CCLD Review
Construction Codes and Licensing Division
Minnesota Department of Labor and Industry
Spring 2015

Educational opportunity

Focus of DLI spring seminars: fire sprinklers

Seminars conducted through June at nine Minnesota locations

DLI offers its spring seminars from April 2 to June 4, 2015, at nine locations throughout Minnesota.

Seminar title: IRC Fire Sprinkler Plan Review, Installation and Inspection

When and where: April 2 to June 4, 2015, at nine locations throughout Minnesota.

Description: This course is offered to provide the local building or fire official and plumbers training in plan review and inspections of one- and two-family home fire suppression systems as required by the 2015 Minnesota State Residential Code. In addition, a basic understanding of requirements for submittal of documents, installation and design parameters for designers, contractors and installers is provided. Read more about the course at www.dli.mn.gov/ccld/education.asp.

Continuing education: This seminar is recognized by DLI as satisfying eight hours of continuing education credit for:

- building officials
- residential building contractors
- manufactured home installers
- plumbers, water conditioning contractors
- water conditioning contractors

DLI's spring seminar series will focus on fire sprinklers. The seminar offers continuing education for licensees and will run through June 4 at nine locations throughout Minnesota.

The cost of the seminar is $85 for each person and payment must be by credit card. Space is limited at each location. Learn more about the course, view dates and locations and register at www.dli.mn.gov/ccld/education.asp.

View more information and register at www.dli.mn.gov/ccld/education.asp

Continuous improvement

DLI Dashboard updated with agency performance indicators

The DLI Dashboard tracks the agency's progress in key areas. Stakeholders can see where the agency is on track and where it needs to improve.

View the recently-updated dashboard at www.dli.mn.gov/Dashboard.asp.

Permit system expands to include boilers, elevators

eTRAKiT, an online permit and notification system, now includes permits for boiler installations and elevator work.

Boiler installation permits

eTRAKiT for boiler installation permits is available at www.dli.mn.gov/ccld/etrakit_boiler.asp. Once logged in to eTRAKiT, the boiler installer will provide information about the boiler and its location. When completed, the installer and state boiler inspector will receive email notice about the installation and allow the contractor to contact the boiler inspector to set up the first inspection.

The email message will include a checklist used by the inspector during the initial inspection. Installers are urged to review checklist prior to the initial inspection to reduce inspection time and costs.

eTRAKiT

Apply for and track permits online *instantly*

What do I need to install a boiler?

All installers must have a mechanical bond on file with DLI to install boilers in Minnesota. Instructions about how to obtain and register a mechanical bond are at www.dli.mn.gov/ccld/HVAC.asp.

Will I need a boiler installation permit?

Installation permits are required for individual boilers or a boiler connected to a common circulation manifold if the individual or combined BTU input exceeds 100,000 BTUs for steam boilers; 500,000 BTUs for hot water supply boilers; or 750,000 BTUs for hot-water-heating boilers.

» Visit www.dli.mn.gov/ccld/etrakit_boiler.asp for more information.

Elevator permits

The eTRAKiT permit system for elevator installation, alteration, repair or removal permits, speeds up the approval process and allows applicants to apply, upload plans and pay for permits instantly. It also allows contractors to log into the account and view a dashboard that shows the status of active permits, inspections and plan reviews. Additionally, the eTRAKiT system allows faster permit-related communication with staff members, including inspection-generated correspondence via email.

» To use eTRAKiT for elevator permits, visit www.dli.mn.gov/CCLD/etrakit_elevator.asp.

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Receive email notification when an issue is available by subscribing online.

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License fees

2015 legislative session budget change item:
Reduction of license fees for personal, business licenses

Proposal
Governor Mark Dayton recommends reducing each of DLI's Construction Codes and Licensing Division's (CCLD) licensing fees by approximately $20. This proposal would lower license costs for construction contractors, electricians, plumbers, high-pressure pipefitters and boiler operators and would align licensing revenues more closely to program costs for the biennium.

