



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

PID 105470

November, 2020



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Contents

Exe	ecutive	e Summa	ary	1
1	Ger	neral App	oraisal	10
	1.1	Overall	Appraisal	10
	1.2	Mechan	nical Systems	10
		1.2.1	Tunnel Ventilation System	10
		1.2.2	Fire Standpipe	10
		1.2.3	Carbon Monoxide Detection System	10
		1.2.4	HVAC	10
	1.3	Electrica	al Systems	10
		1.3.1	Critical Items	10
		1.3.2	Non-Critical Items	10
	1.4	Structur	ral Systems	11
		1.4.1	Overview of the Tunnel Components	11
		1.4.2	Vertical Clearance	11
2	Criti	cal/Sign	ificant Findings	12
	2.1	Critical	Findings	12
		2.1.1	Northbound Tunnel	12
		2.1.2	Northbound Tunnel Closure Sign	12
	2.2	Significa	ant Findings	12
		2.2.1	Electrical Equipment and Panel Board Labeling	12
		2.2.2	Loose Masonry at Portals	12
		2.2.3	Deteriorating Concrete Cap at Southbound South Portal	13
		2.2.4	Communication	13
3	Oth	er Findir	ngs	14
	3.1	Overall		14
	3.2	Mechan	nical	14
		3.2.1	Priority Repair Items	14
		3.2.2	Routine Repair Items	14
	3.3	Electrica	al	17
		3.3.1	Tunnel Wiring	17
		3.3.2	Tunnel Lighting Controls	17
		3.3.3	Tunnel Lighting Fixtures	17
		3.3.4	Tunnel Raceways & Cables	17
		3.3.5	Lighting in Tunnel Ventilation Building	17
		3.3.6	Electrical Equipment	17

3.4.1 Leakage at Emergency Access Hatch 3.4.1 Leakage Along Construction Joint in Stainwell 3.4.2 Leakage Along Construction Joint in Stainwell 3.4.3 Loose Tiles at Expansion Joints 3.4.4 Cast-in-Place Tunnel Liner (10001) 20 3.4.5 Steel Columns/Piles (10020) 20 3.4.6 Other Columns/Piles (10020) 20 3.4.7 Concrete Interior Walls (10041) 20 3.4.8 Concrete Portal (10051) 21 3.4.9 Masonry Portal (10055) 22 3.4.10 Concrete Ceiling Slab (10061) 22 3.4.11 Steel Hangers and Anchorages (10080) 22 3.4.12 Concrete Slab on Grade (10111) 22 3.4.13 Gasket (10140) 23 4.4.15 Concrete Traffic Barrier (10161) 23 4.4.16 Fire Protection Coating (10952) 23 4 Methods 4.1 General 4.2 Mechanical 4.2.1 Dates and Time-Frames 4.2.2 Access 4.2.3 Tools and Equipment 4.3 Electrical 4.3.1 Dates and Time-Frames 24 4.3.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 25 4.4 Structural 4.4.1 Dates and Time Frames 26 4.4.2 Access 4.3.3 Tool and Equipment List 5 Recommended Actions and Estimated Costs 5.1 General 5.2 Mechanical 5.2.1 Critical/Significant Items 5.2.2 Estimated Mechanical Costs 5.3 Electrical 5.3.1 Critical/Significant Items 5.3.2 Other Items 5.3.3 Estimated Electrical Costs 5.3 Estimated Electrical Costs			3.3.7	ICA Systems	17
3.4.2 Leakage Along Construction Joint in Stainwell 19		3.4	Structu	ral	18
3.4.3 Loose Tiles at Expansion Joints 3.4.4 Cast-in-Place Tunnel Liner (10001) 20 3.4.5 Steel Columns/Piles (10020) 20 3.4.6 Other Columns/Piles (10029) 20 3.4.7 Concrete Interior Walls (10041) 20 3.4.8 Concrete Portal (10051) 21 3.4.9 Masonry Portal (10055) 22 3.4.10 Concrete Ceiling Slab (10061) 23 3.4.11 Steel Hangers and Anchorages (10080) 24 3.4.12 Concrete Slab on Grade (10111) 25 3.4.13 Gasket (10140) 26 3.4.14 Asphalt Wearing Surface (10158) 3.4.15 Concrete Traffic Barrier (10161) 3.4.16 Fire Protection Coating (10952) 4 Methods 4.1 General 4.2 Mechanical 4.2.1 Dates and Time-Frames 4.2.2 Access 4.2.3 Tools and Equipment 4.3 Electrical 4.3.1 Dates and Time-Frames 4.3.2 Access 4.3.3 Tool and Equipment List 4.3.1 Dates and Time-Frames 4.4.2 Access 4.3.3 Tool and Equipment List 4.3.1 Dates and Time-Frames 4.4.2 Access 4.3.3 Tool and Equipment List 4.3.1 Dates and Time-Frames 4.4.3 Inspection Methodology 4.4 Structural 4.4.1 Dates and Time Frames 4.4.2 Access 4.4.3 Tool and Equipment List 5 Recommended Actions and Estimated Costs 5.1 General 5.2 Mechanical 5.2.1 Critical/Significant Items 5.2.2 Estimated Mechanical Costs 5.3 Electrical 5.3.1 Critical/Significant Items 5.3.2 Other Items 27			3.4.1	Leakage at Emergency Access Hatch	18
3.4.4 Cast-in-Place Tunnel Liner (10001) 3.4.5 Steel Columns/Piles (10020) 3.4.6 Other Columns/Piles (10029) 3.4.7 Concrete Interior Walls (10041) 3.4.8 Concrete Portal (10051) 3.4.9 Masonry Portal (10055) 3.4.10 Concrete Ceiling Slab (10061) 3.4.11 Steel Hangers and Anchorages (10080) 2.2 3.4.12 Concrete Slab on Grade (10111) 2.3 4.13 Gasket (10140) 3.4.14 Asphalt Wearing Surface (10158) 3.4.15 Concrete Traffic Barrier (10161) 3.4.16 Fire Protection Coating (10952) 4 Methods 4.1 General 4.2 Mechanical 4.2.1 Dates and Time-Frames 4.2.2 Access 4.2.3 Tools and Equipment 4.3 Electrical 4.3.1 Dates and Time-Frames 4.3.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 4.4 Structural 4.4.1 Dates and Time Frames 4.4.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 2.5 Access 4.4.3 Tool and Equipment List 4.4.1 Dates and Time Frames 4.4.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 2.5 Access 4.4.3 Tool and Equipment List 5 Recommended Actions and Estimated Costs 5.1 General 5.2 Mechanical 5.2.1 Critical/Significant Items 5.2.2 Estimated Mechanical Costs 5.3 Electrical 5.3.1 Critical/Significant Items 5.3.2 Other Items 27			3.4.2	Leakage Along Construction Joint in Stairwell	19
3.4.5 Steel Columns/Piles (10020) 20 3.4.6 Other Columns/Piles (10029) 20 3.4.7 Concrete Interior Walls (10041) 20 3.4.8 Concrete Portal (10055) 22 3.4.9 Masonry Portal (10055) 22 3.4.10 Concrete Ceiling Slab (10061) 22 3.4.11 Steel Hangers and Anchorages (10080) 22 3.4.12 Concrete Slab on Grade (10111) 22 3.4.13 Gasket (10140) 22 3.4.14 Asphalt Wearing Surface (10158) 22 3.4.15 Concrete Traffic Barrier (10161) 23 3.4.16 Fire Protection Coating (10952) 23 4 Methods 24 4.1 General 4.2 Mechanical 24 4.2 Mechanical 24 4.2.1 Dates and Time-Frames 24 4.2.2 Access 24 4.2.3 Tools and Equipment 24 4.3.1 Dates and Time-Frames 24 4.3.1 Dates and Time-Frames 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.3.3 Tool and Equipment List 25 5 Recommended Actions and Estimated Costs 27 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			3.4.3	Loose Tiles at Expansion Joints	19
3.4.6 Other Columns/Piles (10029) 3.4.7 Concrete Interior Walls (10041) 20 3.4.8 Concrete Portal (10051) 22 3.4.9 Masonry Portal (10055) 22 3.4.10 Concrete Ceiling Slab (10061) 23.4.11 Steel Hangers and Anchorages (10080) 24 3.4.12 Concrete Slab on Grade (10111) 25 3.4.13 Gasket (10140) 26 3.4.14 Asphalt Wearing Surface (10158) 27 3.4.15 Concrete Traffic Barrier (10161) 28 3.4.16 Fire Protection Coating (10952) 4 Methods 4.1 General 4.2 Mechanical 4.2.1 Dates and Time-Frames 4.2.2 Access 4.2.3 Tools and Equipment 4.3 Electrical 4.3.1 Dates and Time-Frames 4.3.2 Access 4.3.3 Tool and Equipment List 4.3.1 Dates and Time-Frames 4.3.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 4.4 Structural 4.4.1 Dates and Time Frames 4.4.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 4.5 Structural 4.6 Structural 4.7 Dates and Time Frames 4.8 Structural 4.8 Tructural 4.9 Dates and Time Frames 4.0 Dates and Time Frames 4.0 Dates and Time Frames 4.1 Dates and Time Frames 4.2 Dates and Time Fra			3.4.4	Cast-in-Place Tunnel Liner (10001)	20
3.4.7 Concrete Interior Walls (10041) 20 3.4.8 Concrete Portal (10051) 22 3.4.9 Masonry Portal (10055) 22 3.4.10 Concrete Ceiling Slab (10061) 22 3.4.11 Steel Hangers and Anchorages (10080) 22 3.4.12 Concrete Slab on Grade (10111) 22 3.4.13 Gasket (10140) 22 3.4.14 Asphalt Wearing Surface (10158) 22 3.4.15 Concrete Traffic Barrier (10161) 23 3.4.16 Fire Protection Coating (10952) 23 4 Methods 24 4.1 General 24 4.2.1 Dates and Time-Frames 24 4.2.2 Access 24 4.2.3 Tools and Equipment 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.5 Structural 26 4.4.1 Dates and Time Frames 26 5.1 General 27 5.2 Mechanical 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			3.4.5	Steel Columns/Piles (10020)	20
3.4.8 Concrete Portal (10051) 3.4.9 Masonry Portal (10055) 3.4.10 Concrete Celling Slab (10061) 3.4.11 Steel Hangers and Anchorages (10080) 2.2 3.4.12 Concrete Slab on Grade (10111) 2.3 3.4.13 Gasket (10140) 3.4.14 Asphalt Wearing Surface (10158) 3.4.15 Concrete Traffic Barrier (10161) 3.4.16 Fire Protection Coating (10952) 4 Methods 4.1 General 4.2 Mechanical 4.2.1 Dates and Time-Frames 4.2.2 Access 4.2.3 Tools and Equipment 4.3 Electrical 4.3.1 Dates and Time-Frames 4.3.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 4.4 Structural 4.4.1 Dates and Time Frames 4.4.2 Access 4.4.3 Tool and Equipment List 4.3.4 Inspection Methodology 4.5 Structural 4.4.1 Dates and Time Frames 2.6 A.4.3 Tool and Equipment List 4.5 Mechanical 4.6 Structural 4.7 Dates and Time Frames 4.8 Structural 4.9 Coess 4.0 Coe			3.4.6	Other Columns/Piles (10029)	20
3.4.9 Masonry Portal (10055) 3.4.10 Concrete Ceiling Slab (10061) 3.4.11 Steel Hangers and Anchorages (10080) 3.4.12 Concrete Slab on Grade (10111) 3.4.13 Gasket (10140) 3.4.15 Concrete Traffic Barrier (10161) 3.4.16 Fire Protection Coating (10952) 4 Methods 4.1 General 4.2 Mechanical 4.2.1 Dates and Time-Frames 4.2.2 Access 4.2.3 Tools and Equipment 4.3 Electrical 4.3.1 Dates and Time-Frames 4.3.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 4.4 Structural 4.4.1 Dates and Time Frames 4.4.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 5.5 Recommended Actions and Estimated Costs 5 Recommended Actions and Estimated Costs 5.1 General 5.2.1 Critical/Significant Items 5.2.2 Estimated Mechanical Costs 5.3.1 Critical/Significant Items 5.3.2 Other Items			3.4.7	Concrete Interior Walls (10041)	20
3.4.10 Concrete Ceiling Slab (10061) 22 3.4.11 Steel Hangers and Anchorages (10080) 22 3.4.12 Concrete Slab on Grade (10111) 22 3.4.13 Gasket (10140) 22 3.4.14 Asphalt Wearing Surface (10158) 22 3.4.15 Concrete Traffic Barrier (10161) 23 3.4.16 Fire Protection Coating (10952) 23 4 Methods 24 4.1 General 24 4.2 Mechanical 24 4.2.1 Dates and Time-Frames 24 4.2.2 Access 24 4.2.3 Tools and Equipment 24 4.3 Electrical 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.3.3 Tool and Equipment List 25 5.3.4 Critical/Significant Items 27 5.2.1 Critical/Significant Items 27 5.3.2 Other Items 27			3.4.8	Concrete Portal (10051)	22
3.4.11 Steel Hangers and Anchorages (10080) 3.4.12 Concrete Slab on Grade (10111) 3.4.13 Gasket (10140) 3.4.14 Asphalt Wearing Surface (10158) 3.4.15 Concrete Traffic Barrier (10161) 3.4.16 Fire Protection Coating (10952) 4 Methods 4.1 General 4.2 Mechanical 4.2.1 Dates and Time-Frames 4.2.2 Access 4.3.3 Tools and Equipment 4.3 Electrical 4.3.1 Dates and Time-Frames 4.3.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 4.5 Structural 4.4.1 Dates and Time Frames 4.4.1 Dates and Time Frames 5.4.4.3 Tool and Equipment List 4.3.1 Dates and Time Frames 4.4.1 Dates and Time Frames 4.4.2 Access 5.5 Access 4.5 Structural 4.6 Structural 4.7 Dates and Time Frames 4.8 Structural 5.9 Access 5.1 General 5.2 Estimated Costs 5.1 General 5.2.1 Critical/Significant Items 5.2.2 Estimated Mechanical Costs 5.3.1 Critical/Significant Items 5.3.2 Other Items			3.4.9	Masonry Portal (10055)	22
3.4.12 Concrete Slab on Grade (10111) 3.4.13 Gasket (10140) 3.4.14 Asphalt Wearing Surface (10158) 3.4.15 Concrete Traffic Barrier (10161) 3.4.16 Fire Protection Coating (10952) 4 Methods 4.1 General 4.2 Mechanical 4.2.1 Dates and Time-Frames 4.2.2 Access 4.2.3 Tools and Equipment 4.3 Electrical 4.3.1 Dates and Time-Frames 4.3.2 Access 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 4.4 Structural 4.4.1 Dates and Time Frames 4.4.2 Access 25 4.3.3 Tool and Equipment List 26 4.3.1 Dates and Time Frames 27 5.1 General 5.2 Mechanical 5.2.1 Critical/Significant Items 5.3.2 Other Items 27 5.3.1 Critical/Significant Items 5.3.2 Other Items			3.4.10	Concrete Ceiling Slab (10061)	22
3.4.13 Gasket (10140) 22 3.4.14 Asphalt Wearing Surface (10158) 22 3.4.15 Concrete Traffic Barrier (10161) 23 3.4.16 Fire Protection Coating (10952) 23 4 Methods 24 4.1 General 24 4.2 Mechanical 24 4.2.1 Dates and Time-Frames 24 4.2.2 Access 24 4.2.3 Tools and Equipment 24 4.3 Electrical 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 25 5.1 General 26 5.2 Mechanical 27 5.2 Mechanical 27 5.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			3.4.11	Steel Hangers and Anchorages (10080)	22
3.4.14 Asphalt Wearing Surface (10158) 3.4.15 Concrete Traffic Barrier (10161) 3.4.16 Fire Protection Coating (10952) 23 4 Methods 4.1 General 4.2 Mechanical 4.2.1 Dates and Time-Frames 4.2.2 Access 4.2.3 Tools and Equipment 4.3 Electrical 4.3.1 Dates and Time-Frames 4.3.2 Access 24 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 4.4 Structural 4.4.1 Dates and Time Frames 4.4.2 Access 25 4.3.3 Tool and Equipment List 26 4.3.1 Dates and Time Frames 27 5.1 General 5.2 Mechanical 5.2 Mechanical 5.2 Secommended Actions and Estimated Costs 5.3 Electrical 5.3.1 Critical/Significant Items 5.3.2 Other Items 27 5.3.1 Critical/Significant Items 5.3.2 Other Items			3.4.12	Concrete Slab on Grade (10111)	22
3.4.15 Concrete Traffic Barrier (10161) 3.4.16 Fire Protection Coating (10952) 23 4 Methods 24 4.1 General 4.2 Mechanical 4.2.1 Dates and Time-Frames 4.2.2 Access 4.2.3 Tools and Equipment 24 4.3.1 Dates and Time-Frames 24 4.3.1 Dates and Time-Frames 24 4.3.1 Dates and Time-Frames 25 4.3.3 Tool and Equipment List 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5 Recommended Actions and Estimated Costs 5.1 General 5.2 Mechanical 5.2.1 Critical/Significant Items 5.2.2 Estimated Mechanical Costs 5.3 Electrical 5.3.1 Critical/Significant Items 5.3.2 Other Items 27			3.4.13	Gasket (10140)	22
3.4.16 Fire Protection Coating (10952) 23			3.4.14	Asphalt Wearing Surface (10158)	22
4 Methods 24 4.1 General 24 4.2 Mechanical 24 4.2.1 Dates and Time-Frames 24 4.2.2 Access 24 4.2.3 Tools and Equipment 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 26 5.2 Mechanical 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			3.4.15	Concrete Traffic Barrier (10161)	23
4.1 General 24 4.2 Mechanical 24 4.2.1 Dates and Time-Frames 24 4.2.2 Access 24 4.2.3 Tools and Equipment 24 4.3 Electrical 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			3.4.16	Fire Protection Coating (10952)	23
4.2 Mechanical 24 4.2.1 Dates and Time-Frames 24 4.2.2 Access 24 4.2.3 Tools and Equipment 24 4.3 Electrical 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27	4	Met	hods		24
4.2.1 Dates and Time-Frames 24 4.2.2 Access 24 4.2.3 Tools and Equipment 24 4.3 Electrical 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27		4.1	Genera	al	24
4.2.2 Access 24 4.2.3 Tools and Equipment 24 4.3 Electrical 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27		4.2	Mechar	nical	24
4.2.3 Tools and Equipment 24 4.3 Electrical 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 26 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			4.2.1	Dates and Time-Frames	24
4.3 Electrical 24 4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			4.2.2	Access	24
4.3.1 Dates and Time-Frames 24 4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			4.2.3	Tools and Equipment	24
4.3.2 Access 25 4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27		4.3	Electric	cal	24
4.3.3 Tool and Equipment List 25 4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 26 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			4.3.1	Dates and Time-Frames	24
4.3.4 Inspection Methodology 25 4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			4.3.2	Access	25
4.4 Structural 26 4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5 Recommended Actions and Estimated Costs 27 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			4.3.3	Tool and Equipment List	25
4.4.1 Dates and Time Frames 26 4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5 Recommended Actions and Estimated Costs 27 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			4.3.4	Inspection Methodology	25
4.4.2 Access 26 4.4.3 Tool and Equipment List 26 5 Recommended Actions and Estimated Costs 27 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27		4.4	Structu	ral	26
4.4.3 Tool and Equipment List 26 5 Recommended Actions and Estimated Costs 27 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			4.4.1	Dates and Time Frames	26
5 Recommended Actions and Estimated Costs 5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			4.4.2	Access	26
5.1 General 27 5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			4.4.3	Tool and Equipment List	26
5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27	5	Red	ommen	ded Actions and Estimated Costs	27
5.2 Mechanical 27 5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27		5.1	Genera	al	27
5.2.1 Critical/Significant Items 27 5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27			_		
5.2.2 Estimated Mechanical Costs 27 5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27		- : -			
5.3 Electrical 27 5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27					
5.3.1 Critical/Significant Items 27 5.3.2 Other Items 27		5.3			
5.3.2 Other Items 27					
				-	
			5.3.3	Estimated Electrical Costs	28

	5.3.4	Testing Data	28
5.4	Structu	ral	28
	5.4.1	Critical/Significant Items	28
	5.4.2	Estimated Structural Costs	28

A. Mechanical Logs

- A.1 Tunnel Fans and Corresponding Components
- A.2 Fire Standpipes
- A.3 HVAC Equipment and Components

B. Electrical Logs

- B.1 Itemized Inspection Sheets with FHWA Equipment Condition Scoring, Observations, and Recommendations
- B.2 Critical Findings Correspondence to ODOT
- B.3 Inspection Photos
- B.4 Testing Data Received from Contractor

C. Structural Logs

- C.1 Northbound Mainline Tunnel
- C.2 Southbound Mainline Tunnel
- C.3 3rd Street Ramp Tunnel
- C.4 MEP Rooms

388236 | 2019 Fall | November, 2020

List of Figures

1-1 Location	3
1-2 Tunnel Entrances	3
1-3 Layout of Tunnels	4
1-4 Layout of Fan Room, Plenums, and Electrical Spaces	5
1-5 Fireproofing Layout	6
1-6 Inventory Photo: Northbound Looking North	6
1-7 Inventory Photo: Northbound Looking South	7
1-8 Inventory Photo: 3 rd Street Ramp Looking South	7
1-9 Inventory Photo: 3 rd Street Ramp Looking North	8
1-10 Inventory Photo: Southbound Looking South	8
1-11 Inventory Photo: Southbound Looking North	9
2-1 Loose and Missing Masonry at Portals	12
2-2 Disintegrated Concrete Cap at Southbound South Portal	13
3-1 Damper Actuator Oil Leak	14
3-2 Missing Standpipe Riser Cap	15
3-3 Facility Floor Drain Water Pooling	15
3-4 Facility Floor Drain Debris Blockage	16
3-5 Evidence of Leakage Along Construction Joint in Stairwell and Injection Ports	19
3-6 Loose Tiles at Expansion Joints	19
3-7 Typical Hairline Crack in Ceiling Tiles	20
3-8 10 LF Diagonal Hairline Crack with Strain Gauge on Control Room East Wall	20
3-9 Large Area of Efflorescence Present Between Units 16/17 in the Ramp Barrel	21
3-10 Area of Delamination and Spalling with Exposed Rebar in Cross Passageway	21
3-11 Calcification Cracks and Stalactites at Southbound South Portal Header	22
3-12 Typical Vertical Hairline Crack in Barrier and Collision Scrapes	23

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.

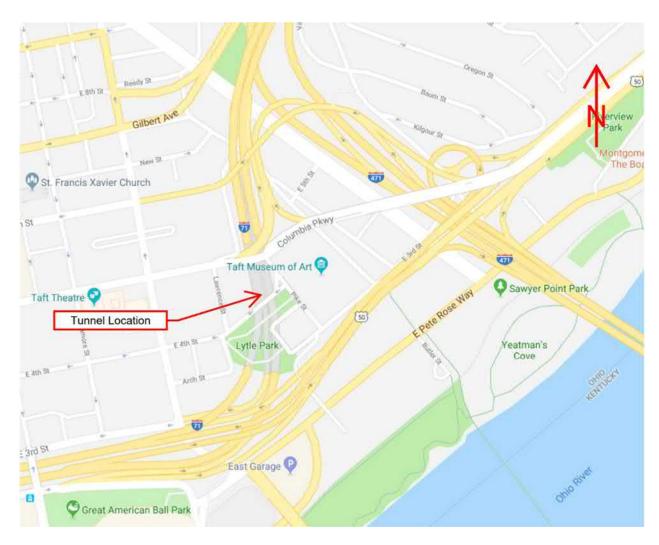
Each of the three tunnels is separated into roughly 150-foot-long segments separated by expansion joints. Each segment is further subdivided into three approximately 50-foot-long units. Northbound and the 3rd Street exit ramp share the same units. The Southbound tunnel, starting from the south end, consists 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.

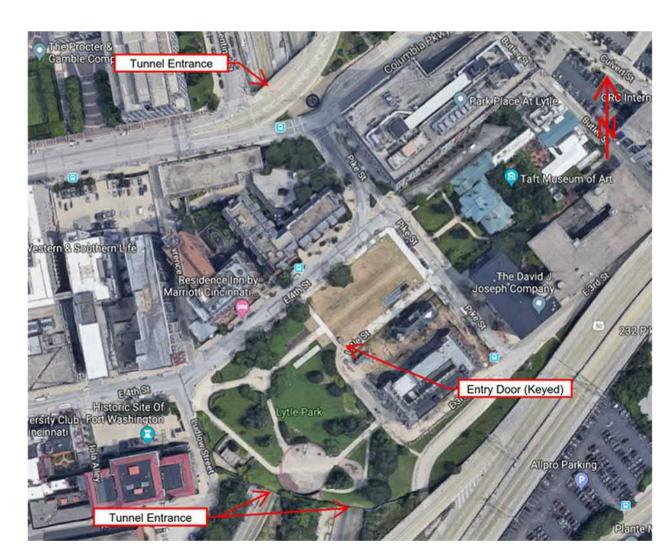
The fan room, electrical rooms and exhaust shaft is located alongside, the Northbound and 3rd Street ramp tunnels' Units 17, 18, and 19. The original plenum and the mechanical and electrical (MEP) rooms are above the same Northbound and 3rd Street ramp tunnels. The floors, walls, and ceilings of these 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.

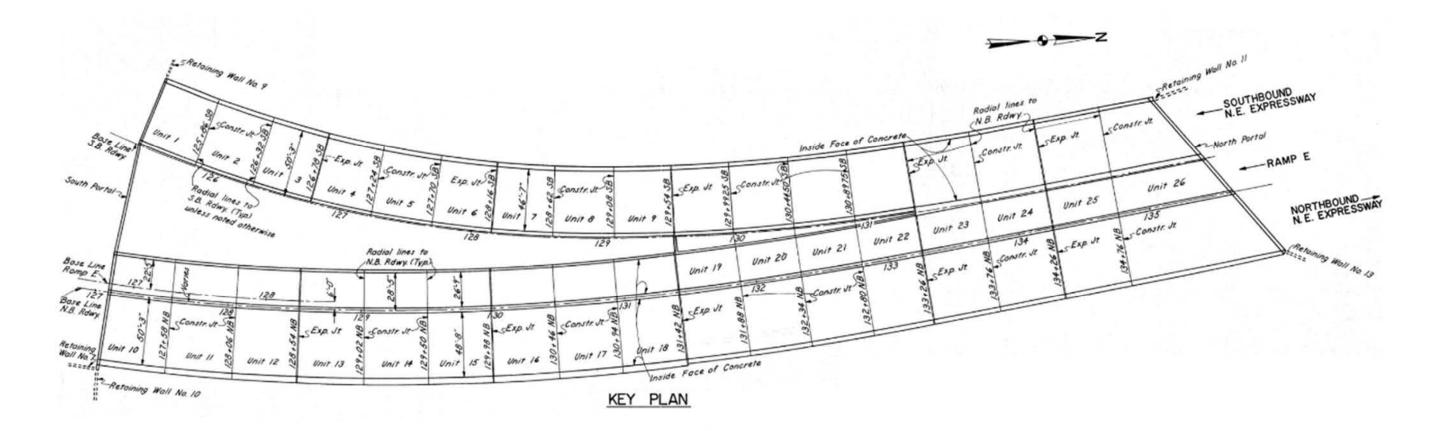
For the structural inspection, the I-71 Northbound barrel was closed to traffic overnight Thursday September 17th, the 3rd Street ramp was inspected while closed to traffic the following night Friday September 18th, and the Southbound barrel was inspected while closed to traffic Saturday September 19th.



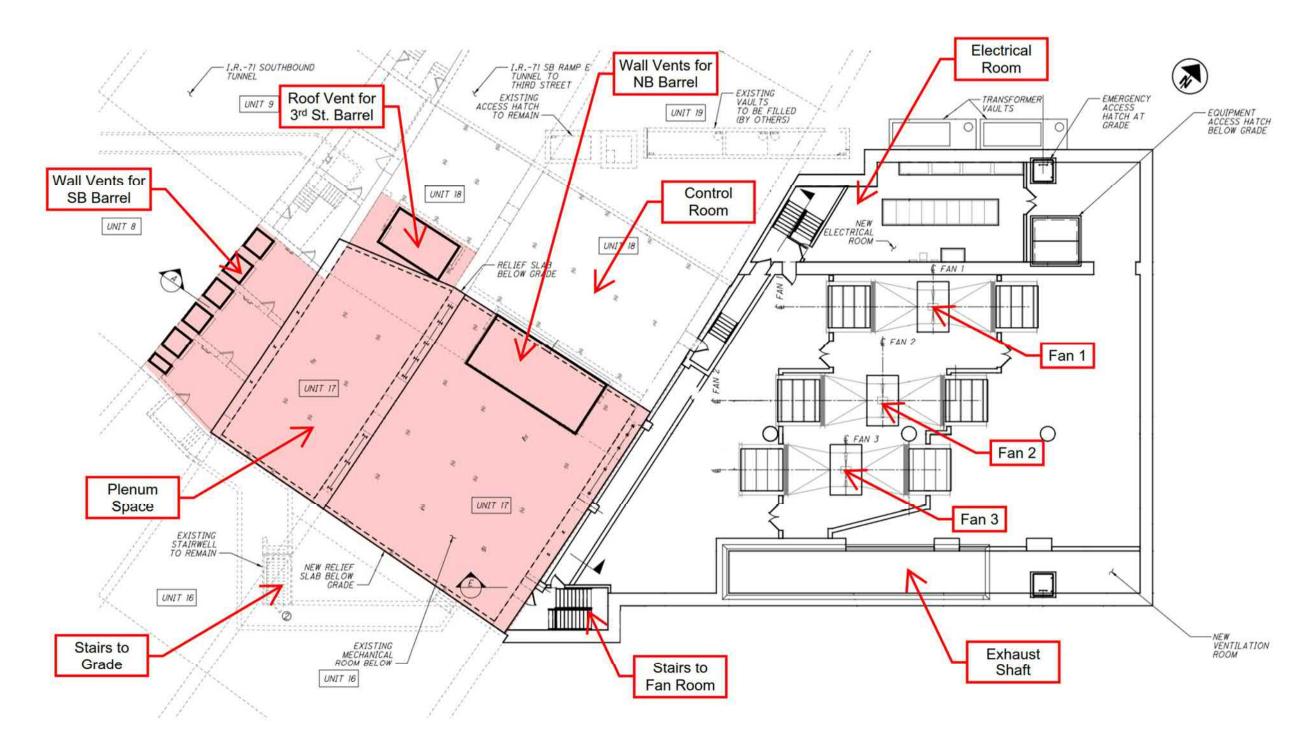
1-1 Location



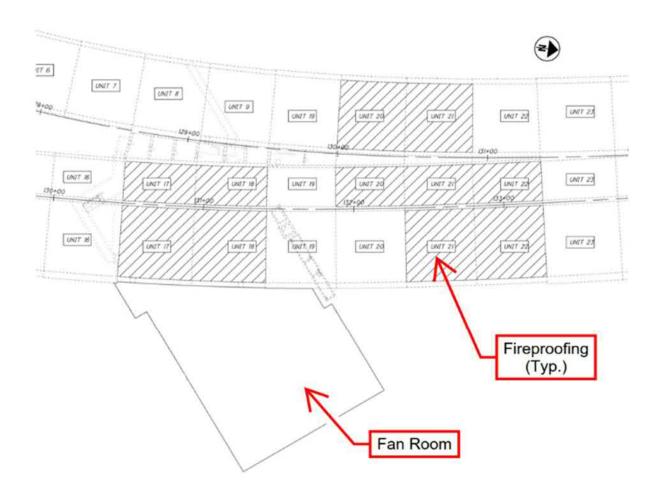
1-2 Tunnel Entrances



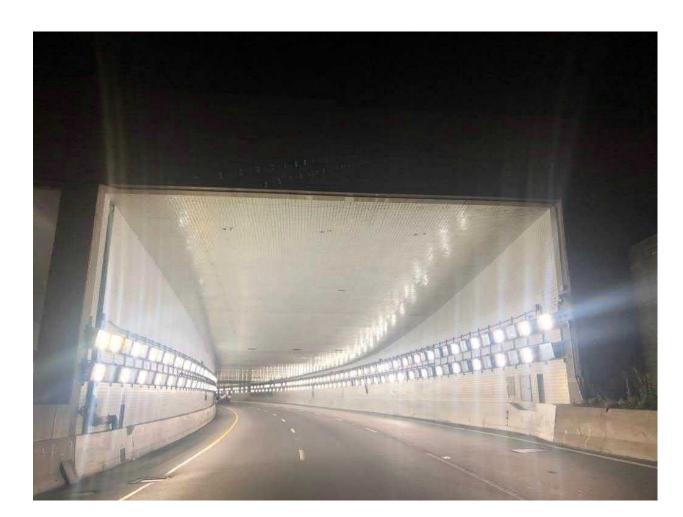
1-3 Layout of Tunnels



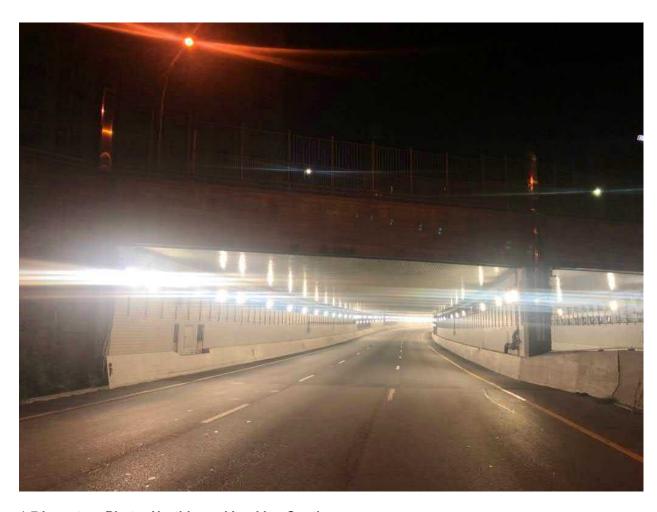
1-4 Layout of Fan Room, Plenums, and Electrical Spaces



1-5 Fireproofing Layout



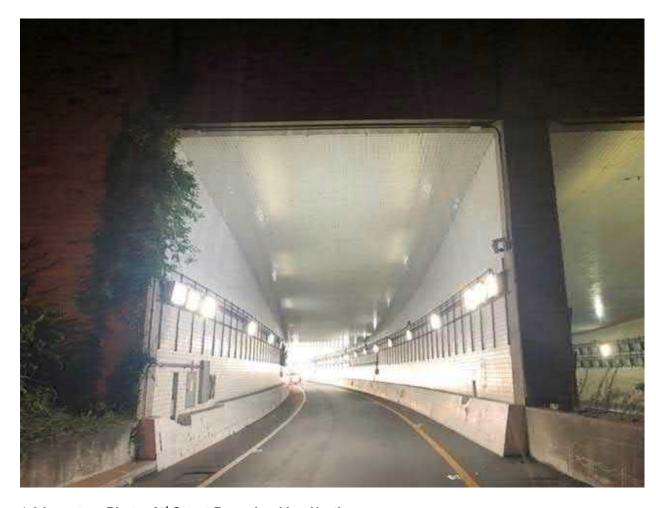
1-6 Inventory Photo: Northbound Looking North



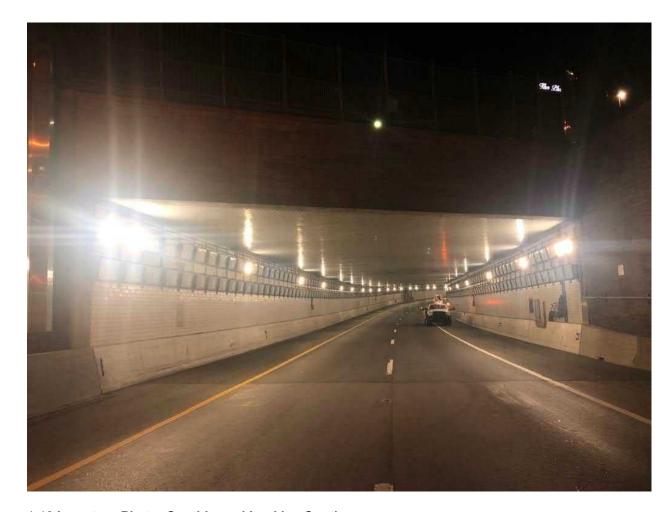
1-7 Inventory Photo: Northbound Looking South



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

10

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.
- 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.

