

GOLDEN FIRE DEPARTMENT FIRE & LIFE SAFETY DIVISION



911 10th Street
Golden, Colorado 80401
303-384-8094

Contractor's Permit & Inspection Guide

*Note: this is not an all-inclusive list of requirements; this shall serve as a general guideline. All projects must be in accordance with the City of Golden's adopted fire code; the International Fire Code, 2018 Edition and all adopted amendments.

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Adopted Fire Code & Amendments

The 2018 IFC as amended is the currently adopted fire code for the City of Golden. Additionally, the NFPA and other codes & standards referenced in Chapter 80 are adopted as part of the COG fire code. The use of more current codes/standards, such as NFPA, may be accepted; provided it is requested in writing as an alternate material and methods per section 104.9 of the 2018 IFC.

This link https://library.municode.com/co/golden/codes/municipal_code?nodeId=TIT16F directs you to all deleted and amended section for the 2018 IFC, for any questions please contact the Fire & Life Safety Division.

Submittal Requirements

Requirements

The following outlines the submittal requirements for all construction, operational, occupancy load submittal, as well as re-inspection or after hour's request

- 1) Sign up for an account at <https://cityofgolden.seamlessdocs.com/ng/login> to track plans and communicate with Fire & Life Safety Division.
- 2) Follow these instructions to create your account <http://www.cityofgolden.net/media/FirePermitSubmittalInstructions.pdf>
- 3) If you have problems, questions or issues please contact Deputy Fire Marshal Katie Quintana 303-215-8887

Plan Review Turnaround Time

GFD's goal is to provide a dependable, reasonable, and consistent plan review time frame for all submittals. Anticipate the plan review to require 3 – 4 weeks; depending on size and scope of project, times may vary. This targeted review time only applies to the initial review; subsequent reviews of resubmittals or of responses to the initial review comments generally require additional time.

This is only a goal and not a guarantee; larger or more complicated projects or multiple same day tenant finish plan submittals may take longer.

Additional time may also be required for insufficient, incomplete, inaccurate, and/or improperly submitted plans, specifications, and/or applications. Individuals are encouraged to call to clarify any questions prior to submittal at 303-384-8094. NO refund will be issued for information submitted on the wrong application. Check your Seamless Docs account regularly to see the status of your plans and/or if additional information is needed. Verify the address is within Golden Fire Departments jurisdiction by entering the address on Jefferson County Address Wizard, check Property Data and under Mill Levy Detail will be Fire District <http://jeffco.us/awiz/> NO REFUND WILL BE GIVEN FOR IMPROPER SUBMITTAL

Inspection Requests

For field inspection and testing related to plan review, GFD does not have an inspection hotline system for a next day inspection. However, GFD will schedule inspections the same day if available personnel and time exist. In most cases 48 hours is appropriate. Note, inspection requests are based upon personnel availability and when a request is sent, you will receive an Outlook Calendar invite to confirm a date and time of inspection. Inspection request can be made via email at fireinspections@CityofGolden.net. Contractors are encouraged to plan ahead and communicate issues that arise and that may dictate postponing inspections or testing. If an inspection is scheduled and personnel arrives and the contractor is not ready a re-inspection fee will be required to schedule the next inspection. All cancellations must be made via email.

Fire Sprinkler Requirements

Fire sprinkler systems shall be designed by a NICET III or above and installed per the City of Golden adopted fire codes, all applicable NFPA codes by a state registered fire suppression system contractor. Scope of work letters are accepted for small jobs (relocating a few heads, adding a few heads or removing a few) and if the project does not require change in calculations. Flow tests must be conducted within the last year from the date the hydraulic calculations (Exception: Confirmation from The City of Golden Water Division that no changes have occurred).

FDC

The location of the FDC is to be proposed during the plan review process. GFD will determine whether or not the location indicated on submitted plans is adequate. Some situations will require locating the FDC in the field.

All FDC's are required to have Knox locking caps, which can be found at www.knoxbox.com. These caps will be installed by GFD during an inspection.

