+10	4.5 LF vertical hairline crack	
6	00+22	4.5 LF vertical hairline crack	
6	00+26	4.5 LF vertical hairline crack	
6	00+35	4.5 LF vertical hairline crack	
6	00+37	4.5 LF vertical hairline crack	
6	00+39	4.5 LF vertical hairline crack	
7	00+20	4.5 LF vertical hairline crack	
7	00+25	4.5 LF vertical hairline crack	
7	00+35	4.5 LF vertical hairline crack	
7	00+37	4.5 LF vertical hairline crack	
7	00+46	2 missing barrier reflectors	
9	00+12	4.5 LF vertical hairline crack	
9	00+16	4.5 LF vertical hairline crack	
9	00+18	4.5 LF vertical hairline crack	
9	00+20	4.5 LF vertical hairline crack	
9	00+30	4.5 LF vertical hairline crack	
9	00+32	4.5 LF vertical hairline crack	
9	00+38	4.5 LF vertical hairline crack	
		Unit 9 ends and unit 19 begins	
19	00+18	4.5 LF vertical hairline crack	
19	00+23	4.5 LF vertical hairline crack	

Southbound East Traffic Barrier			
Unit	station	Deficiency Description	Photo
19	00+37	4.5 LF vertical hairline crack with efflorescense	
20	00+02	1 missing barrier reflector	
21	00+05	1 missing barrier reflector	
22	00+13	4.5 LF vertical hairline crack	
22	00+27	4.5 LF vertical hairline crack	
22	00+35	4.5 LF vertical hairline crack	
23	00+08	2.25 LF vertical hairline crack	
23	00+25	4.5 LF vertical hairline crack	
23	00+40	4.5 LF vertical hairline crack	
23	00+45	4.5 LF vertical hairline crack	
24	00+07	4.5 LF vertical hairline crack	
24	00+12	4.5 LF vertical hairline crack with efflorescense	
24	00+16	1 missing barrier reflector	
24	00+25	4.5 LF vertical hairline crack	
25	00+05	4.5 LF vertical hairline crack	
25	00+10	4.5 LF vertical hairline crack	
25	00+20	2 missing barrier reflectors	
25	00+21	4.5 LF vertical hairline crack	
25	00+25	4.5 LF vertical hairline crack	
25	00+40	4.5 LF vertical hairline crack	
25	00+45	4.5 LF vertical hairline crack	
26	00+05	4.5 LF vertical hairline crack	
26	00+12	4.5 LF vertical hairline crack	
26	00+20	2 missing barrier reflectors	
26	00+24	4.5 LF vertical hairline crack	
26	00+30	4.5 LF vertical hairline crack	
26	00+35	4.5 LF vertical hairline crack	
26	00+45	4.5 LF vertical hairline crack	
26	00+50	4.5 LF vertical hairline crack	
26	00+55	4.5 LF vertical hairline crack	
26	00+60	4.5 LF vertical hairline crack	
26	00+63	4.5 LF vertical hairline crack	
26	00+66	4.5 LF vertical hairline crack	
26	00+69	3 missing barrier reflectors	

Southbound West Traffic Barrier			
Unit	station	Deficiency Description	Photo
1	00+05	4.5 LF vertical hairline crack at pipe encasement	
1	00+10	4.5 LF vertical hairline crack	
1	00+15	4.5 LF vertical hairline crack	
1	00+20	4.5 LF vertical hairline crack	
1	00+23	2 missing barrier reflectors	
1	00+27	4.5 LF vertical hairline crack at form joint	
1	00+35	4.5 LF vertical hairline crack	
1	00+43	3 LF vertical hairline crack	
1	00+48	4.5 LF vertical hairline crack	
2	00+05	4.5 LF vertical hairline crack	
2	00+15	4.5 LF vertical hairline crack	
2	00+20	4.5 LF vertical hairline crack	
2	00+30	2 missing barrier reflectors	
2	00+31	4.5 LF vertical hairline crack	
2	00+35	4.5 LF vertical hairline crack	
3	00+08	4.5 LF vertical hairline crack	
3	00+18	4.5 LF vertical hairline crack	
3	00+21	4.5 LF vertical hairline crack	
3	00+35	2 missing barrier reflectors	
4	00+01	4.5 LF vertical hairline crack 1/16" wide	
4	00+21	4.5 LF vertical hairline crack	
4	00+31	4.5 LF vertical hairline crack	
4	00+35	4.5 LF vertical hairline crack	
4	00+40	3 missing barrier reflectors	
5	00+08	4.5 LF vertical hairline crack	
5	00+18	4.5 LF vertical hairline crack	
5	00+21	4.5 LF vertical hairline crack	
5	00+24	4.5 LF vertical hairline crack	
5	00+45	4.5 LF vertical hairline crack	
6	00+02	3 missing barrier reflectors	
6	00+07	4.5 LF vertical hairline crack	
6	00+15	4.5 LF vertical hairline crack	
6	00+07	4.5 LF vertical hairline crack	
6	00+25	4.5 LF vertical hairline crack	
6	00+37	4.5 LF vertical hairline crack	
6	00+40	4.5 LF vertical hairline crack	
6	00+49	4.5 LF vertical hairline crack 3/16" wide. 2" x 6" x 2" deep spall	
7	00+10	3 missing barrier reflectors	
7	00+25	4.5 LF vertical hairline crack	
7	00+36	4.5 LF vertical hairline crack	
8	00+05	4.5 LF vertical hairline crack	
8	00+08	4.5 LF vertical hairline crack	
8	00+11	4.5 LF vertical hairline crack	
8	00+14	3 missing barrier reflectors	
8	00+30	4.5 LF vertical hairline crack at pipe encasement	

