City of Aurora
Building Codes Division
15151 E Alameda Pkwy
Aurora, CO 80012
(303) 739-7420

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Permit Application: BUILDING~FENCE~ SIGN

Building Division ~15151 E Alameda Pkwy ~ Aurora, CO 80012~ (303) 739-7420

Project Address: 1400 S. POTOMAC Unit # 215 Zip code: 80111
Project Name/Subdivision: ONCOLOGY CLINIC/INFUSION CENTER
Contractor: JACOBS FIRE PROTECTION Phone: 3)698-1190 Fax: 3)698-1389
Contact Person: JEFF SMITH Email: jsmith@jacobsfire.net
Phone: Fax:

Owner: (Required for CO) CORE
Owner address: 830 POTOMAC CIRCLE Valuation / FDA: $ $1,500
Email: nicole.budlong@cbre.com

REQUIRED FOR PROJECTS USING AN ARCHITECT and/or ENGINEER:
Architect or Engineer Name: TPS Email: www.tenplan.com
Phone #: 3)861-4800 Fax #: 3)861-1621

DESCRIBE THE WORK YOU WILL BE DOING: *
Modify existing wet sprinkler in Suite 215 @ 1400 S. Potomac per NFPA 13 2002. Relocate 10, ADD 1, AWG 5.

SIGN PERMIT: Sign type: Ground ☐ Wall ☐ Window ☐ Other ☐ Number of existing signs
Monument sign? ☐Y ☐N Is height from grade more than 6': ☐Y ☐N Sign Features: Illuminated ☐ Y ☐ N
New circuit? Y☐ N ☐ Require separate electrical permit. If yes * see above. Number of faces on sign
Total area all sides: SF | Total SF existing signs: | Bldg/Tenant frontage: ft
Electrician: (Required for any illuminated sign) Any existing waivers ☐Y ☐N If yes provide copy

FENCE PERMIT: Style/Type: * Describe work above ☐ Corner lot ☐ Interior lot Use Zone:
Height in. Greater than 50% open: ☐ Less than 50% open: ☐ Post size: ☐ x ☐ Post spacing:

NEW HOME CONSTRUCTION ONLY:
Model #: Elevation: Foundation Type: Basement Type: Unfinished:
Number of Deck(s): Covered: Uncovered: Size of Deck (s): Concrete Patio(s):
Covered: Uncovered: Size of Patio Cover: GFA – Qty: BTU's: /
Gas range/BBQ/oven/cook top: BTU's Qty AC/Cooler/CFM/Ton: Fireplace(qty):
BTU's: / Misc: Shower #: Lavatory #: Bathtub #: Water Closet #:
Water heater type: BTU'S: # Electrical Svc AMP: Other:

BOARD OF APPEALS - Contractor's Appeals and Standards Board. Applicants have the right to have the board hear appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of the building code. Any application for appeal to the board shall be based on a claim that the true intent of the code or the rules legally adopted there under have been incorrectly interpreted, the provisions of the building code do not fully apply or an equally good or better form of construction is proposed.