Inspection Requirements

The stamped plans and permit certificate must remain on-site at all times; inspection will not be conducted if these documents are not on-site. Inspections must be emailed 48 hours prior to requested time.

All projects shall have rough/hydro (unless otherwise approved or approved by code), and all sprinkler piping shall be visible for the inspector. At the time of final inspection, completed backflow certifications, underground and aboveground test certificates shall be given to the inspector. All flow and tamper Switches must be wired to the fire alarm control panel and operational at the time of final inspection. The contractor must provide all necessary testing equipment and perform all testing required by the inspector.

Residential Sprinklers

Prior to submitting plans to GFD confirm with Building Division on whether or not sprinklers are required. All 13D systems are a deferred submittal through GFD and **multipurpose** systems will be reviewed through the Building Division.

Fire Alarm Requirements

Fire Alarm systems shall be designed and installed per the City of Golden adopted fire code, all applicable NFPA codes (currently 2016 edition) by a fire alarm contractor who is NICET III minimum certified, fire protection engineer and/or factory authorized by the fire alarm panel manufacturer for the system present in the building.

Horn / Strobe Requirements

1. Clear lens horn/strobe: activate on water flow, at the location of FDC
2. Red lens strobe only: activate on general alarm, at location of Knox box
3. Amber lens strobe only: evacuation still in progress do not re-enter building, located on all sides used as an evacuation location.

Remote Annunciator

Remote annunciator's shall be installed on fire alarm systems where the Fire Alarm Control Panel (FACP) is not in a readily accessible location for responding personnel. The annunciator's shall be located during the plan review phase; typically this will be located at the main point of entry for the building. Depending on the size of the building, more than one (1) annunciator shall be installed.

Graphic Map

A permanently mounted graphic map must be located adjacent to either the FACP or the remote annunciator. All fire alarm initiating devices shall be shown on the map, name and address with unit numbers of the building. This map shall be mounted in such a way that it will be sturdy and not be damaged during normal business operations.

Inspection Requirements

The stamped plans and permit certificate must remain on-site at all times; inspections will not be conducted if these documents are not on-site. Inspections must be emailed 48 hours prior to requested time.

All projects shall complete a 100% pre-test of the system with dBA report and fully completed NFPA 72 Record of Completion to provide to GFD during final inspection. During the final inspection for new systems, panels and dialers shall not be called off line until it has been verified that the supervisory station reports an alarm to GFD dispatch.

Kitchen Hood Requirements

Fire suppression systems are required on all Type I Kitchen Hoods. Kitchen hood suppression systems shall be designed and installed per the City of Golden adopted fire code, all applicable NFPA codes (currently 2013 edition). These submittals shall include, but not limited to, nozzle location, nozzle distance from appliance, size of suppressant required, indicate appliances being protected, Class K fire extinguisher location and manual pull station location.

Inspection Requirements

The stamped plans and permit certificate must remain on-site at all times; inspection will not be conducted if these documents are not on-site. Inspections must be emailed 48 hours prior to requested time. During inspection the following will be tested for proper operation: manual pull station, fusible link, deactivation of fuel sources under the hood, deactivation of "make-up air", activation of fire alarm, and proper location of the Class K extinguisher (Hood must be fully functional to receive final sign-off). You will be required to mark appliances location with permanent marker/chalk to assure appliances have placed in exact location after they are moved for cleaning.

NOTE: THAT IF A SYSTEM IS "RED TAGGED" AS OUT OF SERVICE, NOTIFICATION SHALL BE MADE TO GFD IMMEDIATELY

Address Requirements

Per IFC (2018) all buildings shall have address identification. Shall be legible and placed in a position that is visible from the street or road fronting property. Characters shall contrast with background, using Arabic numbers and alphabetical letters. Characters shall be not less than 4 inches high with minimum stroke width of ½ inch. Where access is by means of a private road or cannot be viewed from the public way, a monument pole or other sign shall identify structure. Additional units shall have unit numbers associated, including Additional Dwelling Units (#A and #B).