11

- 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

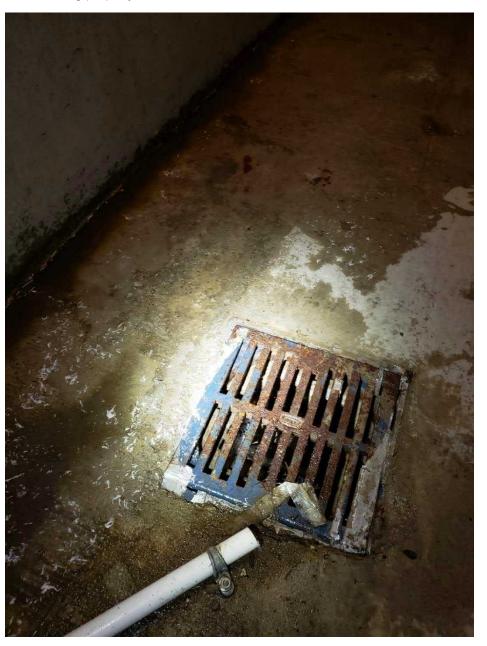
TI-DS damper actuators have minor leaks around actuator shaft underneath thermal insulation jacket. See Appendix A, page 145.

3.2.2.4 Electric Unit Heater

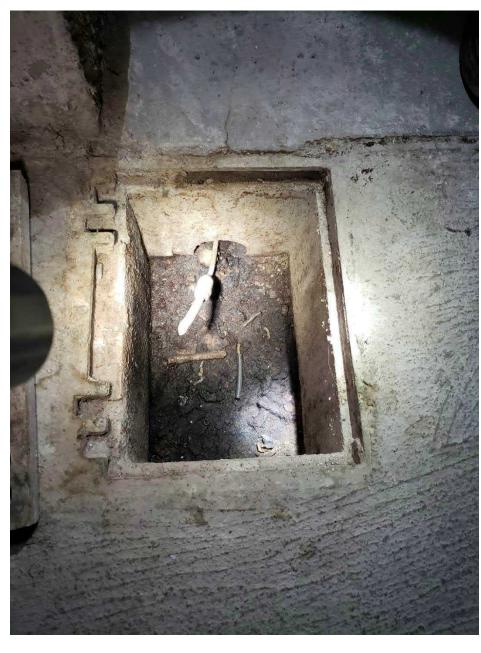
Electric Unit Heater EUH-3 does not turn off. See Appendix A, page 376.

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

17

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.

18

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

24

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
 - o 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.

25

4.3.3 Tool and Equipment List

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

- Tools
 - Walkie Talkies
 - Flashlights
 - Cell Phones
 - Bucket Truck
- PPE
 - Hard Hats
 - o Reflective Tearaway Vests
 - Steel Toe Cap Boots
 - Gloves
 - Face Masks
 - o 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 3^{rd} 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
 - o Cell Phones
 - Masonry Hammers
 - o Rubber Mallets
 - o Tape Measures
 - o Measuring Wheel
- PPE

- Hard Hats
- Reflective Tearaway Vests
- Steel Toe Cap Boots
- o Gloves
- o 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.

26

388236 | 2019 Fall | November, 2020

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

388236 | 2019 Fall | November, 2020

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.

28

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

- A.1 Tunnel Fans and Corresponding Components
- A.1.1 Fan Assembly Check Sheet
- A.1.2 Carbon Monoxide
- A.1.3 Tunnel Isolation Dampers
- A.2 Fire Standpipes
- A.2.1 Northbound Tunnel
- A.2.2 Ramp Tunnel
- A.2.3 Southbound Tunnel
- A.2.4 Electrical Room/Staircase
- A.3 HVAC Equipment and Components
- A.3.1 HVAC Units
- A.3.2 Ductwork
- A.3.3 Other



APPENDICES LIST

FAN ASSEMBLY CHECKSHEET	Δ
TV-F1	
TV-F2	
TV-F3	
CARBON MONOXIDE DETECTION SYSTEM	
CONB-1	
CONB-2	
COSR-1	
COSR-2	
COSB-1	
COSB-2	
TUNNEL ISOLATION DAMPERS	
TI-DN	
TI-DR	
TI-DS	
FAN ISOLATION DAMPERS	
FI-D1	
FI-D2	
FI-D3	
FIRE STANDPIPES	172
TINE STANDERED	1/3
Na	470
NORTHBOUND	
NB MID-TUNNEL RISER	
NB-SOUTH PORTAL RISER & GATE VALVE	
HC1	
HC2	
HC3	
HC4	
HC5	
HC6	
HC7	
HC8	
HC9	
SOUTHBOUND RAMP	
U/ 1()	



HC11	244
HC12	249
HC13	253
HC14	258
HC15	263
HC16	269
HC17	274
HC18	279
SOUTHBOUND TUNNEL	284
SB-SOUTH PORTAL RISER & GATE VALVE	284
SB-MIDTUNNEL RISER & GATE VALVE	288
SB-NORTH PORTAL RISER & GATE VALVE	293
HC19	297
HC20	302
HC21	307
HC22	312
HC23	317
HC24	322
HC25	329
HC26	333
ELECTRICAL ROOM/STAIRCASE	337
+C1F	
HC2F	342
HVAC EQUIPMENT AND COMPONENTS	2/19
TVAC EQUIT MENT AND COMIT ONENTS	3-0
HVAC Units	
HP-1A-INDOOR AIR CONDITIONING UNIT	
HP-1B OUTDOOR CONDENSING UNIT	
HP-2B OUTDOOR CONDENSING UNIT ELECTRICAL ROOM	
HP-2A INDOOR HEAT PUMP	
EF-1 EXHAUST FAN	
EUH-1-ELECTRIC UNIT HEATER	
EUH-2-ELECTRIC UNIT HEATER	
EUH-3-ELECTRIC UNIT HEATER	
Ductwork	
Fire/Smoke Damper 1	
Fire/Smoke Damper 2	386
Fire/Smoke Damper 3	393
Fire/Smoke Damper 4	401
Fire/Smoke Damper 5	
	408
FIRE/SMOKE DAMPER 6	
•	415



COFP-1	430
COER-1	43!
SCADA PANEL	
TV E1 SOLIND DROOF BOARDS	449



Tunnel Fans and Corresponding Components Checksheet Fan Assembly Checksheet TV-F1

Inc	na	~tı	n		2 t	Δ
Ins	υC	LLI	UH	-	aι	C
				_		_

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



Comments

Attach Photo

Take Photo





Photo Comment

Take Photo





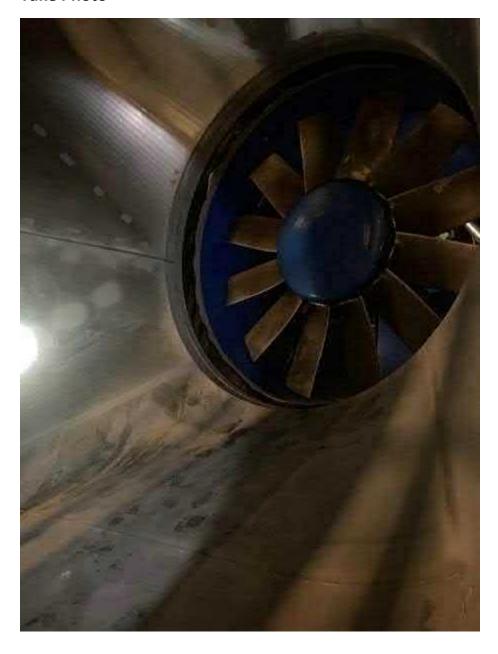
M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





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Photo Comment

Take Photo



Take Photo





M MOTT MACDONALD

Photo Comment

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Take Photo





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





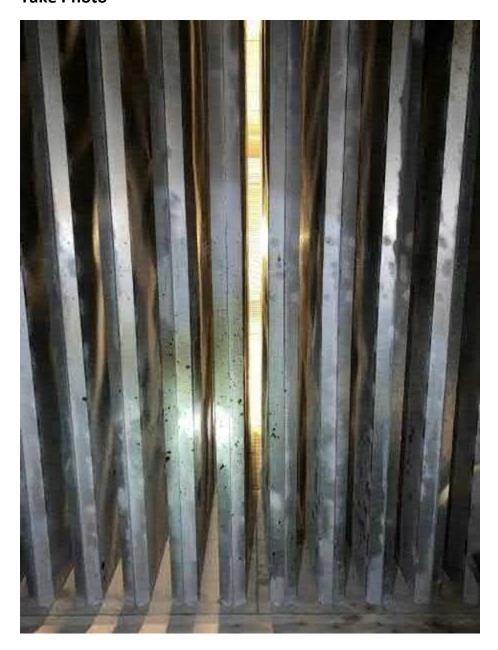


Photo Comment

Take Photo



Take Photo





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo

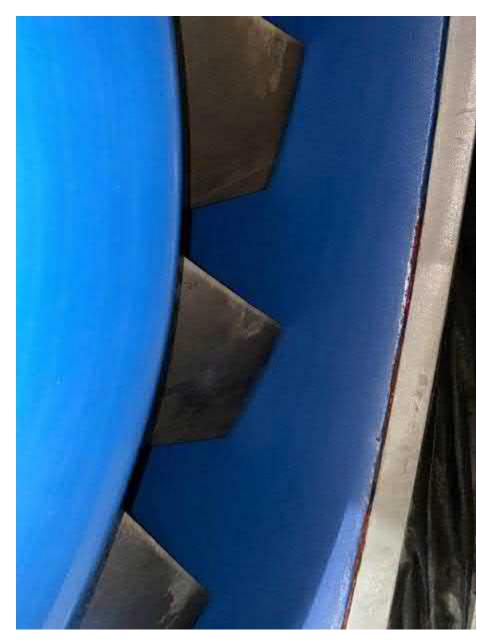




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Photo Comment

Take Photo



Take Photo





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





Take Photo





Photo Comment

Take Photo





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





Take Photo





Photo Comment



TV-F2 Fan Assembly Checksheet

Fan Assembly Checksheet	
Inspection Date	Air Side Attenuator
September 17, 2020	Good condition with some grease residue due to bearing leaking and grease traveling with the airflow down to the sound attention.
Inspection Time	
09:56	Verify Damper Inlocks and Operates Properly Through All Positions
	Yes
Inspection Team	
KK/CM	Check all bolts for tightness
Tag ID	
TV-F2	Locking collar has locking screws verified to 105 ft/lb torque rating
Visual Inspection of Fan Assembly - To Include Motor/Dampers	
Good general condition with grease leaking at both motor bearings.	Impeller blades have cap bolts with 220 ft/lb torque rating
Unusual Noises/Vibrations during Fan Operation	
	Decoder has a locking collar verified between 25-35 inches/lb
Tunnel Side Attenuator Tag ID	Describe Tenna control / Minding Tenna control
TS-A2	Bearing Temperature / Winding Temperature
Tunnel Side Attenuator	Class Fan Matau
Good condition	Clean Fan Motor

M

MOTT MACDONALD

AS-A2

Air Side Attenuator Tag ID



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

35



Comments

Attach Photo

Take Photo





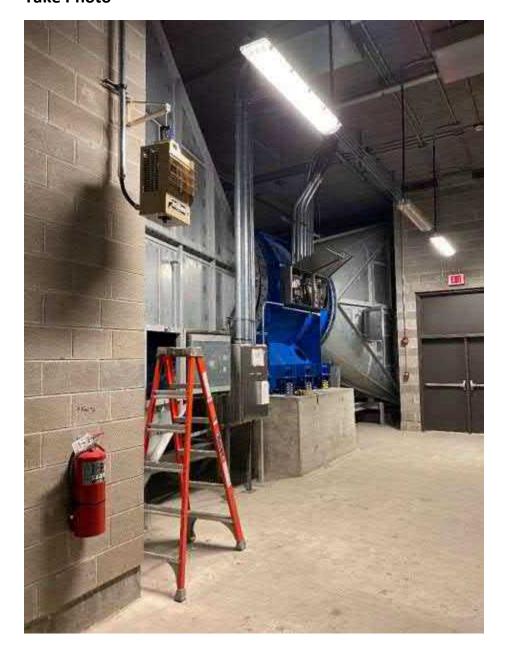
M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo

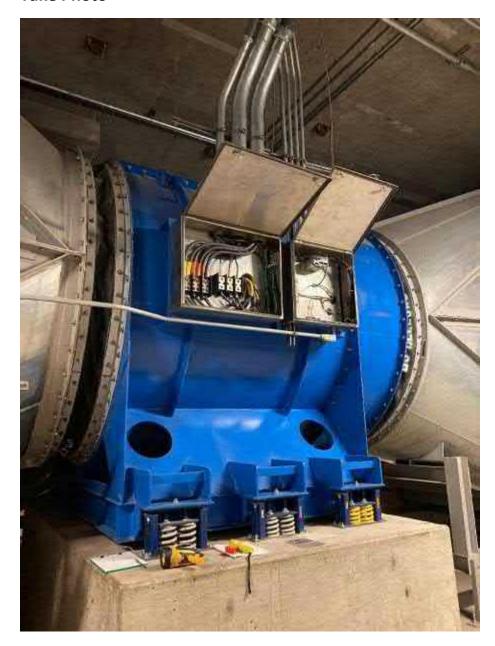




M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





M MOTT M

Photo Comment

Take Photo



Take Photo





Take Photo

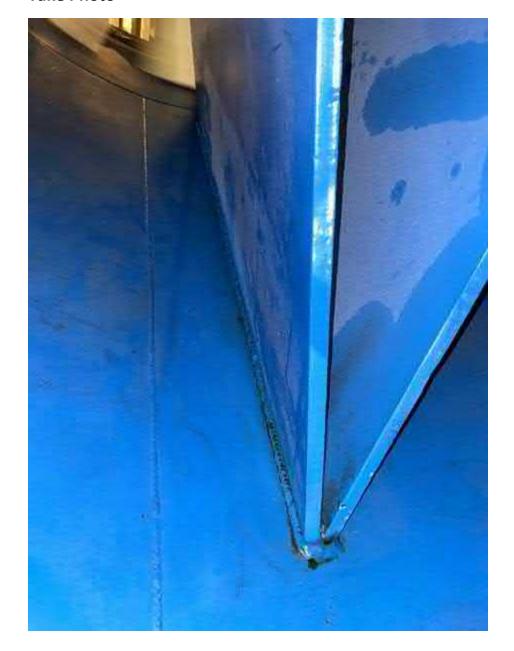




Photo Comment

Grease leaking down towards the sound attenuation

Take Photo





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





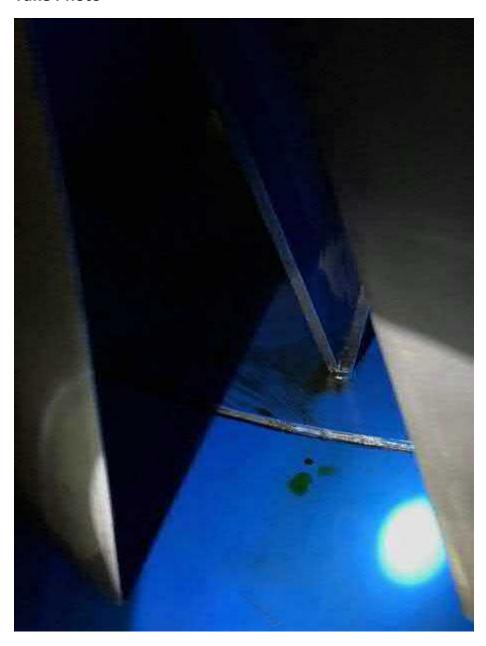
M MOTT M

Photo Comment

Take Photo



Take Photo

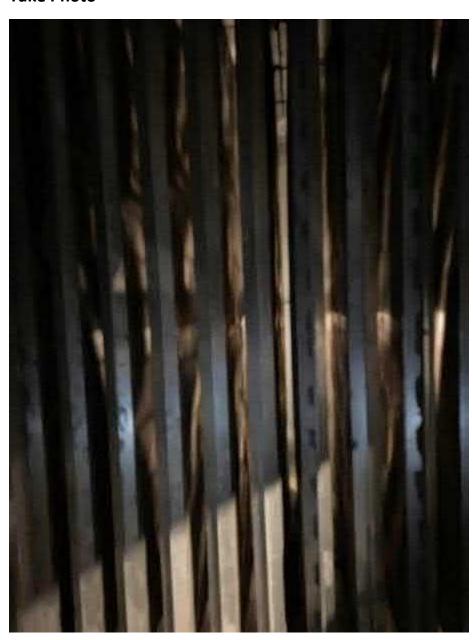




M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





Take Photo



Take Photo

M

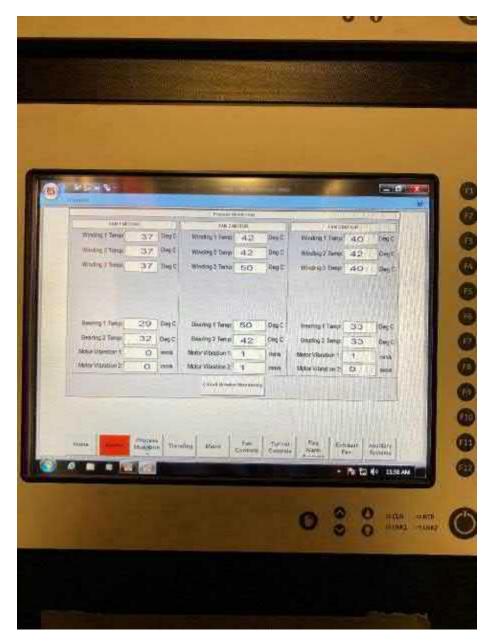
MOTT MACDONALD

Photo Comment





Take Photo



M

MOTT MACDONALD

Photo Comment





M MOTT MACDONALD

Photo Comment

Take Photo





TV-F3

Fan Assembly Checksheet	
Inspection Date	Air Side Attenuator
September 17, 2020	Good condition. Clean and free of debris.
Inspection Time	Verify Damper Inlocks and Operates Properly Through All Positions
08:41	Yes
Inspection Team	Check all bolts for tightness
KK/CM	N/A
Tag ID	Locking collar has locking screws verified to 105 ft/lb torque rating
TV-F3	N/A
Visual Inspection of Fan Assembly - To Include Motor/Dampers	Impeller blades have cap bolts with 220 ft/lb torque rating
Good condition. Very minor grease leaks.	N/A
	Decoder has a locking caller verified between 25 25 inches /lb
Unusual Noises/Vibrations during Fan Operation	Decoder has a locking collar verified between 25-35 inches/lb
None	N/A
Tunnel Side Attenuator Tag ID	Bearing Temperature / Winding Temperature
TS-A3	See photos
13-43	
Tunnel Side Attenuator	Clean Fan Motor
Good condition. Clean and free of debris.	Yes
Air Side Attenuator Tag ID	Check Connecting Terminals, Bolts, Bearing, & Windings

M

MOTT MACDONALD

AS-A3

63

Air Side Attenuator Tag ID



Comments

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



Attach Photo

Take Photo



Photo Comment



M MOTT MACDONALD

Take Photo



Photo Comment

Take Photo

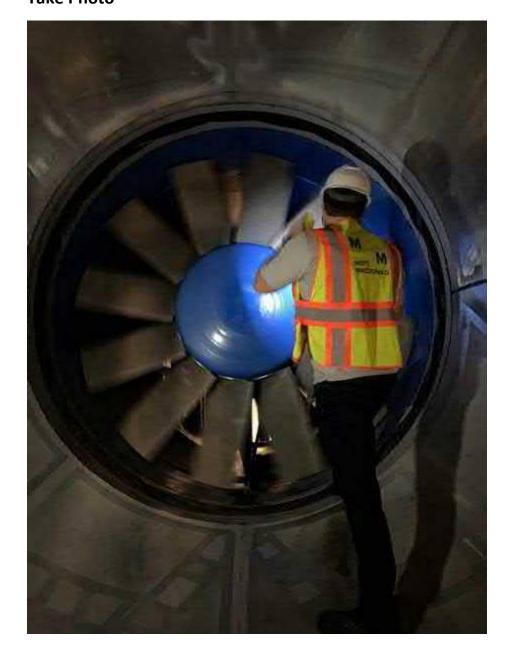


Photo Comment



M MOTT MACDONALD

Take Photo

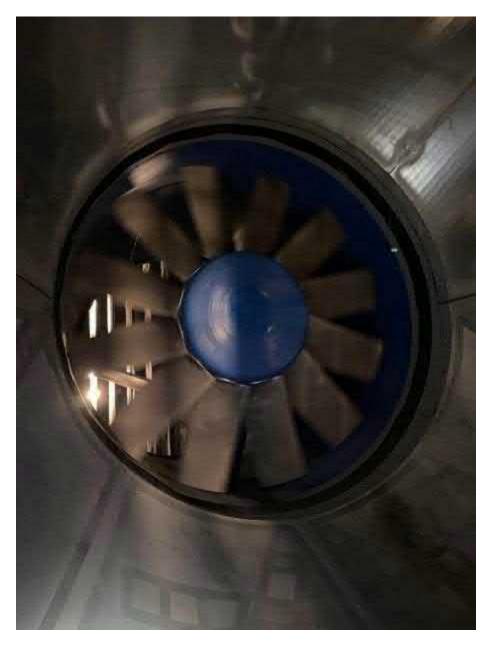


Photo Comment

Take Photo



Photo Comment





Take Photo

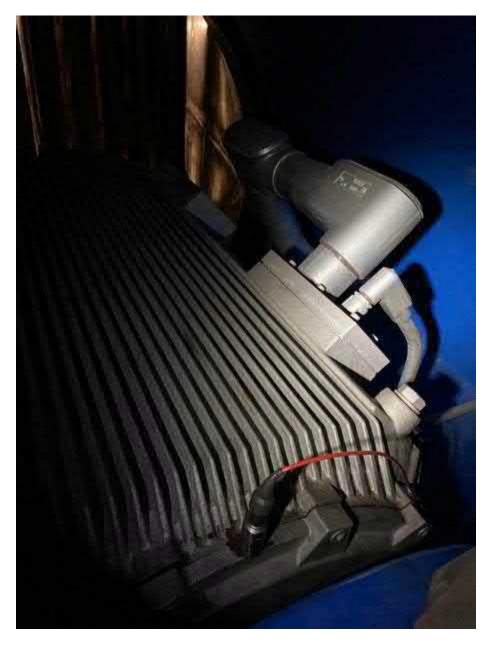


Photo Comment

Take Photo

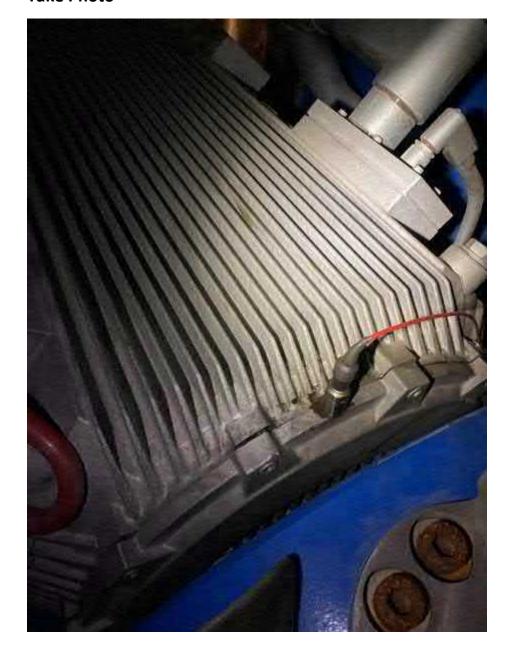


Photo Comment





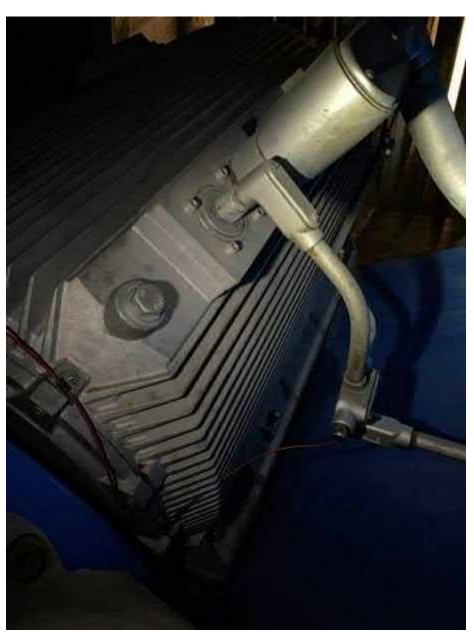


Photo Comment

Take Photo

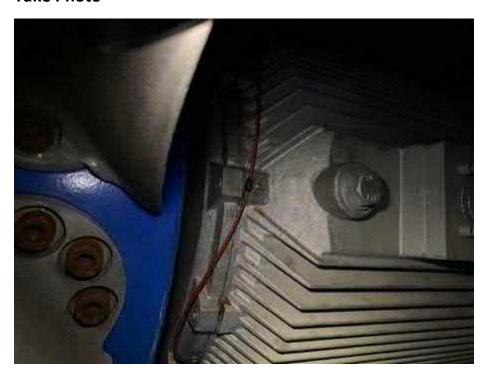
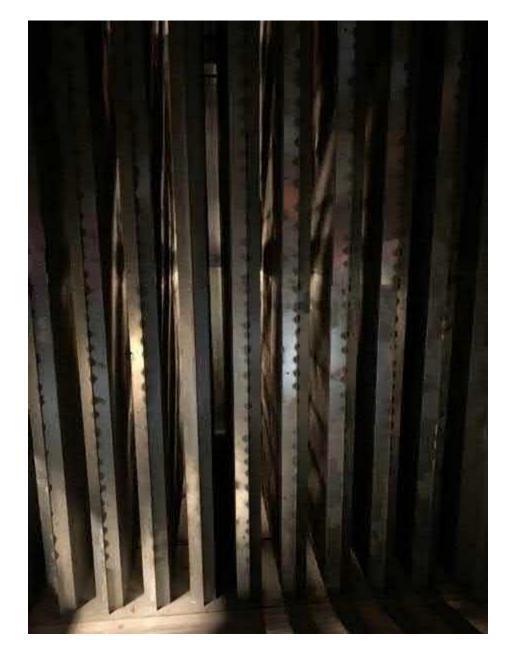


Photo Comment

Take Photo





Take Photo



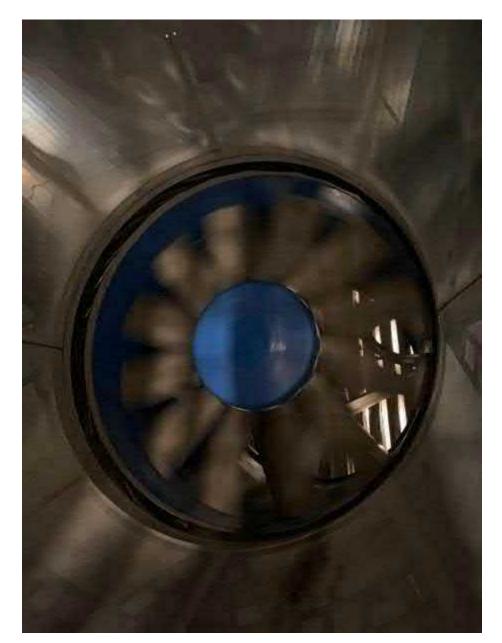


Photo Comment

Take Photo





Take Photo





Photo Comment

Take Photo





79

Take Photo





80

Photo Comment

Take Photo





Take Photo

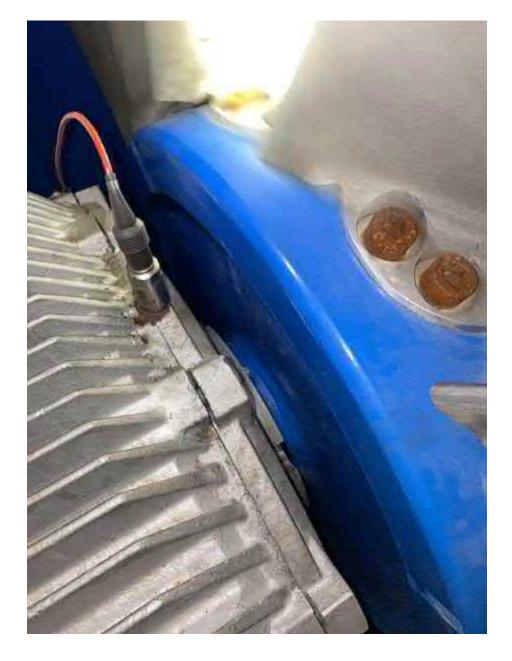




Photo Comment

Take Photo





Take Photo





Photo Comment

Take Photo





Take Photo





Photo Comment

Winding temperatures

Take Photo





Full load current

Take Photo



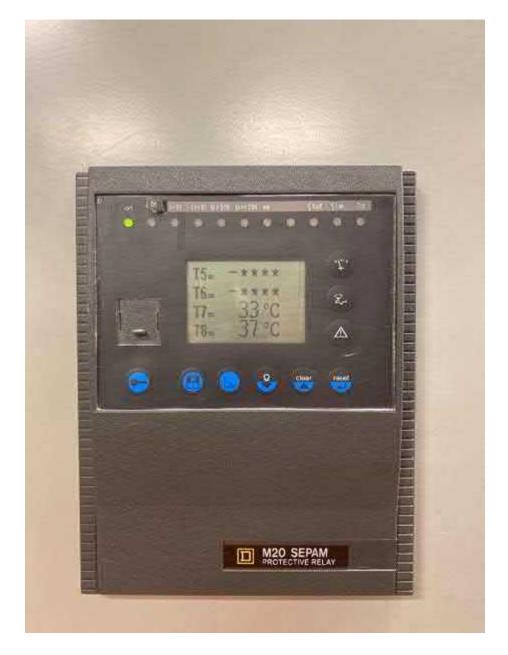


Photo Comment

Motor bearing temperature

Take Photo





Fan 3 breaker

Take Photo





Photo Comment

Take Photo





Take Photo





Photo Comment

Take Photo





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

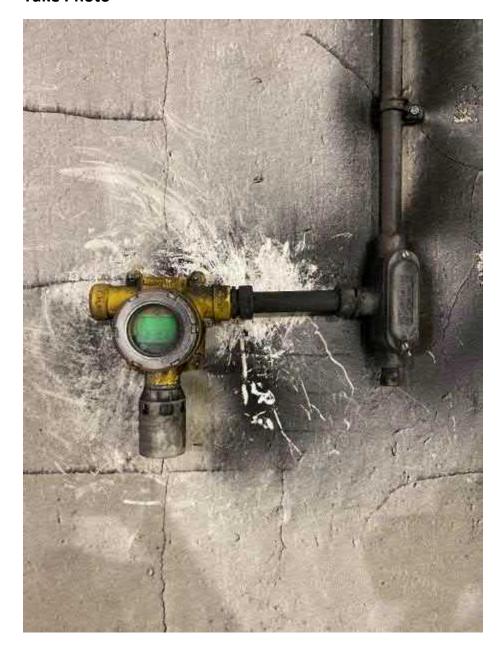


Photo Comment





Photo Comment



Take Photo



Photo Comment





Photo Comment



Take Photo



Photo Comment







Photo Comment



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



Take Photo



Photo Comment





Photo Comment





Take Photo



Photo Comment





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





Photo Comment

0 calibration pass



Take Photo

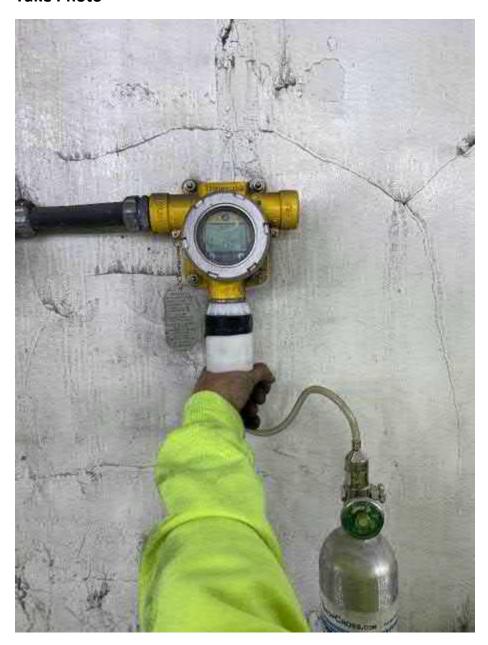


Photo Comment

150 calibration





Photo Comment

150 pass



Take Photo



Photo Comment

35 test pass



DONALD

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





Photo Comment

150 calibration

115



Take Photo



Photo Comment

150 calibration pass





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



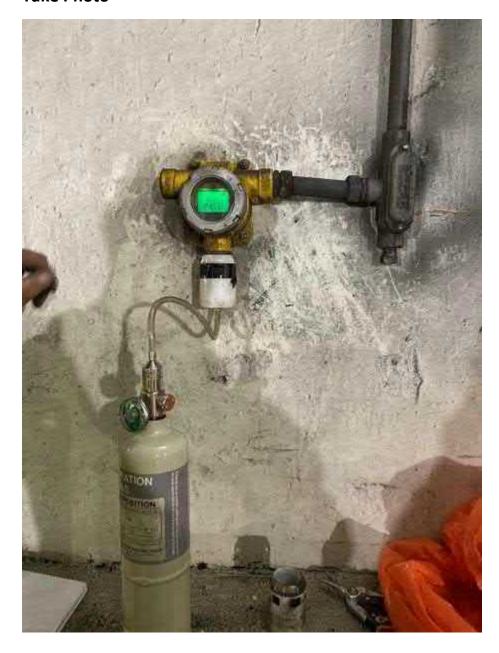


Photo Comment

0 test



Take Photo

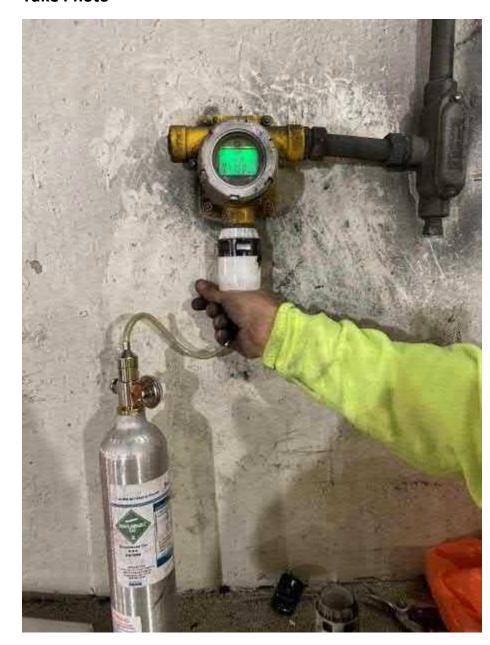


Photo Comment

150





Photo Comment

150 pass

121



Take Photo

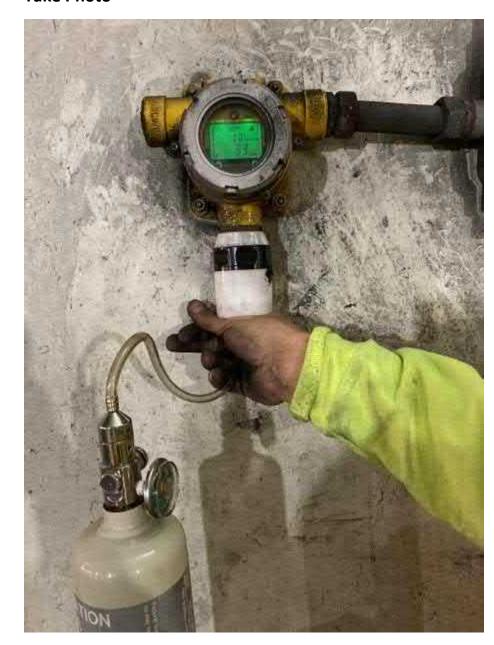


Photo Comment

33 ppm



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



Take Photo



Photo Comment

0 test pass





Photo Comment

150



Take Photo



Photo Comment

150 test pass





Photo Comment

35 test pass



Tunnel Isolation Dampers TI-DN

Ins	pecti	on [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.