◆◆◆◆ THIS SPACE FOR OFFICE USE ONLY ◆◆◆◆

Fee Determination Assessment: $_____

Change of occupancy/use: Y ☐ N ☐

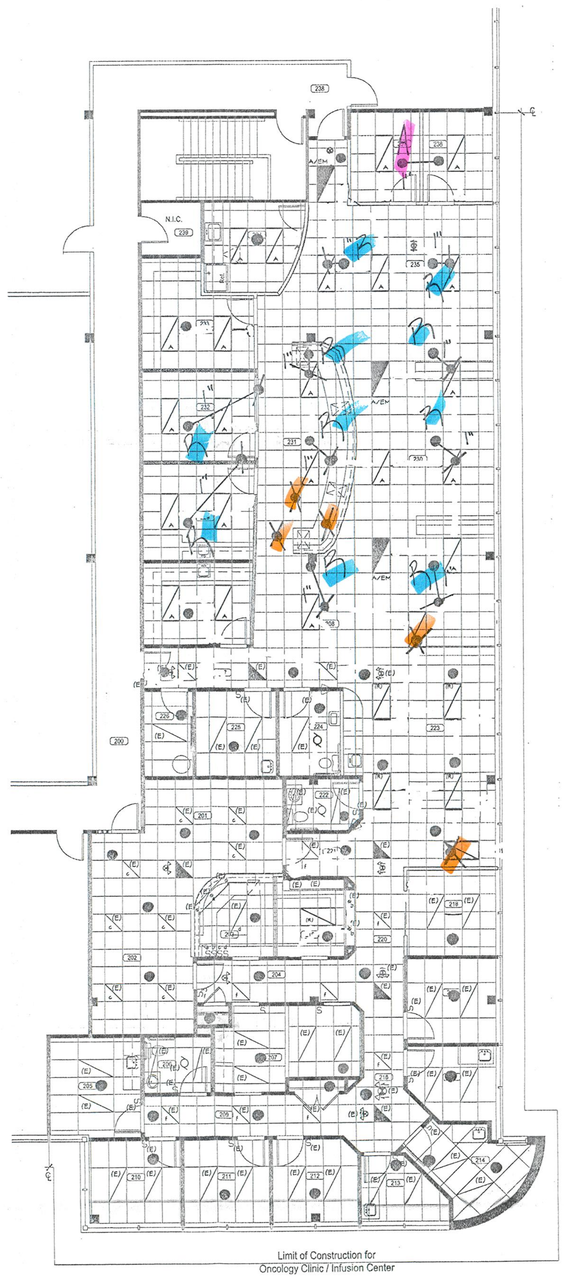
REVIEWS		INSPECTIONS	
☐	Sign		
☐	Structural	☐	Structural
☐	Mechanical	☐	Mechanical
☐	Plumbing	☐	Plumbing
☐	Electrical	☐	Electrical
☐	Life Safety	☒	Life Safety

Intake Date:

Water pre-approval:
Zoning pre-approval:
Parent Permit RSN: 517061
Parent Plan Location
Permit Type: Counter ok JMP
Sub Type: FX Sprinkler
Plans Examiner: JMP
Verify Homeowner:
RSN: 520469
Permit #: 10 453221
Balance Due: $

Sprinkler & Alarm permits must be brought in as separate submittals. "FDA" is NOT included in main permit.

JEFF SMITH — Signature: — 2-9-2010
Print Name: Date:



2nd Floor Fire Protection

1/8"= 1'-0" +/- 4,700 SQ.FT.

LEGEND

- PENDENT SPRINKLER.
1. SPRINKLER TO REMAIN.
2. SPRINKLER TO BE RELOCATED.
3. SPRINKLER TO BE PLUGGED.
4. R RELOCATED SPRINKLER.
5. A ADDED SPRINKLER.

* ALL PIPE USED FOR RELOCATES AND ADDS SHALL BE 1".
*SPRINKLERS –RELIABLE MODEL G – STANDARD RESPONSE – 5.6K – ½" - 155°

**Notes:
1. Pipe used will be Schedule 40.
1" ID – 1.049"
2. Pipe fittings to be Star cast.
3. The fire sprinkler system will not be out of service for more than 8 hours in a 24 hour period.
4. No more than 2 heads to be taken off of 1" outlet.