Knox Box Requirements

Knox Box's are required to be installed per IFC (2018) Section 506; where access to, or within a structure or an area is restricted because of secured openings or where immediate access is necessary (All buildings with a fire alarm or sprinkler must have a Knox box). No Knox Box shall be installed until GFD has approved the requested location. Depending on the size and layout of the building, multiple boxes may be required. GFD requires that each Knox Box contain two (2) identical sets of keys, labeled (shown below) and put on a D-ring or carabineer. The keys that need to be provided are shown in the Key Labeling section.

Model

GFD requires that all newly installed or replaced Knox boxes be DUAL KEY models (tamper switch NOT required): 4400 Series

GFD must be provided with a copy of the Knox security key control system form prior to or at final inspection for certificate of occupancy. GFD does not specify whether or not they need to be surface mount or recessed; GFD also does not

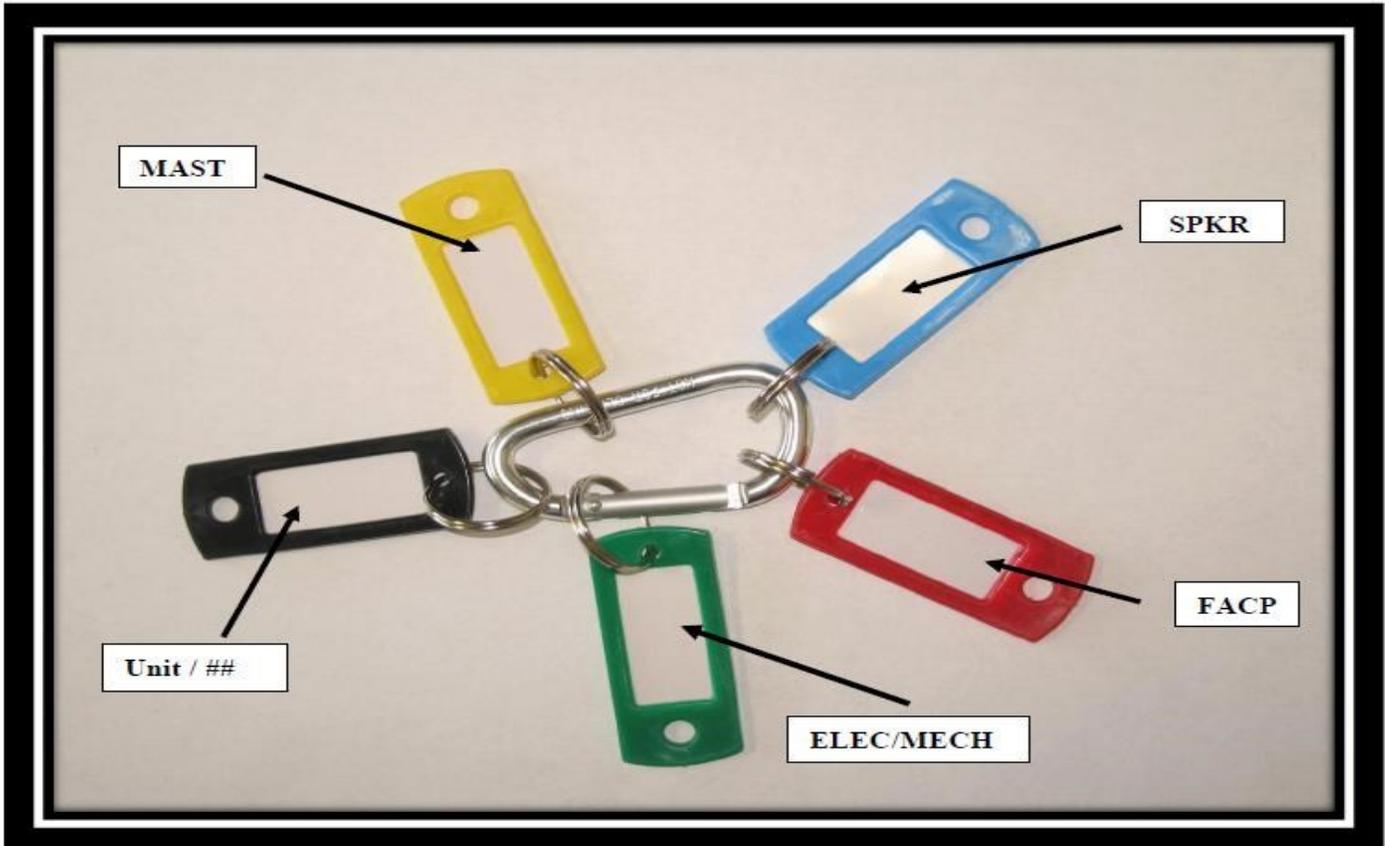


specify the color to be used. To order go to: <http://www.knoxbox.com/store/Knox-Vault-4400-Series.cfm> select Golden Fire Department as the department name and select a box you would like to purchase. Be aware that two (2) sets of keys must fit in the box when considering the size.

Location

During the plan review process indicate Knox box location, but confirm location during field inspection. Exiting buildings call for field inspection location.

Key Labeling



Key Legend

- Red:** Fire Alarm, Elevator Fire Service key
- Blue:** Fire Sprinkler or system valve padlocks
- Yellow:** Building Master. Interior and Exterior
- Green:** Miscellaneous, Electrical rooms, Mechanical rooms and Storage areas
- Black:** Tenant Units or Numbers

Recommended Terms

- FACP** - Fire Alarm Control Panel
- SPKR** - Fire Sprinkler Room
- MECH** - Mechanical Room
- EFS** - Elevator Fire Service