129

Attach Photo

Take Photo



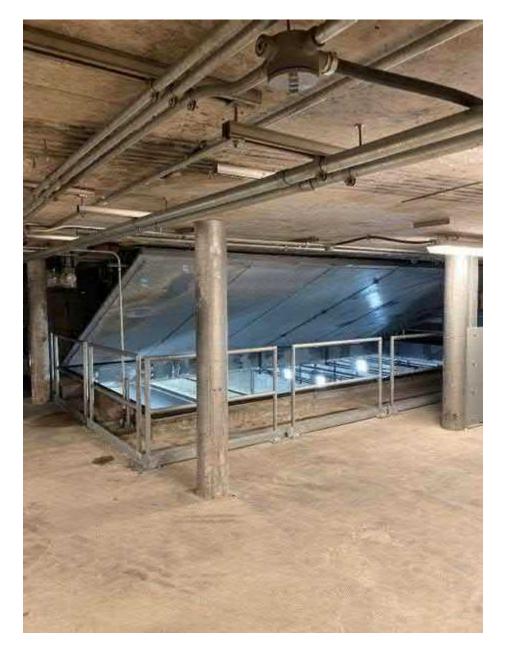
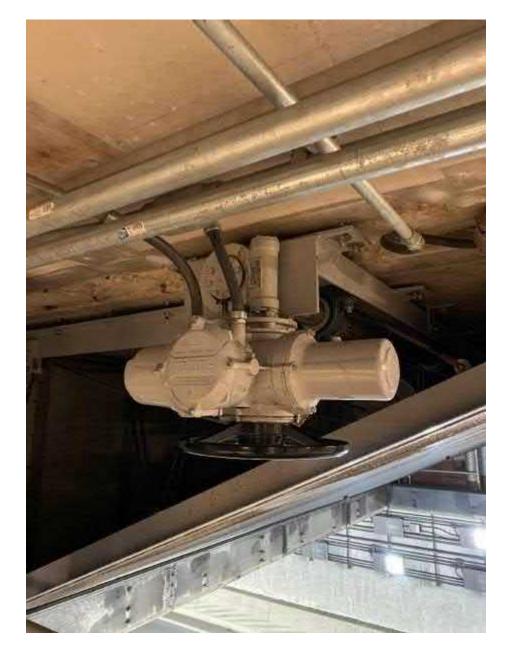


Photo Comment

Take Photo





Take Photo

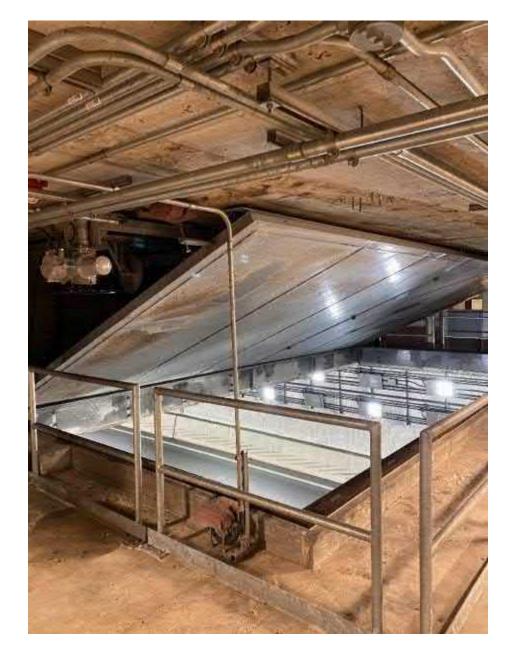




Photo Comment

Take Photo





Take Photo

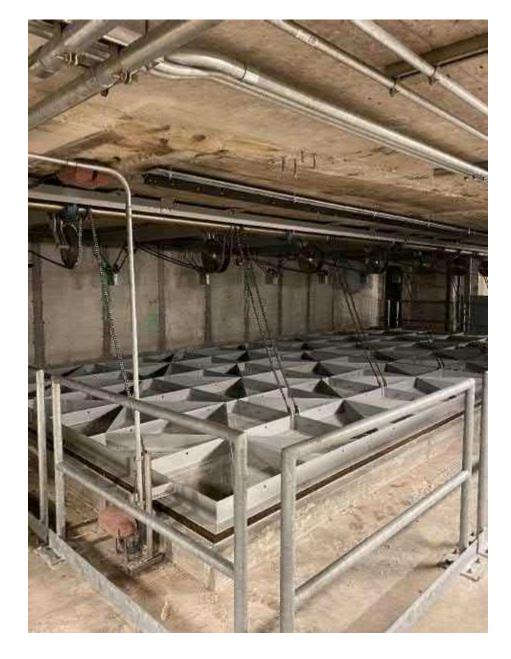




Photo Comment

Take Photo





Take Photo





Photo Comment

Take Photo





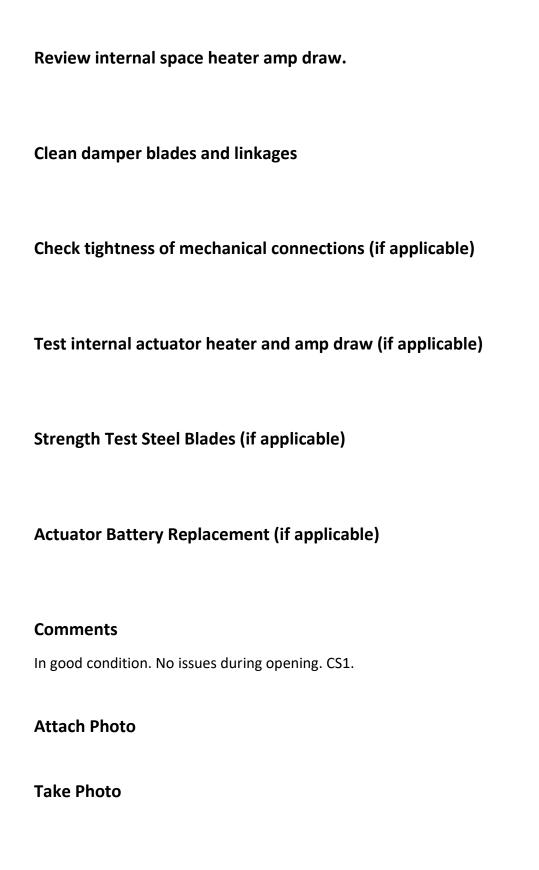
mment



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)







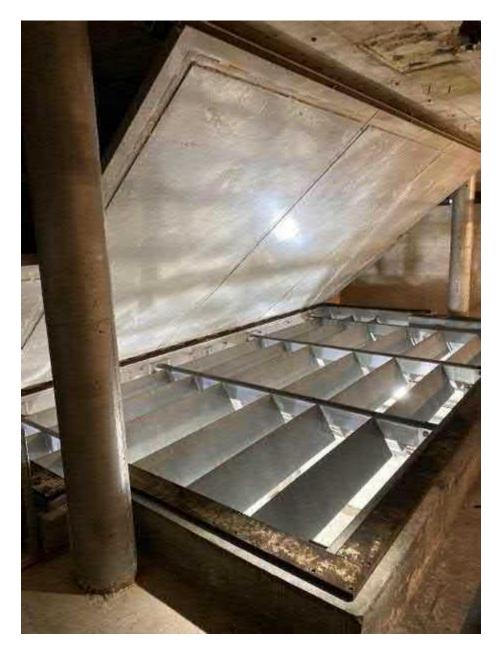
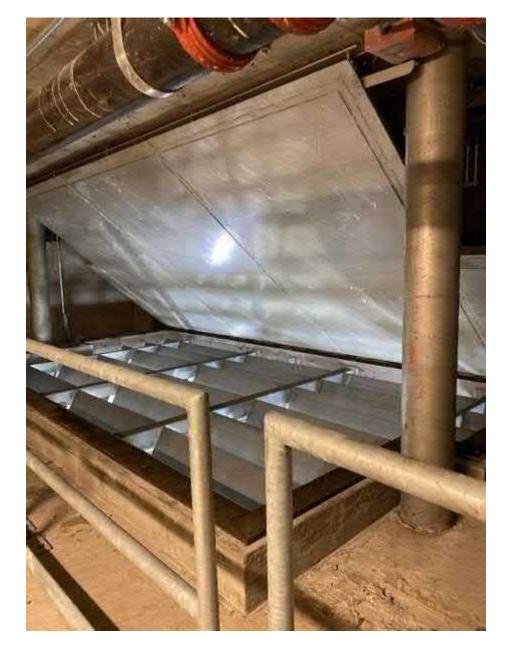


Photo Comment

Take Photo





Take Photo

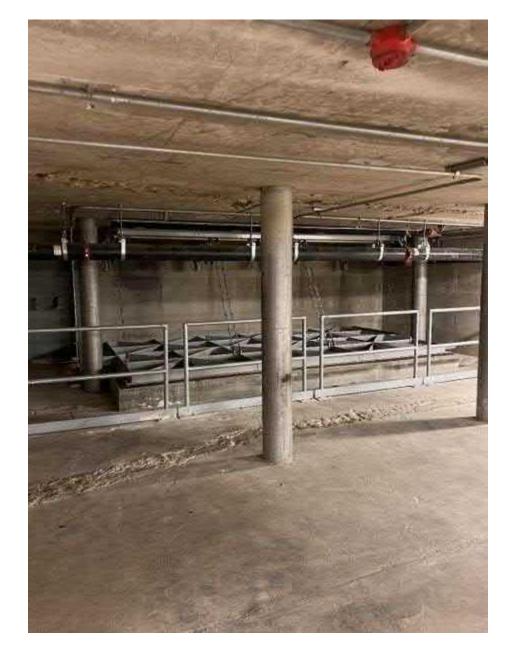




Photo Comment

Take Photo





Take Photo





Photo Comment







MACDONALD	MACDONALD
TI-DS	
Inspection Date	
September 15, 2020	Review internal space heater amp draw.
Inspection Time	
09:17	Clean damper blades and linkages
Inspection Team	
KK/CM	Check tightness of mechanical connections (if applicable)
Tag ID	Tack intermed activates backer and array during the contraction
TI-DS	Test internal actuator heater and amp draw (if applicable)
Visual Inspection	
In good condition. Damper actuators have minor leaks, see photos. No other signs of visual	Strength Test Steel Blades (if applicable)
defects.	
Operation	Actuator Battery Replacement (if applicable)
Good.	
Verfiy Damper Inlocks and Operates Properly Through All Positions	Comments
Yes.	In good condition. Operates as intended. Minor leaks as shown in photos. CS2
Check all bolts for tightness	Attach Photo
	Take Photo

Bearing grease Replacement - Chain Lubrication (if applicable)





Take Photo





Photo Comment

Take Photo





Take Photo

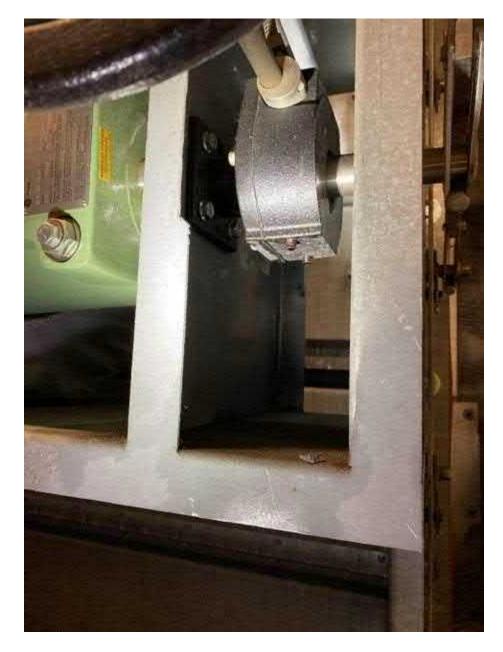
M MOTT M



Photo Comment

Take Photo





Take Photo





Photo Comment

Take Photo





Take Photo





Photo Comment

Take Photo







Fan Isolation Dampers FI-D1

Ins	pecti	on D	ate
1113	PCCLI	011 D	utt

September 15, 2020

Inspection Time

10:09

Inspection Team

KK/CM

Tag ID

FI-D1

Visual Inspection

Good condition. No visual defects.

Operation

Good.

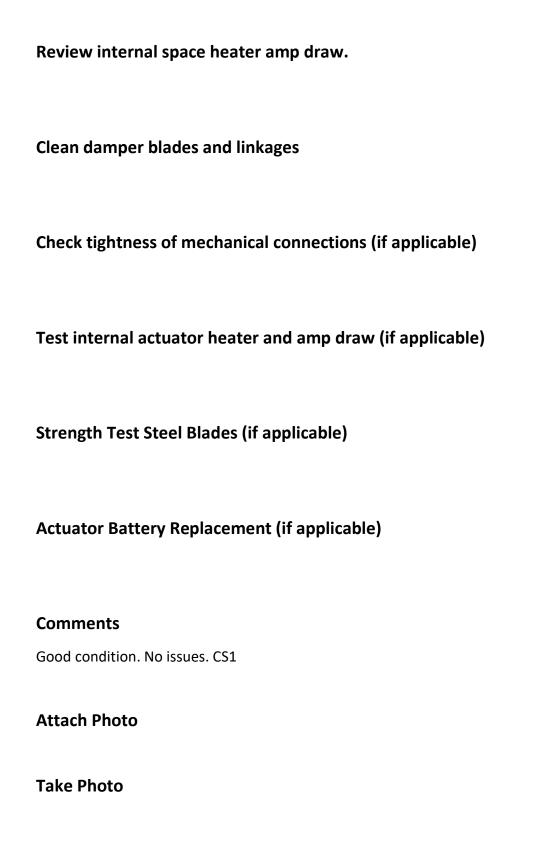
Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes.

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)



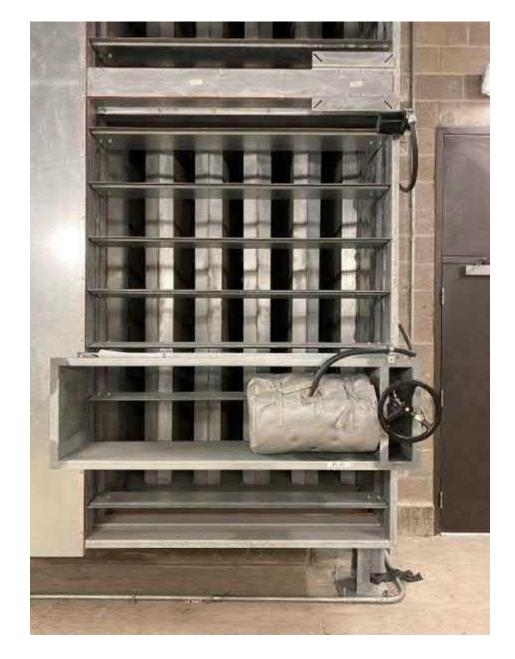






Take Photo





Take Photo



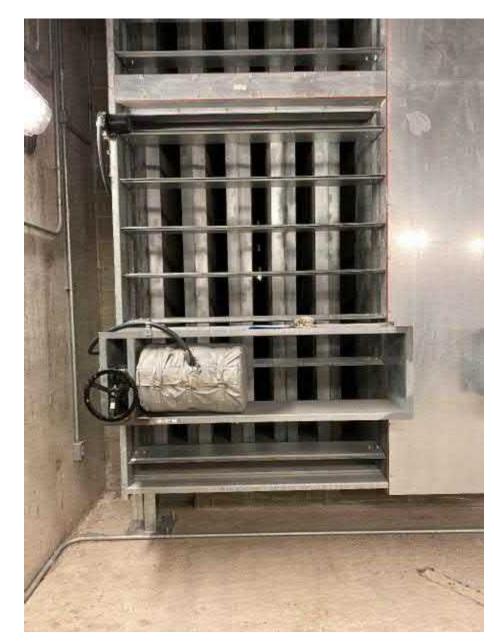


Photo Comment



FI-D2 **Inspection Date** September 15, 2020 **Inspection Time** 10:28 **Inspection Team** KK/CM Tag ID FI-D2

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





Take Photo



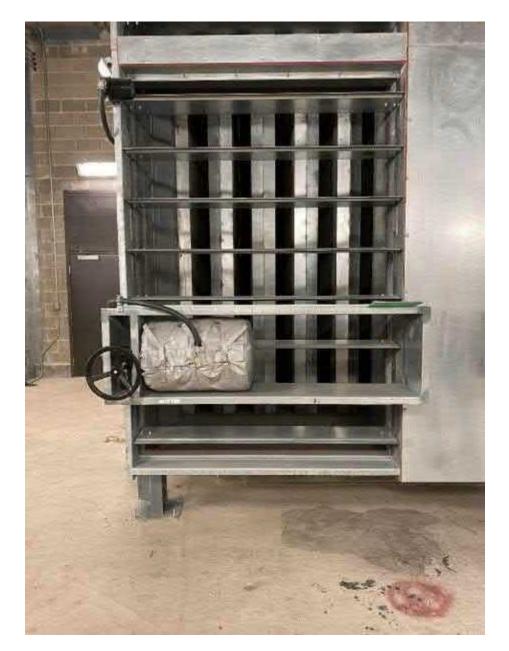


Photo Comment

Take Photo





Take Photo

M MOTT MACDONALD

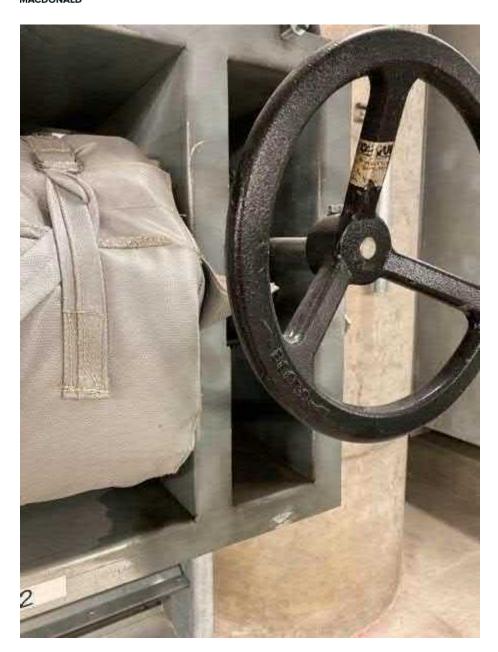


Photo Comment

Take Photo





Minor leak



FI-D3

Ins	pecti	on D	ate

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.

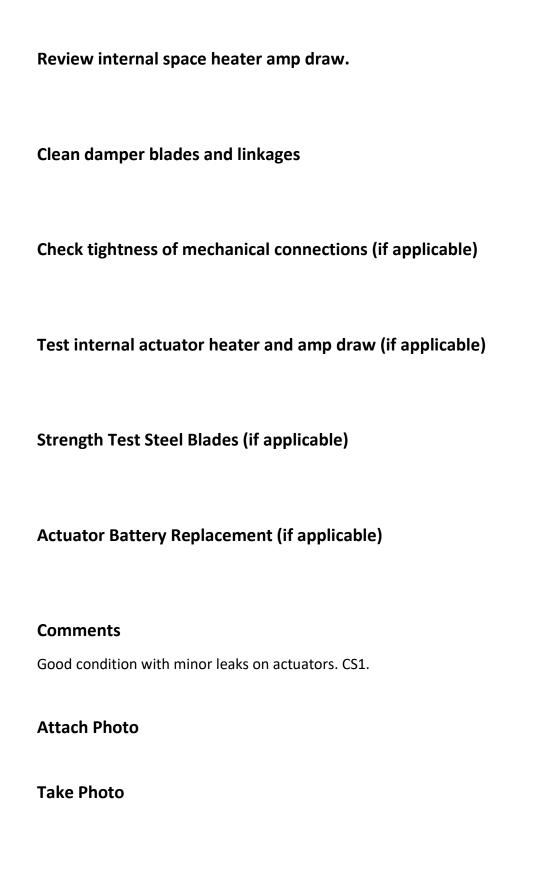
Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes.

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)









Take Photo





Take Photo



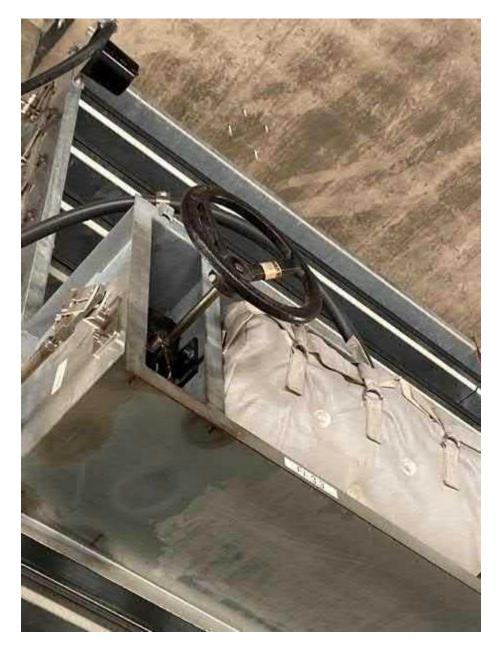


Photo Comment



Eiro Standnings

	rire 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.

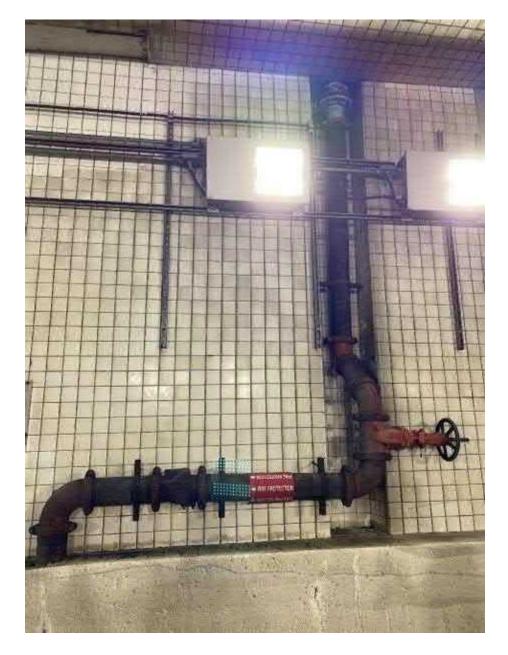
Comments

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

Attach Photo

Take Photo





Take Photo





Photo Comment

Check valve

Take Photo





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 Connect and Class
Fire Department Connections Capped and Clear
Confirm threads are undamaged and caps in place.
The state of the s
Confirm top nut and caps are tight but not over-torqued.



Inspect piping, hose connections and couplings.

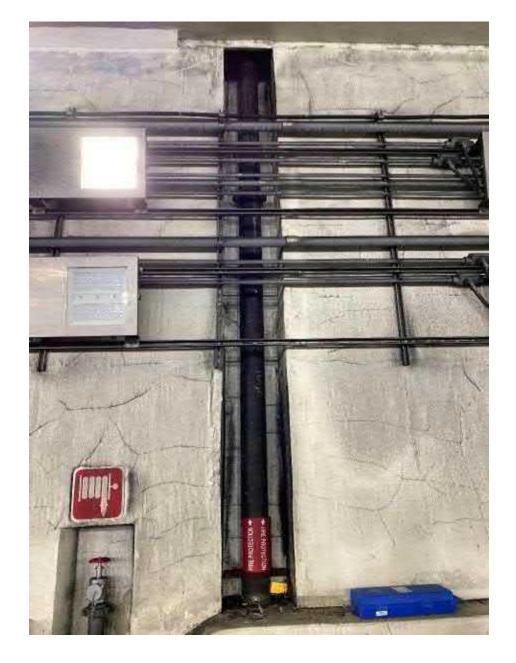
Comments

Good condition. CS1

Attach Photo

Take Photo





Take Photo





Photo Comment



NB-South Portal Riser & Gate Valve

Inspection Date
September 17, 2020
Inspection Time
23:15
Inspection Team
KKCM
Tog ID
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





Take Photo





Photo Comment

Take Photo





Take Photo



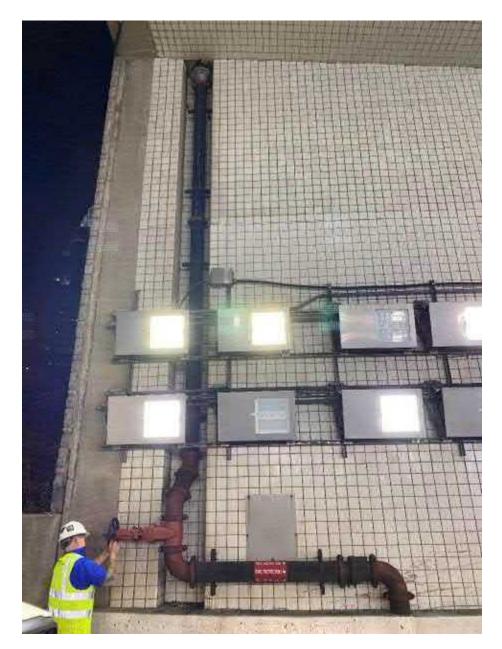


Photo Comment

Take Photo







HC1

IIISDELLIUII Dale	Insi	pection	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





Take Photo



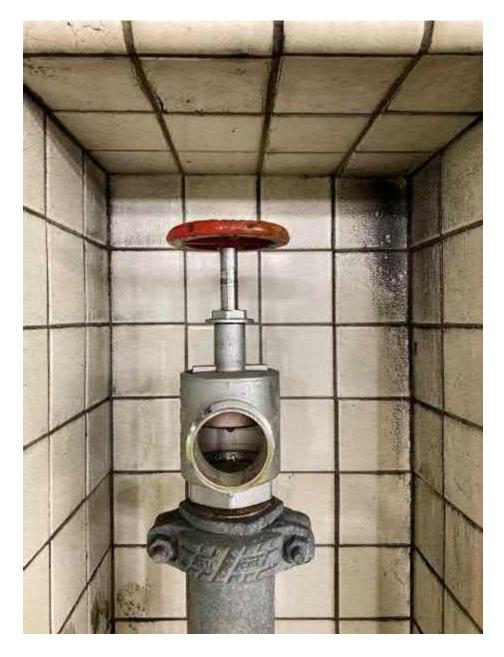


Photo Comment



Yes

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.



Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo





Take Photo





Photo Comment

Take Photo





Take Photo





Photo Comment



Yes

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.



Inspect piping, hose connections and couplings.

Yes

Comments

Recommend tightening the hose connection to the pipe. CS1

Attach Photo

Take Photo





Take Photo





Photo Comment

Take Photo





Take Photo





Photo Comment



Yes

	HC4
Inspection Date	
September 17, 2020	
Inspection Time	
23:30	
23.30	
Inspection Team	
KK/CM	
Tag ID	
HC4	
Location	
NB tube	
Station	
Fire Department Connections Capped	and Clear
Yes	
Confirm throads are undamaged and	cans in place
Confirm threads are undamaged and	caps iii piace.
Yes	

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



Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo





Take Photo





Photo Comment

Take Photo





Take Photo





Photo Comment



Yes

HC5 **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.



Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo





Take Photo





Photo Comment

Take Photo







HC6

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





Take Photo





Photo Comment



Yes

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.

HC7



Inspect piping, hose connections and couplings.

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo





Take Photo

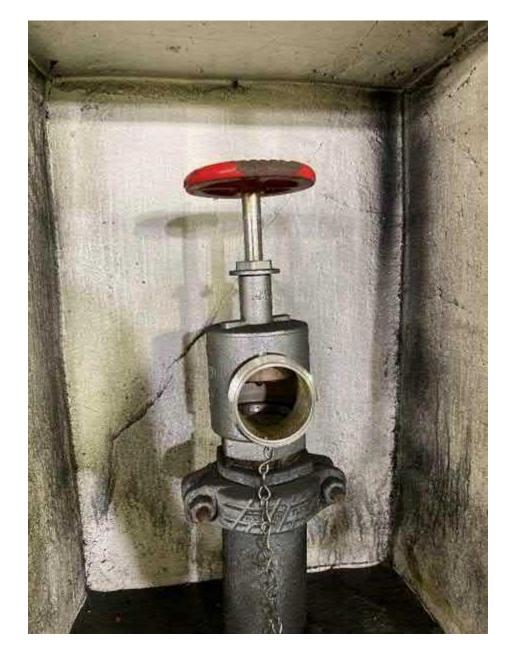
M MOTT MACDONALD



Photo Comment

Take Photo





Take Photo





Photo Comment



Yes

Yes

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.

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

229

M MOTT MACDONALD

Inspect piping, hose connections and couplings.

230

Yes

Comments

Good condition. CS1

Attach Photo

Take Photo





Take Photo





Photo Comment

Take Photo





nent



HC9

Inspection Date	te
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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





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 Cannod and Clear
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





Take Photo





Photo Comment

Take Photo







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





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





Take Photo





Photo Comment



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.



Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo





Take Photo





Photo Comment

Take Photo





Inspe 23:21 Tag ID HC14 Location SR Ramp Station

M

HC14

September 18, 2020

Inspection Time

Inspection Team

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





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





265

Take Photo

M MOTT MACDONALD



Photo Comment

Take Photo







Photo Comment



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.



Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo





Take Photo



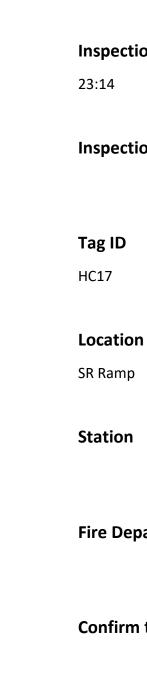


Photo Comment

Take Photo







M

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н	(. I	

Inspection Date	
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September 18, 2020

Inspection Time

Inspection Team

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



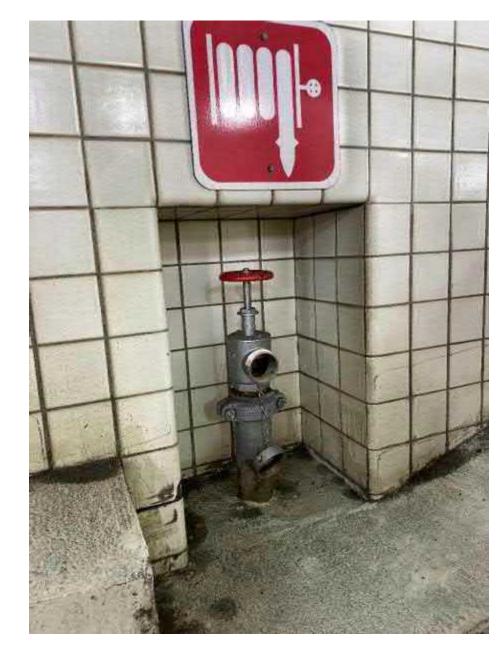


Photo Comment

Take Photo





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





Take Photo





Photo Comment

Take Photo







Southbound Tunnel

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



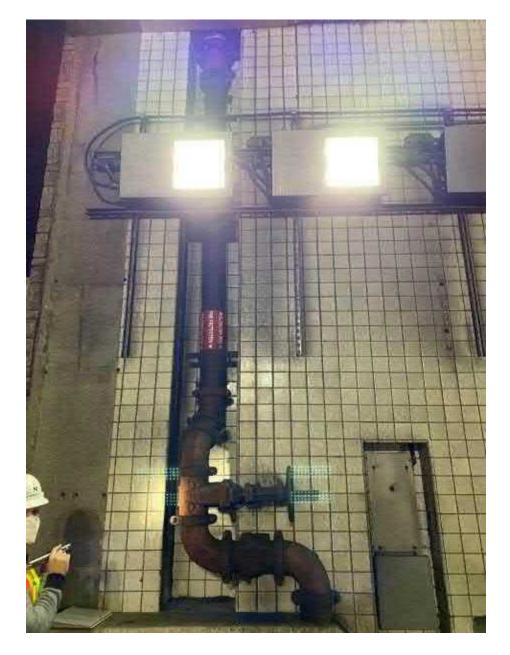


Photo Comment

Take Photo





22:34 Tag ID Location Station

M

SB-Midtunnel Riser & Gate Valve

	Ins	pection Date
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September 18, 2020

Inspection Time

Inspection Team

SB-Midtunnel Riser & Gate Valve

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





Take Photo





Photo Comment



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
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

Good condition. Minor surface rust. CS1

Attach Photo





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



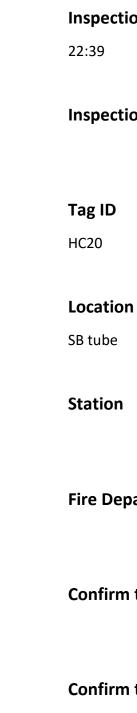


Photo Comment

Take Photo







HC20

Inspection Date	5
------------------------	---

M

September 18, 2020

Inspection Time

Inspection Team

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





Take Photo





Photo Comment



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.



Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo





Take Photo





Photo Comment

Take Photo







HC22

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





Take Photo





Photo Comment



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.



Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo





Take Photo





Photo Comment

Take Photo





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.

M

HC24



Inspect piping, hose connections and couplings.

Comments

Good condition. CS1

Attach Photo

Take Photo





Photo Comment

Take Photo





Take Photo

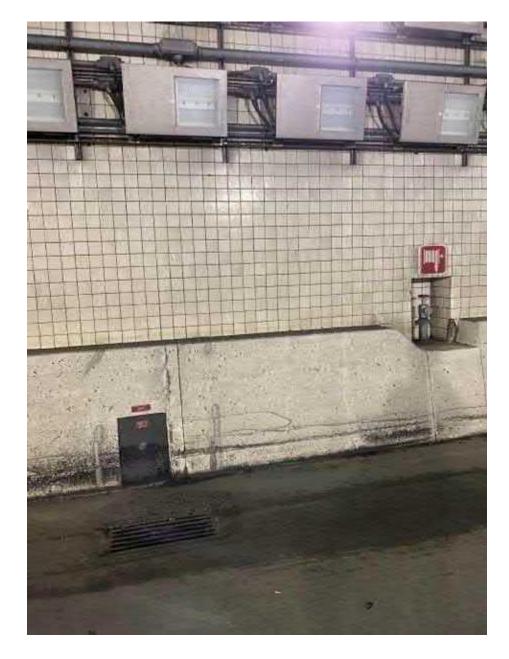




Photo Comment

Take Photo





Take Photo





Photo Comment



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.



Inspect piping, hose connections and couplings.

Comments

Missing cap and chain. CS2

Attach Photo





Take Photo





Photo Comment



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.



Inspect piping, hose connections and couplings.

Comments

Missing cap and chain. CS2.

Attach Photo









Photo Comment

Take Photo



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.

337

M MOTT MACDONALD

Yes

Inspect piping, hose connections and couplings.

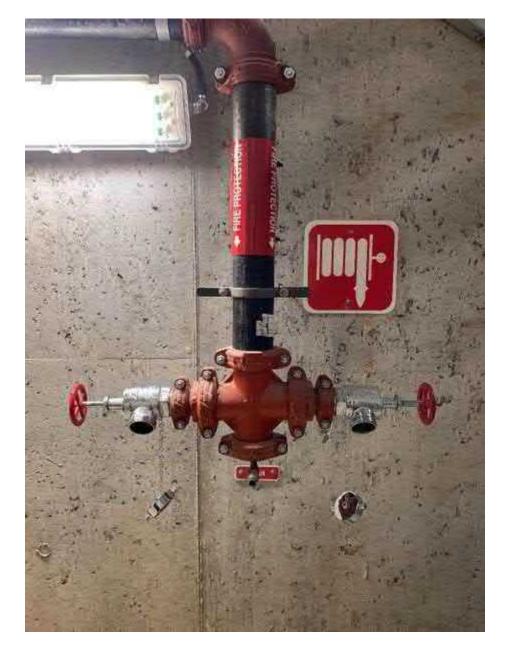
Yes

Comments

Good condition. CS1

Attach Photo





Take Photo



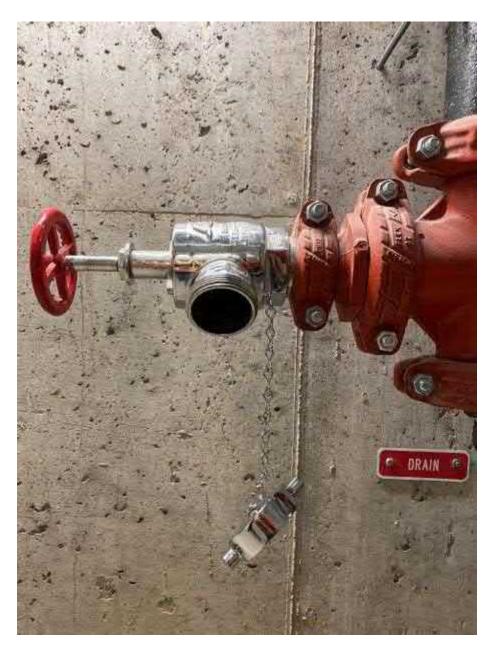


Photo Comment

Take Photo







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

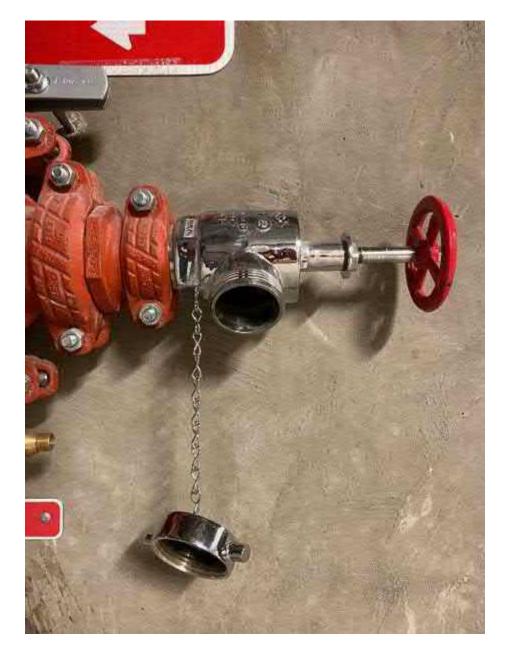




Photo Comment

Take Photo





345

Take Photo





Photo Comment





HVAC EQUIPMENT AND COMPONENTS

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

M MOTT MACDONALD



Photo Comment

Take Photo







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





Take Photo

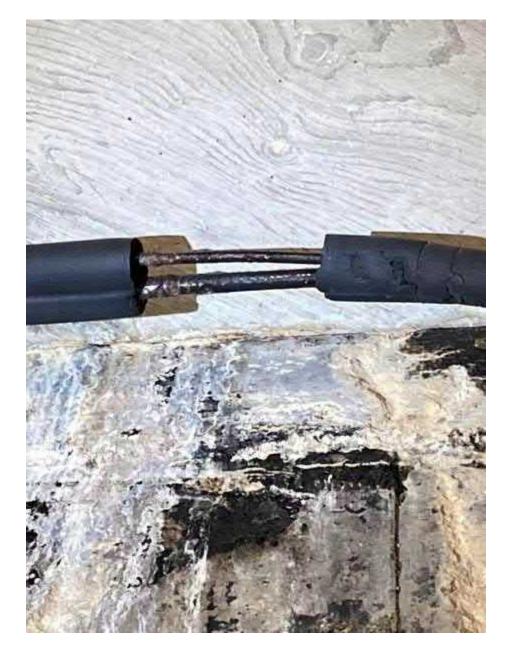




Photo Comment

Take Photo





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



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





On/Off light bulb is not working

Take Photo





Photo Comment



N/A

EF-1 Exhaust Fan

Fan Assembly Checksheet	N/A
Inspection Date September 17, 2020	Air Side Attenuator N/A
Inspection Time 08:23	Verify Damper Inlocks and Operates Properly Through All Positions
Inspection Team KK/CM	Check all bolts for tightness
Tag ID EF-1	Locking collar has locking screws verified to 105 ft/lb torque rating
Visual Inspection of Fan Assembly - To Include Motor/Dampers Good condition	Impeller blades have cap bolts with 220 ft/lb torque rating
Unusual Noises/Vibrations during Fan Operation No	Decoder has a locking collar verified between 25-35 inches/lb
Tunnel Side Attenuator Tag ID N/A	Bearing Temperature / Winding Temperature
Tunnel Side Attenuator	Clean Fan Motor

M

Air Side Attenuator Tag ID



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





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





Photo Comment

M

Take Photo





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 DateSeptember 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





Take Photo





Photo Comment

Take Photo





Take Photo

M MOTT MACDONALD



Photo Comment

Take Photo

381





Take Photo





Photo Comment

Take Photo





KK/CM Tag ID FSD-2 Good Yes



Fire/Smoke Damper 2

Inspection Date

September 16, 2020

Inspection Time

08:50

Inspection Team

Visual Inspection

Good condition

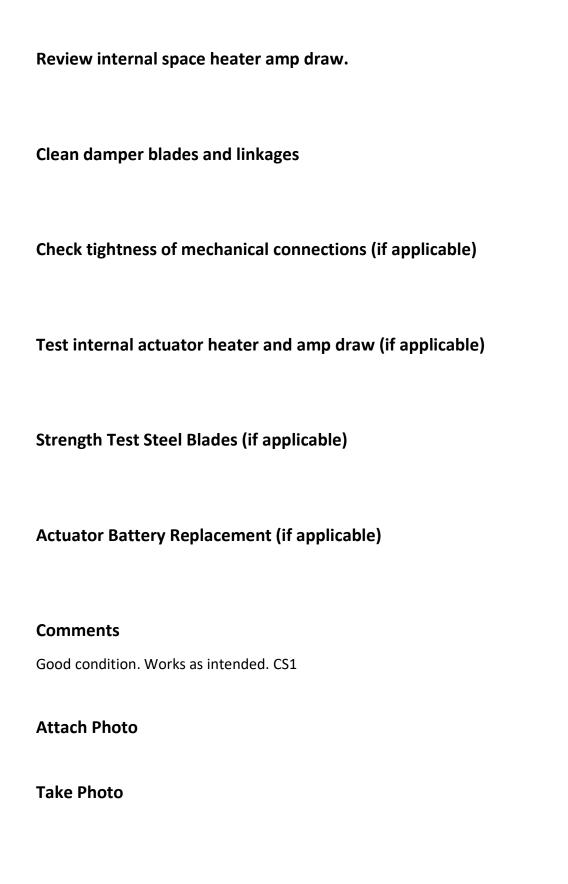
Operation

Verfiy Damper Inlocks and Operates Properly Through All Positions

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)









Take Photo





Take Photo





Photo Comment

Take Photo





Take Photo





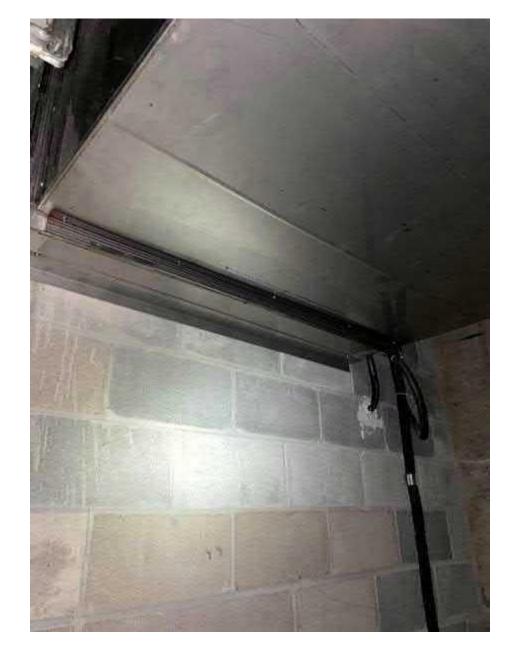
Photo Comment



Fire/Smoke Damper 3 Inspection Date	Review internal space heater amp draw.
September 16, 2020 Inspection Time	Clean damper blades and linkages
08:58	
Inspection Team KKCM	Check tightness of mechanical connections (if applicable)
Tag ID FSD-3	Test internal actuator heater and amp draw (if applicable)
Visual Inspection Good condition	Strength Test Steel Blades (if applicable)
Operation	Actuator Battery Replacement (if applicable)
Good	
Verfiy Damper Inlocks and Operates Properly Through All Positions Yes.	Comments Good condition. Works as intended. CS1
Check all bolts for tightness	Attach Photo
	Take Photo
Bearing grease Replacement - Chain Lubrication (if applicable)	

M MOTT MACDONALD





Take Photo

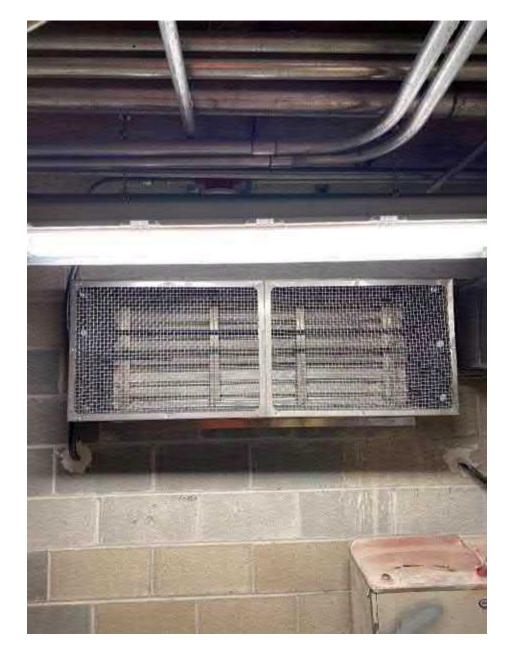




Photo Comment

Take Photo





397

Take Photo



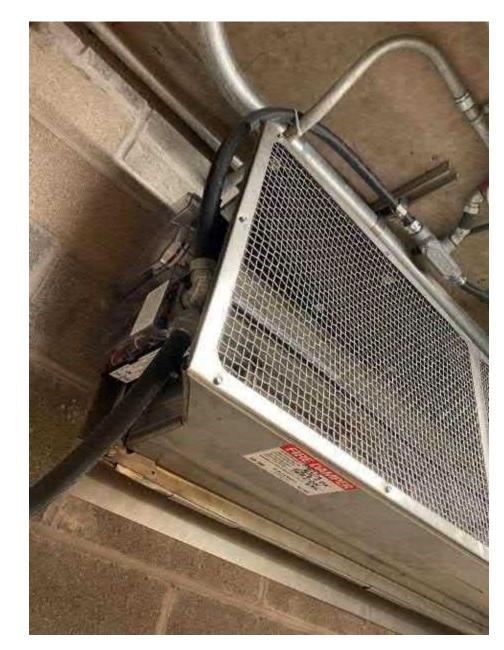


Photo Comment

398

Take Photo







Take Photo





Photo Comment





Fire/Smoke Damper 4 **Inspection Date** Review internal space heater amp draw. September 16, 2020 **Inspection Time** Clean damper blades and linkages 09:03 **Inspection Team** Check tightness of mechanical connections (if applicable) KK/CM Test internal actuator heater and amp draw (if applicable) Tag ID FSD-4 **Strength Test Steel Blades (if applicable) Visual Inspection** Good condition **Actuator Battery Replacement (if applicable)** Operation Good **Comments Verfiy Damper Inlocks and Operates Properly Through All Positions** Good condition. Works as intended. CS1 Yes **Attach Photo Check all bolts for tightness Take Photo**

Bearing grease Replacement - Chain Lubrication (if applicable)





Take Photo





Photo Comment

Take Photo





Take Photo





406

Photo Comment

Take Photo







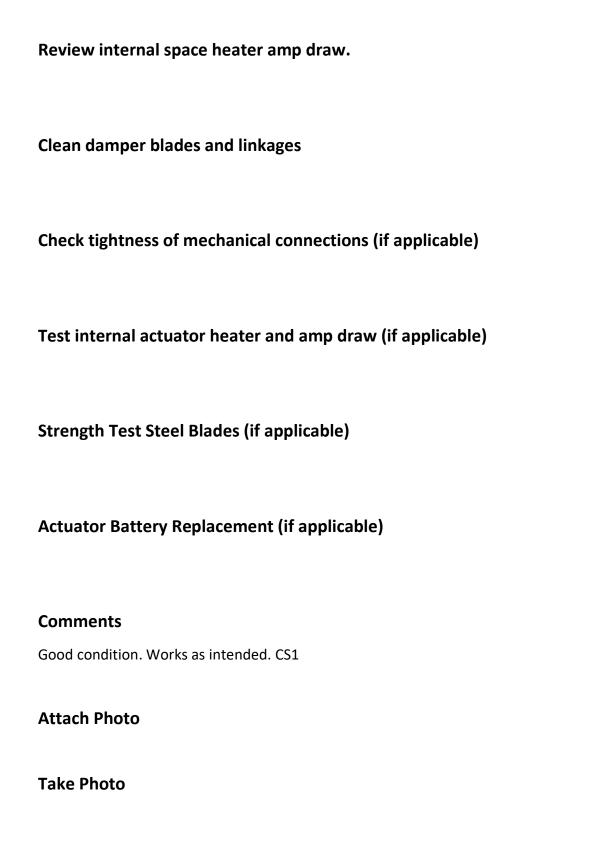
Fire/Smoke Damper 5
nspection Date
eptember 16, 2020
nspection Time
9:19
nspection Team
K/CM
ag ID
SD-5
isual Inspection
ood condition
peration
ood
erfiy Damper Inlocks and Operates Properly Through All Positions

Yes

Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)



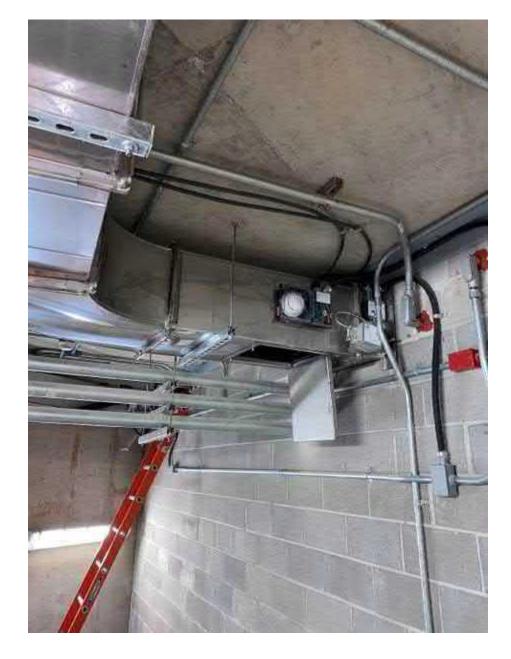






Take Photo





Take Photo





Photo Comment

Take Photo





Take Photo





Photo Comment

Take Photo





Fire/Smoke Damper 6

Inspection Date

M MACDONALD

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

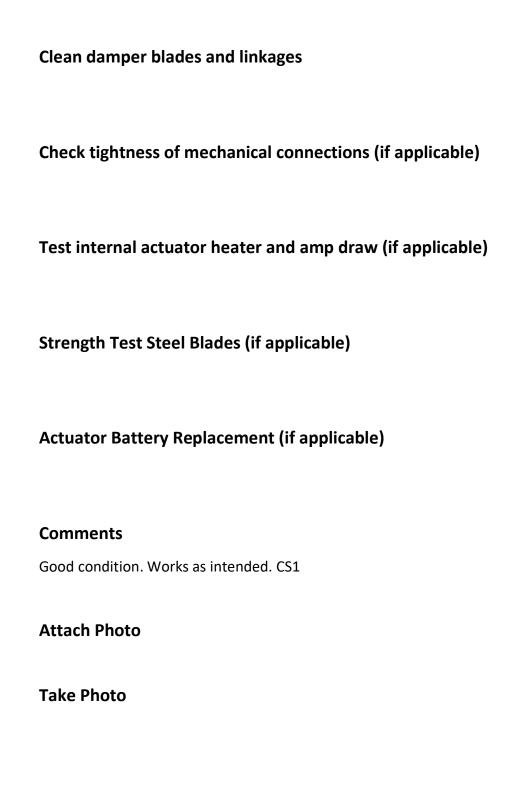
Yes

Check all bolts for tightness

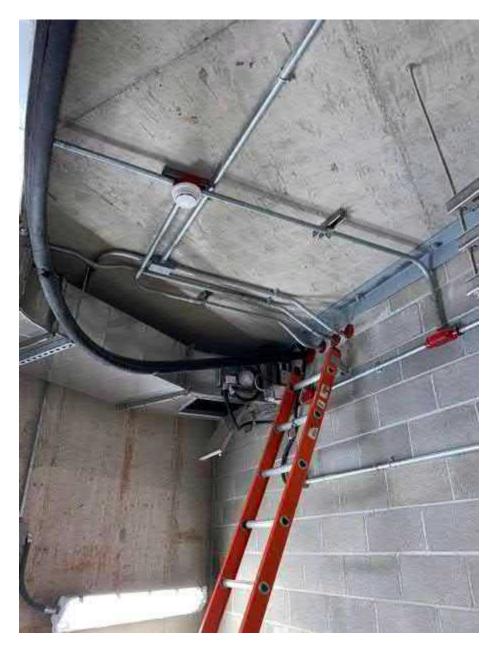
Bearing grease Replacement - Chain Lubrication (if applicable)

Review internal space heater amp draw.



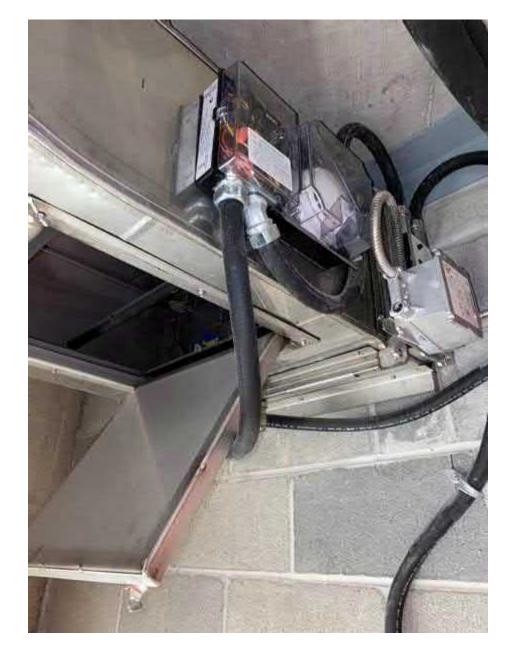






Take Photo





Take Photo



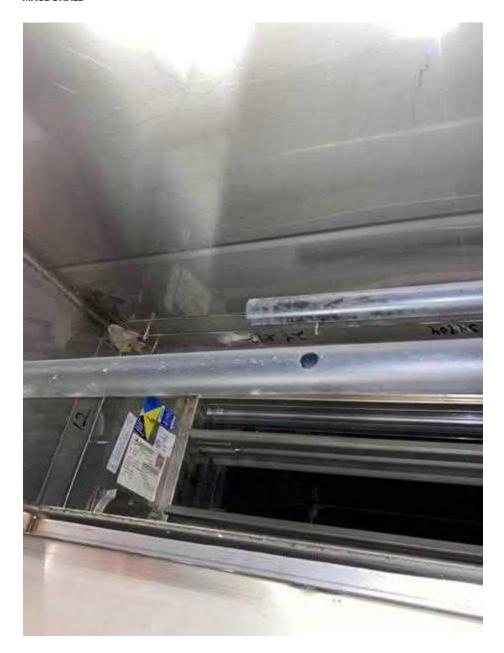


Photo Comment

Take Photo





Take Photo

M MOTT M



Photo Comment

Take Photo







Fire/Smoke Damper 7

	Ins	pection Date
--	-----	--------------

September 16, 2020

Inspection Time

09:34

Inspection Team

KK/CM

Tag ID

FSD-7

Visual Inspection

Good condition

Operation

Good

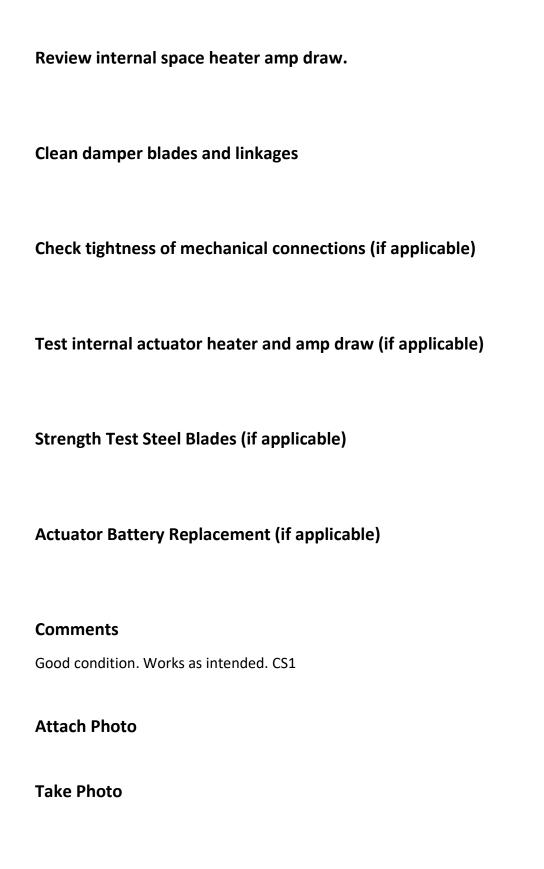
Verfiy Damper Inlocks and Operates Properly Through All Positions

Yes

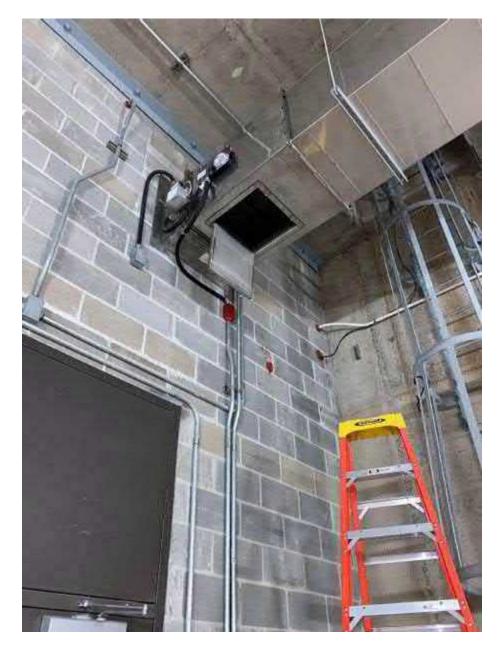
Check all bolts for tightness

Bearing grease Replacement - Chain Lubrication (if applicable)









Take Photo





Take Photo





Photo Comment

Take Photo







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

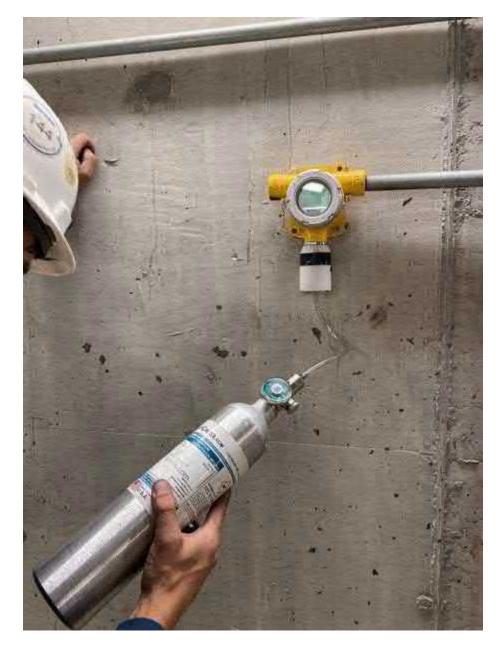


Photo Comment



Take Photo



Photo Comment



M MOTT MACDONALD

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**

Inspection Team

KK/CM

11:00

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





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





M MOTT MACDONALD

Photo Comment

Take Photo



Take Photo





Take Photo

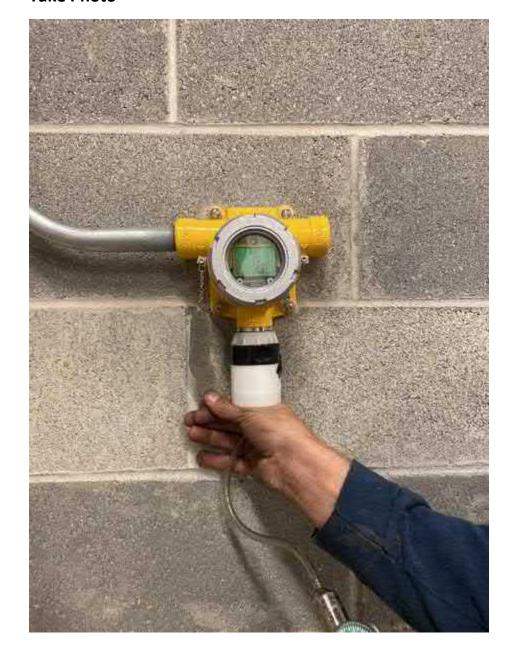




Photo Comment



Miscellaneous Equipment Check

SCADA Panel Miscellaneous Equipment Check

Inspection Date	Ins	pection	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



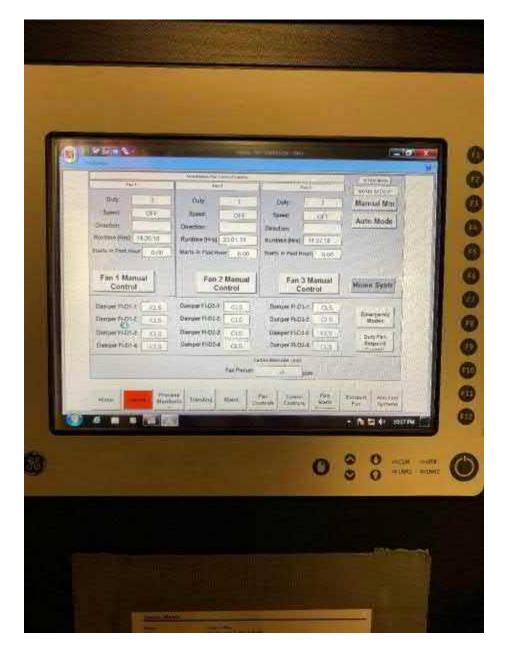


Photo Comment

Take Photo





Take Photo

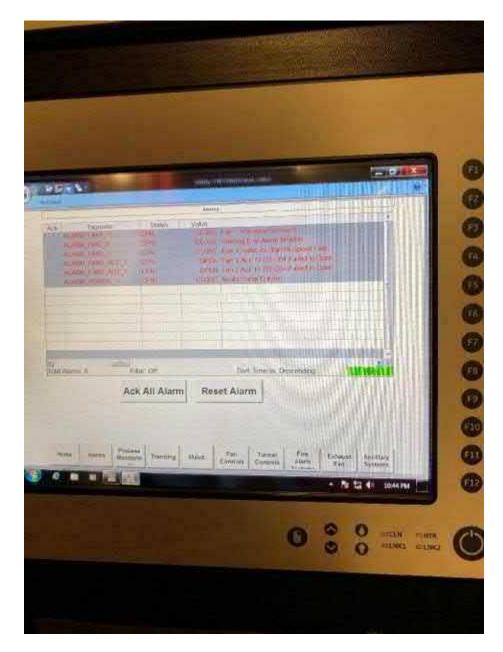
M MOTT MACDONALD



Photo Comment

Take Photo







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





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

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

Element	Element Element Element Name			Total Qua			iantities in	Condition S	States	Ins	pection Findi	ngs
Section	Type	Number Element Name		Quantity	Unit	1	2	3	4	Routine	Priority	Critical
ms	Fire Detection	10650	Fire Detection System(s)	3	Each	1	1	1	1			
Sys	Tunnel Linear Heat Detection Tunnel Linear Heat Detection		3	Each	3	1	1	1				
Safety/Security	Emergency Communications	10750	Emergency Communications System(s)	NA	Each	NA	NA	NA	NA			
afety/9	Operations and Security 10800.01 10800.02	10800	Tunnel Operations and Security System(s)	3	Each	3	ı	1	1			
Fire/Life S		10800.01	CCTV Camera(s)	12	Each	1	ı	1	1			
Fire		10800.02	CCTV Monitoring System(s)	1	Each	1	-	-				
Signs	Traffic Guidance	10850	Traffic Signs	2	Each	1	-	-	1			