Southbound West Traffic Barrier			
Unit	station	Deficiency Description	Photo
8	00+32	4.5 LF vertical hairline crack	
8	00+35	4.5 LF vertical hairline crack	
8	00+40	3 LF vertical hairline crack	
9	00+05	4.5 LF vertical hairline crack at form joint	
9	00+16	2" diameter spall 1/4" deep	
9	00+20	3 missing barrier reflectors	
9	00+21	4.5 LF vertical hairline crack	
9	00+25	4.5 LF vertical hairline crack 1/16" wide	
9	00+35	4.5 LF vertical hairline crack	
		Unit 9 ends and unit 19 begins	
19	00+12	4.5 LF vertical hairline crack	
19	00+12	6LF x 1/2" deep collision damage	
19	00+21	4.5 LF vertical hairline crack	
19	00+24	2 missing barrier reflectors	
19	00+25	4.5 LF vertical hairline crack	
19	00+32-00+45	collision damage 1/2" deep	
20	00+15	4.5 LF vertical hairline crack	
20	00+23	4.5 LF vertical hairline crack	
20	00+31	3 missing barrier reflectors	
20	00+40	4.5 LF vertical hairline crack	
21	00+05	4.5 LF vertical hairline crack	
21	00+07	4.5 LF vertical hairline crack	
21	00+28	4.5 LF vertical hairline crack at form joint	
21	00+40	3 missing barrier reflectors	
21	00+42	4.5 LF vertical hairline crack	
22	00+05	4.5 LF vertical hairline crack	
22	00+15	4.5 LF vertical hairline crack	
22	00+28	4.5 LF vertical hairline crack	
22	00+36	3 missing barrier reflectors	
22	00+37	4.5 LF vertical hairline crack	
22	00+39	4.5 LF vertical hairline crack	
23	00+06	4.5 LF vertical hairline crack	
23	00+20	4.5 LF vertical hairline crack	
23	00+25	4.5 LF vertical hairline crack at form joint	
23	00+37	4.5 LF vertical hairline crack with light efflorescense	
23	00+41	4.5 LF vertical hairline crack	
23	00+46	1 missing barrier reflector	
24	00+05	4.5 LF vertical hairline crack	
24	00+20	4.5 LF vertical hairline crack with light efflorescense	
24	00+34	4.5 LF vertical hairline crack	
24	00+45	4.5 LF vertical hairline crack	
24	00+46	2 missing barrier reflectors	
24	00+48	2 missing barrier reflectors	
25	00+10	4.5 LF vertical hairline crack	

Southbound West Traffic Barrier			
Unit	station	Deficiency Description	Photo
25	00+23	4.5 LF vertical hairline crack	
25	00+25	4.5 LF vertical hairline crack	
25	00+40	4.5 LF vertical hairline crack	
25	00+44	1 missing barrier reflector	
25	00+45	4.5 LF vertical hairline crack	
26	00+06	4.5 LF vertical hairline crack	
26	00+15	4.5 LF vertical hairline crack	
26	00+25	3 LF vertical hairline crack	
26	00+32	4.5 LF vertical hairline crack	
26	00+37	4.5 LF vertical hairline crack	
26	00+44	1 missing barrier reflector	