- ELEC** - Electrical Room
- STG** - Storage Area
- #** - Unit letter or number

(All labels shall be written with a #2 pencil)

2 sets of Knox Box keys Required.

Fire Lane Requirements

During plan review process indicate location and type of fire lane signs, a field inspection will be required.

Approved Signs

Type 1



Type 2



Type 3



Type 4



Type 5



1. 18 inch high x 12 inch wide sign (Type 1-3)
2. 18 inch high x 24 inch wide sign (Type 4-5) AS APPROVED
3. Reflective white background material.
4. "Fire Lane" to be a minimum of 1 inch x ¼ inch stroke.
5. Left, right or bi-directional arrows as required by specific site.
6. Signs to be mounted per Manual for Uniform Traffic Control Devices.
7. Locations to be approved by GFD per specific site plan review and/or on-site inspection.
8. Or other approved signs by GFD

Location

1. Maximum distance between signs shall be 150 feet.
2. Signs shall be angled 30° - 45° with the line of traffic flow.
3. 7 feet to the bottom of the sign.

Apparatus Turning Dimensions

The following dimensions are based upon a 105' aerial platform. All required fire apparatus access road designs within a development shall be able to accommodate the dimensions detailed below.

Apparatus Dimensions

Overall length: 46'-8"
Width: 8'
Height: 11'-6"
Wheel base: 254"
Number of axles: 3
Front overhang: 149"
Rear overhang: 154"
Axle to axle: 52"
Tire height: 42"

Turning Radii Specifications

Inside turn: 37'
Outside Curb to Curb: 45'
Outside Wall to Wall: 52'

Definitions

Overall length: Overall length of apparatus measured from the rear bumper to the front of the aerial platform.

Width: Width of apparatus measured from side to side.

Height: Height measured from grade to highest point of the apparatus.

Wheelbase: Distance between the centerlines front and rear axles of the apparatus. When apparatus is equipped with a tandem rear axle, the centerline between the rear axles is used.

