2012 IPC/IRC Plumbing Updates

Presented by:
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Building Official/Licensed Plumber

D.E.S.I.G.N and TRADES CONFERENCE
2016 ▪ 15TH ANNUAL

CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES

Construction Institute

PURPOSE

- Give building contractors and design professionals information related to Plumbing Code changes
- Identify proper Codes to be used
- This brief presentation is not intended to show all changes in the Plumbing Codes

Department of Administrative Services
Division of Construction Services

- **WWW.ct.gov/dcs/site/default.asp**

- **Division of Construction Services**
- **Building Code Adoption**
- **Office of the State Fire Marshal**
- **Office of the State Building Inspector**
- **WWW.ct.gov/dcs/site/default.asp**

- **Connecticut General Statutes for chapter 541 (Statutory authority to the office of the State Fire Marshal), Chapter 393 Sec. 20-340 (licensing exemptions)**
- **https://www.cga.ct.gov/current/pub/titles.htm**

- **Int. Residential Code, Int. Plumbing Code**
- **www.ICCSafe.org**

- **2015 Connecticut State Fire Prevention Code**
- http://www.ct.gov/dcs/lib/dcs/office_of_state_fire_marshal_files/fire_prevention_code_2012_eff_5-7-2015.pdf or
- ***Google*: 2015 connecticut fire prevention code**

- **NFPA CODES**
- **http://www.nfpa.org/**

Office of Design and Construction

Office of Education and Data Management

Office of State Building Inspector

Office of State Fire Marshal

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CT Alert WE CAN'T ALERT YOU... IF WE CAN'T REACH YOU

The Connecticut Department of Administrative Services (CT DAS), Division of Construction Services (DCS) is the state's primary department for executive and judicial branch construction-related services; administration of the state school construction grant program; and development, administration and training of state building and fire safety codes.

NEW: DCS Bidding and Contracts has moved to **Room 482** in the State Office Building (165 Capitol Ave, Hartford, CT 06106)!

DCS Library

DCS Resources

DCS Projects
- State Police Firearms Relocation Project
- DCS Project Location Viewer *(best viewed using Internet Explorer)*
- DCS Goundbreakings
- DCS Ribbon Cuttings
- DCS Awards & Special Events

DCS Information
- DCS Awards & Special Events
- Human Resources
- Staff Directory
- Statutes and Regulations
- DCS Equipment Resources
- DCS Policy Statements
- DCS Vehicle Usage Policy

Additional Links
- OPM State Bond Commission
- State Contracting Portal for DCS

Doing Business With DCS

INVITATIONS TO BID
- Construction Project Bids

NEW: Bidding and Contracts has moved to **Room 482!**

CONTRACTOR PRE-SELECTION RFQs
- RFQs-SBE/MBE Contractor PreSelection
- RFQs-Contractor PreSelection
- Procedures & Information for SBE/MBEs
- Procedures & Information for Contractors

REQUESTS FOR QUALIFICATIONS
- Architecture & Engineering
- On-Call Consultant Services
- Construction Administrator
- Design-Build
- Construction Manager at-Risk

ON-CALL CONSULTANT SERVICES
- Search for Open On-Call RFQs
- On-Call RFQ Submittal Materials

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Building Code Adoption
Bureau of Boilers
Bureau of Elevators
Bureau of State Construction
Bureau of Technical Services
Contact Information
Codes & Standards Committee
OSBI Forms
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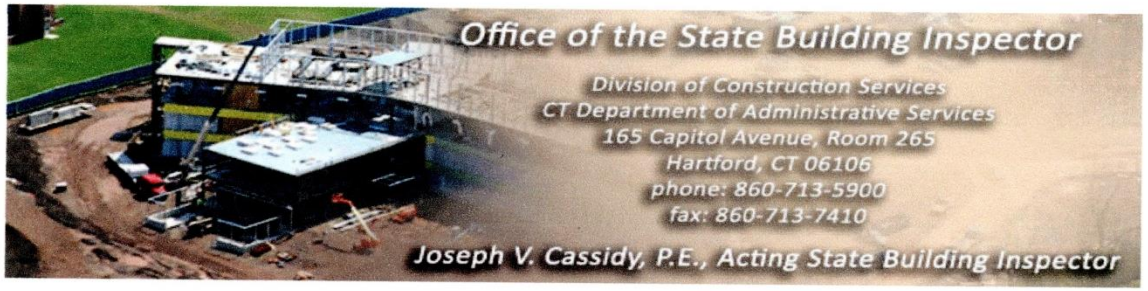

DAS-Office of the State Building Inspector
165 Capitol Avenue, Room 265
Hartford, CT 06106
Telephone: 860-713-5900
Fax: 860-713-7410

Welcome to the Office of the State Building Inspector's home page. The Office of the State Building Inspector is part of the Division of Construction Services. The Office of the State Building Inspector establishes and enforces building, electrical, mechanical, plumbing and energy code requirements necessary to promote the health and safety of the people of Connecticut by reviewing, developing, adopting and administering the State Building Code. For a more detailed description of the regulations and laws, please refer to Connecticut General Statutes Chapter 541 and Regulations of State Agencies Sections 29-262-1a through 29-262-11a.

Hot Topics

*****NEW*** Update regarding Demolition Permit Advisory**

Passage of P.A. 15-131, **"An Act Concerning Demolition Licensure and Demolition Permits"**

Section 2 of P.A. 15-131 resolves the conflict addressed in our 2014 advisory. The new language included in this act requires a written notice from the demolition contractor containing the hold harmless language, but eliminates the requirement that it be included on the certificate of insurance.

Duct and Envelope Testing Rebate for Residential New Construction CL&P and UI are offering rebates to residential customers to offset the cost of duct and envelope testing needed to demonstrate compliance with the Energy Efficiency Code portion of the State Building Code.

-- **CL&P customers** can find this information at:
http://www.cl-p.com/Home/SaveEnergy/NewConstruction/Residential_New_Construction/?MenuID=4294985036
Click here for a copy of the rebate request (pdf).

-- **UI customers** can find this information at:
uinet.com/wps/portal/uinet/residential/newconstruction
Click here for a copy of the rebate request (pdf).

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Crane Board
Fire Prevention Code Advisory Committee
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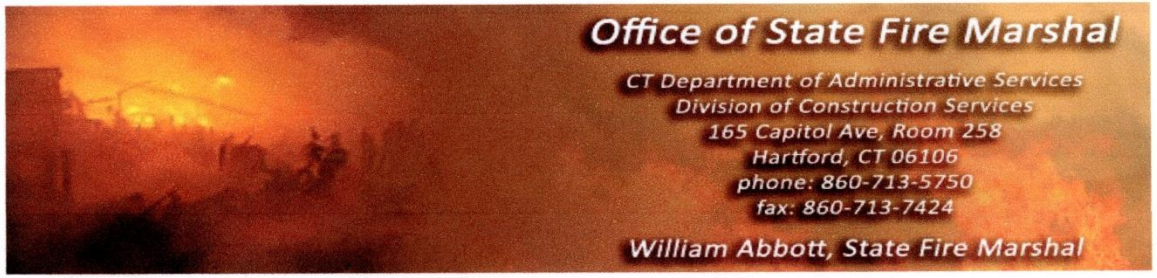

Welcome to the Connecticut Office of State Fire Marshal home page. We are looking forward to using the tremendous opportunities offered by the Internet to support the needs of our valued customers. Each of our Bureaus will utilize this resource to offer Internet access to as many of our services as possible. If there is something you can't find or something that does not totally serve your needs, please advise us so we can take the steps to enhance and improve our service. It is the goal of the Office of State Fire Marshal to provide our customers with a user friendly service and we will continually strive to maintain that goal.