2006 International Fire Code (IFC)
2006 International Building Code (IBC)
2002 National Fire Protection Association (NFPA) Standard 13/13D/13R
2003 National Fire Protection Association (NFPA) Standard 14

- This project consists of a 2 story building, constructed of I-A (INSPK (UBC)) and used as OFFICE (per 2006 IBC).
- Type of construction I-A (II N SPK (UBC))
- Building occupancy classification per the 2006 IBC B
- System #1 is a wet system designed to the 2002 NFPA 13 edition.
- All branch line pipe to be Sched 40.
- All Fittings ¾" through 2" to be thread type fittings.
- All fittings 2-1/2" & larger to be victaulic grooved type fittings
- All hangers to be in accordance with 2002 NFPA 13 edition.
- All material to meet 2002 NFPA 13 edition
- All underground pipe to be testes and flushed prior to connecting the overhead piping system.
- Maximum square footage per head is 196 sq. ft.
- Sprinkler heads are not to be located in the center of ceiling tile or aligned with light/ceiling fixtures.
- Sprinkler contractor to begin work at 7 am.
- The authority having jurisdiction is the Aurora Building Codes Division/Life Safety.
- Scope of work is in accordance with 2002 NFPA 13 edition.
- Owner is responsible for providing heat, above 40 degrees Fahrenheit, adequate enough to prevent freezing of the sprinkler piping.
- All valves controlling the water supply to 20 or more sprinkler heads must be supervised. At the time of final inspection, fire safety systems must be supervised by an approved UL –Listed monitoring agency.
- The contractor (or designee) must provide all necessary testing equipment and perform all testing required by the life safety inspector.
- All new or existing fire alarm systems must be interconnected with the flow switch of the fire sprinkler systems outside horn and strobe.
- Installation of interior alarms activated by the fire sprinkler water flow will be required per 2006 IFC, 903.4.2. Approved audible devices shall be connected to every automatic fire sprinkler system.
- Important: In the event that a concealed space is not shown on the plan submittal and is discovered in the field, the installing contractor must comply with 2002 NFPA 13, section 8.14.1.
- All water supply valves and water flow switches shall be electrically supervised, IFC 2006, 903.0.
- Electrical exterior horn and strobe shall be listed for outdoor use, IFC 903.4.2. Outside horn and strobe will activate upon both general alarm and flow switch activation. When fire alarm panel is silenced, the interior and exterior strobes will continue until fire alarm panel is reset.
- All control valve(s) within the riser room must be accessible, 2002 NFPA Section 8.15.1.1.7.
- Pressure gauges are required on the system side of the main valve and on the supply side of the backflow preventer.
- Both new and existing fire sprinkler systems must be equipped with approved Knox caps.
- The fire department connection must be located not less than 18" and not more than 4' – 0" above the level of the adjacent grade or access level. 2003 NFPA 24, section A.5.9.
- Knox caps will be required on all existing fire department connections.

OK for Counter
CITY OF AURORA
BUILDING DIVISION 09635
APPROVED AS NOTED JMP
DATE 2/10/10
NFPA 13/'02)

NATIONAL INSTITUTE FOR CERTIFICATION
IN ENGINEERING TECHNOLOGIES

LeRoy F. Jacobs

SENIOR ENGINEERING TECHNICIAN
LEVEL 4
CERTIFICATION NUMBER 065125

By

Date 2-9-10

JACOBS FIRE PROTECTION, INC.
STATE REGISTRY : #002
1169 S. HURON STREET DENVER, COLORADO 80223
303-698-1190 303-698-1389 (FAX)

ONCOLOGY CLINIC/INFUSION CENTER

1400 SOUTH POTOMAC
2ND FLOOR – SUITE 215
AURORA, COLORADO
FP1 OF 1

10-6491 1/8"=1'-0" 2/09/2010 JDS
RELOCATE =10, ADDS =1, PLUGS =5
PER NFPA 13 – 2007 EDITION

RSN 520469

Bulletin 110 Rev.R

Reliable®

Model G Automatic Sprinklers Spray Upright, Spray Pendent And Conventional

10 453221

Bulletin 110 Rev.R

Product Description

The Reliable Model G Automatic Sprinkler utilizes the center strut solder in compression principle of construction. The fusible alloy is captured in the cylinder of the solder capsule by a stainless steel ball. When the fusible alloy melts, the ball moves into the cylinder allowing the cylinder to fall away from the sprinkler. When this happens, the lever is released to spring free from the sprinkler so that all of the operating parts clear from the waterway allowing the deflector to distribute the discharging water.