C.3 3rd Street Ramp Tunnel

C.3.1 Condition State Summary

C.3.2 Inspection Logs

C.3.2.1 Portals

C.3.2.2 Walls

C.3.2.3 Ceiling

C.3.2.4 Barriers

C.3.2.5 Lighting

EL#	Element Name	Units	Total Q	State 1	State 2	State 3	State 4
10001	**Cast-in-Place Tunnel Liner**	sq feet	28350	28295	55		
	Delamination/Spall/Patched area	sq feet			45		
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet			10		
	Leakage (Liners)	sq feet					
	Cracking (Liners)	sq feet		152			
10041	**Concrete Interior Walls**	sq feet	22160	21993.5	166.5		
	Delamination/Spall/Patched area	sq feet			166.5		
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet					
	Cracking (Liners)	sq feet		291			
10051	**Concrete Portal**	sq feet	107	56	50.5	0.5	
	Delamination/Spall/Patched area	sq feet			0.5	0.5	
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet			40		
	Cracking (Liners)	sq feet			10		
10055	**Masonry Portal**	sq feet	671		671		
	Efflorescence/Rust Staining	sq feet					
	Mortar Breakdown	sq feet			671		
	Split/Spall	sq feet					
	Patched Area	sq feet					
	Masonry Displacement	sq feet					
10061	**Concrete Ceiling Slab**	sq feet	2724	2724			
	Delamination/Spall/Patched area	sq feet					
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet					
	Cracking	sq feet					
10111	**Concrete Slab on Grade**	sq feet	22910	22910			
	Delamination/Spall/Patched area	sq feet					
	Exposed Rebar	sq feet					
	Cracking (Liners)	sq feet					
10140	**Gasket**	ft	150	129	21		
	Leakage	ft					
	Seal Adhesion/Damage/Crack	ft					
	Debris Impaction	ft					
	Adjacent Deck/Header	ft			21		
10158	**Asphalt Wearing Surface**	sq feet	20058	20024	34		
	General Condition	sq feet			34		
	Effectiveness	sq feet					
10161	**Concrete Traffic Barrier**	ft	1690	1695.5	5.5		
	Delamination/Spall/Patched area	ft			3.5		
	Exposed Rebar	ft					
	Efflorescence/Rust Staining	ft					
	Cracking	ft		675	2		
10952	**Fire Protection Coating**	sq feet	13420	13185	235		
	Effectiveness	sq feet			235		

Exit Ramp West Wall			
Unit	station	Deficiency Description	Photo
10	00+18	4 LF horizontal hairline crack	
10	00+38	1 LF vertical hairline crack and 4 LF vertical hairline crack	
11	00+40	3 LF vertical hairline crack and chipped tile	
12	00+15	12 LF vertical hairline crack	
12	00+20	5 LF vertical hairline crack at barrier	
12	000+30	12 LF vertical hairline crack	
13	00+00	3 SF hollow sound at joint	
13	00+00	12 LF vertical hairline crack	
13	00+29	10 LF vertical hairline crack	
15	00+20	2 SF hollow tile at barrier	
15	00+30	1 LF vertical hairline crack	
15	00+32	1 SF hollow sounding tile	
15	00+40	3 SF hollow tile at barrier	
16	00+00	1 SF hollow sound at joint with 12 LF vertical hairline crack at joint	
16	00+02-00+07	5 SF of hollow tile	
16	00+16	8 LF vertical hairline crack	
17	00+00	4 Hollow tiles at joint	
17	00+02	Light efflorescense at wall from mid height to bottom	
17	00+10	1 SF delamination	
17	00+11	6 SF delamination	
17	00+16	5 SF delamination	
17	00+10	Begin 100 SF of map cracks with delamination	
18	00+10	End of map cracks and delamination	
18	00+20	1 SF delamination	
18	00+22	5 SF of hollow sound with map cracks	
18	00+25-00+50	25 SF of delamination and map cracking	
19	00+00	2 SF hollow tiles at joint	
19	00+10	12 LF vertical hairline crack at joint	
19	00+26	12 LF vertical hairline crack	
19	00+30	12 LF vertical hairline crack	
20	00+00	Fireproofing has map cracks throughout entire section	
20	00+45	1 SF delamination	
21	00+02	4 SF delamination at electrical box	
21	00+07	5 SF Delamination along map cracks	
21	00+20	2 SF Delamination along map cracks	
21	00+22	2 SF delamination along map cracks	
21	00+25	2 SF delamination along map cracks	
21	00+45	1 SF delamination along map cracks	
22	00+00	12 LF vertical hairline crack with 2 SF hollow sound	
22	00+37	3 SF delaminated fireproofing	
23	00+00	2 SF hollow tile at joint	
24	00+00	2 SF hollow tile at joint	
24	00+13	4 LF vertical hairline crack	

Exit Ramp West Wall			
Unit	station	Deficiency Description	Photo
24	00+27	4 LF vertical hairline crack	
24	00+30	3 LF vertical hairline crack	
25	00+00	12 LF vertical hairline crack at joint	
25	00+31	3 LF vertical hairline crack	
26	00+22	9 LF vertical hairline crack	
26	00+00	12 LF vertical hairline crack	
26	00+50	12 LF vertical hairline crack	
26	00+60	11 LF vertical hairline crack	
26	00+70	Missing tiles at recessed box	