2018 BASELINE II	NSPECTION OF	THE LYTLE TUNNEL

				unnel Elem		LYTLE TUNNE ities	-			
Element Section	Element Number	Element Name	Unit	Tunnel	Start Sta.	End Sta.	Section Length (ft)	Area Length Row (No. (n (ft) / Ea.) /	Total Area (ft²) / Total Length (ft) / Total (Ea)
		5 1		SB	125+40	133+57	817			
	10500	Electrical Distribution System(s)	Each	SB Ramp	126+86	135+64.51	878.51	No.	1	1
		System(s)		NB	127+10	135+74	864			
				SB						
	10500.01	Switchgear	Each	SB Ramp				No.	2	2
				NB						
				SB						
	10500.02	Switchboard(s)	Each	SB Ramp				No.	2	2
				NB						
				SB						
	10500.03	Transformer(s)	Each	SB Ramp				No.	2	2
				NB						
tems				SB						
Electrical and Lighting Systems	10500.04	Transfer Switches	Each	SB Ramp				No.	NA	NA
ightin			NB							
and L	10500.05 Panelboard(s)		SB							
trical		Panelboard(s)	Each	SB Ramp				No.	2	2
Eleci				NB						
		Conduit &		SB						
	10500.06	Raceway System(s)	Overall	SB Ramp				No.	1	1
		- , (-,		NB						
				SB						
	10500.07	Soft Starter(s)	Each	SB Ramp				No.	3	3
				NB						
				SB						
	10500.08	Disconnect(s)	Overall	SB Ramp				No.	1	1
				NB						
				SB						
	10500.09	10500.09 Control Panel(s)	Overall	SB Ramp				No. 1	1	1
				NB						

Page 3 of 30

2018 BASELINE INSPECTION OF THE LYTLE TUNNEL

				innel Eleme		LYTLE TUNNE	· -				
Element Section	Element Number	Element Name	Unit	Tunnel	Start Sta.	End Sta.	Section Length (ft)	Lengt Row	th (ft²) / th (ft) / (Ea.) / (Ea.)	Total Area (ft²) / Total Length (ft) / Total (Ea)	
				SB							
	10500.10	Enclosed Circuit Breaker(s)	Overall	SB Ramp				No.	1	1	
				NB							
				SB							
	10500.11	Pullbox/Junction box(s)	Overall	SB Ramp				No.	1	1	
		, ,		NB							
		_		SB				No.			
	10550	Emergency Distribution	Each	SB Ramp					1	1	
		System(s)		NB							
		Tunnel Lighting System(s)			SB				No.	1	
	10600		Each	SB Ramp				No.	1	3	
tems				NB				No.	1		
Electrical and Lighting Systems				SB	125+40	133+57	817	No.	1		
ghtine	10600	Tunnel Lighting Control System(s)	Each	SB Ramp	126+86	135+64.51	878.51	NO.	1	2	
ınd Li				NB	127+10	135+74	864	No.	1		
rical a				SB	125+40	133+57	817	No.	400		
Elect	10500	Disconnect(s)	Each	SB Ramp	126+86	135+64.51	878.51	No.	300	1,100	
				NB	127+10	135+74	864	No.	400		
				SB	125+40	133+57	817	No.	400		
	10601	Tunnel Lighting Fixture(s)	Each	SB Ramp	126+86	135+64.51	878.51	No.	300	1,100	
				NB	127+10	135+74	864	No.	400		
				SB	125+40	133+57	817	No.	1		
	10620	Emergency Lighting System(s)	Each	SB Ramp	126+86	135+64.51	878.51	No.	1	3	
				NB	127+10	135+74	864	No.	1		
				SB	125+40	133+57	817				
	10621	Emergency	Each	SB Ramp	126+86	135+64.51	878.51	No	NA	0	
	10021	Lighting Fixture(s)	Each	NB	127+10	135+74	864	No.	INA	U	
				Building							

2018 BASELINE INSPECTION OF THE LYTLE TUNNEL

	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 (ft²) / Length (ft) / Row (Ea.) / No. (Ea.)		Total Area (ft²) / Total Length (ft) / Total (Ea)							
				SB	125+40	133+57	817	No.	1								
	40050	Fire Detection		SB Ramp	126+86	135+64.51	878.51	No.	1] ,							
	10650	System(s)	Each	NB	127+10	135+74	864	No.	1	- 4							
				Building				No.	1								
				SB	125+40	133+57	817	No.	1								
	10650.01	Tunnel Linear Heat Detection	Each	SB Ramp	126+86	135+64.51	878.51	No.	1	3							
				NB	127+10	135+74	864	No.	1								
sw		Emergency		SB													
Fire/Life Safety/Security Systems	10750	Communications System(s)	Each	SB Ramp				No.	NA	NA							
urity		- 7(-)		NB													
ty/Sec		Tunnel Operations and Security System(s)		SB	125+40	133+57	817	No.	1								
Safel	10800		and Security	and Security	and Security	and Security	and Security	and Security	and Security	and Security System(s)	Each	SB Ramp	126+86	135+64.51	878.51	No.	1
e/Life		Syste(5)		NB	127+10	135+74	864	No.	1								
Ξ				SB	133+51	125+46		No.	3								
	10800.01	CCTV Camera(s)	Each	SB Ramp	135+60	127+15		No.	3	12							
	10000.01	COTV Camera(s)	Luon	NB	135+90	127+14		No.	3								
				Building				No.	3								
				SB													
	10800.02	CCTV Monitoring	Each	SB Ramp				No.	1	1							
	10000.02	System(s)	Luon	NB				140.		'							
				Building													
Signs	10850	Traffic Signs	Each	North Portal	134+86			No.	1	- 2							
Siç	10850 Traffic Signs	Laui	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 Qu	Condition State Quantities									
	Condition State 1	Condition State 2	Condition State 3	Condition State 4						
	1	-	-	-						

Page 5 of 30

Element Number	Elemen	nt Name	Quantity	Unit					
10500.01	Switc	hgear	2	Each					
Inspection Results									
The Switchgears a	re in good condition	– no notable distress							
Observations:									
- None									
Condition State De	fect 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	Elemen	t Name	Quantity	Unit					
10500.02	Switchb	ooard(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 De	fect 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	-	-	-					

Page 7 of 30 Page 8 of 30

Element Number	Elemen	nt Name	Quantity	Unit	
10500.03	Transfo	ormer(s)	2	Each	
Inspection Results					
The LV Transformers are in good condition – no notable distress.					
Observations:	Observations:				
- None					
Condition State De	fect Assessment				
Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4	
Component Housing or	3				
Enclosure	3				
Condition State Quantities					
	Condition State 1	Condition State 2	Condition State 3	Condition State 4	
	3	-	-	-	

Element Number	Elemen	nt Name	Quantity	Unit		
10500.04	Transfer	Switches	NA	Each		
Inspection Results	Inspection Results					
The Transfer Switc	hes are in good cond	dition – no notable di	stress.			
Observations:	Observations:					
- None						
0 1111 04 4 5						
Condition State De	fect Assessment					
Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4		
Component Supports						
Corrosion						
Component Housing or 1 Enclosure						
Condition State Qu	antities					
	Condition State 1	Condition State 2	Condition State 3	Condition State 4		
	1	-	-	-		

Page 9 of 30 Page 10 of 30

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

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.

2

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 Qua	Condition State Quantities				
	Condition State 1	Condition State 2	Condition State 3	Condition State 4	

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 Qu	antities			
	Condition State 1	Condition State 2	Condition State 3	Condition State 4

Page 11 of 30 Page 12 of 30

Element Number	Elemen	it Name	Quantity	Unit	
10500.07	Soft St	arter(s)	3	Each	
Inspection Results					
The Stand-alone M	lotor Starters are in g	good condition. Grou	nd cable connections	s are loose.	
Condition State De	fect 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	Elomon	nt Name	Quantity	Unit
Element Number	Lieillei	it Name	Quantity	Offic
10500.08	Discon	nect(s)	1	Each
Inspection Results				
The Disconnects a	re in good condition	– no notable distress		
Observations:				
- None				
Condition State De	fect 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	-	-	-

Page 13 of 30 Page 14 of 30

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

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 Circ	cuit Breaker(s)	1	Each
Inspection Results				
All LV enclosed CB	s's are in good condit	tion – no notable dist	ress.	
Observations:				
None				
Condition State De	fect 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	-	-	-

Page 15 of 30 Page 16 of 30

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

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	-	-	-

Page 17 of 30 Page 18 of 30

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

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 Quar	Condition State Quantities				
	Condition State 1	Condition State 2	Condition State 3	Condition State 4	
	3	-	-	-	

Element Number	Elemer	nt 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 Defe	ct Assessment				
Defect	Condition State 1	Condition State 2	Condition State 3	Condition State 4	
Southbound	1				
Southbound Ramp	'				
Northbound	1				
Condition State Quar	ntities		•		
	Condition State 1	Condition State 2	Condition State 3	Condition State 4	

2

Page 19 of 30 Page 20 of 30

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

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	-	-	1

Page 21 of 30 Page 22 of 30

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 Qu	antities			
	Condition State 1	Condition State 2	Condition State 3	Condition State 4
	1	_	-	_

Page 23 of 30 Page 24 of 30

Element Number	Element Name	Quantity	Units
10650.01	Tunnel Linear Heat Detection	3	Each
Inspection Results			
The LHD system is fiber optic cables in	in good condition - no notable distress. the tunnels.	This includes the line	ar heat detection
Observations:			

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	
nspection Results					
The Emergency Communications System was not inspected as MM did not find any system in place.					
Condition State De	fect 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	

Page 25 of 30 Page 26 of 30

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

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

Condition State 1

3

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 2 | Condition State 3 | Condition State 4

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	_	_	_		

Page 27 of 30 Page 28 of 30

Element Number	Elemen	it Name	Quantity	Unit				
10800.02	CCTV Monitor	ring System(s)	1	Each				
Inspection Results	nspection Results							
The CCTV System	s are in good conditi	on. Minor dirt observ	ed.					
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 4		
North Portal				1	
South Portal	1				
Condition State Quantities					
	Condition State 1	Condition State 2	Condition State 3	Condition State 4	
	1	_	_	1	

Page 29 of 30 Page 30 of 30

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

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,

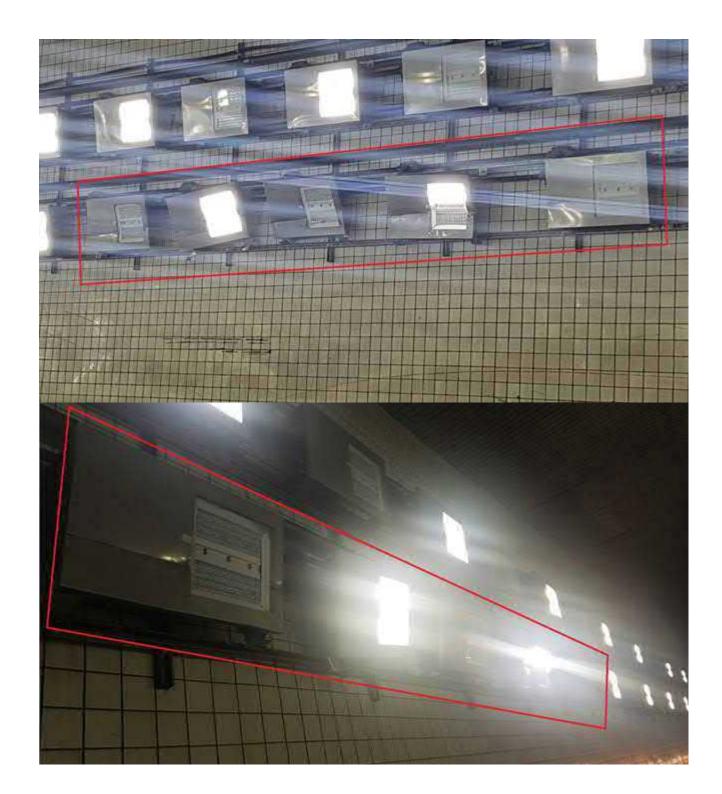
We did a pre-cursor inspection of the NB tunnel during last night's cleaning shift and found the following critical items that need to be reported to ODOT:

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.

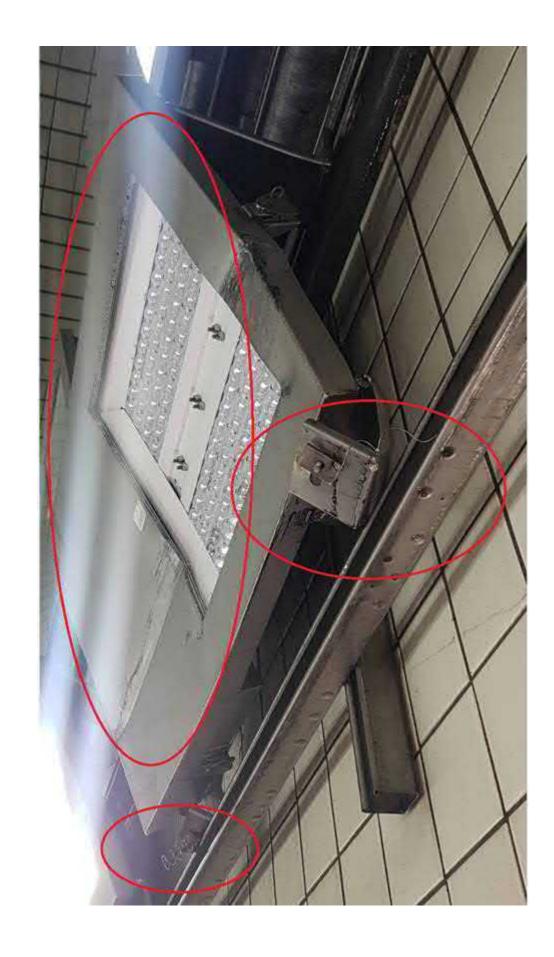




5

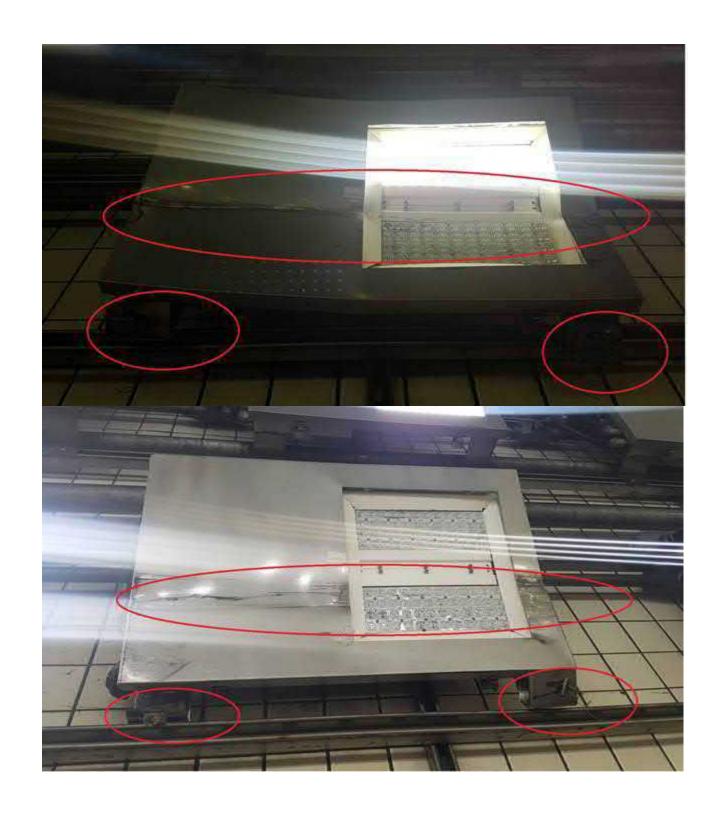


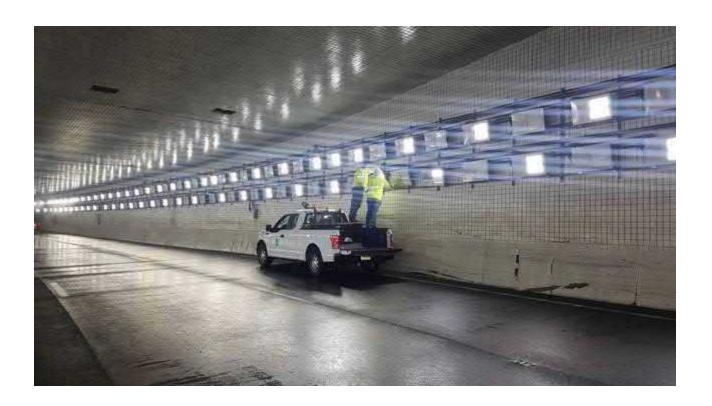
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Let me know if you have any questions.

Thanks, Adrian

Kind Regards,

Adrian S Pasca

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

T +1 (800) 832 3272 T +1 (914) 292 1809 C +1 (914) 343 0518 adrian.pasca@mottmac.com

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Mott MacDonald 800 Westchester Avenue Rye Brook, NY 10573 United States of America

Website | Twitter | LinkedIn | Facebook | YouTube

B.3 Inspection Photos



Sheet 1 of 180

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

Lytle Tunnel Inspection Page 1 M MOTT MACDONALD

Sheet 2 of 180

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	g Information			
Type of lighting co	ntrol:	Emer	gency exterior door	lighting type:	Description	of roof top lighting	present:
Description:		Descr	iption:				
	Are the exit signs provided with battery backup power?		Does the test button on the battery backup lighting indicate proper operation?		Is the emergency lighting power source unswitched?		Are battery wall pack lighting fixtures on the same circuit as adjacent normal lighting fixtures?

Malfunctioning Exit Sign Description:	Exit Sign Image:

Lytle Tunnel Inspection Page 2



Sheet **3** of **180**

Low Voltage Section

Panel Information		Pa	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	
ranei Location Description.	Lighting Control Room	Wire:		
Additional information: Scratch on door.				

Low Voltage Panel Images:

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Sheet 4 of 180







Sheet **5** of **180**

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Sheet 6 of 180



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



Sheet **7** of **180**

Panel Image and Nameplate

Transformer Information				
Туре:	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				

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Sheet **8** of **180**

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



Sheet 9 of 180

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:

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Sheet **10** of **180**







Sheet **11** of **180**





Sheet **12** of **180**

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

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			

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Sheet **13** of **180**

Panel Image and Nameplate

Transformer Information				
Туре:	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				

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Sheet **14** of **180**

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



Sheet **15** of **180**

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:

Lytle Tunnel Inspection Page 15



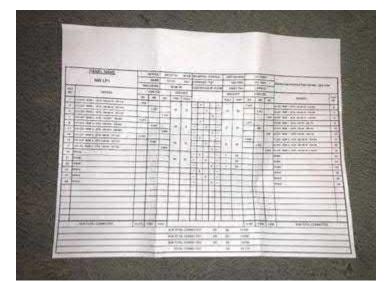
Sheet **16** of **180**







Sheet **17** of **180**







Sheet **18** of **180**

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

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			

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Sheet **19** of **180**

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				

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Sheet **20** of **180**

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



Sheet **21** of **180**

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
Tuner Zotunon Z tota prioni	Zigining converticent	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:

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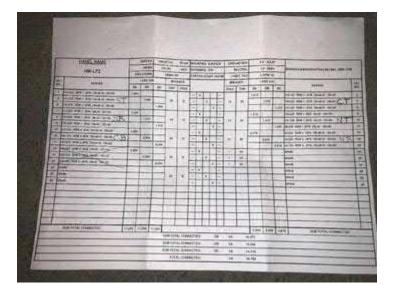
Sheet 22 of 180







Sheet 23 of 180





Sheet **24** of **180**

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

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Sheet **25** of **180**

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					

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Sheet **26** of **180**

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



Sheet **27** of **180**

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
Taner Boomion Besch-puon	Eighwing Common Process	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:

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Sheet 28 of 180







Sheet **29** of **180**



Sheet **30** of **180**



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

Transformer Information				
Туре:	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			

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Sheet **31** of **180**

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Sheet **32** of **180**

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:			



Sheet **33** of **180**

Standalone Equipment Image

Panel Inf	ormation		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	3
Taner Boomion Besch-puon	Eighwing converteem	Wire:	4

Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule Panel schedule missing

Low Voltage Panel Images:

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Sheet **34** of **180**





Sheet **35** of **180**

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Sheet **36** of **180**





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

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		

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Sheet **37** of **180**

Panel Image and Nameplate

Transformer Information				
Туре:	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				

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Sheet **38** of **180**

Standalone Equipment Information		
Name or Tag:		
Type:		
Equipment Location Description:		
Voltage:		
Amperage:		
Additional information:	<u> </u>	



Sheet **39** of **180**

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	3
Tuner Zotumon Z tota speron	Eighwing Common Process	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:

Lytle Tunnel Inspection Page 39 MOTT MACDONALD

Sheet **40** of **180**







Sheet **41** of **180**



Sheet **42** of **180**



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

Transformer Information			
Туре:	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		

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Sheet **43** of **180**

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Sheet **44** of **180**

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				

Standalo	one Equipment Information
Name or Tag:	
Type:	
Equipment Location Description:	
Voltage:	
Amperage:	

Panel Image and Nameplate

Additional information:



Sheet **45** of **180**

Standalone Equipment Image

Panel Inf	ormation		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
Tuner Botturon Baser speron	Zigining converticent	Wire:	4

Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule

Low Voltage Panel Images:

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Sheet **46** of **180**







Sheet **47** of **180**





Sheet **48** of **180**

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

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		Kateu Frequency:	00	

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Sheet **49** of **180**

Panel Image and Nameplate

Transformer Information				
Туре:	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 da	nage			

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Sheet **50** of **180**

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



Sheet **51** of **180**

Standalone Equipment Image

Panel In	formation		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
2 miles 200miles 2 constitution.	Zigining control recom	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:

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Sheet **52** of **180**





Sheet **53** of **180**



Sheet **54** of **180**



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



Sheet **55** of **180**

Panel Image and Nameplate

Transformer Information				
Туре:	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 da	nage			

M MOTT MACDONALD

Sheet **56** of **180**

Standalone Equipment Information			
Name or Tag:			
Type:			
Equipment Location Description:			
Voltage:			
Amperage:			
Additional information:	<u> </u>		



Sheet **57** of **180**

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
Taner Boomion Best-prion	Zigning conto recon	Wire:	4

Additional information: No Printed Labels Scratches on door Transparent pocket doesnt fit the panel schedule

Low Voltage Panel Images:

M MOTT MACDONALD

Sheet **58** of **180**





Sheet **59** of **180**



M

MOTT MACDONALD

Sheet **60** of **180**





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

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		



Sheet **61** of **180**

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 dam	age			

M MOTT MACDONALD

Sheet **62** of **180**

	Standalone Equipment Information	
Name or Tag:		
Type:		
Equipment Location Description:		
Voltage:		
Amperage:		
Additional information:	<u> </u>	



Sheet **63** of **180**

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
and social sections	Lighting content toom	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:

MOTT MACDONALD

Sheet **64** of **180**







Sheet **65** of **180**





Sheet **66** of **180**

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

Transformer Information				
Туре:	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	



Sheet **67** of **180**

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				

M MOTT MACDONALD

Sheet **68** of **180**

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

M MOTT MACDONALD

Sheet **69** of **180**

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
z mier zoemen z eser ipiton.	Lighting contact teeth	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:

M MOTT MACDONALD

Sheet **70** of **180**







Sheet **71** of **180**





Sheet **72** of **180**

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

Transformer Information				
Туре:	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			

M MOTT MACDONALD

Sheet **73** of **180**

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				

M MOTT MACDONALD

Sheet **74** of **180**

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

Sheet **75** of **180**

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
Taner Escation Description.		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:

Lytle Tunnel Inspection Page 75



Sheet **76** of **180**







Sheet **77** of **180**





Sheet **78** of **180**

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

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				

Sheet **79** of **180**

Panel Image and Nameplate

Transformer Information				
Туре:	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				

M MOTT MACDONALD

Sheet **80** of **180**

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



Sheet **81** of **180**

Standalone Equipment Image

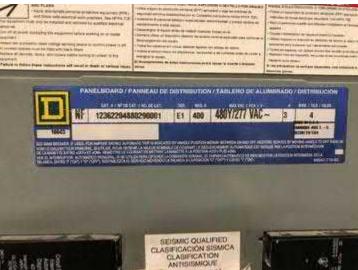
Panel Information]	Panel Ratings	
Name or Tag:	LP-PP	Voltage:	480Y/277V	
Serial Number and/or Manufacturing Date:	12362204880290001	Amperage:	400	
Panel Location Description: Ele	Electrical Room	Phase:	3	
Tallet Location Description.	Electrical Room	Wire:	4	
Additional information:				

Low Voltage Panel Images:

M MOTT MACDONALD

Sheet **82** of **180**





Sheet **83** of **180**

M MOTT MACDONALD

Sheet **84** of **180**





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



Sheet **85** of **180**

MOTT MACDONALD

Sheet **86** of **180**

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



Sheet **87** of **180**

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
Time: Zoendon Zeser prioni		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

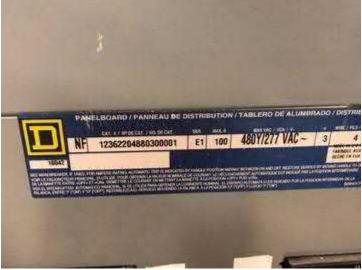
Low Voltage Panel Images:

Lytle Tunnel Inspection Page 87



Sheet **88** of **180**





Sheet **89** of **180**









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

Transformer Information				
Туре:	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	I		



Sheet **91** of **180**

M MOTT MACDONALD

Sheet **92** of **180**

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	Namepl	la
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Standalone Equipment Information				
Name or Tag:				
Type:				
Equipment Location Description:				
Voltage:				
Amperage:				
Additional information:	<u> </u>			



Sheet **93** of **180**

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
z mai zoemon z escription.	Zietaitai Itaaii	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:

M MOTT MACDONALD

Sheet **94** of **180**





Sheet **95** of **180**



Sheet **96** of **180**





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

Transformer Information				
Туре:	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	I		



Sheet **97** of **180**

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				

M MOTT MACDONALD

Sheet **98** of **180**

Standalone Equipment Information				
Name or Tag:				
Type:				
Equipment Location Description:				
Voltage:				
Amperage:				
Additional information:	<u> </u>			



Sheet **99** of **180**

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
- and Zoeman Description	Ziotaitui 1188iii	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:

M MOTT MACDONALD

Sheet **100** of **180**





Sheet **101** of **180**

M

MOTT MACDONALD

Sheet **102** of **180**





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

Transformer Information				
Туре:	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	I		



Sheet **103** of **180**

Panel Image and Nameplate

Transformer Information				
Туре:	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				

M MOTT MACDONALD

Sheet **104** of **180**

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



Sheet **105** of **180**

Standalone Equipment Image

Panel Information		Par	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	
Tanci Escation Description.	Lighting Control Room	Wire:	4	

Additional information: Transparent pocket cant show full panel schedule

Low Voltage Panel Images:

M MOTT MACDONALD

Sheet **106** of **180**





Sheet **107** of **180**

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

Transformer Information				
Туре:	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			

Lytle Tunnel Inspection Page 107



Sheet **108** of **180**

Panel Image and Nameplate

Transformer Information				
Туре:	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			

Lytle Tunnel Inspection Page 108



Sheet **109** of **180**

M MOTT MACDONALD

Sheet **110** of **180**

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
Taner Boundar Beser Phon	Zigitting control recom	Wire:	4

Additional information: Missing Labels Scratches on Door Transparent pocket cant show full panel schedule

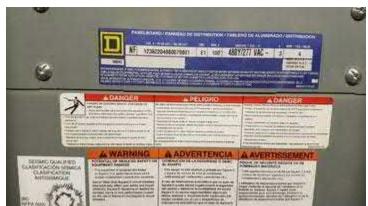
Low Voltage Panel Images:

Sheet **111** of **180**

M MOTT MACDONALD

Sheet **112** of **180**









Sheet **113** of **180**

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

Transformer Information				
Туре:	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			

Lytle Tunnel Inspection Page 113



Sheet **114** of **180**

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		

Lytle Tunnel Inspection Page 114



Sheet **115** of **180**

M MOTT MACDONALD

Sheet **116** of **180**

Panel Image and Nameplate

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

Standalone	Equipment	Image
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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
Taner Boom on Boser Aparons	Digitally contact teem	Wire:	4

Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule

Low Voltage Panel Images:

Sheet **117** of **180**

M MOTT MACDONALD

Sheet **118** of **180**







Sheet **119** of **180**

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

Transformer Information			
Туре:	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

Lytle Tunnel Inspection Page 119



Sheet **120** of **180**

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		

Lytle Tunnel Inspection Page 120



Sheet **121** of **180**

M MOTT MACDONALD

Sheet **122** of **180**

Panel Image and Nameplate

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

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
- mor Boundar Boson sprions	Lighting control from	Wire:	4

Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule

Low Voltage Panel Images:

MOTT MACDONALD

Sheet **123** of **180**

M MOTT MACDONALD

Sheet **124** of **180**





Sheet **125** of **180**

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

Transformer Information			
Туре:	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

Lytle Tunnel Inspection Page 125



Sheet **126** of **180**

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		

Lytle Tunnel Inspection Page 126



Sheet **127** of **180**

Panel Image and Nameplate

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

M MOTT MACDONALD

Sheet **128** of **180**

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:



Sheet **129** of **180**

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



Sheet **131** of **180**

Panel Image and Nameplate

Transformer Information			
Туре:	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			

M MOTT MACDONALD

Sheet **132** of **180**

Standalone Equipment Information		
Name or Tag:		
Type:		
Equipment Location Description:		
Voltage:		
Amperage:		
Additional information:	<u> </u>	



Sheet **133** of **180**

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 Roo	Lighting Control Room	Phase:	3
	Zigining contor rectif	Wire:	4

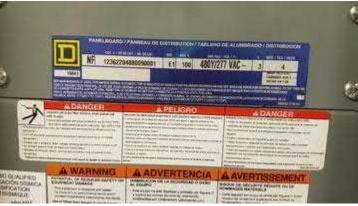
Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule Panel schedule inconsistent with breaker arrangement

Low Voltage Panel Images:

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Sheet **134** of **180**









Sheet **135** of **180**

M MOTT MACDONALD

Sheet **136** of **180**

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

Transformer Information			
Туре:	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



Sheet **137** of **180**

Panel Image and Nameplate

Transformer Information			
Туре:	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			

M MOTT MACDONALD

Sheet **138** of **180**

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



Sheet **139** of **180**

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:

M MOTT MACDONALD

Sheet **140** of **180**







Sheet **141** of **180**

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Sheet **142** of **180**

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

Transformer Information			
Туре:	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



Sheet **143** of **180**

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			

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Sheet **144** of **180**

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



Sheet **145** of **180**

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 sheedule shows space

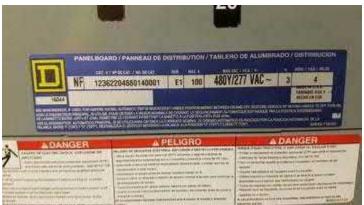
Low Voltage Panel Images:

Lytle Tunnel Inspection Page 145



Sheet **146** of **180**







Sheet **147** of **180**

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Sheet **148** of **180**

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

Transformer Information				
Туре:	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			



Sheet **149** of **180**

Panel Image and Nameplate

Transformer Information				
Туре:	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 da	nage			

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Sheet **150** of **180**

Panel Image and Nameplate

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



Sheet **151** of **180**

Standalone Equipment Image

Panel Inf	ormation		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:

Lytle Tunnel Inspection Page 151



Sheet **152** of **180**









Sheet **153** of **180**

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Sheet **154** of **180**

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



Sheet **155** of **180**

Panel Image and Nameplate

Transformer Information				
Туре:	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 da	mage			

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Sheet **156** of **180**

Panel Image and Nameplate

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



Sheet **157** of **180**

Standalone Equipment Image

Panel Inf	ormation		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
2 and 200mon 2 conspicul	Digiting contact teem	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:

Lytle Tunnel Inspection Page 157



Sheet **158** of **180**





Sheet **159** of **180**

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

Lytle Tunnel Inspection Page 159



Sheet **160** of **180**

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			

Lytle Tunnel Inspection Page 160



Sheet **161** of **180**

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Sheet **162** of **180**

Panel Image and Nameplate

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

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	Phase:	3
Tanci Location Description.	pocket cant show full panel schedule	Wire:	4

Standalone Equipment Image

Additional information: Missing Labels Scratches Transparent pocket cant show full panel schedule

Low Voltage Panel Images:

Sheet **163** of **180**

M MOTT MACDONALD

Sheet **164** of **180**







Sheet **165** of **180**

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

Transformer Information				
Туре:	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			

Lytle Tunnel Inspection Page 165



Sheet **166** of **180**

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			

Lytle Tunnel Inspection Page 166



Sheet **167** of **180**

Panel Image and Nameplate

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

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Sheet **168** of **180**

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:

Sheet **169** of **180**



Sheet **170** of **180**







Sheet **171** of **180**

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

Lytle Tunnel Inspection Page 171



Sheet **172** of **180**

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			

Lytle Tunnel Inspection Page 172



Sheet 173 of 180

Panel Image and Nameplate

Standalone Equipment Information					



Sheet **174** of **180**

Standalone Equipment Image

Panel Inf	ormation		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:

M MOTT MACDONALD

Sheet **175** of **180**



Sheet **176** of **180**







Sheet **177** of **180**

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

Lytle Tunnel Inspection Page 177



Sheet **178** of **180**

Panel Image and Nameplate

	Transformer Information						
Туре:	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						

Lytle Tunnel Inspection Page 178

Sheet **179** of **180**

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Sheet **180** of **180**

Panel Image and Nameplate

Standalone Equipment Image

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



Sheet **1** of **133**

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

Lytle Tunnel Spring 2020 Inspection Page 1



Lytle Tunnel Spring 2020 Inspection Page 2

Sheet 2 of 133

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

Sheet **3** of **133**



Sheet **4** of **133**







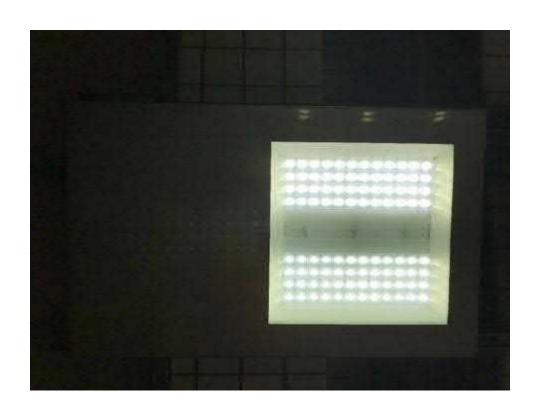
Tunnel Lighting Section

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			

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?
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Sheet **5** of **133**

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





Sheet 6 of 133





Tunnel Lighting Section



Sheet **7** of **133**

	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											

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



Sheet **8** of **133**





Sheet **9** of **133**



Sheet **10** of **133**







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

Sheet **11** of **133**

No	Yes	No	Yes	No	No	Yes	No	Yes	Yes	Yes						





Sheet **12** of **133**







Sheet **13** of **133**



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									

re fun
Lens cover cracked? Wireway ears broken?
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?