Mission Statement: The Office of State Fire Marshal is part of the Department of Administrative Services. This Office is responsible for promulgating and enforcing codes, standards and regulations to reduce the harm associated with fires, explosions, and mechanical failures. Connecticut General Statutes Chapter 541, Section 29-291 gives the statutory authority to the Office of State Fire Marshal.

Sincerely,

William Abbott, State Fire Marshal

NOTICE FROM STATE FIRE MARSHAL WILLIAM ABBOTT

NEW ITEMS ON THE SITE:

The Office of State Fire Marshal has prepared a General Information Notice (GIN) on Mobile Food Units.

Download the GIN by clicking here.

The 2015 CT State Fire Prevention Code (effective May 7, 2015) is available below, please be advised that this has replaced the 2010 CT State Fire Prevention Code. We understand there are some typographical errors in the document we are working on a correction sheet that will

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Building Code Adoption
Bureau of Boilers
Bureau of Elevators
Bureau of State Construction
Bureau of Technical Services
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BUILDING CODE ADOPTION

New State Building Code Adoption

Proposed Adoption of the New State Building Code: At the June 8, 2011 meeting of the Codes Amendment Subcommittee (CAS), the CAS along with the State Building Inspector voted to utilize the 2012 International Code Council's (ICC) Family of Codes as the basis for the next Connecticut State Building Code.

The new State Building Code is planned for adoption in the Fall of 2016 and will include the following model codes and a Supplement of Connecticut-specific items:

Model Codes	Date of Technical Review	Proposed Changes Due Date
2012 International Building Code	Preliminary Review Complete	12/15/13
2012 International Existing Building Code	Preliminary Review Complete	12/15/13
2012 International Plumbing Code	Preliminary Review Complete	12/15/13
2012 International Mechanical Code	Preliminary Review Complete	12/15/13
2012 International Energy Conservation Code	Preliminary Review Complete	12/15/13
2012 International Residential Code	Currently Under Review	2/01/14
2014 National Electrical Code (NFPA 70)	Anticipated Start Date– November 2014	10/15/14

ICC Free eCode Viewer

NFPA Free Viewer

Where to purchase Model Code Books

New State Building Code to be adopted in 2016, to include

- 2012 International Building code
- 2012 International Existing Building code
- 2012 International Plumbing code
- 2012 International Mechanical code
- 2012 International Energy Conservation code
- 2012 International Residential code
- 2014 NFPA 70 (National Electrical Code)

Current Plumbing Codes

- **IMPORTANT NOTE**

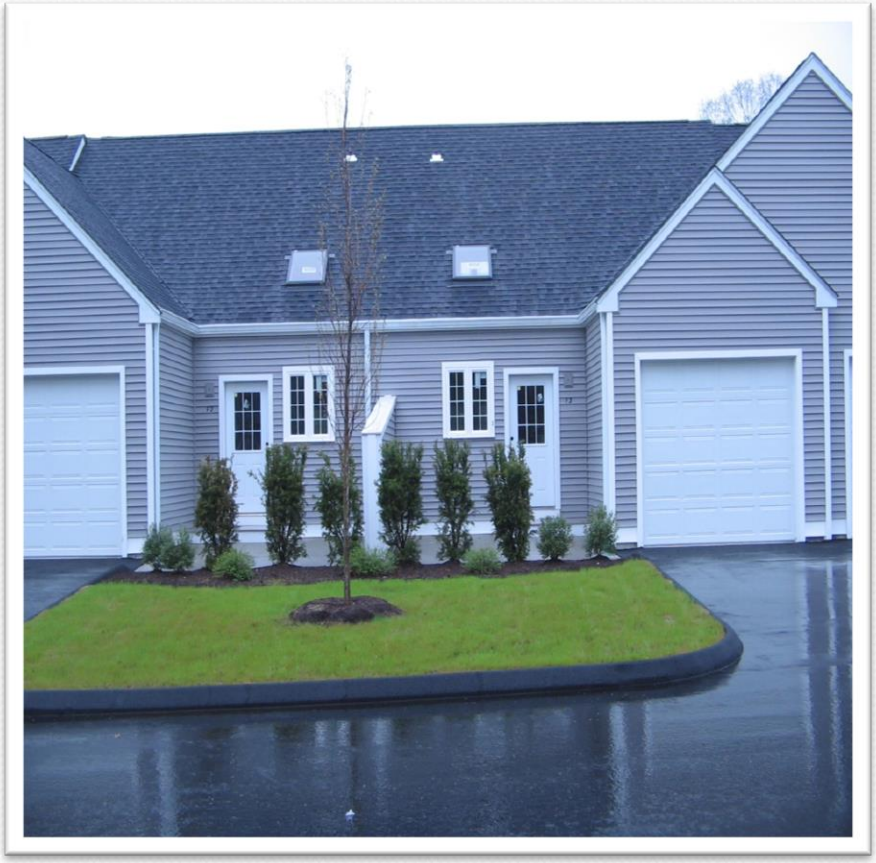
- **As of the writing of this presentation the 2003 IPC and 2009 IRC are still in use until such time as the new State Building Code is adopted.**

WHEN TO USE WHAT

- **International Residential Code used for;**
  - **Detached one and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures**

DETACHED 1 & 2 FAMILY

TOWNHOUSES



- **International Plumbing Code along with NFPA 54 used for everything not included under the uses for the International Residential Code.**
  - **Three family and above residential and all commercial installations**

Connecticut State Fire Prevention Code

- Adopted May 7, 2015
- Includes 139 NFPA Standards
- Generally not for one and two family and townhouses
- One and two family and townhouses use 2012 IRC

Plumbing Codes and Standards

- **One and two family and townhouses use IRC**
- **Three family and above, and commercial, use 2012 IPC**

GAS PIPING

- **Gas piping not found in the Plumbing or Mechanical codes.**
- **Gas piping for one and two family and townhouses found in chapter 24 International Residential Code.**
- **Gas piping for three family and above and commercial from NFPA 54 *"National Fuel Gas Code 2012"***

CHANGES IN STATE BUILDING DEPARTMENT

- JULY 1, 2013, DEPARTMENT OF CONSTRUCTION SERVICES MERGED WITH DEPARTMENT OF ADMINISTRATIVE SERVICES

- **2013 SHALL ADOPT 2009 IRC AND 2011 NFPA70 (NAT. ELEC. CODE)** **(THIS WAS DONE)**

Sec. 106.2 Permits (exceptions)

- **1. The stopping of leaks in drains, water, soil, waste or vent pipe provided, however, that if any concealed trap, drainpipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code**

Exceptions continued

- **2. The cleaning of stoppages or the repairing of leaks in pipes, valves or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.**

Sec. 106.1 WHO MAY TAKE OUT PERMIT

- Any owner, authorized agent or contractor.
- All necessary documentation required
- General description of proposed work
- Location of work
- Other construction documents as required
- Applicant shall meet all qualifications established by statute, rules, ordinance or resolution

CGS CHAPTER 393, SEC.20-340 EXEMPTIONS FROM LICENSING REQUIREMENTS

- #11 Persons engaged in the installation, maintenance, repair and service of glass or electrical, plumbing, fire protection sprinkler systems, solar, heating, piping, cooling and sheet metal equipment in and about single-family residences owned and occupied or to be occupied by such persons; provided any such installation, maintenance and repair shall be subject to inspection and approval by the building official of the municipality in which such residence is located and shall conform to the requirements of the state Building Code.