License holders would save 52 percent at the entry level, 36 percent at the journey level, 26 percent at the master level and 19 percent at the business level.

This reduction in fees is possible because DLI has created efficiencies in its licensing process. In 2012, DLI launched its online DLI ReNew licensing system to allow individuals and businesses to apply for or renew a license, certificate or registration. Since then, DLI has used this technology to create process improvements that have reduced the time required to process license applications and renewals.

Net fiscal impact
A total reduction of $3 million to the Construction Codes Fund ($1.5 million reduction in FY16 and FY17). The fee reduction would sunset at the end of the biennium. DLI would evaluate the costs for licensing services based on revenues prior to the end of the FY16-FY17 biennium.

License levels and fees
There are currently four levels of license fees (M.S. § 326B.092, subd. 7): entry, journey, master and business.

Current license fees are also subject to surcharges:
- A 10 percent E-licensing surcharge is mandated by Minn. Stat. § 16E.22 (sunsets June 30, 2015).
- Licenses requiring continuing education are subject to $20 surcharge.
- Plumbers, electricians, and high-pressure-piping contractors are subject to an $8 board fee.

Continuing education sponsors now upload licensees' course attendance data directly into CCLD's licensing system. CCLD staff members now spend less time to review and input this course attendance data, so the governor proposes reducing the continuing education surcharge from $20 to $5.

The entry level license fee is renewed annually while journey, master and business fees are renewed every two years. With the proposed fee reductions and elimination of e-licensing surcharge, the new fee structure would be:

Current and proposed fee schedule

License level	Current fee	Future fee	Reduction
Entry	$29.00	$14.00	52 percent
Journey	$74.80	$48.00	36 percent
Master	$118.80	$88.00	26 percent
Business	$206.80	$168.00	19 percent

Locate inspectors quickly

Find code requirements and code inspectors online

DLI has built a one-stop "Local Code Lookup" – online at http://workplace.doli.state.mn.us/jurisdiction – to help contractors and homeowners find local code requirements and code inspectors in one place.

The online search tool helps users find which code authority has local jurisdiction for permits, plan review and inspection in the areas of boilers, building codes, electrical, elevators, high-pressure piping, plumbing or other Minnesota construction codes and licensing disciplines.

DLI's Local Code Lookup helps homeowners and contractors find local code requirements and inspectors in one place.

Inspections

Delegation agreements for reserved projects

Inspections of public buildings and state-licensed facilities (state projects)

DLI has expanded the options for local inspection of state projects. In addition to delegation agreements for larger state projects, a municipality that has adopted the state building code and has designated a certified building official or limited building official with DLI may apply to inspect reserved projects.

To apply to inspect reserved projects, submit the delegation agreement application at www.dli.mn.gov/CCLD/delegation.asp.

What are reserved projects?

Reserved projects include:

- roof covering replacement that does not add roof load;
- towers requiring special inspections;
- single-level storage buildings not exceeding 5,000 square feet;
- exterior maintenance work, including replacement of siding, windows and doors;
- HVAC unit replacement that does not add roof load or ventilation capacity;
- accessibility upgrades that do not involve building additions or structural alterations;
- remodeling that does not change the building's occupancy, structural system, exit access or discharge pattern, or mechanical load; and
- other projects determined to be reserved by the commissioner.

Responsibilities include:

- a cursory plan review
- issuing all required permits
- perform all administrative duties, including inspections, relative to the Minnesota State Building Code rule chapter 1300.

» View more information about reserved projects: www.dli.mn.gov/CCLD/Administration.asp

Building official

State building official appointed

Scott McLellan

Scott McLellan, director of DLI's Construction Codes and Licensing Division, was appointed state building official by Commissioner Ken Peterson on Jan. 8, 2015.

McLellan is the ninth named to the position since it was created in 1971 when it was called the "state building inspector."

The state building official is responsible for administering the State Building Code under the direction and supervision of the commissioner of DLI and for employing personnel as necessary to carry out the responsibilities required by Minnesota law.