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Sheet **14** of **133**

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



Sheet **15** of **133**

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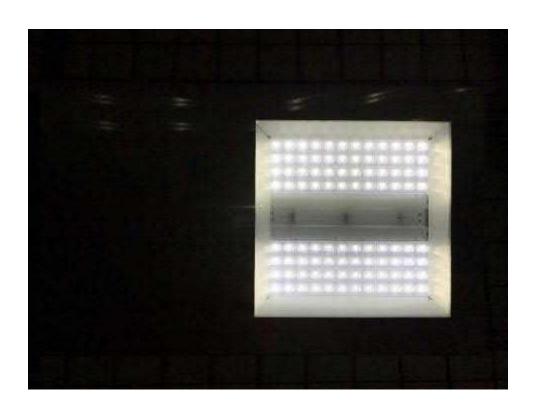
Tunnel Lighting Section

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								

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?

Sheet **17** of **133**

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





Sheet **18** of **133**





Tunnel Lighting Section



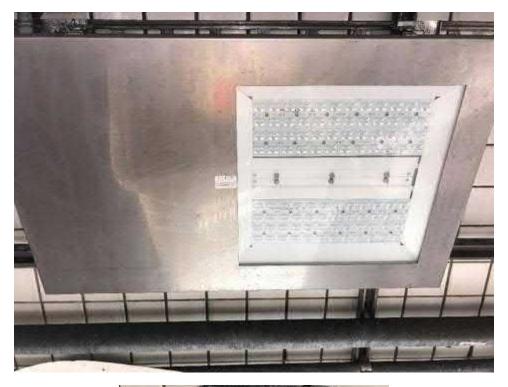
Sheet **19** of **133**

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										

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



Sheet **20** of **133**





Sheet **21** of **133**











Tunnel Lighting Section



Sheet **23** of **133**

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										

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	No	No	No	Yes	No	Yes	Yes	Yes



Sheet **24** of **133**





Sheet **25** of **133**



Sheet **26** of **133**







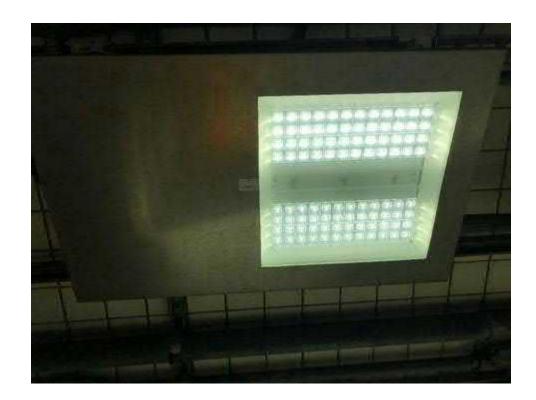
Tunnel Lighting Section

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										

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?
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Sheet **27** of **133**

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	Yes	Yes	Yes
İ																





Sheet **28** of **133**





Sheet **29** of **133**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **30** of **133**

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

Sheet **31** of **133**



Sheet **32** of **133**











Sheet **33** of **133**



Tunnel Lighting Section

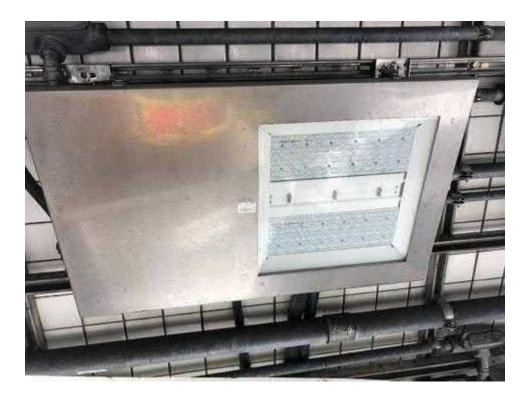
Lighting Fixture Information										
Luminaire Tag or Number:	NB - West Wall - 26A									
Tunnel Direction and Side:	NB - West Wall -1									
Additional Information:	Right clip disanged Top Right Musaligned									

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?	
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M MOTT MACDONALD

Sheet **34** of **133**

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



Sheet **35** of **133**



Sheet **36** of **133**



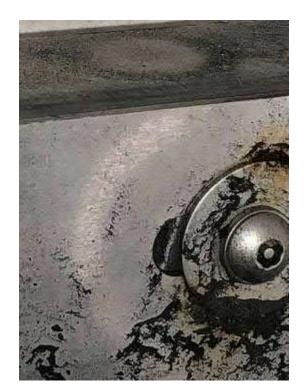








Sheet **37** of **133**



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								

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?	
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M MOTT MACDONALD

Sheet **38** of **133**

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



Sheet **39** of **133**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **40** of **133**

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

Sheet **41** of **133**



Sheet **42** of **133**

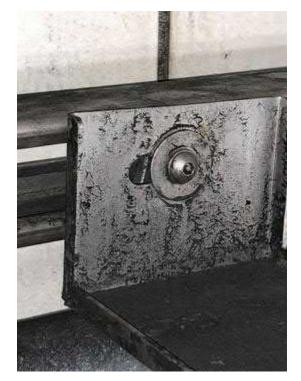








Sheet **43** of **133**





Tunnel Lighting Section

Lytle Tunnel Spring 2020 Inspection Page 43



Sheet **44** of **133**

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

Sheet **45** of **133**











Tunnel Lighting Section



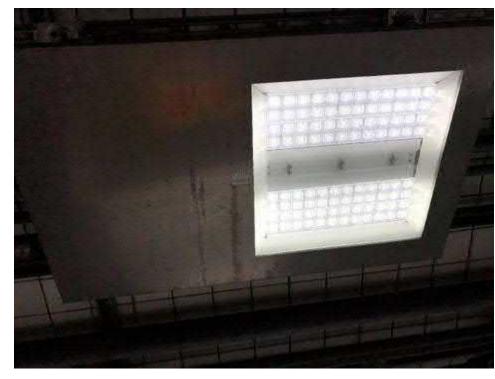
Sheet **47** of **133**

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



Sheet **48** of **133**





Sheet **49** of **133**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet 50 of 133

	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	

Sheet **51** of **133**



Sheet **52** of **133**









Tunnel Lighting Section



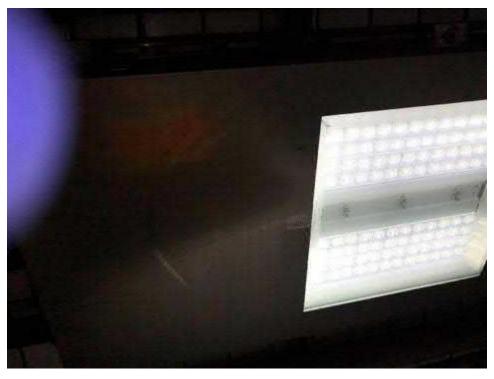
Sheet **53** of **133**

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									

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	Yes	No	Yes	No	Yes



Sheet **54** of **133**





Sheet **55** of **133**





Tunnel Lighting Section

Lytle Tunnel Spring 2020 Inspection Page 55



Sheet **56** of **133**

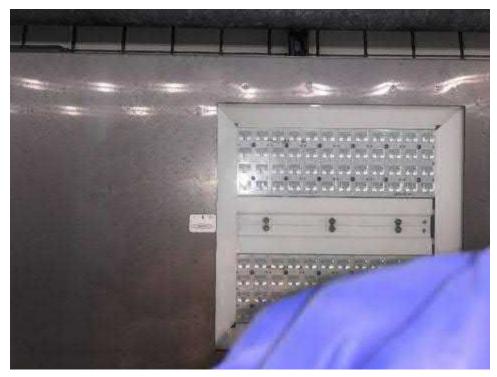
Lighting Fixture Information										
Luminaire Tag or Number:	NB - West Wall - 49B									
Tunnel Direction and Side:	NB - West Wall									
Additional Information:	T Side entry Top sode emtry looose Fixture Top left									

	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

Sheet **57** of **133**



Sheet **58** of **133**











Sheet **59** of **133**



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										

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?	
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M MOTT MACDONALD

Sheet **60** of **133**

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



Sheet **61** of **133**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **62** of **133**

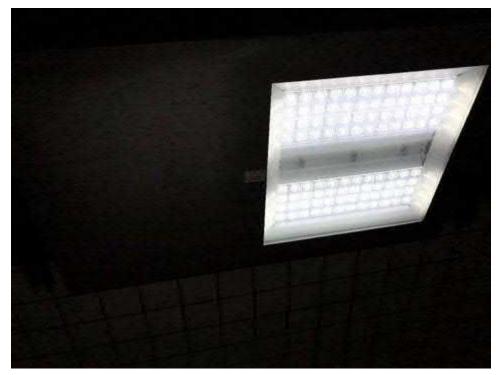
	Lighting Fixture Information									
Luminaire Tag or Number:	NB - West Wall - 58B									
Tunnel Direction and Side:	NB - West Wall									
Additional Information:	T Side emtry Fixture									

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

Sheet **63** of **133**



Sheet **64** of **133**







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?	
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Sheet **65** of **133**

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





Sheet **66** of **133**







Sheet **67** of **133**



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

channel springnut channel wireway c channel wireway c ng clip disengaged? lip disengaged? lip broken? lip broken? vay ears broken?	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? Trans channel springnut misaligned?
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M MOTT MACDONALD

Sheet **68** of **133**

Yes	No	No	No	No	No	No	Yes								



Sheet **69** of **133**



Sheet **70** of **133**











Sheet **71** of **133**



Tunnel Lighting Section

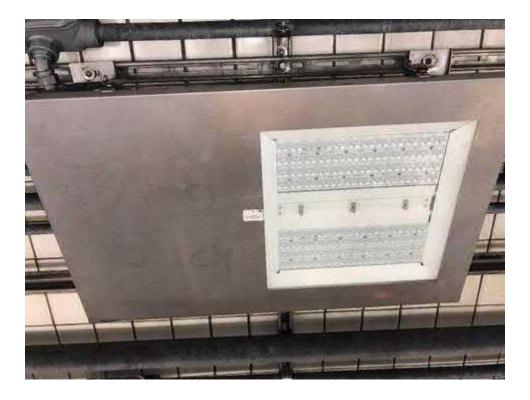
	Lighting Fixture Information									
Luminaire Tag or Number:	NB - West Wall - 76A									
Tunnel Direction and Side:	NB - West Wall									
Additional Information:	T Side entry Both side entry loose Fuxture Both Bottom misaligned									

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?	
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M MOTT MACDONALD

Sheet **72** of **133**

1	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	No	Yes



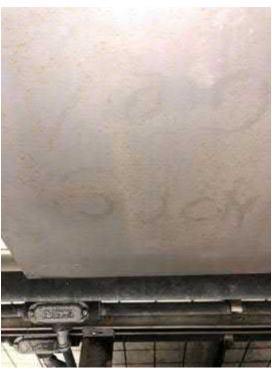
Sheet **73** of **133**



Sheet **74** of **133**











Sheet **75** of **133**



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 1 Fuxture										

Lens clip broken? Lens cover cracked? Wireway ears broken? Luminaire functioning?	Housing clip disengaged? Housing clip missing? Lens clip disengaged?	Long channel springnut cracked? Trans channel springnut misaligned? Trans channel springnut cracked? Trans channel wireway clip?	he tunnel lighting systement tunnel lighting systement the side entry conductive the side entry conductive there any signs of consisture? In the side entry conductive the side entry conductive any signs of consistering or enclosure? In the side entry conductive the side entry
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M MOTT MACDONALD

Sheet **76** of **133**

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



Sheet **77** of **133**





Tunnel Lighting Section

MOTT MACDONALD

Sheet **78** of **133**

	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

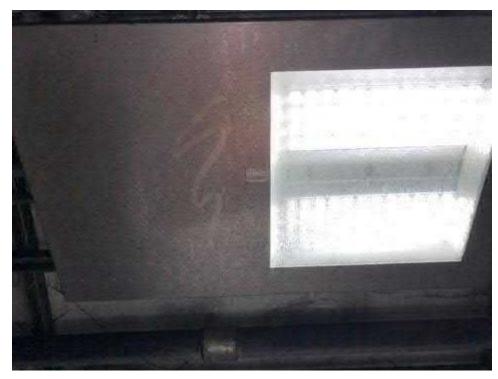
Sheet **79** of **133**



M

MOTT MACDONALD

Sheet **80** of **133**







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										

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?
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Sheet **81** of **133**

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





Sheet **82** of **133**





Sheet **83** of **133**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **84** of **133**

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

Sheet **85** of **133**



Sheet **86** of **133**









Tunnel Lighting Section



Sheet **87** of **133**

	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

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



Sheet **88** of **133**







Sheet **89** of **133**



Tunnel Lighting Section

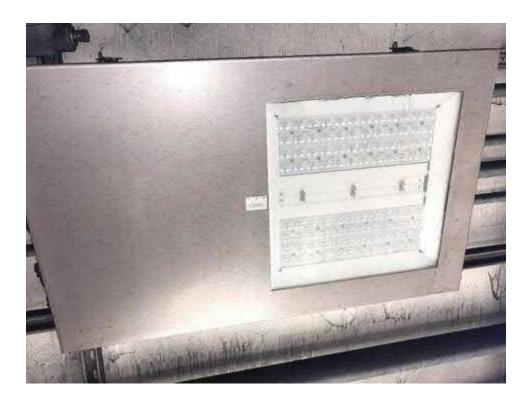
	Lighting Fixture Information
Luminaire Tag or Number:	NB - West Wall - 103A
Tunnel Direction and Side:	NB - West Wall
Additional Information:	T Fixture

Lens clip disengaged? Lens clip broken? Lens cover cracked? Wireway ears broken?
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?

M MOTT MACDONALD

Sheet **90** of **133**

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



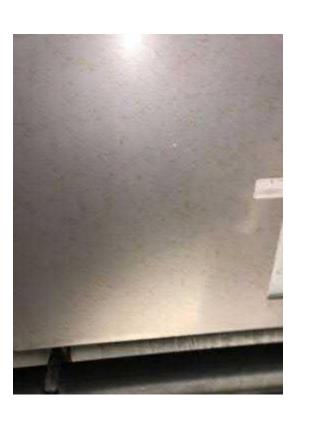
Sheet **91** of **133**



Sheet **92** of **133**







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

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?
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Sheet **93** of **133**

Yes	No	Yes	Yes	Yes										





Sheet **94** of **133**







Sheet **95** of **133**



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					

Lens clip disengaged? Lens clip broken? Lens cover cracked? Wireway ears broken?
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?

M MOTT MACDONALD

Sheet **96** of **133**

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



Sheet **97** of **133**



Sheet **98** of **133**





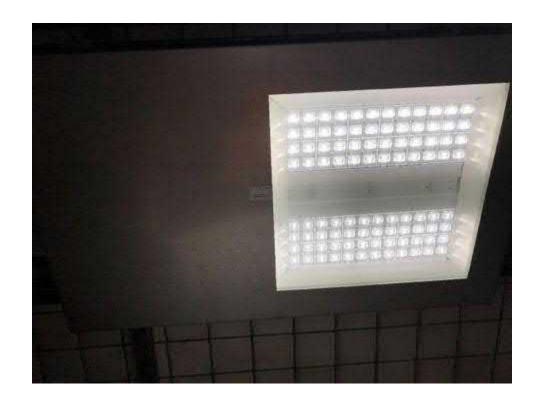


Tunnel Lighting Section

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					

Sheet **99** of **133**

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	Yes	Yes
	1.0	1.0	1.0	1,0	1.0	1,0	1 00	1.0	1 00	1,0	1.0	1 45	1.0	1 45	100	1 45





Sheet **100** of **133**







Sheet **101** of **133**



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									

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?
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M MOTT MACDONALD

Sheet **102** of **133**

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



Sheet **103** of **133**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **104** of **133**

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

Sheet **105** of **133**

M MOTT MACDONALD

Sheet **106** of **133**









Tunnel Lighting Section



Sheet **107** of **133**

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									

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	No	No	Yes	Yes	Yes



Sheet **108** of **133**





Sheet **109** of **133**





Tunnel Lighting Section

Lytle Tunnel Spring 2020 Inspection Page 109



Sheet **110** of **133**

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

Sheet **111** of **133**



Sheet **112** of **133**











Sheet **113** of **133**



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										

Lens clip disengaged? Lens clip broken? Lens cover cracked? Wireway ears broken?
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?

M MOTT MACDONALD

Sheet **114** of **133**

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



Sheet **115** of **133**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **116** of **133**

	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

Sheet **117** of **133**

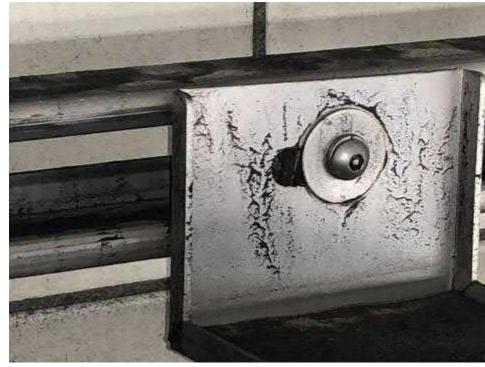


Sheet **118** of **133**









Tunnel Lighting Section



Sheet **119** of **133**

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

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	No	No	Yes	Yes	Yes



Sheet **120** of **133**





Tunnel Lighting Section



Sheet **121** of **133**

Lighting Fixture Information										
Luminaire Tag or Number:	NB - East Wall - 69B									
Tunnel Direction and Side:	NB - 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	Yes



Sheet **122** of **133**







Sheet **123** of **133**



Tunnel Lighting Section

	Lighting Fixture Information											
Luminaire Tag or Number:	NB - East Wall - 78B											
Tunnel Direction and Side:	NB - East 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?	the tunnel lighting system raceways?
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M MOTT MACDONALD

Sheet **124** of **133**

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





Sheet **125** of **133**



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

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?	
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M MOTT MACDONALD

Sheet **126** of **133**

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



Sheet **127** of **133**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **128** of **133**

	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



Sheet **129** of **133**

	Lighting Fixture Information
Luminaire Tag or Number:	
Tunnel Direction and Side:	
Additional Information:	T Side entry L 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		Yes	Yes	No	Yes	Yes



Sheet **130** of **133**







Sheet **131** of **133**



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:	Emergency exterior door lighting type:	Description of roof top lighting present:
Description:	Description:	

MOTT MACDONALD

Sheet **132** of **133**

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

Malfunctioning Exit Sign Description:	Exit Sign Image:

Low Voltage Section

MOTT Sheet 133 of 133 MACDONALD



Sheet **1** of **156**

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

Lytle Tunnel Inspection Page 1



Lytle Tunnel Inspection Page 2

Sheet 2 of 156

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



Sheet **3** of **156**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet 4 of 156

	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

Sheet **5** of **156**



Sheet 6 of 156









Tunnel Lighting Section



Sheet **7** of **156**

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

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

MOTT MACDONALD

Sheet **8** of **156**





Tunnel Lighting Section



Sheet **9** of **156**

	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								

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

M MOTT MACDONALD

Sheet **10** of **156**





Sheet **11** of **156**





Tunnel Lighting Section

Lytle Tunnel Inspection Page 11



Sheet 12 of 156

	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

Sheet **13** of **156**



Sheet **14** of **156**







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

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?
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Sheet **15** of **156**

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





Sheet **16** of **156**







Sheet 17 of 156



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									

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?	
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M MOTT MACDONALD

Sheet **18** of **156**

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



Sheet **19** of **156**



Sheet **20** of **156**







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							

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?

Sheet **21** of **156**

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





Sheet **22** of **156**





Sheet **23** of **156**



Sheet **24** of **156**







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								

Sheet **25** of **156**

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



MOTT MACDONALD

Sheet **26** of **156**





Sheet **27** of **156**



Tunnel Lighting Section

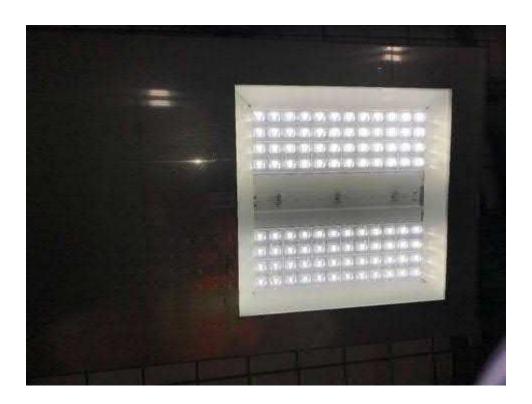
	Lighting Fixture Information									
Luminaire Tag or Number:	SBR - West Wall - 18B									
Tunnel Direction and Side:	SBR - West Wall									
Additional Information:	T Side Entry L									

Are the side entry conduits into the fixture tightly secured? Are there any signs of corrosion on the fixture?	re any signs of corrosion on any damage to the compon or enclosure?	Housing clip disengaged?	Housing clip missing?
there any damage to the busing or enclosure?		Long channel springnut misaligned? Long channel springnut cracked? Trans channel springnut misaligned? Trans channel springnut cracked? Trans channel wireway clip?	annel springnut annel springnut annel springnut annel springnut annel wireway c
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M MOTT MACDONALD

Sheet **28** of **156**

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



Sheet **29** of **156**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **30** of **156**

	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

Sheet **31** of **156**



Sheet **32** of **156**







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										

Sheet **33** of **156**

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





Sheet **34** of **156**







Sheet **35** of **156**



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										

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?

M MOTT MACDONALD

Sheet **36** of **156**

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

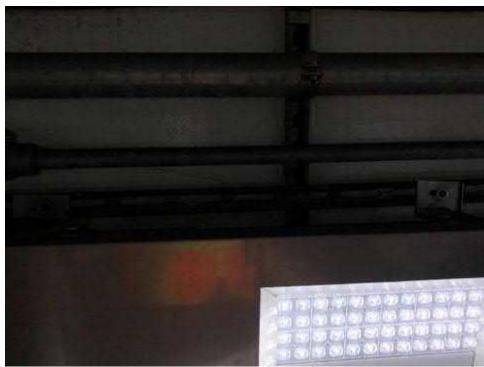


Sheet **37** of **156**



Sheet **38** of **156**









Tunnel Lighting Section



Sheet **39** of **156**

	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

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



Sheet **40** of **156**





Sheet **41** of **156**

M MOTT MACDONALD

Sheet **42** of **156**







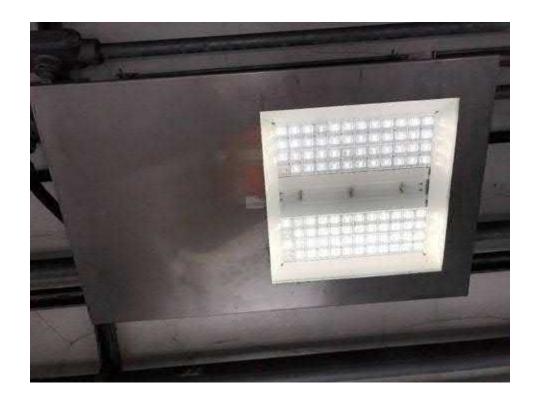
Tunnel Lighting Section

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

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?
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Sheet **43** of **156**

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





Sheet **44** of **156**





Tunnel Lighting Section



Sheet **45** of **156**

Lighting Fixture Information										
Luminaire Tag or Number:	SBR - East Wall - 22B									
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	No	Yes	No

M MOTT MACDONALD

Sheet **46** of **156**





Sheet **47** of **156**





Tunnel Lighting Section

Lytle Tunnel Inspection Page 47



Sheet **48** of **156**

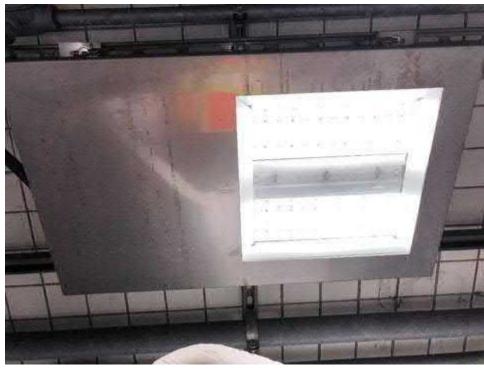
Lighting Fixture Information										
Luminaire Tag or Number:	SBR - West Wall - 28A									
Tunnel Direction and Side:	SBR - West Wall									
Additional Information:	T Both Side Entry Loose Bith Bottom									

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

Lytle Tunnel Inspection Page 48 Sheet **49** of **156**



Sheet **50** of **156**











Sheet **51** of **156**



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

Lens clip disengaged? Lens clip broken? Lens cover cracked? Wireway ears broken?
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?

M MOTT MACDONALD

Sheet **52** of **156**

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



Sheet **53** of **156**



Sheet **54** of **156**











Sheet **55** of **156**



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										

Lens clip disengaged? Lens clip broken? Lens cover cracked? Wireway ears broken?
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?

M MOTT MACDONALD

Sheet **56** of **156**

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



MOTT MACDONALD

Sheet **57** of **156**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **58** of **156**

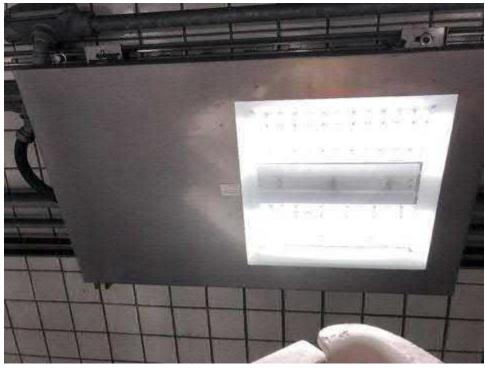
	Lighting Fixture Information									
Luminaire Tag or Number:	SBR - East Wall - 28B									
Tunnel Direction and Side:	SBR - East Wall									
Additional Information:	T Side Entry L Side Entry Loose Top Right Bottom Right									

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

Sheet **59** of **156**



Sheet **60** of **156**









Tunnel Lighting Section



Sheet **61** of **156**

Lighting Fixture Information										
Luminaire Tag or Number:	SBR - West Wall - 33A									
Tunnel Direction and Side:	SBR - West Wall									
Additional Information:	Side Entry 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	Yes	No	Yes	No	No		No	No	Yes	Yes



Sheet **62** of **156**





M MOTT MACDONALD

Sheet **63** of **156**





Tunnel Lighting Section

Lytle Tunnel Inspection Page 63



Sheet **64** of **156**

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

Lytle Tunnel Inspection Page 64 Sheet **65** of **156**



Sheet **66** of **156**











Sheet **67** of **156**



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

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?	
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M MOTT MACDONALD

Sheet **68** of **156**

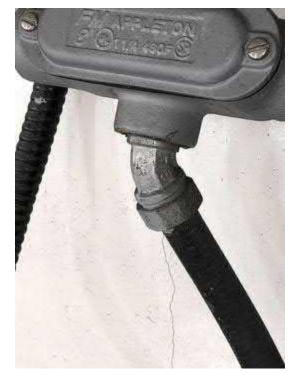
Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes



Sheet **69** of **156**

M MOTT MACDONALD

Sheet **70** of **156**







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

re fur
Lens cover cracked? Wireway ears broken?
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?

M MOTT MACDONALD

Sheet **71** of **156**

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





Sheet **72** of **156**







Sheet **73** of **156**



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

Lens clip disengaged? Lens clip broken? Lens cover cracked? Wireway ears broken?
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?

M MOTT MACDONALD

Sheet **74** of **156**

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





Sheet **75** of **156**



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

Housing clip disengaged? Housing clip missing? Lens clip disengaged? Lens clip broken? Lens cover cracked? Wireway ears broken?
clip clip clip
clip clip
clip clip dise
clip
clip
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?

M MOTT MACDONALD

Sheet **76** of **156**

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



Sheet **77** of **156**



Sheet **78** of **156**









Tunnel Lighting Section



Sheet **79** of **156**

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									

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	Yes	Yes	No	No	No	Yes



Sheet **80** of **156**







Sheet **81** of **156**



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									

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?
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M MOTT MACDONALD

Sheet **82** of **156**



Sheet **83** of **156**



Sheet **84** of **156**







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									

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?

M MOTT MACDONALD

Sheet **85** of **156**

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





Sheet **86** of **156**





Tunnel Lighting Section



Sheet **87** of **156**

Lighting Fixture Information										
Luminaire Tag or Number:	SBR - West Wall - 43B									
Tunnel Direction and Side:	SBR - West Wall									
Additional Information:	T 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	No	No	Yes

M MOTT MACDONALD

Sheet **88** of **156**





Tunnel Lighting Section



Sheet **89** of **156**

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

M MOTT MACDONALD

Sheet **90** of **156**





Sheet **91** of **156**



Sheet **92** of **156**







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									

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?	
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M MOTT MACDONALD

Sheet **93** of **156**

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





Sheet **94** of **156**





Tunnel Lighting Section



Sheet **95** of **156**

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

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

M MOTT MACDONALD

Sheet **96** of **156**





Tunnel Lighting Section



Sheet **97** of **156**

	Lighting Fixture Information
Luminaire Tag or Number:	SBR - West Wall - 48B
Tunnel Direction and Side:	SBR - West Wall
Additional Information:	Top Right 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	No



Sheet **98** of **156**







Sheet **99** of **156**



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

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?
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M MOTT MACDONALD

Sheet 100 of 156

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



M MOTT MACDONALD

Sheet **101** of **156**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **102** of **156**

	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

Sheet **103** of **156**



Sheet **104** of **156**







Tunnel Lighting Section

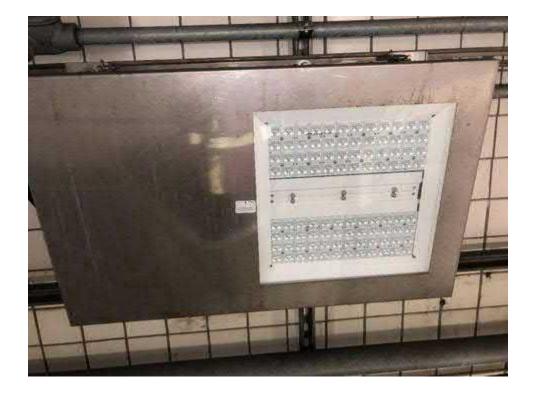
Lighting Fixture Information						
Luminaire Tag or Number:	SBR - West Wall - 53A					
Tunnel Direction and Side:	SBR - West Wall					
Additional Information:	T Side Entry Loose					

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?
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M MOTT MACDONALD

Sheet **105** of **156**

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





Sheet **106** of **156**



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					

M MOTT MACDONALD

Sheet **107** of **156**

Yes	No	Yes	No	No	Yes	No	No	No	Yes						
															l .





Sheet **108** of **156**





Tunnel Lighting Section



Sheet 109 of 156

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						

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	No	Yes



Sheet **110** of **156**







Sheet **111** of **156**



Tunnel Lighting Section

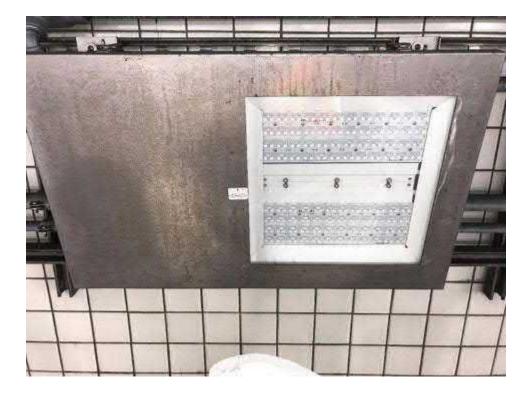
Lighting Fixture Information								
Luminaire Tag or Number:	SBR - East Wall - 53B							
Tunnel Direction and Side:	SBR - East Wall							
Additional Information:	T Side Entry L							

re fun
Lens cover cracked? Wireway ears broken?
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?