CSST

- CORRUGATED STAINLESS STEEL TUBING

- CSST rules changed again

Connecticut
DAS
Division of
Construction Services

Memorandum

Date:	June 5, 2015
To:	**Municipal Building Officials and Fire Marshals**
From:	Joseph V. Cassidy, P.E., Acting State Building Inspector William Abbott, State Fire Marshal
Subject:	Bonding of Corrugated Stainless Steel Tubing (CSST)

The purpose of this memorandum is to clarify the requirements for bonding Corrugated Stainless Steel Tubing (CSST) gas piping systems. The recent adoption of the 2015 Fire Prevention Code and amendment to the State Building Code have led to much confusion what standards apply to which building types.

Until recently Connecticut General Statute (CGS) 29-329 provided the requirements for installation of gas equipment and gas piping in all buildings. This statute was changed to mandate that the State Fire Marshal adopt regulations within the Fire Prevention Code to regulate these installations. Similar changes were made in CGS 29-331 relating to liquefied petroleum gas installations.

The 2015 Connecticut Fire Prevention Code (CFPC) was adopted on May 7, 2015 and includes NFPA 54 National Fuel Gas Code as the standard for installation of gas equipment and piping. The scope of the CFPC excludes one and two family homes and townhouses, meaning the NFPA 54 standard in the CFPC cannot be enforced in these building types. The enforceable code for **one and two family homes and townhouses** is the 2009 International Residential Code (IRC) portion of the State Building Code.

For all installations **other than one and two family homes and townhouses** the bonding requirement is NFPA 54-2012 section 7.13.2, which states:

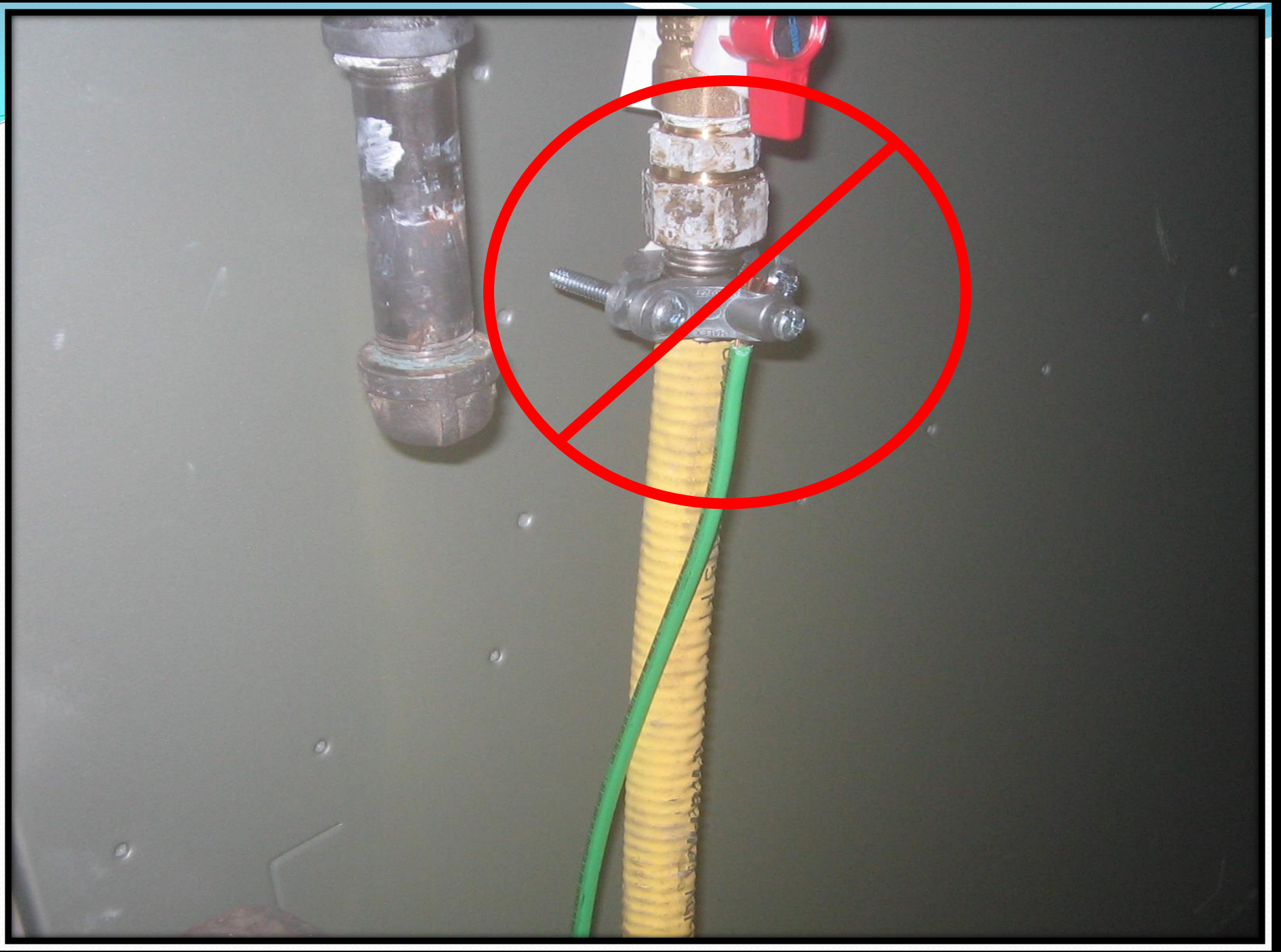
> *CSST gas piping systems shall be bonded to the electrical service grounding electrode system. The bonding jumper shall connect to a metallic pipe or fitting between the point of delivery and the first downstream CSST fitting. The bonding jumper shall not be smaller than 6 AWG copper wire or equivalent. Gas piping systems that contain one or more segments of CSST shall be bonded in accordance with this section.*

For installations in **one and two family homes and townhouses** the CSST bonding requirement is found in the 2009 IRC section G2411.1.1 as amended, which states:

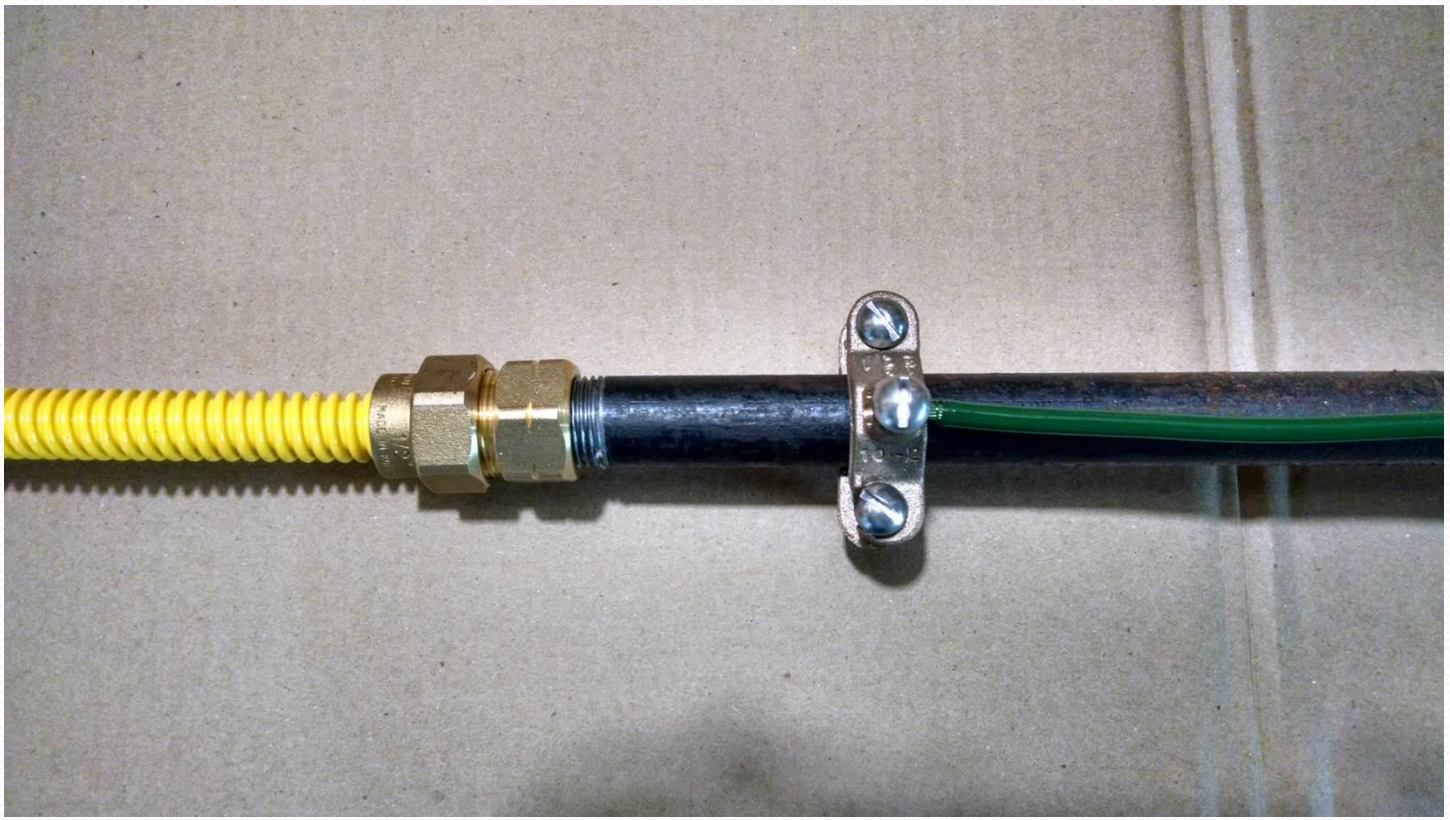
> *Corrugated stainless steel tubing (CSST). CSST gas piping shall be bonded in accordance with manufacturer's installation instructions.*

Most manufacturer's instructions we have reviewed do point to NFPA 54 as the standard for installation of their product, so the NFPA 54 bonding configuration will be the norm. However, there may be manufacturers that provide specific bonding instructions or refer to other standards, such as the National Electrical Code (NFPA 70). Having and understanding the manufacturer's installation instruction will be critical in properly inspecting residential CSST installations.

In the near future we will be adopting the 2012 IRC as part of the State Building Code. The bonding requirement in the 2012 IRC is the same as the section 7.13.2 NFPA 54-2012 requirement. Once the 2012 IRC is adopted into the State Building Code, all installations will be required to be bonded in this manner.



IRC Sec. G2411 (2012), Bond wire on BSP on house side of meter (point of delivery) and before first CSST fitting