McLellan has worked in building code administration for 35 years, 28 years with the state of Minnesota and seven with local governments.

Surcharge

Surcharge fee reduced

Beginning on July 1, 2015, the state surcharge applied to "fixed fee" building permits changes from $5 for each fixed fee permit to $1 for each fixed fee permit.

The second paragraph of Minnesota Statutes 326B.148, SURCHARGE, outlines the change:

> **Subdivision 1. Computation.**
> [...]
> If the fee for the permit issued is fixed in amount the surcharge is equivalent to one-half mill (.0005) of the fee or $1, except that effective July 1, 2010, until June 30, 2015, the permit surcharge is equivalent to one-half mill (.0005) of the fee or $5, whichever amount is greater. View the entire section at https://www.revisor.mn.gov/statutes/?id=326B.148

For help with questions about the change, contact Cindy Chapel at (651) 284-5878 or Cynthia.Chapel@state.mn.us.

Disaster volunteers

Are you a DLI disaster assistance volunteer?

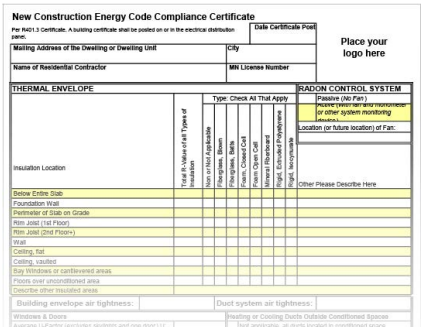
The agency coordinates assistance efforts when disasters strike

DLI recruits code professionals as disaster assistance volunteers who offer their expertise when disaster – like a flood or tornado – strikes.

The list of disaster assistance volunteers is used to link code officials and other professionals with state and county emergency management officials and affected regional code officials. DLI works cooperatively with the Association of Minnesota Building Officials to develop and improve the Disaster Preparedness Manual for Building Officials.

For more information about the program and to volunteer visit www.dli.mn.gov/ccld/disaster.asp.

Energy certificate



New Construction Energy Code Compliance Certificate

Per R401.3 Certificate. A building certificate shall be posted on or in the electrical distribution panel.

Date Certificate Post

Place your logo here

Mailing Address of the Dwelling or Dwelling Unit | City

Name of Residential Contractor | MN License Number

THERMAL ENVELOPE | RADON CONTROL SYSTEM

Insulation Location | Total R-Value of all Types of Insulation | Type: Check All That Apply (Non or Not Applicable; Fiberglass, Blown; Fiberglass, Batts; Foam, Closed Cell; Foam, Open Cell; Mineral / Rockwool; Wood Structural Panel; Rigid, Isocyanurate) | Other Please Describe Here

Below Entire Slab
Foundation Wall
Perimeter of Slab on Grade
Rim Joist (1st Floor)
Rim Joist (2nd Floor+)
Wall
Ceiling, flat
Ceiling, vaulted
Bay Windows or cantilevered areas
Floors over unconditioned area
Describe other insulated areas

Passive (NO Fan)
Active (With fan and manometer or other system monitoring device)
Location (or future location) of Fan:

Building envelope air tightness:
Duct system air tightness:
Windows & Doors
Heating or Cooling Ducts Outside Conditioned Spaces

Residential Energy Code certificate available

The 2015 Minnesota Residential Energy Code, section R401.2, requires a certificate be posted on or in the electrical distribution panel to indicate compliance with provisions of the state energy code.

An updated Residential Energy Code certificate – provided by the Building Association of Minnesota – is available at www.dli.mn.gov/ccld/EnergyConservation.asp. The file is an Excel spreadsheet that allows the fields to be filled-in and customized before printing.

On the water

Charter boat inspections on Minnesota waterways are underway

Before many charter boats moored on scenic Minnesota lakes can push away from shore each year they must be inspected by DLI.

DLI's boiler inspectors perform the annual safety inspections of about 90 charter boats in eight Minnesota lakes. They also perform dry-dock inspections every three years (or annually for wood-hulled vessels.)

