

## SUPERIOR FIRE PROTECTION SERVICES

Rafael E. Castillo

### REVIEW OF FIRE SPRINKLER SHOP DRAWING SUBMITTAL:

DATE: November 7, 2016

TO: Mr. Clint Neerings  
Wasatch County Fire District  
10420 North Jordanelle Blvd.  
Heber City, Utah 84032

PROJECT: Lew Chapple Spec Residence  
Lot 988, 1842 Acorn Way, Timberlakes Subdivision  
Heber, Wasatch County, Utah

REVIEWED BY: Rafael E. Castillo *R E Castillo*  
Superior Fire Protection Services LLC

SUBMITTED BY: Aspen Fire Protection  
875 South Canyon Road  
Santaquin, Utah 84655  
Lane Manwill

DATE RECEIVED: October 24, 2016

APPLICABLE STANDARDS: NFPA 13D – 2013 'STANDARD FOR THE INSTALLATION  
OF SPRINKLER SYSTEMS IN ONE AND TWO FAMILY  
DWELLINGS'

AUTHORITY HAVING JURISDICTION: Wasatch County Fire District  
10420 North Jordanelle Blvd.  
Heber, Utah 84032

#### DESCRIPTION:

This submittal, sheets 1, 2, 3, and 4, for the Lew Chapple Spec Residence dated October 19, 2016 shows the design and installation of a new wet pipe fire sprinkler system throughout the residence. The plan calls for design per NFPA 13D. Hydraulic calculations and material information sheets are also included.



Superior Fire

Protection Services

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### WATER SUPPLY:

No water supply information is provided. It is understood that the water supply is provided from the local water supply and to begin at the water meter at the property line. The water supply shall be capable of providing the required flow and pressure as shown by the hydraulic calculations. Additional pump and tank may be necessary if the flow and pressure requirements are not met. This information is to be acceptable to the Authority Having Jurisdiction.

### REVIEW COMMENTS:

The review comments to follow are based on the information shown on the drawings provided. They shall not dictate methods, techniques or procedures of construction, nor conformance to any specification. Final acceptance of the drawings, submittals and installation is the prerogative of the Authority Having Jurisdiction, and based upon their completed inspection.

#### A. MATERIAL SHEETS

##### COMMENTS:

1. Material information sheets are acceptable as provided.
2. All material and equipment is to be U.L. listed for use in automatic fire sprinkler systems.

#### B. HYDRAULIC CALCULATIONS

##### COMMENTS:

1. The hydraulic calculations are acceptable as provided with the following comments.
2. Plan notes call for sprinkler spacing of 16' x 16'. The calculations use a flow and pressure for 20' x 20' (21.0 gpm @ 18.4 psi) spacing.

##### Remote Area 1 UPPER LEVEL GREAT ROOM

Hazard – NFPA 13D Residential

System Flow – 42.9 gpm

PSI Required @ BOR (31) – 46.8 psi

Density - .05 gpm per sq. ft.

Remote Area – Remote 2 sprinklers

Total Demand – 42.9 gpm

Sprk K-Factor – 4.9



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### A. SHOP DRAWINGS

#### COMMENTS:

1. The fire sprinkler plan is acceptable with the following comments and corrections.
2. All new piping is to be CPVC plastic pipe listed for use in wet automatic fire sprinkler systems. System riser shall be steel pipe with backflow preventor, gauges and flow switch.
3. Calculations show a riser pipe size of 1 1/4", with 1 1/4" supply from the connection to the city water supply.
4. The new installation includes 26 residential sprinklers. The fire sprinkler system is to be filled with water and all piping is to be inside of the building insulation envelope with piping tented and insulated to protect from freezing. The system riser shall be in an area maintained at a minimum of 40 deg. F.
5. The plan notes call for spacing of 16' x 16' and 8' from a wall. This note may be changed to 20' x 20' spacing as shown by the hydraulic calculations.
6. Verify that all pendent sprinklers are located a minimum of 3'-0" from the centerline of light fixtures per NFPA13D 8.2.5 (8.2.5.2.1)
7. All piping is to have hangers and attachments to support piping in accordance with NFPA 13 and CPVC pipe manufacture requirements.
8. UNFINISHED AREAS: Steel or copper pipe shall be installed in all unfinished areas.
9. INTERIOR ALARM: An interior bell/horn shall be provided to warn the occupants of a sprinkler water flow condition.
10. EXTERIOR ALARM: An exterior (weatherproof) electric bell/horn shall be provided to warn of a sprinkler water flow condition.
11. System acceptance tests shall be in accordance with NFPA 13D: 11.2.
12. Final acceptance is based upon field inspection of the completed installation by the Authority Having Jurisdiction.

Based upon the information provided on the sprinkler drawings and calculations, I recommend that you **RELEASE FOR INSTALLATION WITH COMMENTS**. Final Acceptance of the system shall be based upon Field Inspection and Testing in accordance with NFPA 13D.

COPIES RETAINED IN FILES: ONE SET OF SPRINKLER DRAWINGS AND SUBMITTAL BALANCE IS RETURNED WITH A COPY OF THIS REVIEW LETTER TO THE WASATCH COUNTY FIRE DISTRICT.



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