PART ONE

- CODE CHANGES IN THE 2012 INTERNATIONAL PLUMBING CODE (IPC) FROM THE 2003 ipc

- **Code books and Commentary can be purchased from ICC at**

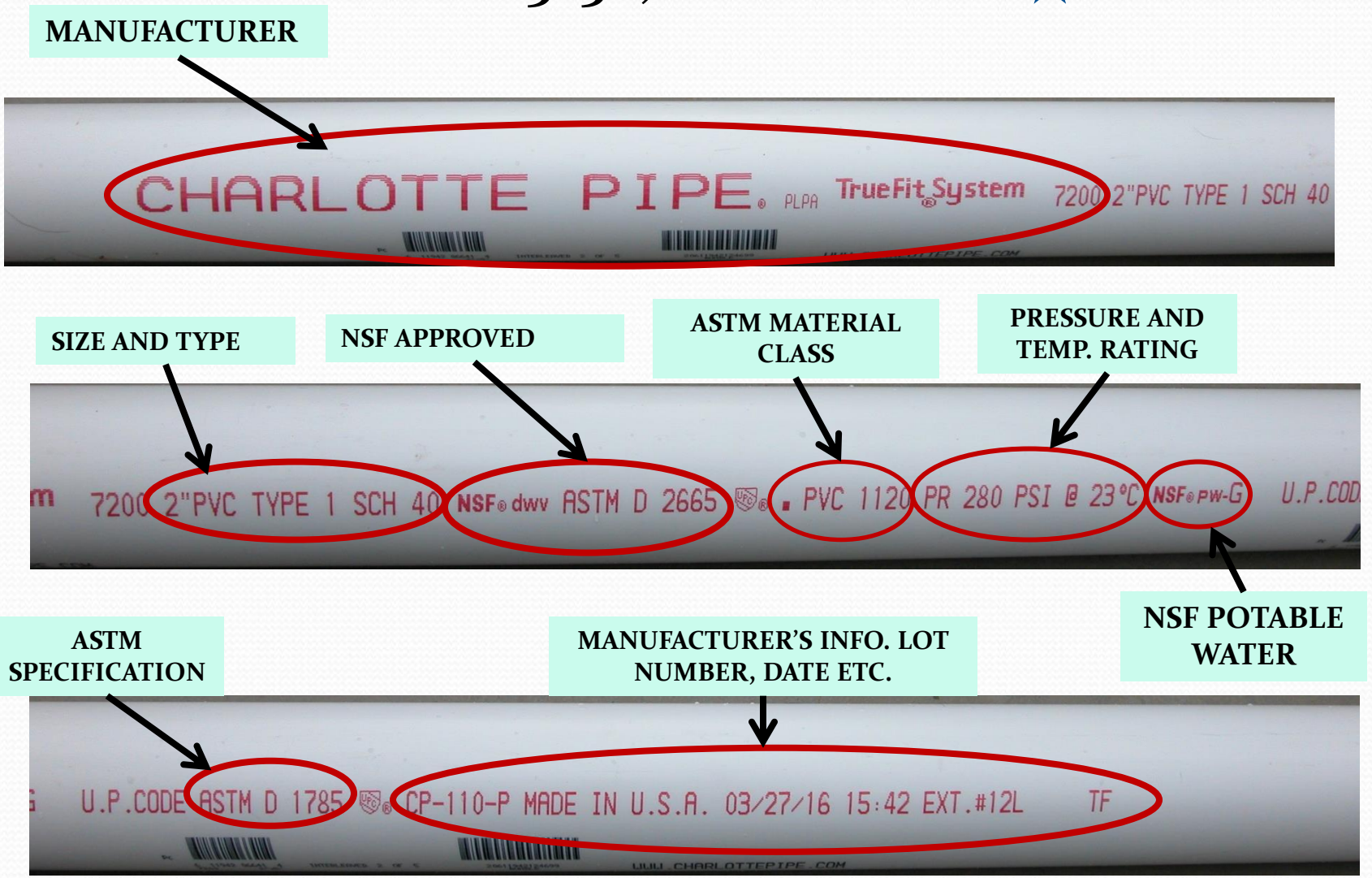
- **ICCSAFE.ORG**

DEFINITIONS

- BRANCH INTERVAL
- FLOW CONTROL VENTED
- GREASE INTERCEPTOR
  - HYDROMECHANICAL
  - GRAVITY

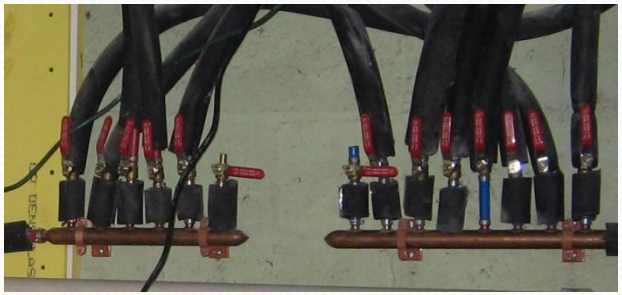
CHAPTER 3: GENERAL REGULATIONS

Sec. 303.1, Identification ★



CHAPTER 3:
GENERAL REGULATIONS

308.9 Parallel water distribution systems ★



CHAPTER 3:
GENERAL REGULATIONS

1. Always use appropriate fittings matching materials.

2. Follow all manufacturers installation instructions

CHAPTER 4:
FIXTURES, FAUCETS AND FIXTURE FITTINGS

- **403.1.1 Fixture calculations**
- **403.2 Separate facilities, Exception 3**

Table 403.1 Business & Mercantile
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES

- For Business and Mercantile occupancies with an occupant load of 15 or fewer, service sinks shall not be required
- See note “g” at end of table