M MOTT MACDONALD

Sheet **112** of **156**

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



M MOTT MACDONALD

Sheet **113** of **156**





Tunnel Lighting Section

MOTT MACDONALD

Sheet **114** of **156**

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

Sheet **115** of **156**



Sheet **116** of **156**







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										

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?
------------------------	----------------------	---------------------	-------------------	-----------------------	-----------------------	--------------------------	-----------------------------	----------------------------------	-------------------------------------	---------------------------------	------------------------------------	---	--	--	---	--

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Sheet **117** of **156**

Yes	No	Yes	No	No	Yes	No	No	Yes	Yes							
																1





Sheet **118** of **156**





Tunnel Lighting Section



Sheet **119** of **156**

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

M MOTT MACDONALD

Sheet **120** of **156**





Tunnel Lighting Section



Sheet **121** of **156**

	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								

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



Sheet **122** of **156**





Sheet **123** of **156**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **124** of **156**

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	



Sheet **125** of **156**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **126** of **156**

	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

Sheet **127** of **156**



Sheet **128** of **156**





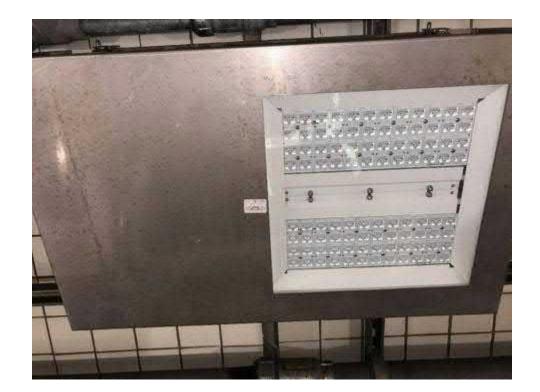


Tunnel Lighting Section

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

Sheet **129** of **156**

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





Sheet **130** of **156**





Tunnel Lighting Section



Sheet **131** of **156**

	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								

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	Yes



Sheet **132** of **156**





Sheet **133** of **156**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **134** of **156**

	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

Sheet **135** of **156**



Sheet **136** of **156**









Tunnel Lighting Section



Sheet **137** of **156**

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								

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



Sheet **138** of **156**





Sheet **139** of **156**





Tunnel Lighting Section

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Sheet **140** of **156**

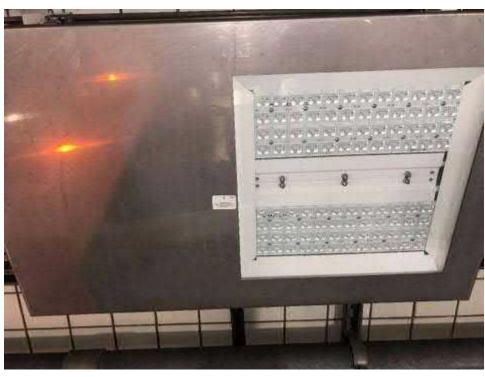
Lighting Fixture Information									
Luminaire Tag or Number:	SBR - East Wall - 69A								
Tunnel Direction and Side:	SBR - East Wall								
Additional Information:	Side Emtry L Both Top								

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

Sheet **141** of **156**

M MOTT MACDONALD

Sheet **142** of **156**









Tunnel Lighting Section



Sheet **143** of **156**

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							

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	No	Yes	Yes



Sheet **144** of **156**





Sheet **145** of **156**





Tunnel Lighting Section

Lytle Tunnel Inspection Page 145



Sheet **146** of **156**

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

Sheet **147** of **156**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **148** of **156**

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

Sheet **149** of **156**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **150** of **156**

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

Sheet **151** of **156**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **152** of **156**

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

Sheet **153** of **156**

M MOTT MACDONALD

Sheet **154** of **156**







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:	Emergency exterior door lighting type:	Description of roof top lighting present:							
Description:	Description:								

Sheet **155** of **156**

Malfunctioning Exit Sign Description:	Exit Sign Image:

Low Voltage Section

M MOTT MACDONALD

Sheet **156** of **156**



Sheet 1 of 207

Inspection Report

Project Name:	Lytle Tunnel Fall 2020 Inspection	Inspection Date:	09/19/2020 11:00 PM
Project Number:	Lytic Tunner Fun 2020 Inspection	Inspection Bute.	05/15/2020 11:00 1141
Project Description:			
Client Name:	ODOT		
Inspection by:	Adrian Pasca/Jaymin D. Pancholi		
Location:	Cincinnati, OH		

Site Contacts	Company, Title, Phone Number

Lytle Tunnel Spring 2020 Inspection Page 1



Lytle Tunnel Spring 2020 Inspection Page 2

Sheet 2 of 207

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

Sheet **3** of **207**



Sheet 4 of 207







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						

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?

Sheet **5** of **207**

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	Yes	No	Yes	Yes
1 05	110	110	110	110	110	110	1 05	110	1 05	110	110	1 05	1 05	110	1 05	105





Sheet 6 of 207







Sheet **7** of **207**



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							

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?
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Sheet 8 of 207

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



Sheet 9 of 207





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **10** of **207**

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

Sheet 11 of 207



Sheet **12** of **207**











Sheet **13** of **207**



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

Lens clip disengaged? Lens clip broken? Lens cover cracked? Wireway ears broken?
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?

M MOTT MACDONALD

Sheet **14** of **207**

1	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	Yes	Yes



Sheet **15** of **207**



Sheet **16** of **207**







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

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?

Sheet 17 of 207

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





Sheet **18** of **207**





Sheet 19 of 207





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **20** of **207**

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

Sheet **21** of **207**



Sheet **22** of **207**









Tunnel Lighting Section



Sheet 23 of 207

	Lighting Fixture Information
Luminaire Tag or Number:	SB - West Wall - 21A
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	No	No	No	Yes	No	No	No	Yes



Sheet **24** of **207**







Sheet **25** of **207**



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								

Long channel springnut misaligned? Long channel springnut cracked? Trans channel springnut misaligned? Trans channel springnut cracked? Trans channel wireway clip? Housing clip disengaged? Lens clip disengaged?	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?
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Sheet **26** of **207**

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



Sheet **27** of **207**

M MOTT MACDONALD

Sheet **28** of **207**







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								

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?

Sheet **29** of **207**

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





Sheet **30** of **207**





Sheet **31** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **32** of **207**

	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

Sheet **33** of **207**

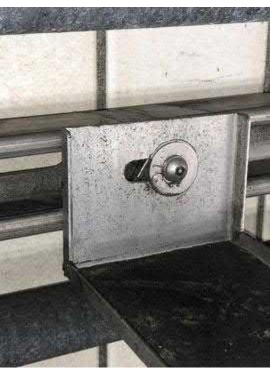


Sheet **34** of **207**











Sheet **35** of **207**



Tunnel Lighting Section

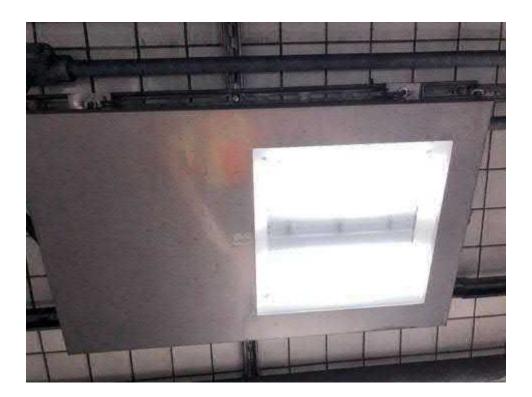
	Lighting Fixture Information
Luminaire Tag or Number:	SB - West Wall - 31A
Tunnel Direction and Side:	SB - West Wall
Additional Information:	T SEL RIGHT CLIP

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?
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M MOTT MACDONALD

Sheet **36** of **207**

Yes	No	No	No	Yes	No	No	Yes	No	Yes	Yes						



Sheet **37** of **207**

M

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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									

Sheet **39** of **207**

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes
1 03	110	140	140	110	140	110	1 03	140	1 03	140	140	1 03	110	110	1 03
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Sheet **40** of **207**







Sheet **41** of **207**



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									

Lens clip disengaged? Lens clip broken? Lens cover cracked? Wireway ears broken?
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?

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Sheet **42** of **207**

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



Sheet **43** of **207**



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Sheet **44** of **207**







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									

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?
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Sheet **45** of **207**

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





Sheet **46** of **207**







Sheet 47 of 207



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									

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?	
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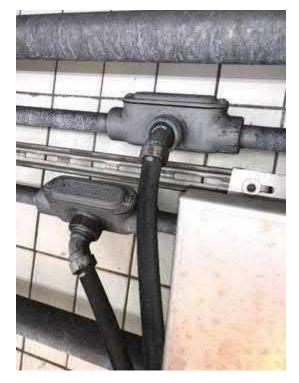
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Sheet 48 of 207

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



Sheet **49** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **50** of **207**

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

Sheet **51** of **207**



Sheet **52** of **207**









Tunnel Lighting Section



Sheet **53** of **207**

	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											

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



Sheet **54** of **207**





Tunnel Lighting Section



Sheet **55** of **207**

Lighting Fixture Information										
Luminaire Tag or Number:	SB - West Wall - 46B									
Tunnel Direction and Side:										
Additional Information:	T SEL SE LOOSE 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	No	Yes



Sheet **56** of **207**





Sheet **57** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **58** of **207**

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

Sheet **59** of **207**



Sheet **60** of **207**









Tunnel Lighting Section



Sheet **61** of **207**

	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										

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



Sheet **62** of **207**





Sheet **63** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **64** of **207**

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

Sheet **65** of **207**



Sheet **66** of **207**









Sheet **67** of **207**





Tunnel Lighting Section

Lytle Tunnel Spring 2020 Inspection Page 67



Sheet **68** of **207**

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

Sheet **69** of **207**



Sheet **70** of **207**









Tunnel Lighting Section



Sheet **71** of **207**

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								

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



Sheet **72** of **207**





Sheet **73** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **74** of **207**

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

Sheet **75** of **207**



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MOTT MACDONALD

Sheet **76** of **207**







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							

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?
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Sheet **77** of **207**

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	Yes
1 05	110	110	110	110	110	110	1 05	110	1 05	110	110	1 05	110	1 05	1 05
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Sheet **78** of **207**





Sheet **79** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **80** of **207**

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

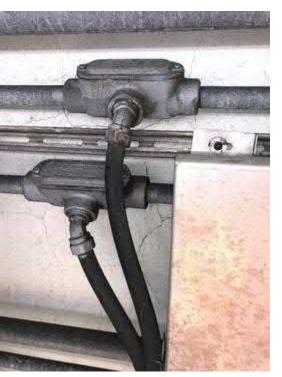
Sheet **81** of **207**



Sheet **82** of **207**









Tunnel Lighting Section



Sheet **83** of **207**

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								

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	No	No	No	Yes



Sheet **84** of **207**





Sheet **85** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **86** of **207**

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

Sheet **87** of **207**



Sheet **88** of **207**









Tunnel Lighting Section



Sheet **89** of **207**

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									

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



Sheet **90** of **207**





Sheet **91** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **92** of **207**

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

Sheet **93** of **207**













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									

Sheet **95** of **207**

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





Sheet **96** of **207**





Sheet **97** of **207**



MOTT MACDONALD

Sheet **98** of **207**







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									

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?	
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Sheet **99** of **207**

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes
105	110	110	110	110	110	110	1 05	110	1 05	110	110	1 05	110	110	1 05	105





Sheet **100** of **207**







Sheet **101** of **207**



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 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?
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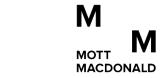
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Sheet **102** of **207**

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



Sheet 103 of 207











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									

Sheet 105 of 207

37	NI	NT.	NT.	NT	NT.	NT	17	N.T.	37	NT.	NT.	37	N	N.T.	37	37
Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes





Sheet **106** of **207**





Sheet **107** of **207**





Tunnel Lighting Section

Lytle Tunnel Spring 2020 Inspection Page 107



Sheet 108 of 207

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

Lytle Tunnel Spring 2020 Inspection Page 108

Sheet 109 of 207



Sheet **110** of **207**









Tunnel Lighting Section



Sheet **111** of **207**

	Lighting Fixture Information
Luminaire Tag or Number:	SB - West Wall - 103B
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



Sheet **112** of **207**





Sheet **113** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **114** of **207**

	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



Sheet **115** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **116** of **207**

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

Sheet **117** of **207**







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						

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?

Sheet **119** of **207**

Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes
1 05	110	110	110	110	110	110	105	110	110	110	110	1 05	110	110	1 05	1 05
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																l





Sheet **120** of **207**





Tunnel Lighting Section



Sheet **121** of **207**

	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

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



Sheet **122** of **207**





Sheet **123** of **207**



Sheet **124** of **207**







Tunnel Lighting Section

	Lighting Fixture Information						
Luminaire Tag or Number:	SB - West Wall - 130A						
Tunnel Direction and Side:							
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?

Sheet **125** of **207**

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes
1 00	110	1.0	1.0	1,0	1.0	1.0	1 00	110	105	110	1.0	1 65	1.0	1.0	105	1 45
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Sheet 126 of 207







Sheet **127** of **207**



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							

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?	
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M MOTT MACDONALD

Sheet 128 of 207

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



Sheet **129** of **207**



Sheet **130** of **207**







Tunnel Lighting Section

Lighting Fixture Information							
Luminaire Tag or Number:	SB - East Wall - 144A						
Tunnel Direction and Side:	SB - East WallTT						
Additional Information:	Т						

Sheet **131** of **207**

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





Sheet **132** of **207**



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					

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?

Sheet **133** of **207**

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





Sheet **134** of **207**





Tunnel Lighting Section



Sheet **135** of **207**

Lighting Fixture Information								
Luminaire Tag or Number:	SB - East Wall - 135A							
Tunnel Direction and Side:	SB - East 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		Yes	No	No	Yes	Yes



Sheet **136** of **207**





Tunnel Lighting Section



Sheet **137** of **207**

Lighting Fixture Information											
Luminaire Tag or Number:	SB - East Wall - 135B										
Tunnel Direction and Side:	SB - East 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



Sheet **138** of **207**





Tunnel Lighting Section



Sheet **139** of **207**

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									

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



Sheet **140** of **207**







Sheet **141** of **207**



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 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?
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M MOTT MACDONALD

Sheet 142 of 207

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



Sheet **143** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **144** of **207**

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

Sheet **145** of **207**



Sheet **146** of **207**







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										

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?	
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Sheet **147** of **207**

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





Sheet **148** of **207**





Tunnel Lighting Section



Sheet **149** of **207**

	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

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	Yes	Yes	Yes



Sheet **150** of **207**





Sheet **151** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **152** of **207**

	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

Sheet **153** of **207**



Sheet **154** of **207**







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

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?	
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Sheet **155** of **207**

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





Sheet **156** of **207**





Tunnel Lighting Section



Sheet **157** of **207**

	Lighting Fixture Information
Luminaire Tag or Number:	SB - East Wall - 99B
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



Sheet **158** of **207**







Sheet **159** of **207**



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

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?	
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M MOTT MACDONALD

Sheet **160** of **207**

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



Sheet **161** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **162** of **207**

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	

Sheet **163** of **207**









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											

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?	
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Sheet **165** of **207**

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





Sheet **166** of **207**



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							

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?

Sheet **167** of **207**

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





Sheet **168** of **207**





Tunnel Lighting Section



Sheet **169** of **207**

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								

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	No	No	No		No	No	No	No	No	Yes



Sheet **170** of **207**







Sheet 171 of 207



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										

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?	
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M MOTT MACDONALD

Sheet 172 of 207

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





Sheet 173 of 207





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **174** of **207**

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

Sheet 175 of 207



Sheet **176** of **207**







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										

re fur
Lens cover cracked? Wireway ears broken?
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?

Sheet 177 of 207

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





Sheet 178 of 207





Tunnel Lighting Section



Sheet 179 of 207

Lighting Fixture Information											
Luminaire Tag or Number:	SB EAST WALL - 54B										
Tunnel Direction and Side:	SB EAST 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	Yes	No	No	Yes	No	No	Yes	Yes



Sheet **180** of **207**





Tunnel Lighting Section



Sheet **181** of **207**

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						

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	Yes



Sheet **182** of **207**





Sheet **183** of **207**





Tunnel Lighting Section

M MOTT MACDONALD

Sheet **184** of **207**

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

Sheet **185** of **207**



Sheet **186** of **207**







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								

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?

M MOTT MACDONALD

Sheet **187** of **207**

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





Sheet **188** of **207**





Tunnel Lighting Section



Sheet **189** of **207**

Lighting Fixture Information									
Luminaire Tag or Number:	SB EAST WALL - 36B								
Tunnel Direction and Side:	SB EAST 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	No	No	No	Yes	No	No	No	Yes



Sheet **190** of **207**





Tunnel Lighting Section



Sheet **191** of **207**

Lighting Fixture Information								
Luminaire Tag or Number:	SB EAST WALL - 27A							
Tunnel Direction and Side:	SB EAST 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



Sheet **192** of **207**





Tunnel Lighting Section



Sheet **193** of **207**

Lighting Fixture Information									
Luminaire Tag or Number:	SB EAST WALL - 27B								
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



Sheet **194** of **207**







Sheet **195** of **207**



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

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?	
------------------------	----------------------	---------------------	-------------------	-----------------------	-----------------------	--------------------------	-----------------------------	----------------------------------	-------------------------------------	---------------------------------	------------------------------------	---	--	--	---	--	--

M MOTT MACDONALD

Sheet **196** of **207**

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



Sheet **197** of **207**



Sheet **198** of **207**







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

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?
------------------------	----------------------	---------------------	-------------------	-----------------------	-----------------------	--------------------------	-----------------------------	----------------------------------	-------------------------------------	---------------------------------	------------------------------------	---	--	--	---	--

M MOTT MACDONALD

Sheet **199** of **207**

Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	Yes
1 03	110	110	110	110	110	110	1 03	110	1 03	110	110	1 03	110	110	1 03	1 03
															1 1	
															1 1	
															1 1	
															1 1	
															1 1	
															1 1	
										I		1		1		I





Sheet **200** of **207**





Tunnel Lighting Section



Sheet **201** of **207**

	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

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



Sheet **202** of **207**





Sheet **203** of **207**

M







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										

Trans channel springnut misaligned? Trans channel springnut cracked? Trans channel wireway clip? Housing clip disengaged? Lens clip disengaged? Lens clip broken? Lens cover cracked?	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?
---	---



Sheet **205** of **207**

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





Sheet **206** of **207**



Tunnel Lighting Section

	Lighting Fixture Information
Luminaire Tag or Number:	SB EAST WALL - 1A
Tunnel Direction and Side:	SB EAST WALL
Additional Information:	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?

M MOTT MACDONALD

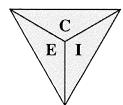
Sheet **207** of **207**

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



Lytle Tunnel Spring 2020 Inspection Page 207

B.4 Testing Data Received from Contractor



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.

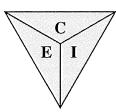
Summary

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



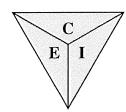
Electrical Certification Incorporated

P.O. Box 53368 * Cincinnati, Ohio 45253 Office: (513) 662-7500 * Fax: (513) 662-6610 Cell: (513) 604-2431 * Email: ECInc@cinci.rr.com

Low Voltage Circuit Breaker

Custom	er	Glenwo	ood Elec	etric								Job#	202	0-7:	58
Locatio	n	Lytle T	unnel									Date	09/1	16/2	.020
Identifi	cation	Main 1	(Left B	us)							•				
Mfg	Square	e D	Type	Mast	erpact	Style	N	W 32H1		Volta	age	480	ASY	M	65
Serial	085325	5377502		Frame	3000	OC	M	IL 6.0P		Coil	30	00	Plug	g	3000
							······································								
	<u>Sett</u>				<u> 1vailable</u>		\underline{A}	<u>Found</u>		<u>As</u>	Left	<u>t</u>	<u>A</u> .	s Te	<u>ested</u>
Long T				-				1							
Long T								2							
Short T								6			6			4	
Short T							0.4	I ² T Off							
Ground								J							
Ground		Delay					0.4	I ² T Off							
Instanta	aneous				- 0000			6					_		
Circuit	Breake	r Test	1	est	% Setting	es	A	Phase		BF	Phase	e		Ph	ase
				mps		-	_					-			
Long T	ime			000				7.373							
Short T			15	5000				0.414							
Ground	Fault		2	400										0.40)3
Instanta	aneous		22	2500	90% - 75%			0.036							
Instanta	aneous				110%-125	%									
Insulati	on Resi	istance (a 1KVI	OC		A-	Gr		B-0				C-Gr		
Across	Open P	ole				A -	В		В-0	C			A-C		
				P-Trij	Unit Unit	A			В				C		
Contact	t Resista	ance (μΩ	2)					12			12			13	}
Comme															
_	· All f	unctions	passed												
Technic	cian	Ken F	Powell												

20-758-01



Customer

Glenwood Electric

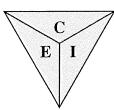
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Job # | 2020-758

Low Voltage Circuit Breaker

Locatio	n	Lytle T								Date	09/16/	2020
Identifi	cation	Panel I)P-E									
	1			T			1	122		400	1.0373.5	1 67
Mfg	Square	e D	Type	Maste	rpact	Style	NW 08H1	Volt	age	480	ASYM	65
Serial	085325	5378002		Frame	800	OC	ML 6.0P	Coil	800		Plug	600
												1
-	Catt	······································		T 4	vailable		As Found	1	s Left		1 s T	ested'
Long T	Setti			<u>A</u>	<u>vanavie</u>		0.83	<u> </u>	Leji		<u> </u>	esteu
Long T							12					
Short T							6		6			4
Short T							0 I ² T Off					-
		Pick-up					J					
Ground							0.2 I ² T Off					
Instant							8					
Circuit	Breake	r Test		<u>est</u>	% Settings	<u>s</u>	A Phase	<u>B</u> .	<u>Phase</u>		CP	<u>hase</u>
			<u> </u>	mps								
Long T				500			44.138					
Short T				400			0.038					
Ground				200			0.159					
Instant			6	000	90% - 75%		0.043					
Instant	aneous			1	110%-125%	/n						
					110/0-123/						~ ~	
		istance (a 1KVI	C	110/0-125/	A-G		B-Gr			C-Gr	
Insulati Across			a 1KVI			A-G A-B		В-С			A-C	
Across	Open P	ole		OC P-Trip		A-G	i				A-C C	
Across	Open P					A-G A-B		В-С	13		A-C C	4
Across	Open P	ole				A-G A-B	i	В-С	13		A-C C	4
Across	Open P t Resista	ole ance (μΩ	2)			A-G A-B	i	В-С	13		A-C C	4
Across Contac	Open P t Resista	ole	2)			A-G A-B	i	В-С	13		A-C C	4
Across	Open P t Resista	ole ance (μΩ	2)			A-G A-B	i	В-С	13		A-C C	4
Across	Open P t Resista	ole ance (μΩ	2)			A-G A-B	i	В-С	13		A-C C	4
Across Contac	Open P t Resista	ole ance (μΩ	2)			A-G A-B	i	В-С	13		A-C C	4
Across Contac	Open P t Resista	ole ance (μΩ	2)			A-G A-B	i	В-С	13		A-C C	4
Across Contac	Open P t Resists ents - All f	ance (μΩ	2)	P-Trip	Unit	A-G A-B	i	В-С	13		A-C C	4

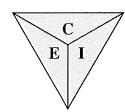


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Low Voltage Circuit Breaker

Locatio	er	Glenwo	od Ele	etric						Job#	2020-	
	n	Lytle T	unnel							Date	09/16/	2020
Identifi	cation	Vent Fa	ın #1									
Mfg	Square	e D	Type	Mast	erpact	Style	NW 08H1	V	oltage	480	ASYM	65
Serial	085325	5377103		Frame	800	OC	ML 6.0P	C	Coil 8	300	Plug	800
				1								
	<u>Sett.</u>			<u> </u>	<u>lvailable</u>		As Found		As L	<u>eft</u>	<u> </u>	<u>ested</u>
Long Ti							1					
Long Ti				-			12					
Short T							10		10			6
Short T							0.4 I ² T Off					
		Pick-up					J					
Ground		Delay					0.2 I ² T Off					
Instanta	aneous			1			10					
<u>Circuit</u>	<u>Breake</u>	r Test		<u> Test</u>	% Setting	<u>s</u>	<u> A Phase</u>		B Pho	<u>ase</u>	\underline{CP}	<u>hase</u>
				<u>mps</u>								
Long Ti				467			19.855					
				400			0.411					
Short T												
Short T Ground	l Fault		1	600		,	0.158					
Short T Ground Instanta	l Fault aneous		1		90% - 75%		0.158 0.035					
Short T Ground Instanta Instanta	l Fault aneous aneous		1 1(600 0000	90% - 75% 110%-125%	6	0.035	P. C.				
Short T Ground Instanta Instanta Insulati	l Fault aneous aneous on Resi	istance (a	1 1(600 0000		/ ₀ A-C	0.035	B-G ₁			C-Gr	
Short T Ground Instanta Instanta Insulati	l Fault aneous aneous on Resi		1 1(600 0000 DC	110%-1259	A-C A-B	0.035	В-С			A-C	
Short T Ground Instanta Instanta Insulati Across (I Fault aneous aneous ion Resi Open P	ole	1 10 10 1KV	600 0000	110%-1259	/ ₀ A-C	0.035		r			
Short T Ground Instanta Instanta Insulati Across (I Fault aneous aneous ion Resi Open P		1 10 10 1KV	600 0000 DC	110%-1259	A-C A-B	0.035	В-С	г		A-C	
Short T Ground Instanta Instanta Insulati Across (I Fault aneous aneous on Resi Open P	ole	1 10 10 1KV	600 0000 DC	110%-1259	A-C A-B	0.035	В-С			A-C	
Short T Ground Instanta Instanta Insulati Across (I Fault aneous aneous on Resi Open P	ole ance (μΩ	1 1(0) 1KV 2)	600 0000 DC P-Tri _I	110%-1259	A-C A-B	0.035	В-С	·		A-C	
Short T Ground Instanta Instanta Insulati Across (I Fault aneous aneous on Resi Open P	ole	1 1(0) 1KV 2)	600 0000 DC P-Tri _I	110%-1259	A-C A-B	0.035	В-С			A-C	
Short T Ground Instanta Instanta Insulati Across (I Fault aneous aneous on Resi Open P	ole ance (μΩ	1 1(0) 1KV 2)	600 0000 DC P-Tri _I	110%-1259	A-C A-B	0.035	В-С			A-C	
Short T Ground Instanta Instanta Insulati Across	I Fault aneous aneous on Resi Open P	ole ance (μΩ	1 1(0) 1KV 2)	600 0000 DC P-Tri _I	110%-1259	A-C A-B	0.035	В-С			A-C	
Short T Ground Instanta Instanta Insulati Across (I Fault aneous aneous on Resi Open P	ole ance (μΩ	1 1(0) 1KV 2)	600 0000 DC P-Tri _I	110%-1259	A-C A-B	0.035	В-С			A-C	
Short T Ground Instanta Instanta Insulati Across (I Fault aneous aneous on Resi Open P	ole ance (μΩ	1 1(0) 1KV 2)	600 0000 DC P-Tri _I	110%-1259	A-C A-B	0.035	В-С	·		A-C	



Customer

Glenwood Electric

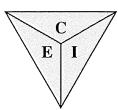
Electrical Certification Incorporated

P.O. Box 53368 * Cincinnati, Ohio 45253 Office: (513) 662-7500 * Fax: (513) 662-6610 Cell: (513) 604-2431 * Email: ECInc@cinci.rr.com

Job # 2020-758

Low Voltage Circuit Breaker

	n	Lytle T	unnel						Date	09/16/	2020
Locatio Identifi		Vent Fa							Date	07/10/	2020
		, 0110 1 0	72.11.2								
Mfg	Square	e D	Type	Mast	erpact	Style	NW 08H1	Volta	ge 480	ASYM	65
Serial	085325	5377101		Frame	e 800	OC	ML 6.0P	Coil	800	Plug	800
	Sett	ings			Available		As Found	As	Left	As T	ested
Long T				_	· · · · · · · · · · · · · · · · · · ·		1				
Long T							12				
Short T	ime Pio	k-up					10	1	0		6
Short T							$0.4 I^2 T Off$				
~		Pick-up					J				
Ground		Delay					0.3 I ² T Off				
Instant	aneous						10				
					T -						
Circuit	<u>Breake</u>	<u>r Test</u>	_	<u>est</u> mps	% Setting	<u>S</u>	<u>A Phase</u>	BP	<u>hase</u>	<u>C P</u>	<u>hase</u>
							20.082				
Long T	ime		3.	467			20.002				
				467 400			0.411				
	`ime		6.	400 600			0.411 0.263				
Short T Ground	ime l Fault		6.	400	90% - 75%		0.411				
Short T Ground Instant Instant	Time I Fault aneous aneous		10	400 600 0000	90% - 75% 110%-125%	%	0.411 0.263 0.035				
Instanta Instanta Insulati	Time I Fault aneous aneous ion Resi	istance (10	400 600 0000		% A-G	0.411 0.263 0.035	B-Gr		C-Gr	
Short T Ground Instant Instant	Time I Fault aneous aneous ion Resi		10	400 600 0000 DC	110%-1259	A-G A-B	0.411 0.263 0.035	В-С		A-C	
Short T Ground Instant Instant Insulati Across	Time I Fault aneous aneous ion Resi Open P	ole	6, 10 10 0 1KVI	400 600 0000 DC		% A-G	0.411 0.263 0.035				
Short T Ground Instant Instant Insulati Across	Time I Fault aneous aneous ion Resi Open P		6, 10 10 0 1KVI	400 600 0000 DC	110%-1259	A-G A-B	0.411 0.263 0.035	В-С		A-C	
Short T Ground Instant Instant Insulati Across	Time I Fault aneous aneous ion Resi Open P	ole	6, 10 10 0 1KVI	400 600 0000 DC	110%-1259	A-G A-B	0.411 0.263 0.035	В-С		A-C	
Short T Ground Instant Instant Insulati Across	Time I Fault aneous aneous ion Resi Open P	ole ance (μΩ	6- 10 10 20 1KVI	400 600 0000 DC	110%-1259	A-G A-B	0.411 0.263 0.035	В-С		A-C	
Short T Ground Instant Instant Insulati Across	Time I Fault aneous aneous ion Resi Open P	ole	6- 10 10 20 1KVI	400 600 0000 DC	110%-1259	A-G A-B	0.411 0.263 0.035	В-С		A-C	
Short T Ground Instant Instant Insulati Across	Time I Fault aneous aneous ion Resi Open P	ole ance (μΩ	6- 10 10 20 1KVI	400 600 0000 DC	110%-1259	A-G A-B	0.411 0.263 0.035	В-С		A-C	
Short T Ground Instant Instant Insulati Across	Time I Fault aneous aneous ion Resi Open P	ole ance (μΩ	6- 10 10 20 1KVI	400 600 0000 DC	110%-1259	A-G A-B	0.411 0.263 0.035	В-С		A-C	
Short T Ground Instant Instant Insulati Across	Time I Fault aneous aneous ion Resi Open P	ole ance (μΩ	6- 10 10 20 1KVI	400 600 0000 DC	110%-1259	A-G A-B	0.411 0.263 0.035	В-С		A-C	
Short T Ground Instant Instant Insulati Across	Time I Fault aneous aneous ion Resi Open P	ole ance (μΩ	6- 10 10 20 1KVI	400 600 0000 DC	110%-1259	A-G A-B	0.411 0.263 0.035	В-С		A-C	

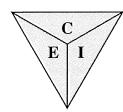


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Low Voltage Circuit Breaker

Custom	er	Glenwo	ood Elec	etric						Job #	2020	-758
Locatio	n	Lytle T	unnel							Date	09/1	6/2020
Identifi	cation	Panel I										
Mfg	Square	e D	Type	Maste	erpact	Style	NW 08H1	V	oltage	e 480	ASY	M 65
Serial	085327	7017701		Frame	800	OC	ML 6.0P	C	Coil 8	800	Plug	400
											<u>'</u>	
	<u>Setti</u>			A	<u>vailable</u>		As Found		As L	<u>eft</u>	<u> As</u>	Tested
Long Ti	ime Pic	k-up					1					
Long Ti							2					
Short T							6		6			4
Short T							0 I ² T Off					
Ground							<u>J</u>					
Ground	Fault	Delay					$0.3 I^2T Off$					
Instanta	aneous						6					
Circuit	Breake	r Test		<u> Test</u>	% Settin	<u>gs</u>	A Phase		B Ph	<u>ase</u>	<u>C</u>	<u>Phase</u>
T and T	!			<u>mps</u> 200			7.036					
Long Ti Short T				000			0.047					
Snort 1 Ground				300			0.047					
Instanta				000	90% - 75	0/0	0.202					
Instanta Instanta				000	110%-125		0.044					
Insulati		stance ($\frac{1}{2}$ 1KV	DC	11070 120	A-C	Gr	B-Gı	•		C-Gr	
Across (,				A-B		В-С			A-C	
	- F			P-Trip	Unit	A		В			$\overline{\mathbf{C}}$	
Contact	Resista	ance (us	2)				16		18			14
Comme	ents											
		unctions	passed									



Customer

Glenwood Electric

Electrical Certification Incorporated

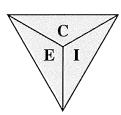
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2020-758