Exit Ramp East Wall			
Unit	station	Deficiency Description	Photo
10	00+15	12 LF vertical hairline crack	
11	00+30	12 LF vertical hairline crack	
12	00+28	10 LF vertical hairline crack	
12	00+49	2 SF hollow sound, 3 tiles removed	
13	00+00	12 LF vertical hairline crack	
13	00+30	3 LF vertical hairline crack	
14	00+15	3 LF vertical hairline crack	
14	00+34	2; 3LF vertical hairline cracks	
15	00+35	3 LF diagonal hairline crack	
16	00+00	1 SF hollow sound, 4 tiles removed	
17	00+00	6 hollow tiles at joint with efflorescense	
17	00+15	1 SF delamination	
17	00+17	2 SF delamination	
17	00+20	1 SF delamination	
17	00+20-00+28	10 SF delamination at barrier	
17	00+42	1 SF delamination	
17	00+48	3 SF delamination	
18	00+00	3 SF delamination at joint	
18	00+05	2 SF delamination	
18	00+20-00+50	30 SF delamination along map cracking	
19	00+00	3 SF hollow tiles at joint	
19	00+05	Hollow tiles around door way	
19	00+20	3 LF vertical hairline crack	
20	00+00	1 SF delamination	
20	00+05-00+10	10 SF delamination along map cracking	
20	00+20	4 SF delamination along map cracking	
20	00+30-00+35	5 SF delamination at barrier	
20	00+45-00+50	10 SF delamination at joint	
21	00+00	12 LF vertical hairline crack with delamination at joint	
21	00+02-00+10	8 SF delamination at barrier	
21	00+10	3 SF delaminated fireproofing	
21	00+15	3 LF vertical hairline crack with 3 SF delamination	
21	00+20-00+25	5 SF delamination along map cracking	
21	00+30	2 SF delamination at barrier	
21	00+35	4 SF delamination at barrier	
21	00+40	4 LF vertical hairline crack with 4 SF delamination	
21	00+45-00+50	5 SF delamination along map cracking	

Exit Ramp East Wall			
Unit	station	Deficiency Description	Photo
22	00+05	6 SF delamination at box in wall	
22	00+20	4 SF delamination	
22	00+25	2 SF delamination at barrier	
23	00+00	4 SF hollow sound at joint	
23	00+20	7 LF vertical hairline crack	
23	00+30	4 LF vertical hairline crack	
24	00+00	5 LF vertical hairline crack with hollow sounding tiles	
24	00+10	7 LF vertical hairline crack	
24	00+30	4 LF vertical hairline crack with hollow sound	
25	00+00	4 SF hollow tile with 12 LF vertical hairline crack at joint	
25	00+25	5 LF vertical hairline crack	
25	00+30	8 LF vertical hairline crack	
26	00+18	12 LF vertical hairline crack	
26	00+46	3 LF vertical hairline crack	
26	00+58	10 LF vertical hairline crack	

Exit Ramp Portals			
Unit	station	Deficiency Description	Photo
		North Portal	
		Stalagtites with standing drip and hairline cracks on portal header	
		Failing mortar joints at North east end of portal	
		Typical stress cacks in façade	
		Typical moisture stain and moderate efflorescense along entire base of façade	
		South Portal	
		10 SF of map cracking at portal wall concrete cap	
		2" x 2" x 1" deep spall in cap over east lane	
		Moisture staining throughout portal	
		Brush growth at east side of portal wall	
		dislodged fascade stone at east walll base, Stone delaminated	
		4" x 6" x 3" deep spall at left wall portal cap	

Exit Ramp Ceiling unit 10-12			
Unit	station	Deficiency Description	Photo
11	00+10	6 LF transverse HLC over east shoulder	
11	00+35	3 LF tranverse hairline crack over west lane	
11	00+40	4 LF transverse hairline crack over east shoulder	
11	00+48	2 LF hairline crack and collision damage on tiles 10 LF	

Exit Ramp Ceiling unit 10-12			
Unit	station	Deficiency Description	Photo
12	00+48	10 SF efflorescense on the joint	
13	00+48	2 hollow sounding tiles, 1/2 tile removed at joint	
14	00+10	5 hollow tiles	
14	00+15	2 missing tiles	
15	00+10	5 LF transverse hairline crack	
15	00+15	5 LF transverse hairline crack	
15	00+20	5 LF transverse hairline crack	
16	00+00	4 hollow tiles at joint, 2 missing, 4 damaged	
17	00+00	delaminated fireproofing at joint with full width crack	
19	00+00	Delaminated fireproofing across joint	
22	00+45	1 SF of delaminated fireproofing	
23	00+00	15 LF diagonal hairline crack	
23	00+25	20 hollow tiles	
23	00+40	4 LF longitudinal hairline crack	
24	00+05	5 LF longitudinal hairline crack	
24	00+15	25 hollow tiles	
25	00+00	5 hollow tiles	
26	00+00	2 hollow tiles	
26	00+25	4 LF trasverse hairline crack	
26	00+35	6 hollow tiles	
26	00+50	5 LF transverse hairline crack	
26	00+75	2; 4 LF trasnverse hairline crack	

