

APPENDIX

D

FIRE

PROTECTION

TESTING

DOCUMENTS

Contractor's Material and Test Certificate for Aboveground Piping

PROCEDURE

Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor's personnel finally leave the job.

A certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners, and contractor. It is understood the owner's representative's signature in no way prejudices any claim against contractor for faulty material, poor workmanship, or failure to comply with approving authority's requirements or local ordinances.

Property name Lytle Tunnel North Bound Date 09/29/23
 Property address _____

Plans	Accepted by approving authorities (names)	
	Address	
	Installation conforms to accepted plans	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Equipment used is approved If no, explain deviations	<input type="checkbox"/> Yes <input type="checkbox"/> No

Instructions	Has person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this new equipment? If no, explain	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Have copies of the following been left on the premises? 1. System components instructions 2. Care and maintenance instructions 3. NFPA 25	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Location of system: Supplies buildings Stand pipes only

Sprinklers	Make	Model	Year of manufacture	Orifice size	Quantity	Temperature rating
	Ø					

Pipe and fittings: Type of pipe Ductile 7 Sch 40 BSP
 Type of fittings Ductile Grooved

Alarm valve or flow indicator	Alarm device			Maximum time to operate through test connection	
	Type	Make	Model	Minutes	Seconds

Dry pipe operating test	Dry valve			Q. O. D.			
	Make	Model	Serial no.	Make	Model	Serial no.	
		Time to trip through test connection ^{1,2}	Water pressure	Air pressure	Trip point air pressure	Time water reached test outlet ^{1,2}	Alarm operated properly
		Minutes Seconds	psi	psi	psi	Minutes Seconds	Yes No
	Without Q.O.D.						
With Q.O.D.							
If no, explain							

¹ Measured from time Inspector's test connection is opened
² NFPA 13 only requires the 60-second limitation in specific sections

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Deluge and preaction valves	Operation <input type="checkbox"/> Pneumatic <input type="checkbox"/> Electric <input type="checkbox"/> Hydraulics							
	Piping supervised: <input type="checkbox"/> Yes <input type="checkbox"/> No				Detecting media supervised <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Does valve operate from the manual trip, remote, or both control stations? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Is there an accessible facility in each circuit for testing? <input type="checkbox"/> Yes <input type="checkbox"/> No						If no, explain	
	Make	Model	Does each circuit operate supervision loss alarm?		Does each circuit operate valve release?		Maximum time to operate release	
		Yes	No	Yes	No	Minutes	Seconds	
Pressure reducing valve test	Location and floor	Make and model	Setting	Static pressure		Residual pressure (flowing)		Flow rate
				Inlet (psi)	Outlet (psi)	Inlet (psi)	Outlet (psi)	Flow (gpm)
Test description	<p>Hydrostatic: Hydrostatic tests shall be made at not less than 200 psi (13.6 bar) for 2 hours or 50 psi (3.4 bar) above static pressure in excess of 150 psi (10.2 bar) for 2 hours. Differential dry-pipe valve clappers shall be left open during the test to prevent damage. All aboveground piping leakage shall be stopped.</p> <p>Pneumatic: Establish 40 psi (2.7 bar) air pressure and measure drop, which shall not exceed 1 1/2 psi (0.1 bar) in 24 hours. Test pressure tanks at normal water level and air pressure and measure air pressure drop, which shall not exceed 1 1/2 psi (0.1 bar) in 24 hours.</p>							
Tests	All piping hydrostatically tested at <u>210</u> psi (<u>14.5</u> bar) for <u>2</u> hours				If no, state reason			
	Dry piping pneumatically tested <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
	Equipment operates properly <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
	Do you certify as the sprinkler contractor that additives and corrosive chemicals, sodium silicate or derivatives of sodium silicate, brine, or other corrosive chemicals were not used for testing systems or stopping leaks? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
	Drain test	Reading of gauge located near water supply test connection: _____ psi (<u>14.5</u> bar)			Residual pressure with valve in test connection open wide: _____ psi (<u>14.5</u> bar)			
Blank testing gaskets	Number used <u>0</u>		Locations			Number removed		
	Welding piping <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
	If yes...							
Welding	Do you certify as the sprinkler contractor that welding procedures comply with the requirements of at least AWS B2.1? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Do you certify that the welding was performed by welders qualified in compliance with the requirements of at least AWS B2.1? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Do you certify that the welding was carried out in compliance with a documented quality control procedure to ensure that all discs are retrieved, that openings in piping are smooth, that slag and other welding residue are removed, and that the internal diameters of piping are not penetrated? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Outlets (discs)	Do you certify that you have a control feature to ensure that all outlets (discs) are retrieved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Hydraulic data nameplate	Nameplate provided <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			If no, explain <u>Dry stand pipe</u>				
Remarks	Date left in service with all control valves open <u>9-29-2023</u>							
Signatures	Name of sprinkler contractor <u>Summit Fire Security</u>							
	Tests witnessed by							
	For property owner (signed) _____		Title <u>WSP</u>		Date <u>9/29/23</u>			
For sprinkler contractor (signed) <u>Dave L...</u>		Title _____		Date <u>9-29-23</u>				
Additional explanations and notes								