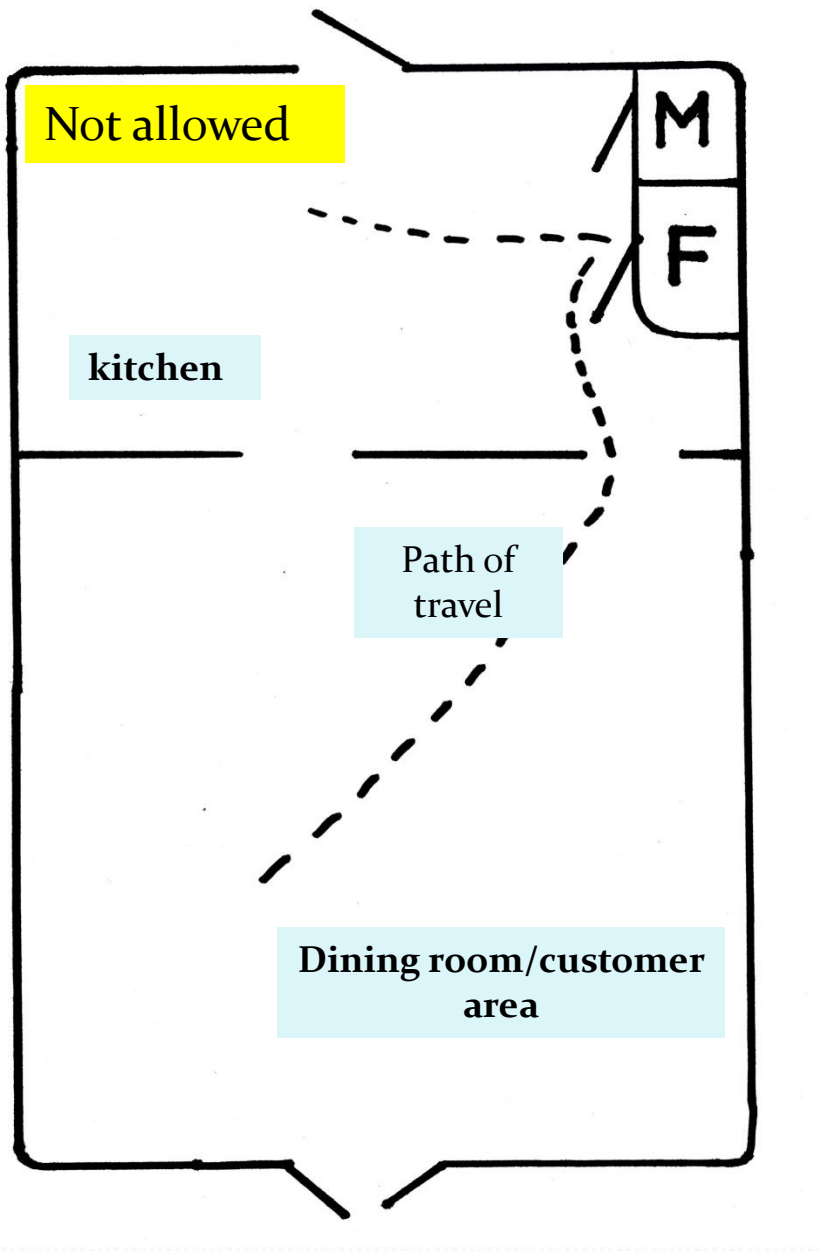
Chapter 4 continued

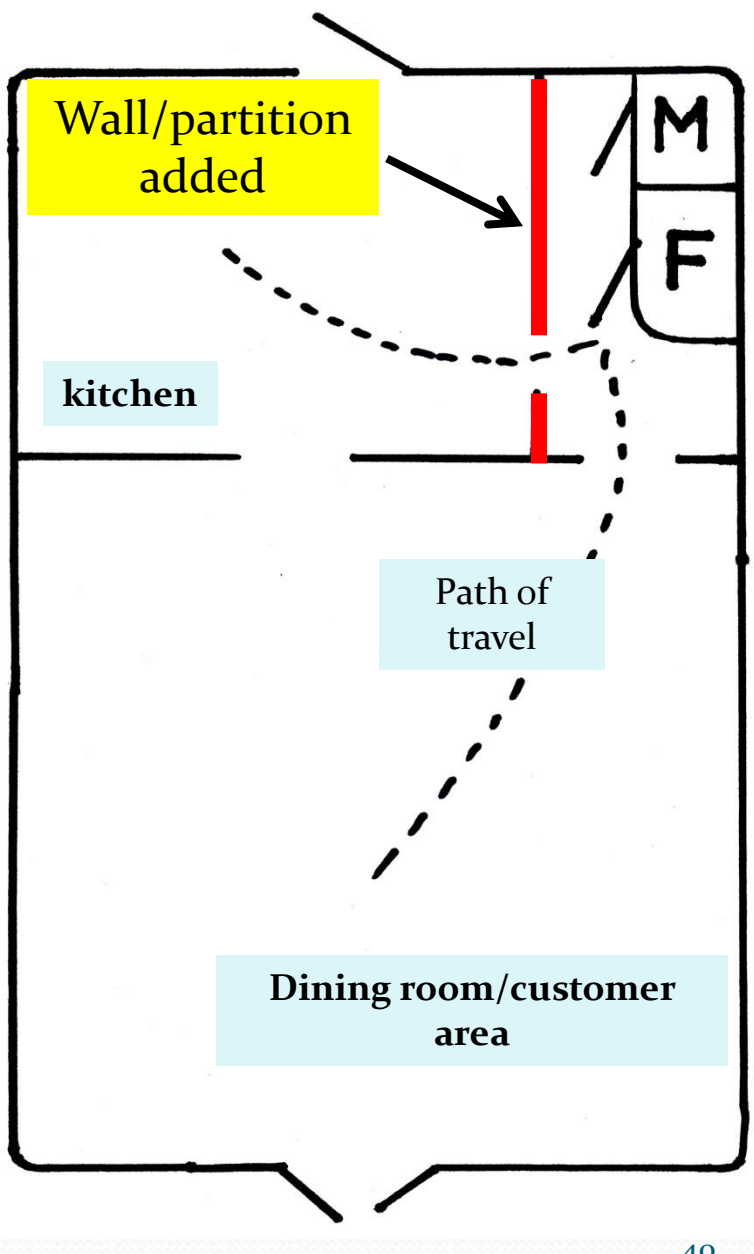
- **403.2.1 Family or assisted use toilet facilities serving as separate facilities** ★
- **403.3 Required public toilet facilities**
- **Exception (open parking garages)**

403.3.1 & 403.3.2 Toilet room access & location ★

- **Route to the public toilet facilities shall not pass through kitchens, storage rooms or closets.**

TOILET ROOM ACCESS NOT ALLOWED PASSES THROUGH KITCHEN





Chapter 4 continued

- 403.3.6 Door locking ★
- 403.4.1 Directional signage
- 403.5 Drinking fountain location ★
- 404.0 Where required. Accessible plumbing facilities and fixtures shall be provided in accordance with the *International Building Code*

Chapter 4 continued

- **405.3.1 Water closets, urinals, lavatories and bidets (15 inches to wall min. and 30 inches center to center)** ★
- **405.3.4 Water closet compartment (single occupant toilet rooms, child day care, I-3 Housing**
- **405.3.5 Urinal partitions**

gojo
ARNING
VERY HOT
WATER

Chapter 4 continued

- 407.2 Bathtub waste outlets and overflows ★
- 408.3 Bidet water temperature (110°)

- 410.0 Drinking Fountains Approval ★
  - ASME A112.19.1 or.2
- 410.2 Minimum number, (2)
  - Exception (1, combo. h/c and regular)

410.2 Minimum number

drinking fountains

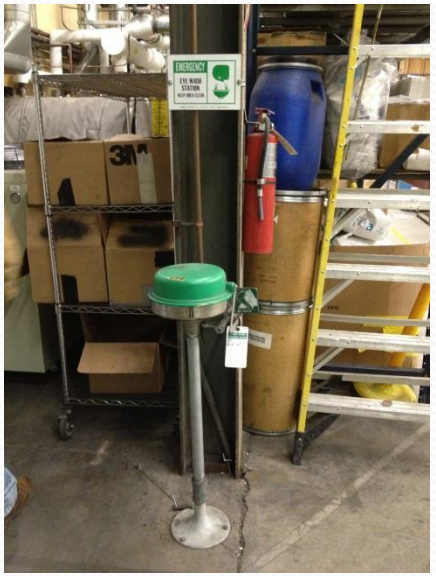
Chapter 4 continued

- **410.3 Substitution (restaurants)**
- **410.4 prohibited location (public rest rooms**

Chapter 4 continued

- **Section 411, emergency showers and eyewash stations.**
  - **(Code does not require installation)**
- **411.1 Approval,**
  - **(Shall conform to ISEA Z358.1)**
- **411.2 Waste connections,**
  - **(not required by IPC)**

Emergency showers and eyewashes



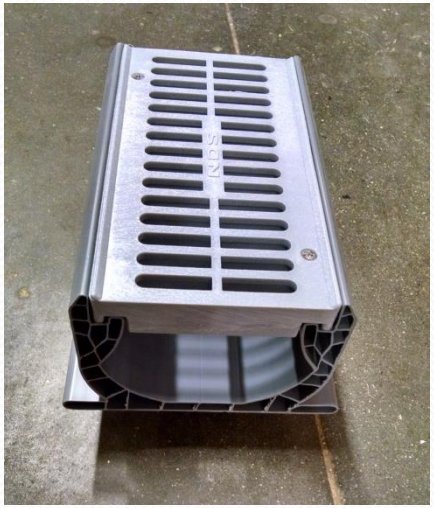
Bradley

Chapter 4 continued

- **Section 412 Floor and Trench Drains**
  - **Removable strainers and access for cleaning.**
- **412.2 Floor drains**
  - **Required in Public Laundries and central washing facilities**
  - **Trap seal (see 1002.4)**

Trench & Floor Drains

Trench & Floor Drains



Opening for trap primer fitting attachment

Chapter 4 continued

- 413.1 Food waste grinders, Approval, ASSE 1008
- 413.3 Commercial food waste grinder waste outlets, (min. 1½ in.)
- 413.4 Water supply required.
  - Water supply must be protected from backflow by air gap (vacuum breaker) or backflow preventer

Chapter 4 continued

- 417.2 Water supply riser for shower
  - (attached to structure)
- 417.4 Shower compartments
  - (min. 900 Sq. inches, with exceptions)

Chapter 4 continued

- **419.1, approvals, Urinals** (ANSI Z125.9, ASME A112.19.2/CSA B45.1)