Exit Ramp Ceiling Middle Lane			
Unit	station	Deficiency Description	Photo
14	00+05	8 hollow tiles	
14	00+25	15 hollow tiles	
14	00+30	7 hollow tiles	
14	00+40	6 hollow tiles	
16	00+00	7 cracked tile at joint with 3 broken	
16	00+35	12 hollow tiles	
20	00+15	3 SF delaminated fireproofing	
22	00+40	1 SF delaminated fireproofing	
24	00+30	2 hollow tiles	
25	00+10	2 hollow tiles	
26	00+40	5 delaminated tiles	
26	00+60	12 LF diagonal hairline crack	

Exit Ramp Ceiling East Lane			
Unit	station	Deficiency Description	Photo
13	00+00	5 hollow tiles	
14	00+00	8 hollow tiles	
15	00+00	8 hollow tiles	
16	00+00	1 cracked tile	
17	00+00	4 hollow tiles	
19	00+00	25 hollow tiles	
22	00+00	2 SF delaminated fireproofing	
24	00+00	30 hollow tiles	
26	00+00	7 hollow tiles	
26	00+00	2 hollow tiles	

Exit Ramp Roadway			
Unit	station	Deficiency Description	Photo
12	00+05	2 patched cores in middle of roadway	
13	00+00	10 LF transverse crack in middle of roadway	
15	00+29	2 patched cores in middle of lane	
16	00+00	10 LF transverse crack	
20	00+00	2 patched cores in lane	
23	00+00	4 LF transverse crack	
25	00+00	10 LF transverse crack	

Exit Ramp West Traffic Barrier			
Unit	station	Deficiency Description	Photo
10	00+01	3 missing barrier reflectors	
10	00+05	3 LF vertical hairline crack	
10	00+08	3 LF vertical hairline crack	
10	00+25	4.5 LF vertical hairline crack	
10	00+28	4.5 LF vertical hairline crack	
10	00+37	1" x 4" x 1" deep spall	
10	00+38	3 missing barrier reflectors	
11	00+11	4.5 LF vertical hairline crack	
11	00+40	4.5 LF vertical hairline crack	
11	00+42	2 missing barrier reflectors	
12	00+05	4.5 LF vertical hairline crack	
12	00+25	4.5 LF vertical hairline crack	
12	00+38	4.5 LF vertical hairline crack	
12	00+48	1 missing barrier reflector	
13	00+09	4.5 LF vertical hairline crack	
14	00+00	1 missing barrier reflector	
14	00+04	4.5 LF vertical hairline crack	
14	00+25	4.5 LF vertical hairline crack at form joint	
14	00+40	4.5 LF vertical hairline crack	
14	00+43	4.5 LF vertical hairline crack	
15	00+01	2 missing barrier reflectors, last one is damaged	
15	00+05	4.5 LF vertical hairline crack	
15	00+22	4.5 LF vertical hairline crack	
16	00+03	3 missing barrier reflectors	
16	00+10	4.5 LF vertical hairline crack	
16	00+20	4.5 LF vertical hairline crack	
16	00+40	4.5 LF vertical hairline crack	
16	00+44	4.5 LF vertical hairline crack	
17	00+04	4.5 LF vertical hairline crack	
17	00+05	1 missing barrier reflector	
17	00+09	4.5 LF vertical hairline crack	
18	00+07	2 damaged barrier reflector	
18	00+08	4.5 LF vertical hairline crack	
18	00+25	4.5 LF vertical hairline crack	
19	00+00	4" x 4" x 2" deep spall	
19	00+35	4.5 LF vertical hairline crack	
21	00+18	3 damaged reflectors	
21	00+30	4.5 LF vertical hairline crack	
21	00+35	4.5 LF vertical hairline crack at form joint	
22	00+02	4.5 LF vertical hairline crack	
22	00+08	4.5 LF vertical hairline crack	
22	00+21	1 missing barrier reflector	
22	00+23	4.5 LF vertical hairline crack	
22	00+38	4.5 LF vertical hairline crack	
23	00+06	4.5 LF vertical hairline crack	

