



Denton Fire Department Hot Work Permit Procedures

PURPOSE

The purpose of this program is to establish safe procedures for conducting Hot Work operations in the City of Denton. Hot Work includes, but is not limited to: welding, brazing, cutting, grinding, soldering, thawing pipe, hot taps, torch applied roofing and all other similar applications producing a spark, flame, or heat. Hot Work does not include: Bunsen burners in laboratories, cooking of food or electric solder irons.

SCOPE

This program applies to anyone conducting Hot Work operations in the City of Denton. All Hot Work must be conducted in Designated Hot Work Areas and/or other locations authorized through the Hot Work Permit process. All personnel (employees, contractors, building occupants) must be suitably protected against hazards generated by the work (e.g., heat, sparks, fumes, welding radiation, etc.). This may include, but is not limited to, the use of personal protective equipment, shields, screens, or local exhaust ventilation.

DESIGNATED HOT WORK AREAS

To the extent possible, all Hot Work will be conducted in a permanent Designated Hot Work Area having the following features:

- Constructed of noncombustible materials, with all openings or cracks in walls or floors tightly covered to prevent the passage of sparks
- Floors kept clean; noncombustible surface
- No storage of flammable, combustible or other chemical materials within 35 feet
- Adequate ventilation to remove smoke, fumes and odors
- Flammable gases, vapors or liquids are not present
- If present, sprinkler system must be fully operational
- The area will be clearly delineated from other work areas with a sign: CAUTION HOT WORK AREA

Designated Hot Work Areas will be inspected by the Denton Fire Marshal's Office annually to ensure these features remain in place.

HOT WORK PERMIT PROCEDURES HOT WORK PERMIT PROCEDURES

Hot Work should not be performed if the work can be avoided or performed in a safer manner. When practical, objects must be moved to a Designated Hot Work Area. If Hot Work is necessary in other areas on a temporary basis, Fire Marshal or designee approval shall be obtained before proceeding. The permit process is designed to prevent fire, prevent injury, and improve overall safety and is required for Hot Work conducted outside officially Designated Hot Work Areas. Permits are issued by a the Denton Fire Marshal's Office.

OUR CORE VALUES

Integrity • Fiscal Responsibility • Transparency • Outstanding Customer Service

The following steps shall be followed to obtain a Hot Work Permit and to safely conduct Hot Work:

1. The worker will contact the Denton Fire Marshal's Office to obtain a Hot Work Permit. Up-to-date permitting procedures can be found at www.dentonfire.com
2. Upon approval of the permit, a fire inspector shall inspect the area and equipment for fire protection features using the criteria contained in the Hot Work Permit Checklist.
3. A Fire Watch is required for all hot work and an individual must be designated that responsibility.
4. Fire Monitoring may be required following the conclusion of hot work.
5. The Hot Work Permit will not be issued unless all items on the Hot Work Checklist portion of the permit have been adequately addressed.

A Hot Work Permit will not be issued if any of the following conditions exist:

- Sprinkler protection is impaired
- Appropriate fire-fighting equipment is not readily available
- Combustible or flammable materials are within 35 feet and cannot be moved or protected
- Floor and wall openings cannot be covered
- Cutting or welding on pipes or other metals can conduct enough heat to ignite nearby combustible materials
- Any condition that could result in undue hazards by performing the work.

All precautions on the Hot Work Permit must be met prior to performing any hot work. The Hot Work Permit is valid only for the date(s) and time specified on the permit. A copy of the permit must remain posted at the hot work location until the hot work is completed and the permit closed.

FIRE WATCH

The individual responsible for the Fire Watch must remain in the area during Hot Work and for a minimum of 30 minutes following the completion of hot work. Their assigned job is to monitor the hot work area and the surrounding area for fire, fire damage or potential for fire. The Fire Watch individual can be given other duties during this time, as long as they do not interfere with their responsibilities outlined here.

Certain construction and occupancy factors lead to a greater risk of fire during Hot Work activities. These higher risk Hot Work activities require a longer fire watch or more than one person. The duration of the Fire Watch will be determined by the Denton Fire Marshal's Office. Refer to Appendix A for specific fire watch periods depending on the occupancy.

Certain activities require a second fire watch to be designated. A second fire watch shall be required when ANY of the following conditions exist:

- The hot work area and person performing the hot work are not visible from a single vantage point
- The hot work area is large, multi-level and/or congested
- The Hot Work area extends to the other side of a building assembly due to an opening or thermally-conductive partition.

FIRE MONITORING

After the post-work fire watch has been completed, the hot work area shall be monitored for fire by one of the following methods:

- Automatic smoke detection
- Security video cameras with clear coverage of the hot work area
- Individuals routinely present in the area who have been informed of how to monitor for the start of a fire and can call 9-1-1 in the event a fire or smoke is discovered
- An intermittent patrol of the hot work area, at a minimum of every 15 minutes

Refer to Appendix A for specific fire monitoring periods depending on the occupancy.

EMERGENCY PROCEDURES

Should a fire or signs of a fire occur, the Fire Watch shall immediately call 9-1-1 to report the fire. The fire watch or other staff in the area may use a fire extinguisher if, in their judgment, it is safe to do so and they know how to use the extinguisher. Anyone serving as a Fire Watch must know how to use a fire extinguisher. However, at no point should any one place their life or safety in jeopardy for a fire.

Factors to consider in using a fire extinguisher:

- First, have you initiated the fire alarm or called 9-1-1 so that back up help is on its way and others can begin to evacuate?
- Secondly, is there a safe exit behind you, so that if necessary, you can safely get away from the fire?
- Third, is the fire beyond the incipient stage? This means a fire large enough that it cannot be extinguished using one fire extinguisher. If this is the case DO NOT attempt to use a second fire extinguisher; evacuate immediately and ensure that the building alarm has notified all others to evacuate.

APPENDIX A – HOT WORK OCCUPANCY MATRIX

Permit holder shall use the shall use the matrix below to determine Post-Work Fire Watch and Fire Monitoring Periods. Contact the Denton Fire Marshal’s Office with any questions.

		Building Construction Factors					
		Non-Combustible Construction (eg concrete, brick)		Combustible Construction without concealed spaces (e.g. open wood frame walls (sheathed on one side), exposed wood joists, beams or trusses or non-FM approved insulated metal panels		Combustible construction with unprotected concealed spaces (e.g. enclosed wood frame walls sheathed on two sides, between ceilings and combustible floor or roof construction)	
Occupancy Factors		Fire Watch	Fire Monitor	Fire Watch	Fire Monitor	Fire Watch	Fire Monitor
	Essentially non-combustible with any combustibles contained within closed equipment (e.g. mechanical rooms)	30 min.	0 hours	1 hour	3 hours	1 hour	5 hours
	Office, Classroom and practical lab spaces with limited combustibles	1 hour	1 hour	1 hour	3 hours	1 hour	5 hours
	Offices, shops or labs with significant combustibles (e.g. storage rooms, receiving)	1 hour	2 hours	1 hour	3 hours	1 hour	5 hours
	Shops and Labs and other spaces with oil or chemical use or storage	1 hour	3 hours	1 hour	3 hours	1 hour	5 hours