Except for the parts in the cylinder as mentioned above, the sprinkler components are made from copper based alloys for maximum corrosion protection. Lead plated, wax coated or wax over lead plated sprinklers are available for specially severe environments. Chrome plated sprinklers are available for decorative purposes.

All sprinklers are individually hydrostatically tested.

All sprinklers are identified as to their fusing point by markings that appear on several of the operating parts and by an identifying color that appears on the frame.



Upright



Pendent



Small Orifice Upright



Conventional

Sprinkler Types

Standard Upright – This deflector configuration is normally used with exposed piping installations. Water is distributed laterally and downward in a wide pattern approximating a hemisphere which is completely and uniformly filled with water in the form of small drops or spray. At a sprinkler height of 10 feet (3m), a circular area of approximately 20 feet (6.1m) in diameter is covered by the water discharged at the minimum pressure.

Standard Pendent – This deflector configuration is normally used where the space above the piping is not adequate or where a concealed piping installation is employed. The discharge characteristics of the standard pendent are virtually identical to the standard upright as described above.

Large and Small Orifice—By varying the orifice size, a large or small orifice sprinkler is created that will distribute as much as 40% more water or 65% less water than the normal ½″ (15mm) orifice sprinkler. These sprinklers are identified by the orifice size that is stamped in the base of the sprinkler and by the pintle that extends from the deflector–the exception is the large orifice sprinkler with the ¾″ NPT (R¾) inlet thread where the size of the inlet is sufficient to classify this sprinkler as one having a larger than standard orifice.

Conventional—This deflector configuration is used primarily in those countries where the LPC installation rules have precedence. The sprinkler is designed to distribute a portion of its water discharge upward against the ceiling with the balance downward. It may be installed in either the upright or the pendent position. Sprinklers with conventional deflectors are available with orifice sizes corresponding to light, ordinary and extra–high hazard installations.

Application and Installation

Standard sprinklers are used in fixed fire protection systems: Wet, Dry, Deluge or Preaction. Care must be exercised that the orifice sizes, temperature ratings, deflector styles and sprinkler spacings are in accordance with the latest published standards of the National Fire Protection Association or the approving authority having jurisdiction.

The sprinklers must be installed with the Reliable Model D Sprinkler Wrench. Any other type of wrench may damage the sprinkler.

The approvals or listings of Reliable Automatic Sprinklers by major approving organizations are shown in the tabulated list provided on the back of this bulletin.

*Patent No. 4,440,234

The Reliable Automatic Sprinkler Co., Inc., 525 North MacQuesten Parkway, Mount Vernon, New York 10552

RSN 520469

Technical Data

Sprinkler Type	"K" Factor US	"K" Factor Metric	Sprinkler Height	Approvals	Sprinkler Identification Number (SIN) SSU	Sprinkler Identification Number (SIN) SSP
Standard–Upright (SSU) and Pendent (SSP) Deflectors Marked to Indicate Position						
½″ (15 mm) Standard Orifice with ½″ NPT (R½) Thread	5.62	81.0	2 ⅞″ (73 mm)	1, 2, 3, 4, 5, 6, 7	R1025	R1015
7/16″ (11 mm) Small Orifice with ½″ NPT (R½) Thread	4.24	61.0	2 ⅞″ (73 mm)	1, 3, 7	R1023	R1013
⅜″ (10 mm) Small Orifice with ½″ NPT (R½) Thread	2.82	40.6	2 ⅞″ (73 mm)	1, 2, 3, 7	R1021	R1011
5/16″ (8 mm) Small Orifice with ½″ NPT (R½) Thread	1.98	28.5	2 ⅞″ (73 mm)	1, 3, 7	R1022	R1012
17/32″ (20 mm) Large Orifice with ½″ NPT (R½) Thread	7.96	114.7	2 ⅞″ (73 mm)	1, 2, 3, 7	R1026	R1016
17/32″ (20 mm) Large Orifice with ¾″ NPT (R¾)Thread	8.20	118.2	2 15/16″ (75 mm)	1, 2, 3, 7	R1027	R1017
20 mm XHH with 20 mm Thread	8.20	118.2	75.4 mm	4, 5, 6	R1027	R1017
10 mm XLH with 10 mm Thread	4.10	59.1	73 mm	4, 5, 6	R1024	R1014
Conventional—Installed in Upright or Pendent Position						
10mm XLH with 10mm Thread	4.10	59.1	73 mm	5	R1074	
15mm Standard Orifice with (R½) Thread	5.62	81.0	73 mm	4, 5, 6	R1075	
20mm XHH with (R¾) Thread	8.20	118.2	75.4 mm	4, 5	R1077	