Exit Ramp West Traffic Barrier			
Unit	station	Deficiency Description	Photo
23	00+08	4.5 LF vertical hairline crack	
23	00+10	4.5 LF vertical hairline crack	
23	00+20	4.5 LF vertical hairline crack	
23	00+25	4.5 LF vertical hairline crack	
23	00+38	4.5 LF vertical hairline crack	
24	00+10	4.5 LF vertical hairline crack	
24	00+20	4.5 LF vertical hairline crack	
24	00+22	2 missing barrier reflectors	
24	00+27	4.5 LF vertical hairline crack	
24	00+35	4.5 LF vertical hairline crack	
25	00+05	4.5 LF vertical hairline crack	
25	00+10	4.5 LF vertical hairline crack	
25	00+23	4.5 LF vertical hairline crack	
25	00+25	1 missing barrier reflector	
25	00+27	4.5 LF vertical hairline crack	
25	00+35	4.5 LF vertical hairline crack	
25	00+37	4.5 LF vertical hairline crack	
25	00+40	4.5 LF vertical hairline crack	
26	00+05	4.5 LF vertical hairline crack	
26	00+09	4.5 LF vertical hairline crack	
26	00+12	4.5 LF vertical hairline crack	
26	00+15	4.5 LF vertical hairline crack	
26	00+20	4.5 LF vertical hairline crack	
26	00+25	4.5 LF vertical hairline crack, 3 missing reflectors	
26	00+27	4.5 LF vertical hairline crack	
26	00+30	4.5 LF vertical hairline crack	
26	00+50	4.5 LF vertical hairline crack	
26	00+55	4.5 LF vertical hairline crack	
26	00+58	4.5 LF vertical hairline crack	
26	00+63	4.5 LF vertical hairline crack	
26	00+65	4.5 LF vertical hairline crack	
26	00+70	3 LF vertical hairline crack	
26	portal	2 missing barrier reflectors	

Exit Ramp East Traffic Barrier			
Unit	station	Deficiency Description	Photo
10	00+05	4.5 LF vertical hairline crack	
10	00+10	4.5 LF vertical hairline crack	
10	00+13	2 Missing barrier reflectors	
10	00+20	4.5 LF vertical hairline crack	
10	00+23	4.5 LF vertical hairline crack	
10	00+25	4.5 LF vertical hairline crack	
10	00+40	4.5 LF vertical hairline crack	
11	00+04	4.5 LF vertical hairline crack	
11	00+08	4.5 LF vertical hairline crack	
11	00+12	4.5 LF vertical hairline crack	
11	00+25	4.5 LF vertical hairline crack	
11	00+30	4.5 LF vertical hairline crack	
11	00+45	4.5 LF vertical hairline crack	
12	00+20	2 Missing barrier reflectors	
12	00+12	4.5 LF vertical hairline crack	
12	00+25	4.5 LF vertical hairline crack	
12	00+30	4.5 LF vertical hairline crack	
12	00+45	4.5 LF vertical hairline crack	
13	00+08	4.5 LF vertical hairline crack	
13	00+25	4.5 LF vertical hairline crack	
13	00+41	4.5 LF vertical hairline crack	
14	00+13	4.5 LF vertical hairline crack	
14	00+16	4.5 LF vertical hairline crack	
14	00+20	4.5 LF vertical hairline crack	
14	00+20	1 missing barrier reflector	
14	00+25	4.5 LF vertical hairline crack	
14	00+30	4.5 LF vertical hairline crack	
14	00+30	4.5 LF vertical hairline crack	
15	00+05	4.5 LF vertical hairline crack	
15	00+08	4.5 LF vertical hairline crack	
15	00+20	4.5 LF vertical hairline crack	
15	00+20	2 Missing barrier reflectors	
15	00+25	4.5 LF vertical hairline crack	
15	00+30	4.5 LF vertical hairline crack	
15	00+36	4.5 LF vertical hairline crack	
16	00+08	4.5 LF vertical hairline crack	
16	00+18	4.5 LF vertical hairline crack	
16	00+20	4.5 LF vertical hairline crack	
16	00+25	4.5 LF vertical hairline crack	
16	00+40	4.5 LF vertical hairline crack	
16	00+42	4.5 LF vertical hairline crack	
16	00+45	4.5 LF vertical hairline crack with light efflorescence	
16	00+49	2 SF 1/2" deep spall at joint	
17	00+05	4.5 LF vertical hairline crack	
17	00+08	4.5 LF vertical hairline crack	