The annual safety inspections include an array of safety checks that include ensuring proper flotation devices are onboard, engine safety sensors and pumps operate properly, fire suppression systems are up-to-date, and other items.

According to state law, boats-for-hire propelled by machinery or sails navigating Minnesota's inland waters and carrying more than six passengers are subject to the inspection requirements. Vessels inspected by the U.S. Coast Guard are exempt.

Waterways that include DLI-inspected boats are:

- Lake Minnetonka
- Mille Lacs Lake
- Leech Lake
- Lake Winnibigoshish
- Green Lake
- Prior Lake
- Lake Shetek
- Burntside Lake

For more information about boats-for-hire and inspections, visit www.dli.mn.gov/ccld/boats.asp.

Plumbing

Plumbing plans must be submitted to, approved by DLI

Plumbing plans must be submitted to and approved by DLI prior to the construction, alteration or repair of plumbing systems for commercial buildings and other buildings that serve the public. Municipalities must also ensure that plans have been approved by DLI prior to issuing plumbing permits.

Examples of these building types include, but are not limited to:

- **Food, beverage and lodging:** restaurants, commercial food service areas, bars, coffee shops, resorts, lodging and boarding houses including cabins or single-family dwellings that carry a health license, hotels and motels and youth camps.
- **State-licensed facilities:** nursing homes, free-standing outpatient surgical centers, hospices, hospitals, correctional facilities, detention centers, single-family dwellings that are state-licensed healthcare facilities, supervised living facilities, boarding care homes and dialysis facilities.
- **Retail, agricultural, food or bottling facilities:** convenience stores, grocery stores, bakeries, slaughtering facilities, water- or wine-bottling facilities, markets, food-packaging facilities.
- **Other types of public or commercial buildings:** State-owned buildings, salons, beauty shops, mortuaries, office buildings, schools, colleges, apartments and condos with five or more units, dorms, churches, laundromats, commercial warehouses, vehicle-washing facilities and clinics.

Municipal plumbing plan agreements

Some municipalities have agreements with DLI to review plumbing plans within their jurisdictions. Those municipalities have either technical staff members qualified to conduct the reviews or they contract for these services.

Municipalities with these agreements must submit some plumbing plans to DLI for review. These include any plans listed above under "state-licensed facilities" and plans for any state-owned building such as buildings at state colleges and universities. A list of municipalities with agreements is at www.dli.mn.gov/CCLD/PDF/pe_planrevagree.pdf.

Registrations

Employer registrations an alternative for some electrical work

Type of registration differs depending on type of work being performed

Licensing is required for individuals performing electrical work, including electrical maintenance work. While the general rule is that all electrical work must be performed by licensed employees of licensed electrical contractors, special consideration can be granted for registered employers.

Employer registration refers to an alternative to traditional licensing in Minnesota law that permits employees to perform electrical work on their employer's property without the employer being licensed as an electrical contractor.

The type of employer registration differs depending on the type of work employees will perform. The electrical work must be done on property owned or leased by the employer and the individual licensing rules and ratios are the same as for an electrical contractor.

To take advantage of the alternative to contractor licensing, both the employer and the employees who perform the work must register with DLI.

If the employees will perform electrical work as defined in Minn. Statutes 326B.31 as the "installation, alteration, extension or repair of electrical wiring for light, heat, power or other purposes," three conditions must be met:

- the employer must file a registration with DLI,
- unlicensed employees who will perform electrical work must register with DLI as unlicensed

REGISTER continues on Page 7

Gas piping

Update about corrugated stainless steel tubing requirements

The changes to the requirements for electrical bonding of CSST in National Fire Protection Association (NFPA) 54: ANSI Z223.1–2015 National Fuel Gas Code provide clear direction for electricians and electrical contractors.

The new rules in Section 7.13.2 apply to all CSST gas piping systems and gas piping systems containing one or more segments of CSST and reflect a better understanding of both the grounding electrode system and the effectiveness of lightning protection.