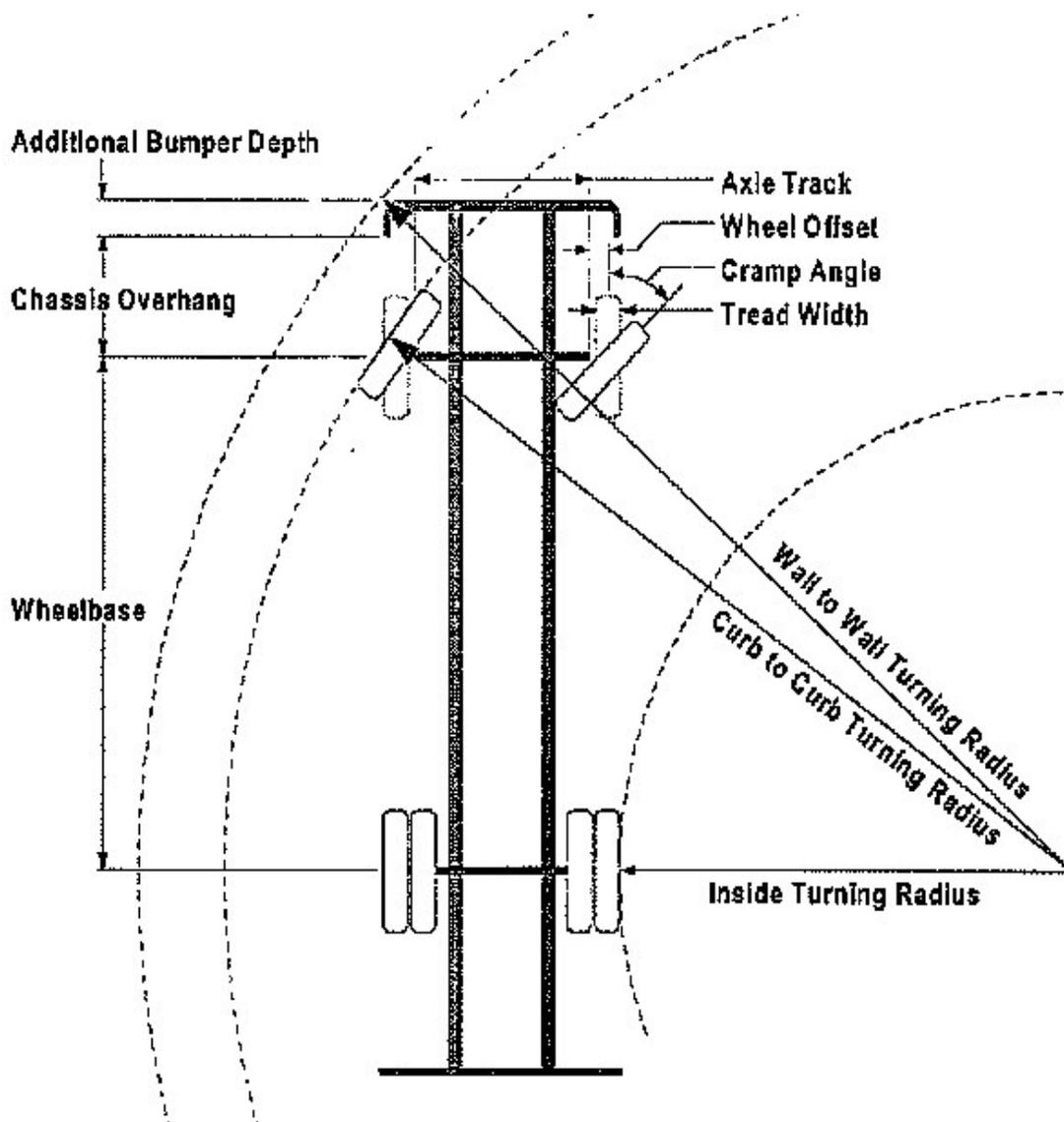
Chassis overhang: Distance from the centerline of the front axle to the front edge of the cab. This does not include bumper depth or the platform overhang.

Additional bumper depth: Depth added to the front overhang by the front bumper.

Front overhang: The aggregate overhang from the centerline of the front axle to the front edge of the aerial platform. This dimension is used to determine the wall to wall turning radius.