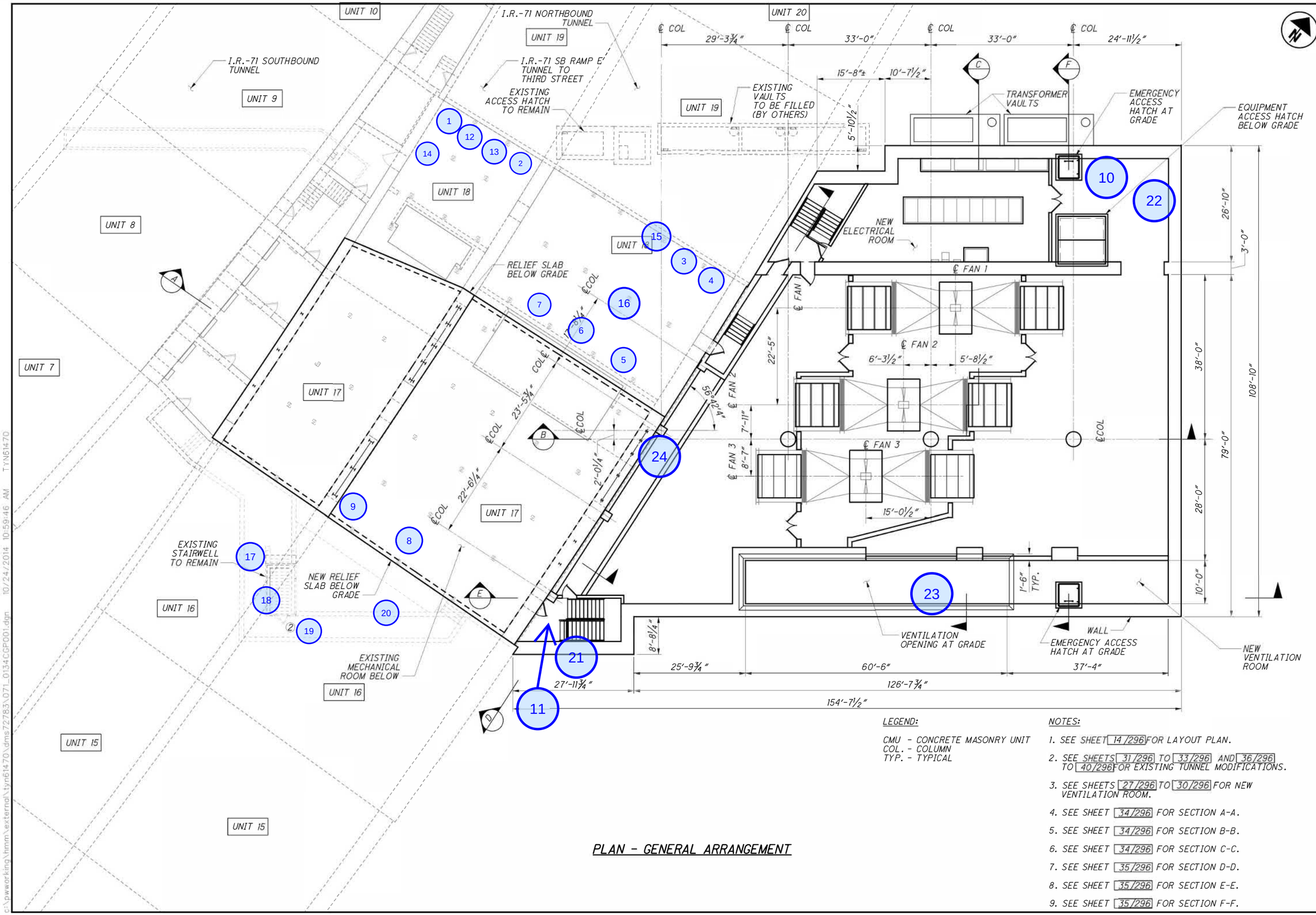
Exit Ramp East Traffic Barrier			
Unit	station	Deficiency Description	Photo
17	00+20	2 Missing barrier reflectors	
17	00+28	4.5 LF vertical hairline crack	
17	00+40	4.5 LF vertical hairline crack	
17	00+43	4.5 LF vertical hairline crack	
18	00+05	4.5 LF vertical hairline crack	
18	00+30	3 missing barrier reflectors	
19	00+12	4.5 LF vertical hairline crack	
19	00+20	4.5 LF vertical hairline crack	
19	00+30	1 missing barrier reflector	
19	00+33	4.5 LF vertical hairline crack	
19	00+40	4.5 LF vertical hairline crack	
20	00+05	4.5 LF vertical hairline crack	
20	00+18	4.5 LF vertical hairline crack	
20	00+30	1 missing barrier reflector	
20	00+43	4.5 LF vertical hairline crack	
21	00+08	4.5 LF vertical hairline crack	
21	00+10	4.5 LF vertical hairline crack	
21	00+18	4.5 LF vertical hairline crack	
21	00+25	4.5 LF vertical hairline crack	
21	00+35	2 missing barrier reflector	
21	00+38	4.5 LF vertical hairline crack	
22	00+05	4.5 LF vertical hairline crack	
22	00+09	4.5 LF vertical hairline crack	
22	00+23	4.5 LF vertical hairline crack	
22	00+30	4.5 LF vertical hairline crack	
22	00+36	1 missing barrier reflector	
22	00+46	2 LF vertical crack 1/8" wide	
23	00+07	4.5 LF vertical hairline crack	
23	00+23	4.5 LF vertical hairline crack	
23	00+27	4.5 LF vertical hairline crack	
23	00+38	4.5 LF vertical hairline crack	
23	00+42	1 missing barrier reflector	
23	00+45	4.5 LF vertical hairline crack	
23	00+48	4.5 LF vertical hairline crack	
24	00+05	4.5 LF hairline crack with light efflorescense	
24	00+06	4.5 LF vertical hairline crack	
24	00+15	4.5 LF vertical hairline crack	
24	00+17	4.5 LF vertical hairline crack	
24	00+29	4.5 LF vertical hairline crack	
24	00+37	4.5 LF vertical hairline crack	
24	00+40	3 missing barrier reflectors	
25	00+25	4.5 LF vertical hairline crack	
25	00+29	4.5 LF vertical hairline crack	
25	00+38	3 missing barrier reflectors	
25	00+42	4.5 LF vertical hairline crack	