Just as before the new rules, the bonding connection must be made to metallic pipe, pipe fitting or the CSST fitting (not the tubing itself) and the minimum bonding conductor size is still #6 copper.

The maximum length of the bonding conductor has been changed. Independent testing revealed the bond between the tubing and the premise's grounding electrode system provided lightning protection only when the conductor length was as short as practicable and limited to no more than 75 feet.

Rules about how to properly provide electrical bonding with corrugated stainless steel tubing have been clarified.

The most significant change is the connection to the grounding electrode system no longer needs to be made at the electrical service panel. The bond connection should be made to the nearest point anywhere on the grounding electrode system.

Registrations

REGISTER – continued from Page 6

electricians, and
- the employer must employ a master electrician who will be responsible for compliance with the licensing and inspection requirements.

Maintenance registration

Additional alternatives might apply if the employees will perform only electrical maintenance work as defined in MN Rules 3800.3500 as the "adjustment, repair or replacement of worn or defective parts of electrical equipment" and includes the replacement of broken receptacles and switches.

Conditions for performing only electrical maintenance work are:

- the employer must file a registration with DLI,
- unlicensed employees who will perform only electrical maintenance work must register with DLI as unlicensed maintenance electricians and:
  a. the employer may employ a licensed maintenance electrician or electrical engineer to provide general supervision to employees performing only electrical maintenance work or,
  b. the employer may engage the services of the responsible master electrician of an electrical contractor to provide general supervision to employees performing only electrical maintenance work.

Similar registration alternatives are available for employers if the employees will perform only installation and maintenance of technology circuits and systems.

This is a summary of the statutory requirements and the language of the Minnesota Electrical Act will be enforced.

More information about registration is available at www.dli.mn.gov/CCLD/LicElectricalUnlicensed.asp.

On the road

License information on contractor vehicles required

Electrical and technology system contractors are reminded that any vehicle used by a contractor while performing electrical or technology system work is required to have the contractor's name and license number on the vehicle, as the name and license number appears on the contractor's license.

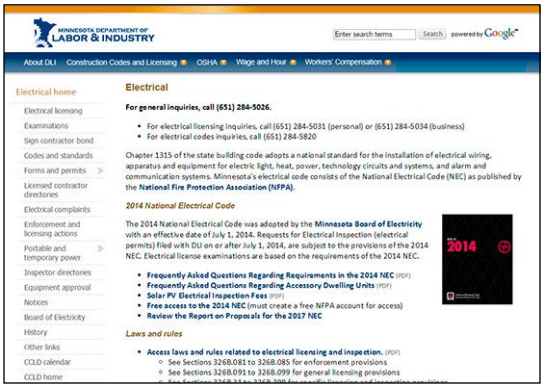
License numbers should be in a contrasting color to that of the vehicle, be affixed to each side of the vehicle and be visible to an electrical inspector from a reasonable distance. Magnetic signs have always been accepted as an alternative to permanently affixed characters. The full text of the requirement is in Minnesota Rules Chapter 3800.3570.

Residential building contractors, remodelers, and roofers are also required to display their license numbers on all vehicles, advertising, signs, websites, contracts, and business cards.

Questions about contractor license enforcement? Send an email to dli.contractor@state.mn.us.

Online resources

Electrical resources updated regularly on DLI's website



DLI's online electrical resources are updated regularly as new information is available. Some of the current resources, at www.dli.mn.gov/CCLD/Electrical.asp, include:

- Frequently asked questions regarding requirements in the 2014 National Electrical Code (NEC)
- Frequently asked questions regarding accessory dwelling units
- The Report on Proposals for the 2017 NEC

Woodworking shops

Are woodworking shops hazardous locations?

How the shop is classified may mean stricter rules for electrical equipment

There are eight articles in Chapter 5 of the National Electrical Code (NEC) that contain requirements for electrical and electronic equipment and wiring methods installed in locations where fire or explosion hazards may exist, such as woodworking shops.