Job#

Low Voltage Circuit Breaker

Custom	ler.	OTCHWO	Jou Fiel	JUIC						JUDIT	2020-	150
Locatio	n	Lytle T	unnel							Date	09/16/	2020
Identifi	cation	Tie										
												,
Mfg	Square	e D	Type	Maste	erpact	Style	NW 32H1	Vo	oltage	480	ASYM	65
							NAT COD		.,		TOT	12006
Serial	085325	5377701		Frame	3200	OC	ML 6.0P	Co	oil		Plug	3000
	II											
	,											
	Sett	ings		<u>A</u>	l <i>vailable</i>		<u>As Found</u>		As Lej	<u>ft</u>	<u> As 7</u>	<u> ested</u>
Long T	ime Pic	k-up					1					
Long T							2					
Short T							6		6			4
Short T							$0.4 I^2 T Off$					
		Pick-up					J					
Ground		Delay					$0.4 I^2 T Off$					
Instanta	aneous						6					
<u>Circuit</u>	Breake	<u>r Test</u>		<u>est</u>	% Setting	<u> </u>	<u>A Phase</u>	1	3 Phas	<u>se</u>	\underline{CP}	<u>hase</u>
				<u>mps</u>								
Long T				000			7.228					
Short T				5000			0.414					
Ground				400			Protection Of	Ť				
Instanta			22	2500	90% - 75%		0.035					
Instanta					110%-125						~ ~ "	
Insulati			@ 1KVI	DC		A-0		B-Gr			C-Gr	
Across	Open P	ole				A-B		В-С			A-C	
						A		В			C	
Contact	t Resista	ance (µ ડ	(2)				14		15]	4
Comme												
-		unctions										
-	*Nei	utral (A)	Neutra	ıl CT pı	otection of	<u>f</u>						
Technic	cian	Ken I	Powell /	John C	Coletta							



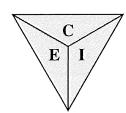
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Low Voltage Circuit Breaker

	er	Glenwo	ood Elec	etric						J	lob#	2020-	758
Locatio	n	Lytle T)ate	09/16	/2020
Identifi	cation	Main 2		Bus)						I			
		JL											
Mfg	Square	e D	Type	Master	rpact	Style	NW 32H1		Volta	ge 4	180	ASYM	65
Serial	085325	5377501		Frame	3200	OC	ML 6.0P		Coil	3000)	Plug	3000
	Sett	ings			vailable		As Found		As	Left		As 7	Tested
Long T				2.17	<u> </u>		1		210	<u> Licji</u>		215 1	CSICII
Long T							2						
Short T							6		(5			4
Short T	ime De	lay					0.1 I ² T Off						
		Pick-up					J						
Ground	Fault	Delay					0.4 I ² T Off						
Instanta	aneous						6						
Circuit	Prople	or Tost	1 2	Test	% Settings		A Phase		D D	hase		C	<u>hase</u>
Circuit	Dieake	<u> 1 est</u>		mps	70 Seumgs		<u>A Frase</u>		<u>D F I</u>	nuse		CI	nuse
	ime			000			7.329					·	
Long T				000			0.111						
	ime		1.										
Short T				400			0.403						
Short T Ground	Fault		2		90% - 75%		0.403 0.036						
Short T Ground Instanta Instanta	Fault aneous aneous		22	400	90% - 75% 110%-125%		0.036						
Short T Ground Instanta Instanta Insulati	Fault aneous aneous on Resi	istance (22	400		A-G	0.036	В-С				C-Gr	
Short T Ground Instanta Instanta Insulati	Fault aneous aneous on Resi		22	400 2500 DC	110%-125%		0.036	В-С			A	\-C	
Short T Ground Instanta Instanta Insulati Across	Fault neous neous on Resi	ole	2 22 0 1KVI	400	110%-125%	A-G	0.036		C			\-C	
Instanta Instanta Insulati Across	Fault neous neous on Resi		2 22 0 1KVI	400 2500 DC	110%-125%	A-G	0.036	В-С	C	3	A	\-C	.5
Short T Ground Instanta Instanta Insulati Across	Fault aneous aneous on Resi Open P	ole	2 22 0 1KVI	400 2500 DC	110%-125%	A-G	0.036	В-С	C	3	A	\-C	.5
Short T Ground Instanta Instanta Insulati Across	Fault aneous aneous on Resi Open P	ole	2 22 22 2) 1KVI	400 2500 DC	110%-125%	A-G	0.036	В-С	C	3	A	\-C	.5
Short T Ground Instanta Instanta Insulati Across	Fault aneous aneous on Resi Open P	ole ance (μΩ	2 22 22 2) 1KVI	400 2500 DC	110%-125%	A-G	0.036	В-С	C	3	A	\-C	.5
Short T Ground Instanta Instanta Insulati Across	Fault aneous aneous on Resi Open P	ole ance (μΩ	2 22 22 2) 1KVI	400 2500 DC	110%-125%	A-G	0.036	В-С	C	3	A	\-C	.5
Short T Ground Instanta Instanta Insulati Across	Fault aneous aneous on Resi Open P	ole ance (μΩ	2 22 22 2) 1KVI	400 2500 DC	110%-125%	A-G	0.036	В-С	C	3	A	\-C	.5
Short T Ground Instanta Instanta Insulati Across	Fault aneous aneous on Resi Open P	ole ance (μΩ	2 22 22 2) 1KVI	400 2500 DC	110%-125%	A-G	0.036	В-С	C	3	A	\-C	.5

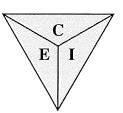
20-758-07



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Low Voltage Circuit Breaker

	ıer	Glenwo	ood Elec	ctric						Job #	2020-	758
Locatio	n	Lytle T	unnel							Date	09/16	/2020
Identifi	cation	Vent Fa	an #3									
NAC.		D	no.	- N. C	, 1	G()	NIW! OOT!1	1 1	-14	400	ASYM	(65
Mfg	Square	eD	Type	Maste	erpact	Style	NW 08H1	V	oltage	480	ASTIV	65
Serial	085325	5377102		Frame	800	OC	ML 6.0P	C	oil		Plug	800
				I								
	Sett	ings		A	vailable		As Found		As Le	<u>ft</u>	As Z	<u> </u>
Long T				-	30111		1					
Long T							12					
Short T							10		10			6
Short T	ime De	lay					0.4 I ² T Off					
Ground	H Fault	Pick-up					J					
Ground	Fault	Delay					0.2 I ² T Off					
Instant	aneous						10					
Cinor:4	Duasles	w Too4		Tast	0/ Catting		A Dhaga		D Dl. a		C	Dh as a
<u>Circuit</u>	Breake	r Test	_	Test mps	% Setting	<u>s</u>	A Phase		B Pha	<u>se</u>	<u>C I</u>	<u>Phase</u>
		r Test	$\underline{\underline{A}}$	<u>Test</u> <u>mps</u> 467	% Setting	<u> </u>	<u>A Phase</u> 20.054		B Pha	<u>se</u>	<u>C I</u>	<u>Phase</u>
	ime	r Test	<u>A</u>	mps	% Setting	<u>s</u>	20.054 0.412	;	B Pha	<u>se</u>	<u>C1</u>	<u>Phase</u>
Long T	ime Iime	r Test	A 3 6	467 6400 600			20.054 0.412 0.160		B Pha	<u>se</u>	<u>C1</u>	<u>Phase</u>
Long T Short T	ime Ime I Fault	r Test	A 3 6	467 5400	90% - 75%	б	20.054 0.412		B Pha	se	<u>C1</u>	Phase
Long T Short T Ground Instants	ime lime l Fault aneous aneous		<u>A</u> 3 6 1	467 4400 600 0000		6 /6	20.054 0.412 0.160 0.035					<u>Phase</u>
Long T Short T Ground Instant Instant	ime Time I Fault aneous aneous ion Resi	istance (<u>A</u> 3 6 1	467 4400 600 0000	90% - 75%	/o /o A-G	20.054 0.412 0.160 0.035	B-Gr			C-Gr	<u>Phase</u>
Long T Short T Ground Instants	ime Time I Fault aneous aneous ion Resi	istance (<u>A</u> 3 6 1	mps	90% - 75% 110%-125%	A-G A-B	20.054 0.412 0.160 0.035	B-Gr B-C			C-Gr A-C	Phase
Long T Short T Ground Instant Instant Insulati Across	ime ime I Fault aneous aneous ion Resi Open P	istance (<u>A</u> 3 6 1 10 a) 1KV	467 4400 600 0000	90% - 75% 110%-125%	/o /o A-G	20.054 0.412 0.160 0.035	B-Gr			C-Gr A-C	
Long T Short T Ground Instant Instant Insulati Across	ime ime I Fault aneous aneous ion Resi Open P	istance (<u>A</u> 3 6 1 10 a) 1KV	mps	90% - 75% 110%-125%	A-G A-B	20.054 0.412 0.160 0.035	B-Gr B-C			C-Gr A-C	Phase
Long T Short T Ground Instant Instant Insulati Across	ime lime l Fault aneous aneous ion Resi Open P	istance (ole ance (μΩ	<u>A</u> 3 6 1 10 a) 1KV	<u>mps</u> 467 4400 600 0000 DC P-Trip	90% - 75% 110%-125%	A-G A-B	20.054 0.412 0.160 0.035	B-Gr B-C			C-Gr A-C	
Long T Short T Ground Instant Instant Across Contact	ime lime l Fault aneous aneous ion Resi Open P	istance (<u>A</u> 3 6 1 10 a) 1KV	<u>mps</u> 467 4400 600 0000 DC P-Trip	90% - 75% 110%-125%	A-G A-B	20.054 0.412 0.160 0.035	B-Gr B-C			C-Gr A-C	
Long T Short T Ground Instant Instant Across Contact	ime lime l Fault aneous aneous ion Resi Open P	istance (ole ance (μΩ	<u>A</u> 3 6 1 10 a) 1KV	<u>mps</u> 467 4400 600 0000 DC P-Trip	90% - 75% 110%-125%	A-G A-B	20.054 0.412 0.160 0.035	B-Gr B-C			C-Gr A-C	
Long T Short T Ground Instant Instant Across Contact	ime lime l Fault aneous aneous ion Resi Open P	istance (ole ance (μΩ	<u>A</u> 3 6 1 10 a) 1KV	<u>mps</u> 467 4400 600 0000 DC P-Trip	90% - 75% 110%-125%	A-G A-B	20.054 0.412 0.160 0.035	B-Gr B-C			C-Gr A-C	
Long T Short T Ground Instant Instant Across Contact	ime lime l Fault aneous aneous ion Resi Open P	istance (ole ance (μΩ	<u>A</u> 3 6 1 10 a) 1KV	<u>mps</u> 467 4400 600 0000 DC P-Trip	90% - 75% 110%-125%	A-G A-B	20.054 0.412 0.160 0.035	B-Gr B-C			C-Gr A-C	
Long T Short T Ground Instant Instant Across Contact	ime lime lime lifault aneous aneous ion Resi Open P t Resista	istance (ole ance (μΩ unctions	<u>A</u> 3 6 1 10 a) 1KV	<u>mps</u> 467 4400 600 0000 DC P-Trip	90% - 75% 110%-125%	A-G A-B	20.054 0.412 0.160 0.035	B-Gr B-C			C-Gr A-C	



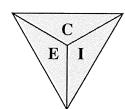
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Low Voltage Circuit Breaker

	er	Glenwo	ood Elec	etric						Job#	2020	-758
Locatio	n	Lytle T	unnel							Date	09/16	5/2020
Identifi	cation	Panel I										
							1					
Mfg	Square	e D	Type	Maste	rpact	Style	NW 08H1	Vo	ltage	480	ASYN	1 65
Serial	085325	5378001		Frame	800	OC	ML 6.0P	Co	il		Plug	600
	G	•		T 4	•7 7 7	- T	4 15 1		4 Tr C	, T		75 . I
T 7TV	<u>Sett.</u>			\underline{A}	<u>vailable</u>		As Found	4	<u> As Lefi</u>	!	AS	<u>Tested</u>
Long Ti							0.83					
Long Ti Short T							12 6					
Short T							0 I ² T Off					
Ground							J					
Ground							$\frac{3}{0.2 \text{ I}^2 \text{T Off}}$					
Instanta							8					
										1		
				T						·-···		
Circuit '	Breake	<u>r Test</u>	_	<u>'est</u>	% Settings	!	A Phase	<u>B</u>	Phase Phase	2	$\underline{C}I$	<u>Phase</u>
CH CUIL.			4	unc				l l				
	ime			<u>mps</u> 167			20.202					
Long Ti			2	167			20.202					
Long Ti Short T	ime		39	167 900			0.045					
Long Ti Short Ti Ground Instanta	ime Fault		2 39 12	167	90% - 75%							
Long Ti Short Ti Ground Instanta	ime Fault ineous		2 39 12	167 900 200	90% - 75% 110%-125%		0.045 0.159					
Long Ti Short Ti Ground Instanta Instanta	ime Fault ineous ineous	stance (i	2 39 12 60	167 900 200 000			0.045 0.159 0.036	B-Gr			C-Gr	
Long Ti Short Ti Ground Instanta Instanta	ime Fault neous neous neous on Resi		2 39 12 60	167 900 200 000		Ď	0.045 0.159 0.036	B-Gr B-C			C-Gr A-C	
Long Ti Short Ti Ground Instanta Instanta Insulatio Across (ime Fault Ineous Ineous Open P	ole	2 39 12 60 20 1KVI	167 900 200 000	110%-125%	A-G	0.045 0.159 0.036					
Long Ti Short Tr Ground Instanta Instanta Insulatio Across C	ime Fault Ineous Ineous Open P	ole	2 39 12 60 20 1KVI	167 900 200 000	110%-125%	A-G A-B	0.045 0.159 0.036	В-С	19		A-C C	16
Long Ti Short Tr Ground Instanta Instanta Insulatio Across C	ime Fault Ineous Ineous Ineous Open P	ole	2 39 12 60 20 1KVI	167 900 200 000	110%-125%	A-G A-B	0.045 0.159 0.036	В-С	19		A-C C	16
Long Ti Short T Ground Instanta Instanta Insulatio Across (ime Fault Ineous Ineous On Resi Open P Resista	ole ance (μΩ	2 39 12 60 20 1KVI	167 900 200 000	110%-125%	A-G A-B	0.045 0.159 0.036	В-С	19		A-C C	16
Long Ti Short T Ground Instanta Instanta Across C	ime Fault Ineous Ineous On Resi Open P Resista	ole	2 39 12 60 20 1KVI	167 900 200 000	110%-125%	A-G A-B	0.045 0.159 0.036	В-С	19		A-C C	16
Long Ti Short Ti Ground Instanta Instanta Insulatio Across (ime Fault Ineous Ineous On Resi Open P Resista	ole ance (μΩ	2 39 12 60 20 1KVI	167 900 200 000	110%-125%	A-G A-B	0.045 0.159 0.036	В-С	19		A-C C	16
Long Ti Short T Ground Instanta Instanta Across C	ime Fault Ineous Ineous On Resi Open P Resista	ole ance (μΩ	2 39 12 60 20 1KVI	167 900 200 000	110%-125%	A-G A-B	0.045 0.159 0.036	В-С	19		A-C C	16
Long Ti Short T Ground Instanta Instanta Insulatio Across C	ime Fault Ineous Ineous On Resi Open P Resista	ole ance (μΩ	2 39 12 60 20 1KVI	167 900 200 000	110%-125%	A-G A-B	0.045 0.159 0.036	В-С	19		A-C C	16

20-758-09

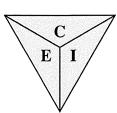


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Low Voltage Circuit Breaker

Custon			ood Elec	tric						Jo	b #	2020-7	758
Locatio										Da	ate	09/16/	2020
Identif	cation	Panel I	_P-PP										
Mfg	Square	e D	Туре	Maste	erpact	Style	NW 08H1			ge 48	30	ASYM	65
Serial	085325	5378101		Frame	800	OC	ML 6.0P		Coil			Plug	400
				·									
	Sett			<u>A</u>	<u>vailable</u>		As Found		<u>As</u>	<u>Left</u>		As T	<u>'ested</u>
Long T	ime Pic	k-up					1						
Long T							8						
Short T							8			8			4
Short T							0 I ² T Off						
		Pick-up					J						
Ground		Delay					$0.3 I^2 T Off$						
Instant	aneous						8						
Circuit	Breake	r Test		<u>'est</u> nps	% Settings	<u> </u>	A Phase		<u>B P</u>	<u>hase</u>		<u>C Pi</u>	<u>hase</u>
Long T	ime		12	200			28.769						
Short T	ime		24	100			0.044						
Ground	Fault		8	00			0.270						
Instanta	aneous												
			40	000	90% - 75%		0.043						
Instanta					90% - 75% 110%-125%	ó	0.043						
Insulati	on Resi	stance @				A-G	0.043	B-G				C-Gr	
Insulati	on Resi		n 1KVD	OC	110%-125%	A-G A-B	0.043	В-С			A	-C	
Insulati Across	on Resi Open Po	ole) 1KVD		110%-125%	A-G	0.043		-			C	
Insulati	on Resi Open Po	ole) 1KVD	OC	110%-125%	A-G A-B	0.043	В-С	-	9	A	-C	2
Insulati Across (on Resi Open Po Resista	ole) 1KVD	OC	110%-125%	A-G A-B	0.043	В-С	-	9	A	C	2
Insulati Across (Contact	on Resi Open Po Resista	ole ance (μΩ) 1KVD	OC	110%-125%	A-G A-B	0.043	В-С	-	9	A	C	2
Insulati Across	on Resi Open Po Resista	ole) 1KVD	OC	110%-125%	A-G A-B	0.043	В-С	-	9	A	C	2
Insulati Across (on Resi Open Po Resista	ole ance (μΩ) 1KVD	OC	110%-125%	A-G A-B	0.043	В-С	-	9	A	C	2
Insulati Across (Contact	on Resi Open Po Resista	ole ance (μΩ) 1KVD	OC	110%-125%	A-G A-B	0.043	В-С	-	9	A	C	2
Insulati Across (Contact	on Resi Open Po Resista	ole ance (μΩ) 1KVD	OC	110%-125%	A-G A-B	0.043	В-С	-	9	A	C	2
Insulati Across (Contact	on Resi Open Po Resista nts All fo	ole ance (μΩ unctions) 1KVD	P-Trip	110%-125% Unit	A-G A-B	0.043	В-С	-	9	A	C	2

20-758-10



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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.

General Manager



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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.

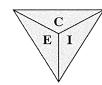
Level 2

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: G	lenwood Electric	Location: Lytle Tunnel - Cincinnati,	OH Job # 2020-758
Image #	Location	Equipment Inspected	Severity
Lytle Tu	innel	Main 1A	No Issues
Lytle Tu	ınnel	Panel DP-E	No Issues
Lytle Tu	ınnel	Vent Fan #2	No Issues
Lytle Tu	ınnel	Vent Fan #1	No Issues
Lytle Tu	innel	Panel LP-DP	No Issues
Lytle Tu	innel	TIE	No Issues
Lytle Tu	ınnel	Vent Fan #3	No Issues
Lytle Tu	ınnel	Panel DP-W	No Issues
Lytle Tu	ınnel	Panel LP-PP	No Issues
Lytle Tu	ınnel	Main 2B	No Issues
Lytle Tu	innel	120 VAC UPS	No Issues
Lytle Tu	innel	LP-1	No Issues
Lytle Tu	innel	LP-PP	No Issues
Lytle Tu	innel	480 VAC UPS	No Issues
Lytle Tu	innel	LP1 Transformer	No Issues
Lytle Tu	innel	SW-LP2	No Issues
Lytle Tu	innel	SW-LP1	No Issues
Lytle Tu	innel	SW-DN	No Issues
Lytle Tu	innel	RW-LP2	No Issues
Lytle Tu	ınnel	RW-LP1	No Issues
Lytle Tu	innel	RW-DN	No Issues
Lytle Tu	innel	NW-LP2	No Issues
Lytle Tu	ınnel	NW-LP1	No Issues
Lytle Tu	innel	NW-DN	No Issues
Lytle Tu	innel	DP-W	No Issues
Lytle Tu	innel	Contactor NW-C1	No Issues
Lytle Tu	innel	Contactor NW-C2	No Issues
Lytle Tu	innel	Contactor RW-C1	No Issues
Lytle Tu	ınnel	Contactor RW-C2	No Issues
Lytle Tu	ınnel	Contactor SW-C1	No Issues
Lytle Tu	innel	Contactor SW-C2	No Issues
Lytle Tu	innel	LP-2	No Issues
Lytle Tu	innel	LP-2 Transformer	No Issues
Lytle Tu	ınnel	LP	No Issues
Lytle Tu	innel	Contactor SE-C2	No Issues
Lytle Tu	ınnel	Contactor SE-C1	No Issues
Lytle Tu	ınnel	Contactor RE-C2	No Issues
Lytle Tu	ınnel	Contactor RE-C1	No Issues
Lytle Tu	ınnel	Contactor NE-C2	No Issues
Lytle Tu	ınnel	Contactor NE-C1	No Issues



Electrical Certification Incorporated

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Customer	: Glenwood Electric	Location: Lytle Tunnel - Cincinnati, OF	Job # 2020-758
<u>lmage #</u>	<u>Location</u>	Equipment Inspected	Severity
Lyt	le Tunnel	DP-E	No Issues
Lytl	le Tunnel	NE-DN	No Issues
Lytl	le Tunnel	NE-LP1	No Issues
Lyti	le Tunnel	NE-LP2	No Issues
Lytl	le Tunnel	RE-DN	No Issues
Lytl	le Tunnel	RE-LP1	No Issues
Lyti	le Tunnel	RE-LP2	No Issues
Lytl	le Tunnel	SE-DN	No Issues
Lyti	le Tunnel	SE-LP1	No Issues
	le Tunnel	SE-LP2	No Issues
	le Tunnel	N-EM	No Issues
	e Tunnel	R-EM	No Issues
·	e Tunnel	S-EM	No Issues
	e 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		0	0
	Delamination/Spall/Patched area	sq feet			53		
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet					
	Cracking (Liners)	sq feet		124			
10051		sq feet	192	100	89.5	2	0.5
	Delamination/Spall/Patched area	sq feet			21.5	2	0.5
	Exposed Rebar	sq feet				_	0.0
	Efflorescence/Rust Staining	sq feet			22		
	Cracking (Liners)	sq feet			46		
10055	Masonry Portal	sq feet	1331		921	410	
10033	Efflorescence/Rust Staining	sq feet	1331		321	710	
	Mortar Breakdown	sq feet					
	Split/Spall	sq feet			29	2	
	Patched Area	sq feet			23		
	Masonry Displacement	sq feet				408	
10061	Concrete Ceiling Slab	sq feet	4946	4946		700	
10001	Delamination/Spall/Patched area	sq feet	7370	7570			
	Exposed Rebar	sq feet					
	Efflorescence/Rust Staining	sq feet					
	Cracking	sq feet					
10111		sq feet	47251	47251			
10111	Delamination/Spall/Patched area	sq feet	47231	47231			
	Exposed Rebar	sq feet					
	Cracking (Liners)	sq feet					
101/10	Gasket	ft	250	197	53		
10140	Leakage	ft	230	137	15		
	Seal Adhesion/Damage/Crack	ft			13		
	Debris Impaction	ft					
	Adjacent Deck/Header	ft			38		
10159	Asphalt Wearing Surface	sq feet	38823	38694	121	8	0
10120	General Condition	sq feet	30023	30034	121	0	0
	Effectiveness	sq feet			121	8	
10161	Concrete Traffic Barrier	ft	1738	1724	13		0
10101	Delamination/Spall/Patched area	ft	1/30	1/24	3		U
	Exposed Rebar	ft			3	1	
	Efflorescence/Rust Staining	ft			9		
		ft	-	799			
10601	Cracking		470				_
TOOUT	Tunnel Lighting Fixture	each	478				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-	10 LF diagonal hairline crack	
10	00+50	TO LE GIAGOTIAI HAITIITE CIACK	
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			
	00+00-	Man gracking over left lane			
22	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			
	00+30-	Constitution in financial financial			
17	00+50	Small bubbles in fireproofing coating			
	00+10-	and the state of t			
17	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			
	00+00-				
21	00+50	Map cracking throughout fireproofing over left lane			
	00+00-	Man cracking throughout fireproofing over left land			
22	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	80+00	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			
	00+10-	man grading over middle lane 15 L5 wide			
17	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	

C:\Users\gaf84868\Desktop\Lytle Tunnel\Fall 2020\Field Notes\North Bound Lytle field notes 2020 11/24/2020 1 of 2

	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			
	00+40-				
12	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		
	00+00-	, ,			
10	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			
	00+00-				
11	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			
	00+00-	4.5 LF vertical hairline crack about every 5 ft			
12	00+50	4.3 Li Vertical Hall line Crack about every 3 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			
	00+25-	4.5 LF vertical hairline crack about every 5 ft			
13	00+50	4.3 LF Vertical Halfille Crack about every 3 ft			
	00+00-	4.5 LF vertical hairline crack about every 5 ft			
14	00+50	4.3 Li Vertical Hall line Crack about every 3 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			
	00+38-	3' x 4" x 1" deep spall with collison damage			
15	00+40	3 X4 X1 accp spair with comson damage			
	00+00-	4.5 LF vertical hairline crack about every 10ft			
15	00+50	4.5 Er Verticul Hammie erack about every 1010			
	00+00-	4.5 LF vertical hairline crack about every 10 ft			
16	00+50	<u>'</u>			
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 00+49	3 missing barrier reflectors 4.5 LF vertical hairline crack	
22	00+49	4.5 LF vertical hairline crack 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+23	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	
	00+44-		
24	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	Unit station Deficiency Description			
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+65	4.5 LF vertical hairline crack	
	00+80	4.5 LF vertical hairline crack	+
26	00700	4.3 LF VEHILLAH HAHIHIE CTACK	

		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			
	Effectiveness	sq feet			1180		1

		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	
_	00+30-		
3	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	
		12 SF hollow tiles along full height. 10'H x 6"W x 2" deep spall. Full height	1
7	00+00	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	1
9	00+30	3 LF vertical hairline crack	1
	00.30	Unit 9 ends and unit 19 begins	
		Spall 2'H x 4"W x 1" Deep. Full height of tiles removed and vertical hairline	
19	00+00	crack	
19	00+17	10 LF vertical hairline crack	
19	00+25	12 LF vertical hairline crack	1
19	00+32	8 LF vertical hairline crack	†
20	00+00	map cracking begins and is consistent throughout fireproofing	1
20	00+11	8 LF vertical hairline crack	
22	00+11	10 LF vertical hairline crack, 2 tiles removed	+
22	00+20	6 LF diagonal hairline crack	-
23	00+35	12 hollow tiles, 11 removed tiles. 4 LF vertical hairline crack	+
	00+00	4 LF vertical hairline crack	+
23		4 LF vertical hairline crack 4 LF vertical hairline crack	+
24	00+12		
24	00+25	12 LF vertical hairline crack	<u> </u>
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	

C:\Users\gaf84868\Desktop\Lytle Tunnel\Fall 2020\Field Notes\South Bound Lytle field notes 2020 11/24/2020 1 of 2

		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	
		12 SF delaminated tile full height at joint with 6 cracked tiles. Full height	
25	00+00	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	
		Map crack in fireproofing throughout remainder of section (20-00+20 to 22-	
20	00+20	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	
		3 LF longitudinal hairline crack, 2 LF transverse hairline crack, 5 LF longitudinal	
2	00+30	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	
		1 SF delamination, 1" deep spall, 10 hollow tiles, 8 hollow tiles and 1 removed	
6	00+00	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	111000
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+25	4.5 LF vertical hairline crack	
7	00+33	4.5 LF vertical hairline crack	
7	00+37	2 missing barrier reflectors	
9	00+40	4.5 LF vertical hairline crack	
9	00+12	4.5 LF vertical hairline crack	
9	00+18	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+36	Unit 9 ends and unit 19 begins	
19	00+18	4.5 LF vertical hairline crack	
19	00+18	4.5 LF vertical hairline crack 4.5 LF vertical hairline crack	
19	00+23	4.5 LF VEHICAL HAITIINE CLACK	

		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	
- 10	00+32-		
19	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	107	30	0.5	0.5	
	Exposed Rebar	sq feet			0.5	0.5	
	Efflorescence/Rust Staining	sq feet			40		
	Cracking (Liners)	sq feet			10		
10055	Masonry Portal	sq feet	671		671		
10023	Efflorescence/Rust Staining	sq feet	0/1		0/1		
	Mortar Breakdown	sq feet			671		
					6/1		
	Split/Spall	sq feet					
	Patched Area	sq feet					
40064	Masonry Displacement	sq feet	2724	2724			
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		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	
	00+02-		
16	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	
	00+25-	·	
18	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+37	2 SF hollow tile at joint	
24	00+00	2 SF hollow tile at joint	
۷4	00.00	2 31 Hollow the at joint	

		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	
	00+20-		
17	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	
	00+20-		
18	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	
	00+05-		
20	00+10	10 SF delamination along map cracking	
20	00+20	4 SF delamination along map cracking	
	00+30-		
20	00+35	5 SF delamination at barrier	
	00+45-		
20	00+50	10 SF delamination at joint	
21	00+00	12 LF vertical hairline crack with delamination at joint	
	00+02-		
21	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	
	00+20-		
21	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	
	00+45-		
21	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	Unit station Deficiency Description				
11	00+10	6 LF transverse HLC over east shoulder			
11	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	station Deficiency Description					
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	

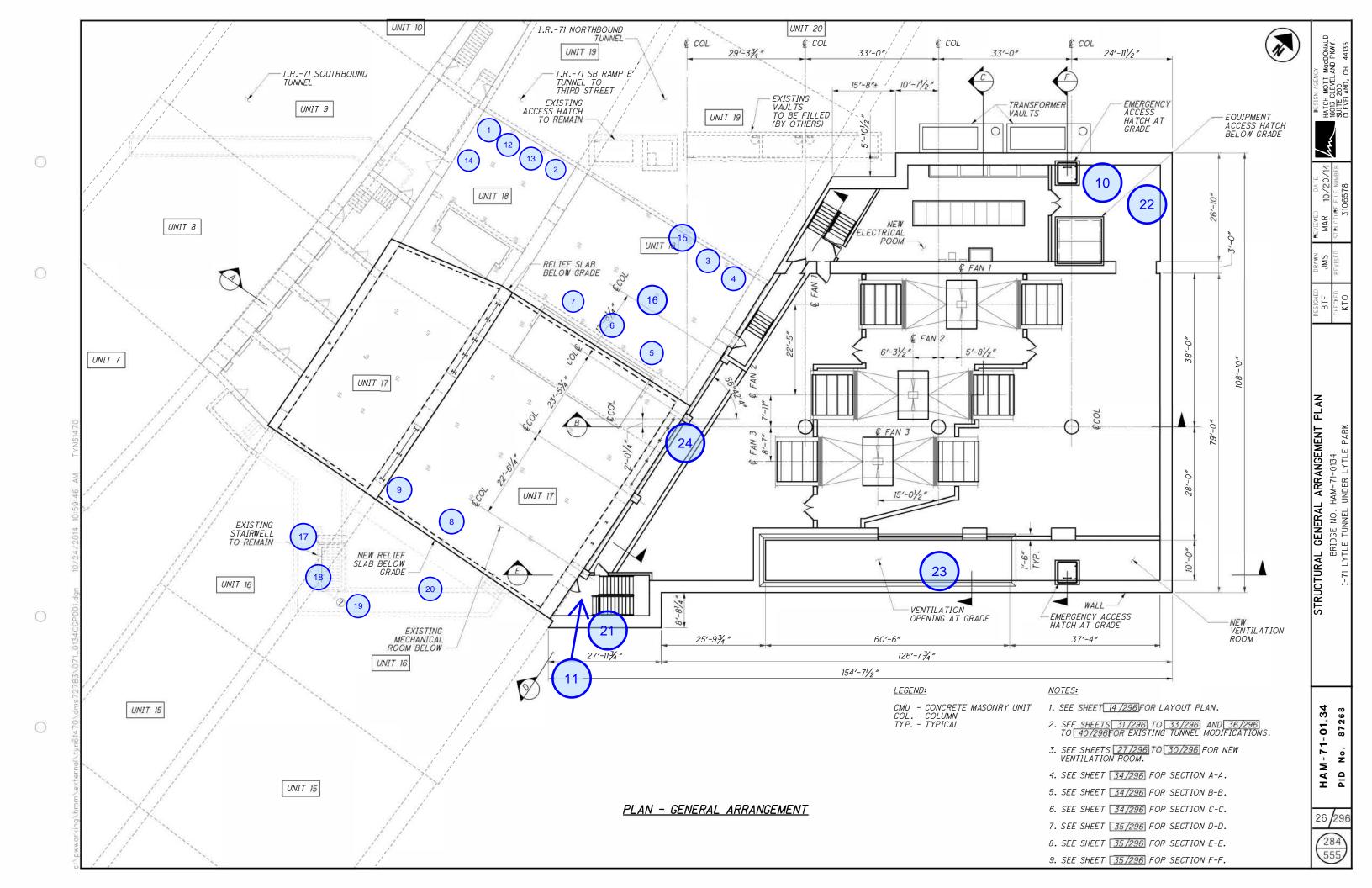
		Exit Ramp West Traffic Barrier	
Unit	station	Deficiency Description	Photo
23	00+08	4.5 LF vertical hairline crack	
23	00+10	4.5 LF vertical hairline crack	
23	00+20	4.5 LF vertical hairline crack	
23	00+25	4.5 LF vertical hairline crack	
23	00+38	4.5 LF vertical hairline crack	
24	00+10	4.5 LF vertical 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



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	•
		Water intrusion at access hatch collecting on floor and spreading to nearby	
10	North Corner	rooms	
22	North corner	10 LF hairline crack on wall	
23	Intake plenum	15 LF vertical hairline crack on south wall	
		Water intrusion at ceiling above stairs with new injection ports. Heavy	
11	South Corner Stairs	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	
		16; 16 LF vertical hairline cracks throughout area between Exit Ramp and	
28	void space	South barrels	
		Efflorescense at ceiling join and 30 SF honecombing, efflorescense, and	
29	void space	exposed rebar	I