Exit Ramp East Traffic Barrier			
Unit	station	Deficiency Description	Photo
25	00+45	4.5 LF vertical hairline crack	
26	00+05	4.5 LF vertical hairline crack	
26	00+07	4.5 LF vertical hairline crack	
26	00+11	4.5 LF vertical hairline crack	
26	00+18	4.5 LF vertical hairline crack	
26	00+22	4.5 LF vertical hairline crack	
26	00+33	4.5 LF vertical hairline crack	
26	00+38	3 missing barrier reflectors	
26	00+70	4.5 LF vertical hairline crack	
26	00+78	4.5 LF vertical hairline crack	
26	00+81	4.5 LF vertical hairline crack	
26	Portal	2 Missing barrier reflectors	

C.4 MEP Rooms

C.4.1 Condition State Summary

C.4.2 Inspection Logs



PLAN - GENERAL ARRANGEMENT

LEGEND:

CMU - CONCRETE MASONRY UNIT
COL. - COLUMN
TYP. - TYPICAL

NOTES:

1. SEE SHEET 14/296 FOR LAYOUT PLAN.
2. SEE SHEETS 31/296 TO 33/296 AND 36/296 TO 40/296 FOR EXISTING TUNNEL MODIFICATIONS.
3. SEE SHEETS 27/296 TO 30/296 FOR NEW VENTILATION ROOM.
4. SEE SHEET 34/296 FOR SECTION A-A.
5. SEE SHEET 34/296 FOR SECTION B-B.
6. SEE SHEET 34/296 FOR SECTION C-C.
7. SEE SHEET 35/296 FOR SECTION D-D.
8. SEE SHEET 35/296 FOR SECTION E-E.
9. SEE SHEET 35/296 FOR SECTION F-F.

DESIGN AGENCY
HATCH MOTT MacDONALD
18013 CLEVELAND PKWY.
SUITE 200
CLEVELAND, OH 44135

DESIGNED BTF | DRAWN JMS | REVIEWED MAR | DATE 10/20/14
CHECKED KTO | REVISED | STRUCTURE FILE NUMBER 3106578

STRUCTURAL GENERAL ARRANGEMENT PLAN
BRIDGE NO. HAM-71-0134
I-71 LYTLE TUNNEL UNDER LYTLE PARK

HAM-71-01.34
PID No. 87268

26/296

284/555

Note	Location	Deficiency Description	Photo
Control Room			
1	North Wall	4 LF hairline crack with light efflorescense and previous moisture	
2	North Wall	4 LF hairline crack	
3	North Wall	4 LF hairline crack around pipe penetrations	
4	North Wall	9 LF hairline crack in corner	
5	South Wall	Hairline cracking with 1 SF delamination to right of plenum door	
6	South Wall	4 LF hairline crack with small spall	
7	South Wall	10 LF diagonal hairline crack with strain gage	
12	North Wall	efflorescense 15 LF along roof joint	
13	North Wall	light efflorescense on wall	
14	North west floor	40 SF staining on floor	
15	North wall	Waterproofing material built up on floor	
16	Base of anchors	Rusting at base of anchor at floor	
Plenum Area			
8	South Wall	Previous staining, no visible moisture	
9	South Wall	18" x 2" x 3" deep spall previously foam injected	
24	Steel framing	Anchor bolts installed at angle	
West Egress Hallway			
17	south wall	8 LF vertical hairline crack	
18	ceiling	2 LF hairline crack with efflorescense	
19	West wall	3 LF hairline crack	
20	West wall	6 LF hairline crack	
Mechanical Room			
10	North Corner	Water intrusion at access hatch collecting on floor and spreading to nearby rooms	
22	North corner	10 LF hairline crack on wall	
23	Intake plenum	15 LF vertical hairline crack on south wall	
11	South Corner Stairs	Water intrusion at ceiling above stairs with new injection ports. Heavy moisture on floor.	
21	South corner stairs	6 LF hairline crack on west wall	
Southbound to Exit ramp Cross passage			
25	Under stairs	8 SF spalling and 1 SF delamination along floor	
26	Above door	2 LF hairline crack over exit ramp doorway	
27	Base of stairs	15 LF vertical hairline crack	
28	void space	16; 16 LF vertical hairline cracks throughout area between Exit Ramp and South barrels	
29	void space	Efflorescense at ceiling join and 30 SF honecombing, efflorescense, and exposed rebar	