Temperature Ratings

Classification	Sprinkler Rating °F	Sprinkler Rating °C	Maximum Ambient Temperature °F	Maximum Ambient Temperature °C	Frame (1) Color
Ordinary	135	57	100	38	Black
Ordinary	165	74	100	38	Uncolored
Intermediate	212	100	150	66	White
High	286	141	225	107	Blue

(1) Frame color does not apply to painted or plated sprinklers–Use sprinkler rating as identified on operating parts.

Maintenance

Model G Sprinklers should be inspected quarterly and the sprinkler system maintained in accordance with NFPA 25. Do not clean sprinklers with soap and water, ammonia or any other cleaning fluids. Remove any sprinkler that has been painted (other than factory applied) or damaged in any way. A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers. Prior to installation, sprinklers should be maintained in the original cartons and packaging until used to minimize the potential for damage to sprinklers that would cause improper operation or non-operation. Use only the Model D Sprinkler Wrench for sprinkler removal and installation. Any other type of wrench may damage the sprinkler.

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Finishes(1)

Standard Finishes	
Bronze	—All Temperature Ratings
Chrome	—All Temperature Ratings
White (2)	—All Temperature Ratings Only Frame and Deflector are Painted
Special Application Finishes	
Bright Brass Plated	—Only frame, deflector and cap are plated. 135°F (57°C), 165°F (74°C), 212°F (100°C) Temp. Rating.
Black Plated	—Only frame, deflector and cap are plated. All Temp. Ratings.
Polyester Coated (2)	—Only frame and deflector are coated.
Lead Plated	—165°F (74°C), 212°F (100°C) and 286°F (141°C) Temp. Ratings.
Wax-Coated (3)	—165°F (74°C) Clear Wax, 212°F (100°C) Brown Wax.
Wax-Coated Over Lead Plated (3)	—165°F (74°C) Clear Wax, 212°F (100°C) Brown Wax.

(1) Other colors and finishes are available. Consult factory for details.
(2) UL listed and NYC MEA Approved only.
(3) 212°F (100°C) brown wax may be used on 286°F (141°C) sprinklers when maximum ambient temperatures do not exceed 150°F (66°C). UL Listed, FM Approved, NYC MEA 258-93-E.

Approval Organizations

1. Underwriters Laboratories, Inc.
2. Factory Mutual Research Corporation
3. Underwriters' Laboratories of Canada
4. Loss Prevention Council
5. Pleniere Assemblee
6. Verband der Schadenversicherer eV
7. N.Y.C. BS&A No. 587–75–SA
8. N.Y.C. MEA 258-93-E

Ordering Information

Specify

1. Model G
2. Deflector
   - Upright
   - Pendent
   - Conventional
3. Nominal Orifice
4. Inlet Thread
5. Temperature Rating
6. Finish

The equipment presented in this bulletin is to be installed in accordance with the latest pertinent Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable.

Products manufactured and distributed by Reliable have been protecting life and property for over 80 years, and are installed and serviced by the most highly qualified and reputable sprinkler contractors located throughout the United States, Canada and foreign countries.

Manufactured by

Reliable®

The Reliable Automatic Sprinkler Co., Inc.

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