Contractor's Material and Test Certificate for Aboveground Piping

Contractor's Material and Test Certificate for Aboveground Piping

PROCEDURE

Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor's personnel finally leave the job.

A certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners, and contractor. It is understood the owner's representative's signature in no way prejudices any claim against contractor for faulty material, poor workmanship, or failure to comply with approving authority's requirements or local ordinances.

Property name Lytle Tunnel Southbound Date 9-29-2023
 Property address _____

Plans	Accepted by approving authorities (names)	
	Address	
	Installation conforms to accepted plans	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Equipment used is approved If no, explain deviations	<input type="checkbox"/> Yes <input type="checkbox"/> No

Instructions	Has person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this new equipment? If no, explain	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Have copies of the following been left on the premises? 1. System components instructions 2. Care and maintenance instructions 3. NFPA 25	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Location of system: Supplies buildings Stand Pipes Only

Sprinklers	Make	Model	Year of manufacture	Orifice size	Quantity	Temperature rating
	<u>φ</u>					

Pipe and fittings: Type of pipe Ductile SCH 40 BSP
 Type of fittings Ductile Grooved

Alarm valve or flow indicator <u>φ</u>	Alarm device			Maximum time to operate through test connection	
	Type	Make	Model	Minutes	Seconds

Dry pipe operating test <u>φ</u>	Dry valve			Q. O. D.					
	Make	Model	Serial no.	Make	Model	Serial no.			
	Time to trip through test connection ^{1,2}		Water pressure	Air pressure	Trip point air pressure	Time water reached test outlet ^{1,2}	Alarm operated properly		
	Minutes	Seconds	psi	psi	psi	Minutes	Seconds	Yes	No
	Without Q.O.D.								
	With Q.O.D.								
	If no, explain								

¹ Measured from time Inspector's test connection is opened
² NFPA 13 only requires the 60-second limitation in specific sections