- **419.2 Urinal Substitution for water closets**
  - **Not more than 67% in assembly and educational**
  - **Not more than 50% in all other occupancies**

Waterless Urinals

Chapter 4 continued

- 421 Whirlpool bathtubs
- 421.4 Suction fittings,
  - (ASME A112.19.7/CSA B45.10)
- 421.5 Access to pump required
  - 12" x 12" within 2 feet, greater than 2 feet 18" x 18"

Chapter 4 continued

- 424.2 Hand showers (ASME A112.18.1/CSA B125.1)
  - Backflow prevention
  - Max 120° if hands free mounted
- 424.3 Individual shower valves, (ASSE 1016, or ASME A112.18.1/CSA B125.1
- 424.4 Multiple (gang) showers
  - ASSE 1069 mixing valve, or
  - Point of use ASSE 1016, balanced-pressure, thermostatic or combo. balanced-pressure/thermostatic valve

Approximate Time and Temperature Relationship to Severe Burns in Children and the Elderly

Water Temperature	Time for 3rd degree burn to occur
104 degrees F	Safe for bathing
120 degrees F	2.5 Child/ 5 Adults
127 degrees F	10 sec. child/1 min. Adult
133 degrees F	4 sec. child/15 sec. adult
140 degrees F	1 sec. child/5 sec. adult
155 degrees F	0.5 sec. child/1 sec. adult

Maximum temperature allowed at fixtures

Fixture	*Maximum Temp.*	*Standard*
Bidet	**110 degrees**	**ASSE 1070**
Public lavatory	**85 to 110 degrees**	**ASSE 1070**
Individual shower valve	**120 degrees**	**ASSE 1016 or CSA B125**
Multiple showers (Gang)	**120 degrees**	**ASSE 1069 or CSA B125**
Bathtub, whirlpool	**120 degrees**	**ASSE 1070, or ASSE 1016 type valve or CSA B125**

CHAPTER 5
2012 IPC

WATER HEATERS

Chapter 5

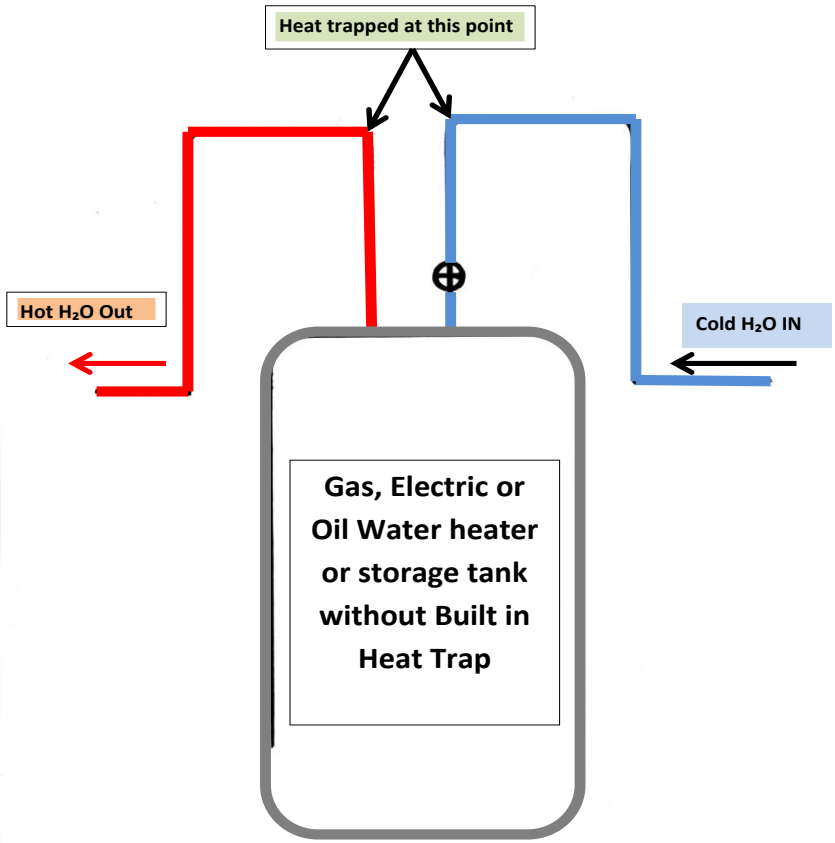
- 501.8 Temperature controls required.
  - Not to be used alone to satisfy temperature requirements of chapter 4
- 502 Installation, (manufacturer's installation instructions) AND
  - Oil (IMC)
  - Gas (NFPA 54)
  - Electric NFPA 70)

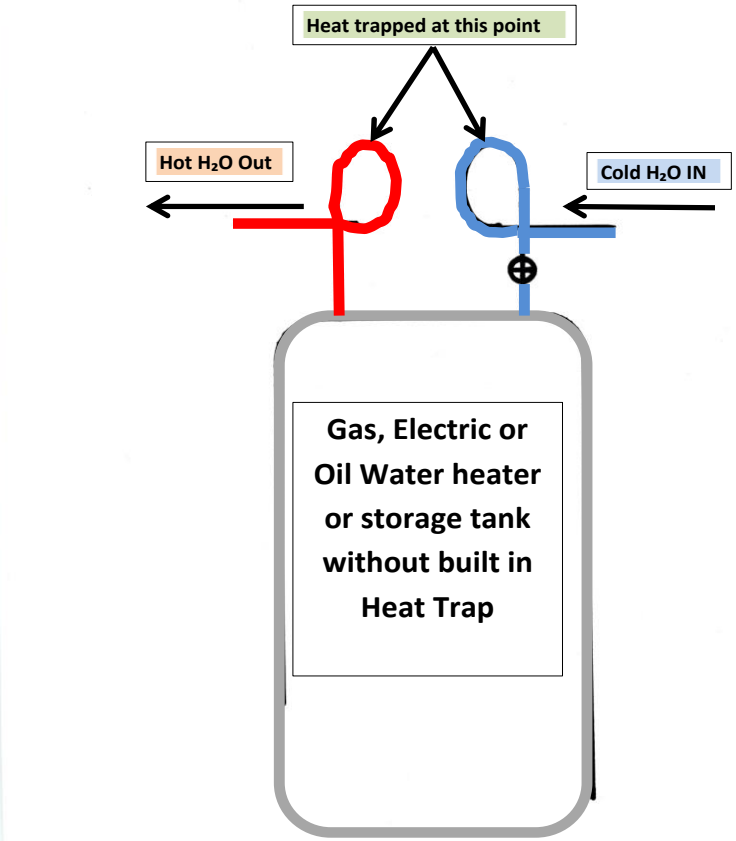
Chapter 5 continued

- **502.3 Water heaters installed in attics (access requirements)**
  - Unobstructed passageway
  - Large enough to remove water heater
  - Min. 30" High x 22" Wide
  - Max 20' in length
  - Continuous solid flooring, 24" wide
  - Service space 30" x 30"
- **504.3 Shutdown (Electric not in sight of Elec. Panel)**

