



# RAYTOWN FIRE PROTECTION DISTRICT

## Fire Prevention

# Roofing Safety

## Controlling Hot Work Hazards

**Provide for a fire watch after torching applications.**

### Torch-applied Roofs

Torch-applied operations can be hazardous to roofers and the public. Torching can reach temperatures over 1093°C or 2000°F. Roofers may suffer serious burns from the torch or the hot modified bitumen they are applying. In addition, temperatures generated by torching applications have been known to start fires that may smolder out of sight, only to burst into flame later, well after torching is over.

When installing torch-applied roofs, take the following precautions.

- Wear proper personal protective equipment, including hard hats, safety boots, eye protection, and gloves. Clothing should be flame-resistant (cotton or wool--no synthetics).
- Check the roof surface for combustible material. Remove what can be removed. Encapsulate the rest with hot or cold applied membranes, sealing off all intakes and projections to prevent flame from spreading into combustible material.
- Inspect torches before use. Equipment must be in good working order, with fittings, hoses, and head secure and cylinder valves clean.
- Don't use leaking propane equipment. If a leak occurs during operation, stop immediately.
- When not in use, set torch units in their support leg position with torch head pointing at an upward angle. Don't place torch units over a curb or roof edge.
- Unless you're the torch operator, stay at least four or six feet away from the flame.
- Don't torch directly on cant strips, insulation, wood, grease, lint exhaust, or any other flammable material. Never torch directly at flashing, corners, voids in the roof and roof deck, or behind metal counter-flashings.
- Take extra care when torching near pipes, fresh air vents, and HVAC units since flame could be sucked into the building.
- Do not torch near gas and electrical lines.
- When shutting off the torch, close the propane cylinder valve first. Let the remaining gas in the hose burn off, and then close the torch valve.
- Disconnect the hose at the end of the day.
- Ensure that workers have been adequately trained to install torch-applied modified bitumen roofing systems, including appropriate training in the storage, handling, and use of roofing propane.

# *Fire Prevention*

The roofing contractor's health and safety policy must provide for a fire watch for one hour after torching applications.

Cease torching at least one hour before leaving for the day.

**Designate a person responsible in the event of fire.**

**You must have two means of escape from the roof.**

**Make sure all workers know their escape routes.**

**Have at least one fully charged 20-lb dry chemical fire extinguisher within 20 feet of each worker using a torch.**

**Inspect the roof for hot spots at the end of work stoppage using an infrared thermometer to take temperature readings.**

**At the end of the one hour monitoring period, inspect the building interior (with owner's representative) before leaving the site.**

**Failure to comply with these regulations may result in the revocation of your permit.**

**CALL 911 for Emergencies**



# RAYTOWN FIRE PROTECTION DISTRICT

## Fire Prevention

### HOT WORK PERMIT REQUEST

This hot work permit is required for any temporary operation involving open flames or producing heat and/or sparks. This includes but is not limited to: Brazing, Cutting, Grinding, Soldering, Torch Applied Roofing, and Welding.

**Authorization: (print clearly)**

This permit will authorize \_\_\_\_\_ of \_\_\_\_\_

(Name) (Company)

**Building Address:**

\_\_\_\_\_

(Starting Date) (Time)

(Expiry Date) (Time)

**Permit Application By:**

**Telephone #:**

<b>Type of Hot Work:</b>	<input type="checkbox"/> Brazing <input type="checkbox"/> Grinding <input type="checkbox"/> Arc Welding <input type="checkbox"/> Cutting <input type="checkbox"/> Soldering <input type="checkbox"/> Torch Applied Roofing <input type="checkbox"/> Other
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**Raytown Fire Protection District use beyond this point**

<b>Safety Precautions:</b> <input type="checkbox"/> Appropriate means of egress <input type="checkbox"/> Appropriate Fire Extinguisher on site <input type="checkbox"/> Additional checklist on reverse side completed and understood	<b>IN CASE OF EMERGENCY 911</b>
<b>Comments:</b>	
<b>Permit Approved BY:</b>	

Except in cases of emergency, this request is to be delivered to The Raytown Fire Protection District **72 hours (3 working days) prior to the start time.**

Permits will be available for pick up from 08:00 to 09:00 am, Monday to Friday.

**Permit Fee: \$35.00, Payable to the Raytown Fire Protection District**

<b>AMOUNT PAID:</b>	<b>Check/Money Order #:</b>	<b>Rcvd By:</b>	<b>Date:</b>
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## PRECAUTIONS FOR HOT WORK

**DEFINITION:** Hot Work is any temporary operation involving open flames or equipment producing heat or spark.

**TYPICAL LIST OF HOT WORKS:** list of typical hot work includes: welding, heat treating, grinding, hot riveting, Soldering, brazing, torch applied roofing, and similar activities involving spark, flame, or heat.

**COMPLETE THE FOLLOWING CHECKLIST BEFORE PROCEEDING WITH HOT WORK OPERATIONS:**

**BUILDING SYSTEMS:** With regard to building systems, ensure that:

- Fire sprinklers, if existing, are kept operational.
- Building ventilation protected from smoke and fumes.
- Fire alarm system kept operational; detectors disabled only if necessary.
- Cutting and welding equipment in good operating condition and UL listed when applicable.

**PERSONNEL / OCCUPANT PROTECTION:**

- Workers and occupants protected from smoke, fumes, and toxic materials by use of exhaust ventilation or other approved safety measures.
- Vision screens/barriers in place.
- Confined space entry permit/procedures in place when applicable.
- Energized equipment locked/tagged out of service when applicable.
- Workers properly trained in use of equipment.
- Two means of escape from any roof, both must be OSHA approved.

**WITHIN 35 FEET OF WORK:**

Within 35 feet of the area, ensure that:

- Floors swept clean of combustibles.
- Combustible floors swept down & covered with damp sand, metal or other spark/heat shields.
- Combustible and flammable materials removed.
- Flammable liquids, dust, lint, and oily deposits removed.
- Explosive atmosphere in area eliminated.
- Fixed combustibles and flammables covered with fire-resistive covers, guards, and/or shields.
- Wall and floor openings covered with non-combustible covers.
- Fire-resistive covers suspended beneath work to collect sparks.

**WORK ON OR NEAR WALLS FLOORS OR CEILINGS:** Prior to the start of work ensure that:

- All holes, cracks and penetrations are sealed with non-combustible material.
- Construction is non-combustible and without combustible covering or insulation. Otherwise, combustibles are to be shielded/protected.
- Combustibles moved away from opposite side of wall and second fire watch provided where required by NFPA-51B or the IFC

**WORK ON ENCLOSED EQUIPMENT (tanks, ducts, plenums, etc.)**

- Confined space entry permit/procedures.
- Compressed gases out of confined space.
- Equipment empty, cleaned of residues, pressure released, purged of vapors, and gas valves shut off.

**FIRE WATCH (at work site)**

- Fire watcher is to be present 30 minutes before for combustible clean up, during and for 60 minutes after operation to ensure that no smoldering fires exist. Fire watcher is to search for any smoldering or flaming ignition and extinguish any such sources.
- Fire watcher is to be supplied with hose and/or fire extinguishers of proper size and type and be properly trained in use of same.
- The permit applicant or their representative is to protect all combustibles from hot work ignition sources. This includes sealing of floor and wall penetrations.
- Fire watcher is to stop hot work if any of the safety precautions cannot be met.
- Fire watcher is to have access to a telephone to dial 9-1-1 to report emergencies.

**OTHER PRECAUTIONS TAKEN**

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FIRE WATCHER Signature: \_\_\_\_\_