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Deluge and preaction valves	Operation <input type="checkbox"/> Pneumatic <input type="checkbox"/> Electric <input type="checkbox"/> Hydraulic							
	Piping supervised: <input type="checkbox"/> Yes <input type="checkbox"/> No				Detecting media supervised <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Does valve operate from the manual trip, remote, or both control stations? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Is there an accessible facility in each circuit for testing? <input type="checkbox"/> Yes <input type="checkbox"/> No						If no, explain	
	Make	Model	Does each circuit operate supervision loss alarm?		Does each circuit operate valve release?		Maximum time to operate release	
		Yes	No	Yes	No	Minutes	Seconds	
Pressure reducing valve test	Location and floor	Make and model	Setting	Static pressure		Residual pressure (flowing)		Flow rate
				Inlet (psi)	Outlet (psi)	Inlet (psi)	Outlet (psi)	Flow (gpm)
Test description	<p>Hydrostatic: Hydrostatic tests shall be made at not less than 200 psi (13.6 bar) for 2 hours or 50 psi (3.4 bar) above static pressure in excess of 150 psi (10.2 bar) for 2 hours. Differential dry-pipe valve clappers shall be left open during the test to prevent damage. All aboveground piping leakage shall be stopped.</p> <p>Pneumatic: Establish 40 psi (2.7 bar) air pressure and measure drop, which shall not exceed 1 1/2 psi (0.1 bar) in 24 hours. Test pressure tanks at normal water level and air pressure and measure air pressure drop, which shall not exceed 1 1/2 psi (0.1 bar) in 24 hours.</p>							
Tests	All piping hydrostatically tested at _____ psi (____ bar) for _____ hours						If no, state reason	
	Dry piping pneumatically tested <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Equipment operates properly <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Do you certify as the sprinkler contractor that additives and corrosive chemicals, sodium silicate or derivatives of sodium silicate, brine, or other corrosive chemicals were not used for testing systems or stopping leaks? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Drain test	Reading of gauge located near water supply test connection: _____ psi (____ bar)				Residual pressure with valve in test connection open wide: _____ psi (____ bar)		
Underground mains and lead-in connections to system risers flushed before connection made to sprinkler piping								
Verified by copy of the Contractor's Material and Test Certificate for Underground Piping. <input type="checkbox"/> Yes <input type="checkbox"/> No						Other Explain		
Flushed by installer of underground sprinkler piping <input type="checkbox"/> Yes <input type="checkbox"/> No								
If powder-driven fasteners are used in concrete, has representative sample testing been satisfactorily completed? <input type="checkbox"/> Yes <input type="checkbox"/> No						If no, explain		
Blank testing gaskets	Number used			Locations			Number removed	
Welding	Welding piping <input type="checkbox"/> Yes <input type="checkbox"/> No							
	If yes...							
	Do you certify as the sprinkler contractor that welding procedures comply with the requirements of at least AWS B2.1? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Do you certify that the welding was performed by welders qualified in compliance with the requirements of at least AWS B2.1? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Do you certify that the welding was carried out in compliance with a documented quality control procedure to ensure that all discs are retrieved, that openings in piping are smooth, that slag and other welding residue are removed, and that the internal diameters of piping are not penetrated? <input type="checkbox"/> Yes <input type="checkbox"/> No								
Outputs (discs)	Do you certify that you have a control feature to ensure that all outputs (discs) are retrieved? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Hydraulic data nameplate	Nameplate provided <input type="checkbox"/> Yes <input type="checkbox"/> No				If no, explain			
Remarks	Data left in service with all control valves open							
Signatures	Name of sprinkler contractor							
	Tests witnessed by							
	For property owner (signed)		Title		Date			
For sprinkler contractor (signed)		Title		Date				
Additional explanations and notes								

Contractor's Material and Test Certificate for Aboveground Piping

Contractor's Material and Test Certificate for Aboveground Piping

PROCEDURE

Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor's personnel finally leave the job.

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Property name Lytbe Tunnel South Bound Exit Date 9-29-29

Property address _____

Plans	Accepted by approving authorities (names)		
	Address		
	Installation conforms to accepted plans		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Equipment used is approved If no, explain deviations		<input type="checkbox"/> Yes <input type="checkbox"/> No

Instructions	Has person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this new equipment? If no, explain		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Have copies of the following been left on the premises? 1. System components instructions 2. Care and maintenance instructions 3. NFPA 25		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Location of system: Supplies buildings Stand Pipes Only

Sprinklers	Make	Model	Year of manufacture	Orifice size	Quantity	Temperature rating
	φ					

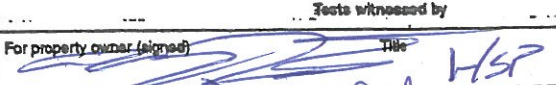

Pipe and fittings: Type of pipe Ductile Iron Sch 40 BSP
Type of fittings Ductile Grooved

Alarm valve or flow indicator	Alarm device			Maximum time to operate through test connection	
	Type	Make	Model	Minutes	Seconds
φ					

Dry pipe operating test	Dry valve				Q. O. D.				
	Make		Model	Serial no.	Make		Model	Serial no.	
	Time to trip through test connection ^{1,2}		Water pressure	Air pressure	Trip point air pressure	Time water reached test outlet ^{1,2}		Alarm operated properly	
	Minutes	Seconds	psi	psi	psi	Minutes	Seconds	Yes	No
φ	Without Q.O.D.								
	With Q.O.D.								
If no, explain									