Rear overhang: Distance from the centerline of the rear axle to the rear tailboard. When apparatus is equipped with a tandem rear axle, the centerline between the rear axles is used.

Axle to axle: Distance between the centerline of the rear tandem axles.



Operational Permits

Operational permits shall be submitted and reviewed for approval prior to work being conducted or event occurring. Please provide all required documents so not to delay review time, per the 2018 IFC. Random inspections for compliance may occur during the duration of the operational permit. All associated permit documentation shall remain on-site at all times.

Tent Permit Requirements

- All required information per 2018 IFC Chapter 31
 - Section 3103.6 Construction documents: A detailed site and floor plan for tents or membrane structures with an occupant load of 50 or more shall be provided with each application for approval. The tent or membrane structure floor plan shall indicate details of the means of egress facilities, seating capacity, arrangement of seating, and location and type of heating and electrical equipment. The construction documents shall include an analysis of structural stability.
 - Section 3105.5 Required documents
- Tent schematics from the manufacture
- Installation instructions for the manufacture; including stake/anchor/ballasting information
- Any accessory documents from the manufacture
- Area drawing of location of tent
- Dimension drawing of location of tent (with measurements in feet) distances from buildings, lot lines, fire lanes, parking lot & the number of spaces that will be taken up by the tent (per Section 3103.8)
- Tent details: exit signs (proper means of egress per Section 3103.12), fire extinguishers, no smoking signs & emergency lighting (depending on time of operation)
- Provide a diagram of tables, chairs, stages, or anything that will be set up within the tent, and show occupancy load.
- Provide proper information regarding heating or cooking appliances that will be used
- Fire Resistant Certificate
- Events involving 500 people require a Crowd Manager per Section 3106.4 (amended from 1,000 to 500)

Formula for determining holding power

Holding power of 1.5 – 2 times the forces imposed on the tent. For 45 mph winds the tent withstands about 9 pounds of force per square foot. Example: Tent size 20' x 30' = 600 sq ft x 9 lbs of force = 5400 x 1.5 holding power = 8100 lbs (required to hold the tent). When using water barrels, concrete, sand bags or anything other than stakes.

Fees

Shall apply to; construction and operational permit plan review to include initial inspections and witness testing services performed by GFD and issuance of permits.

Valuation Based Fees (application)

All fees are to be paid by applicant, developer or contractor upon submittal. Valuations provided may be verified by the International Code Council's Building Valuation Data, and valuation includes all costs included in the contract except the fee herein.

VALUATION	FEES
\$.01 to \$500.00	\$36.00
\$500.01 to \$1,000.00 (\$36.00 to \$66.00)	\$36.00 first \$500.00 plus \$6.00 per each additional \$100.00 or fraction thereof.
\$1,000.01 to \$5,000.00 (\$68.40 to \$162.00)	\$66.00 first \$1,000.00 plus \$2.40 per each additional \$100.00 or fraction thereof.
\$5,000.01 to \$25,000.00 (\$163.80 to \$522.00)	\$162.00 first 5,000.00 plus \$1.80 per each additional \$100.00 or fraction thereof.
\$25,000.01 to \$50,000.00 (\$523.20 to \$822.00)	\$522.00 first \$25,000.00 plus \$1.20 per each additional \$100.00 or fraction thereof.
\$50,000.01 to \$100,000.00 (\$822.90 to \$1272.00)	\$822.00 first \$50,000.00 plus \$.90 per additional \$100.00 or fraction thereof.
\$100,000.01 to \$500,000.00 (\$1272.35 to \$2672.00)	\$1272.00 first \$100,000.00 plus \$.35 per additional \$100.00 or fraction thereof.
\$500,000.01 and up (\$2672.30 and up)	\$2672.00 first \$500,000.00 plus \$.30 per additional \$100.00 or fraction thereof.

