

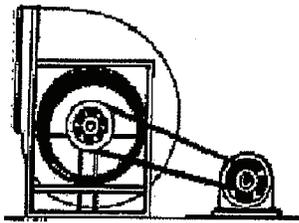


Building Department Newsletter

March 2009

Special points of interest:

- Mechanical Systems Commissioning
- Washington State Department of Ecology will be in Pullman
- Cross-Connection Control
- Picasso Never Wore a Hard Hat



Mechanical Systems Commissioning

The 2006 Washington State Nonresidential Energy Code (WSNEC) now requires commissioning of mechanical systems installed in nonresidential buildings. Commissioning is a systematic process of verification and documentation that ensures that the selected building systems have been designed, installed and maintained in accordance with the contract documents in order to satisfy the building owner's design intent and operational requirements.

The code requirements that the building plans have notes requiring commissioning and the notes may refer to specifications for further requirements. Commissioning of simple systems, as defined in WSNEC section 1421, shall include, as a minimum:

- * A Commissioning Plan
- * Controls Functional Performance Testing
- * System testing and balancing
- * A Preliminary Commissioning Report
- * A final Commissioning Report
- * Post Construction Documentation in the form of O&M and Record Drawing Review

Commissioning of systems other than a simple system requires Equipment Functional Performance Testing in addition to the above requirements. All of the sub sections of WSNEC, Section 1416, go into great detail stating the specific requirements for commissioning of a mechanical system.

Does all this mean closer scrutiny of mechanical plans? No.

The designer of the mechanical system is required to **state on the plan**, commissioning and completion requirements, the commissioning plan, system balancing requirements, and post construction documents. The plan reviewer will verify the preceding items have been stated on the plan. **Review of the detailed content of these items by the building official is not required.**

Does this mean more required inspections of mechanical systems by the building inspector? No.

Commissioning is a self certification process; this includes testing, recording of results and report preparation. The code requires that a preliminary commissioning report be completed and provided to the owner. The building official is required to determine that the preliminary report has been completed prior to issuing a certificate of occupancy. A copy of the report is not required to be submitted to the building official. **A letter from the person preparing the report stating the preliminary commissioning report is complete is sufficient to meet this code requirement.**

Washington State Department of Ecology will be in Pullman

The Washington State Department of Ecology will be in Pullman March 12th to review the effectiveness of efforts here to control erosion and storm water runoff at construction sites. If the DOE finds our/your efforts to mitigate construction site storm water run off and erosion are effective they may be inclined to postpone duplicative compliance measures for a while. Please keep that date in mind and police your BMP's; make sure your erosion barriers are intact and functioning. Remember, you can make a difference. If you have any questions concerning Storm Water/Erosion Control contact Rob Buchert, Pullman Storm water Services Program Manager, 509-338-3314.

Cross-Connection Control (Backflow Prevention Assemblies)

What is Backflow?

Backflow takes place when water flows opposite to its intended direction. There are two conditions that can cause backflow. It may occur due to either back-siphonage or backpressure in the water system. Backflow can take place within any water distribution system whether it is private or public.

Back-siphonage can occur when a water main or plumbing system within a building loses water pressure creating a reduced pressure within the water supply piping. This reduced pressure will allow the direction of water in the system to flow opposite of its normal direction of flow. Such pressure differences can cause siphoning of non-potable water and other liquids back into the potable water system.

Backpressure occurs when water pressure in a building or fixture becomes greater than the water pressure within the water supply piping. This condition can force non-potable water or other fluids back into the potable system.

What is Cross-connection?

A cross-connection is a physical connection between a potable water supply line and a non-potable source (sprinkler systems, chemically process water, heating and cooling systems, ponds, ect.). Under a backflow condition, connections to non-potable sources could potentially cause contamination of our drinking water. Cross-connections can jeopardize the safety of drinking water. A hazardous backflow incident can occur through cross connections when backpressure or back-siphonage conditions occur.

The Degree of Hazard

The type of backflow prevention assemblies installed to prevent backflow from occurring at the point of cross-connections depends upon the substance which may flow into the potable water supply. A *pollutant* is considered to be a substance which would affect the color or odor of the water but would not pose a health hazard and is considered a non-health hazard. A *contaminant* is considered a substance of high health hazard if it causes illness or death if ingested.

Types of Backflow Prevention Assemblies and Devices

The City of Pullman cross-connection control manual list five types of backflow prevention assemblies and devices. These assemblies and devices and their relative level of protection and uses are listed in the City of Pullman control manual. It must be stressed that these are not all equally acceptable as protection against all types of hazards and that each job should be evaluated for its degree of hazard.

- * Air Gap (AG)
- * Atmospheric Vacuum Breaker (AVB)
- * Double Check Valve Assemble (DCVA)
- * Pressure Vacuum Breaker Assembly (PVBA)
- * Reduced Pressure Backflow Assembly (RPBA)

"Identifying a few key erosion control measures ahead of time on the site plan is required prior to staff review."



Picasso Never Wore a Hard Hat

Just a reminder that as much as we would like to encourage creative expression and the arts in Pullman, we would prefer not to have to ask you to come down to City Hall just to hand draw in erosion control measures on a site plan that has been submitted as part of a building permit application. Identifying a few key erosion control measures ahead of time on the site plan is required prior to staff review. In 2008, over-the-counter pen and ink changes on site plans were allowed with the understanding that the erosion control measures would be included on the original drawings on future submittals. We all know what things are needed on a construction site in Pullman to reduce erosion and keep the sediment on site. Putting it down on paper shows that the builder thought about it ahead of time and cares about how their construction site impacts the rest of the Pullman community and the environment. Save time and avoid costly delays in processing your building permit applications by remembering to include erosion control on the site plans.