These hazardous areas are:
- Class I for flammable gasses and vapors,
- Class II for combustible dusts,
- Class III where ignitable fibers or flyings are present.

Each of the three classifications is further divided into:
- Division 1 if the hazard is normally present, and
- Division 2 if it would only be present in the event of equipment failure or other malfunction.

Determining which classification applies to an area can be a challenge. While the NEC provides some direction in determining if a product poses a fire or explosive hazard, the code book itself cannot declare an area to be hazardous or determine the its category.

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HAZARD – continued from Page 8

A common question asked by electrical contractors concerns the classification of facilities used for the storage, manufacturing or processing of timber, lumber or wood by-products. **If a woodworking facility provides an adequate dust collection system with assurance that the system will minimize any potential for visual dust clouds and the accumulation of dust, the facility could be deemed an unclassified area.**

Hazardous classifications in the NEC

In the commentary for Section 503.1, the 2014 edition of the NEC Handbook states that Class III locations usually include textile mills that process cotton, rayon, and other fabrics, where easily ignitable fibers or flyings are present in the manufacturing process. Sawmills and other woodworking plants, where sawdust, wood shavings, and combustible fibers or flyings are present, may also become hazardous. If wood flour (dust) is present, the location is a Class II, Group G location, not a Class III location.

The term wood flour is generally understood to be "wood reduced to finely divided particles approximating those of cereal flours in size, appearance, and texture." Though its definition is imprecise, the term wood flour is in common use and usually refers to wood particles that are small enough to pass through a screen with 850 μm (micrometer) openings.

These types of occupancies – cabinet shops, woodworking facilities and such – are classified based on NEC Article 500.5(C)(2)(2 & 3) where combustible wood dust is present, however, under normal conditions the environment is maintained so the combustible dust does not accumulate or interfere with operations. In that case, the area would be categorized as a Class II, Division 2, Group G. If the dust removal system sufficiently eliminates the wood flour the shop area may even be considered an unclassified space based on National Fire Protection Association (NFPA) 499 Recommended Practice for the Classification of Combustible Dusts.

Class II Locations are hazardous because of the presence of combustible dust. Class II locations includes those specified in NEC Sections 500.5(C)(1) and(C)(2).

Class II, Division 2 locations are:

- Locations where combustible dust accumulations are present but are normally insufficient to interfere with the normal operation of electrical equipment or other apparatus, but could as a result of infrequent malfunctioning of handling or processing equipment become suspended in the air; or
- Locations in which combustible dust accumulations on, in, or in the vicinity of the electrical equipment could be sufficient to interfere with the safe dissipation of heat from electrical equipment, or could be ignited by abnormal operation or failure of electrical equipment.

Further guidance can be found in NFPA 499 which explains that in a Class II Division 2 hazardous (classified) area there will be no visible dust cloud under normal operation and no dust accumulation exceeding 1/8th of an inch in depth.

Unclassified locations (non-hazardous)

NFPA 499 also addresses how to recognize areas that are generally deemed to not require classification, or "unclassified locations."

Section 5.4.1 states: Experience has shown the release of ignitable dust suspensions from some operations and apparatus is so infrequent that a classification is not necessary. Examples include combustible dusts that are processed, stored or handled under the following conditions:

- Where materials are stored in sealed containers.
- Where materials are transported in well-maintained closed piping systems.
- Where palletized materials with minimum dust are handled or used.
- Where closed tanks are handled or stored.

The section of the code book recognizes that classification may not be required in situations where dust removal systems or excellent housekeeping prevent dust clouds or layer accumulations that make surface colors indiscernible, provided the dust removal systems have safe guards and warnings against failure.

A note about classifications

Electrical inspection authorities do not classify hazardous locations. The NEC does not classify hazardous locations but does serve as an installation standard that contains rules about how to install electrical equipment and wiring in areas that have been classified as hazardous by a registered professional electrical engineer. The classification of all areas that are classified as hazardous must be properly documented and be available to electrical inspection authorities.