Hourly Fees (application)

1. Apply to, but not be limited to, review of development plans for commercial or residential sites, and planned unit developments for such matters as fire emergency apparatus access, water supply and fire hydrant locations and distribution.
2. Review of development, construction or operational permit plans due to revision, alternate methods and materials, or rejection based on insufficient information necessary for approval.
3. Re-inspections when initial permit inspections and/or witness tests have failed or work requiring inspection is not complete at the time the inspection was scheduled for.
4. Fire personnel standby when required as determined by permit review.
5. Initial inspections or witness testing outside of normal business hours may be assessed a fee. For the purpose of this resolution, normal business hours shall be 8:00 a.m. to 5:00 p.m., Monday through Friday, except holidays.

HOURLY FEE SCHEDULE	DEFINITION/EXPLANATION	FEE/HOUR
Site Development Review	PC level review	No fee for initial and 1 revision - \$60.00 each additional
Building Permit Plan Review	Building referral	\$60.00
Operational Permits	Continual or temporary	\$60.00
Alternate methods/material review		\$60.00
Re-inspection (after initial and 1 re-inspection)	2 – hour minimum	\$60.00
Fire & Life Safety Special Events standby or off hours inspection	TBD by Fire Marshal or Chief – 1 hour minimum	Normal hours - \$45.00 per hour/person Off hours - \$67.50 per hour/person
Revised site/building permit referral plans		\$60.00

Set Fee Schedule (application)

The following set fee schedule applies to operational that are shorter term in nature and includes operational permits associated with special events.

SET FEE SCHEDULE	DEFINITION/EXPLANATION	SET FEE
Hot Works Permit	Cutting and Welding	\$60.00
Explosives Permit	Blasting/Fireworks	\$90.00
Temporary aboveground, flammable construction permit: Liquid or LPG tanks / equipment		\$90.00
Open Burning Permit	Non-Recreational	\$60.00
Open flames/candles/model rockets		No charge
Tents (>700 sf) – Special Events	Includes 1 inspection	\$90.00
Pyrotechnic special effects materials use and handling permit		\$90.00

Emergency Fire Alarm Inspection Fee (application)

1. The emergency fire alarm inspection fee applies to multiple (beginning on the 4th occurrence in a calendar year) fire alarm responses to a fire alarm system(monitored or unmonitored) where the inspection/investigation reveals that the fire alarm was caused by a system malfunction due to; improper system maintenance, improper system installation due to changes in the building or facility use after initial system acceptance, improper protection of fire alarm system components during construction, re-model or maintenance activity, or by improper action or coordination by the alarm monitoring station and the protected premise fire alarm installation/maintenance or testing company or their representative.
2. For multiple building facilities, the fee schedule is applicable to each individual fire alarm panel.

Number of fire alarms per calendar year	Fee for commercial, industrial and multi-dwelling residential fire alarm systems (less than 16 dwelling/sleeping units)	Fee for residential fire alarm systems with 16 or more dwelling/sleeping units, and one or two family dwellings
First Three	No charge	No Charge
Fourth	\$240.00	\$25.00
Fifth	\$360.00	\$50.00
Sixth	\$480.00	\$75.00
Seventh or greater	Progressively increases at \$200.00 increments for each additional fire alarm	Progressively increases at \$25.00 increments for each additional fire alarm.

Annual Testing and Maintenance

Testing and maintenance inspection on all fire alarm, fire suppression, kitchen hood, and fire extinguishers are required as outlined in their respective NFPA standard. Please be aware of GFD Systems Testing (Confidence Testing) reporting requirements that went into effect October 1, 2019. Systems test reports including deficiency corrections must be submitted via the web at <https://www.thecomplianceengine.com/>. GFD no longer accepts reports submitted via email. As a contractor please register your company at the above website to submit documentation. See attached letter and pricing. All suppression contractors shall be aware and follow set rules by <https://www.colorado.gov/pacific/dfpc/fire-suppression-system-contractors> Division of Fire Prevention and Control 8 CCR 1507-11 Section 6.4.6 Tagging of Suppression Systems.

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