¹ Measured from time inspector's test connection is opened
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Deluge and preaction valves	Operation <input type="checkbox"/> Pneumatic <input type="checkbox"/> Electric <input type="checkbox"/> Hydraulics							
	Piping supervised: <input type="checkbox"/> Yes <input type="checkbox"/> No				Detecting media supervised <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Does valve operate from the manual trip, remote, or both control stations? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Is there an accessible facility in each circuit for testing? <input type="checkbox"/> Yes <input type="checkbox"/> No						If no, explain	
	Make	Model	Does each circuit operate supervision loss alarm?		Does each circuit operate valve release?		Maximum time to operate release	
		Yes	No	Yes	No	Minutes	Seconds	
Pressure reducing valve test	Location and floor	Make and model	Setting	Static pressure		Residual pressure (flowing)		Flow rate
				Inlet (psi)	Outlet (psi)	Inlet (psi)	Outlet (psi)	Flow (gpm)
Test description	<p>Hydrstatic: Hydrostatic tests shall be made at not less than 200 psi (13.6 bar) for 2 hours or 50 psi (3.4 bar) above static pressure in excess of 150 psi (10.2 bar) for 2 hours. Differential dry-pipe valve clappers shall be left open during the test to prevent damage. All aboveground piping leakage shall be stopped.</p> <p>Pneumatic: Establish 40 psi (2.7 bar) air pressure and measure drop, which shall not exceed 1 1/2 psi (0.1 bar) in 24 hours. Test pressure tanks at normal water level and air pressure and measure air pressure drop, which shall not exceed 1 1/2 psi (0.1 bar) in 24 hours.</p>							
Tests	All piping hydrostatically tested at ____ psi (____ bar) for ____ hours						If no, state reason	
	Dry piping pneumatically tested <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Equipment operates properly <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Do you certify as the sprinkler contractor that additives and corrosive chemicals, sodium silicate or derivatives of sodium silicate, brine, or other corrosive chemicals were not used for testing systems or stopping leaks? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Drain test	Reading of gauge located near water supply test connection: ____ psi (____ bar)				Residual pressure with valve in test connection open wide: ____ psi (____ bar)		
Underground mains and lead-in connections to system floors flushed before connection made to sprinkler piping								
Verified by copy of the Contractor's Material and Test Certificate for Underground Piping. <input type="checkbox"/> Yes <input type="checkbox"/> No						Other Explain		
Flushed by installer of underground sprinkler piping <input type="checkbox"/> Yes <input type="checkbox"/> No								
If powder-driven fasteners are used in concrete, has representative sample testing been satisfactorily completed? <input type="checkbox"/> Yes <input type="checkbox"/> No						If no, explain		
Blank testing gaskets	Number used			Locations			Number removed	
Welding	Welding piping <input type="checkbox"/> Yes <input type="checkbox"/> No							
	If yes...							
	Do you certify as the sprinkler contractor that welding procedures comply with the requirements of at least AWS B2.1? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Do you certify that the welding was performed by welders qualified in compliance with the requirements of at least AWS B2.1? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Do you certify that the welding was carried out in compliance with a documented quality control procedure to ensure that all discs are retrieved, that openings in piping are smooth, that slag and other welding residue are removed, and that the internal diameters of piping are not penetrated? <input type="checkbox"/> Yes <input type="checkbox"/> No								
Cutouts (discs)	Do you certify that you have a control feature to ensure that all cutouts (discs) are retrieved? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Hydraulic data nameplate	Nameplate provided <input type="checkbox"/> Yes <input type="checkbox"/> No				If no, explain			
Remarks	Date left in service with all control valves open							
Signatures	Name of sprinkler contractor							
	Tests witnessed by							
	For property owner (signed) 				Title HSR		Date 9/29/23	
For sprinkler contractor (signed) 				Title		Date 9-29-23		
Additional explanations and notes								

Contractor's Material and Test Certificate for Aboveground Piping