DIELECTRIC HEAT TRAP WATER HEATER FITTINGS

Chapter 5 Water Heaters, Heat Trap Required Built in or add on



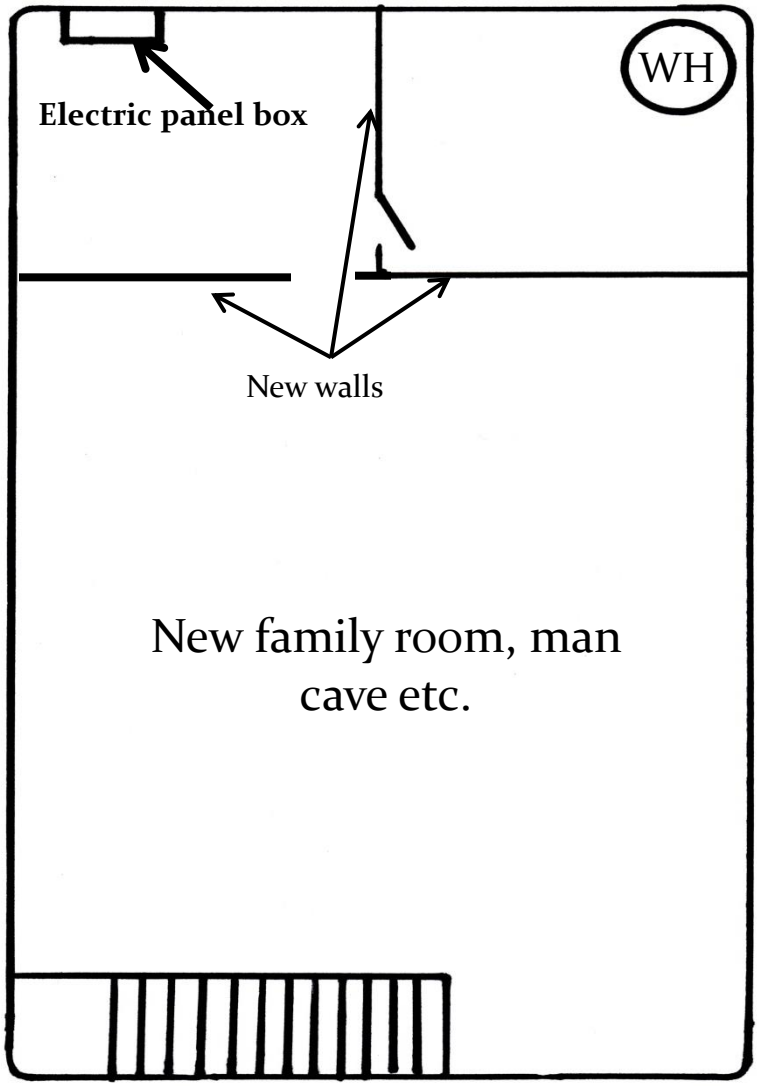


CHAPTER 5 WATER HEATERS

- Sec. 504.2 Bottom fed water heaters and tanks required to have vacuum relief valve installed.

- Shutdown for electric water heaters required to be within sight of water heater.

Water heaters in remodeled basements



- Where water heater is no longer within sight of electric panel, a switch to shut off power to water heater required within sight of heater. Sec. 504.3
- Gas or oil fired heaters may also require outside combustion air.
- All are now required to have drip pan. Sec.504.7

Chapter 5 continued

- 504.6 Requirements for relief valve discharge piping (13 items required)

- 504.7 Required pan, where leakage will damage building ★

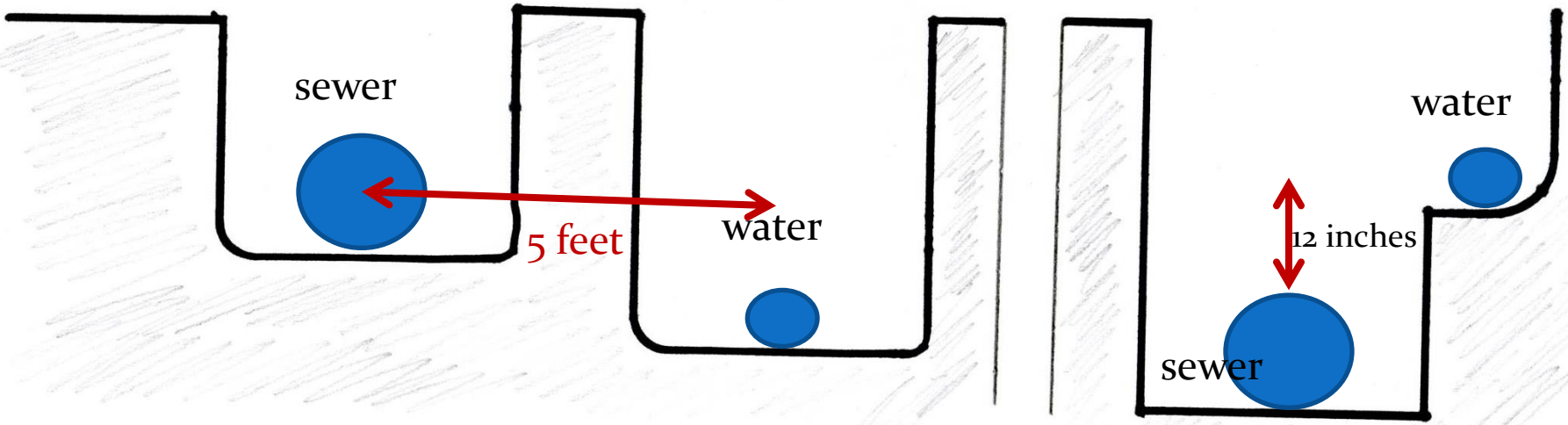
CHAPTER 6
2012 IPC

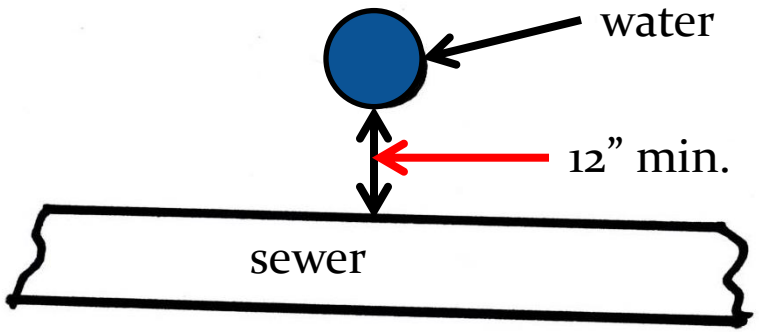
WATER SUPPLY AND DISTRIBUTION

Chapter 6

- **603.2 Separation of water service and building sewer (code says 5 feet, with exceptions, but beware of local ordinances where more is required)**

Separation of Water Service and Building Sewer





Chapter 6 continued

- **Table 604.3, "water distribution system design criteria required capacity at fixture supply outlets"**

- **604.4 Maximum flow and water consumption**

604.4

Capacity at fixtures

fixture	Flow rate (gpm)	Pressure (psi)
Bathtub	4	20
Shower	3	20
Urinal valve	12	25
Water closet, flushometer	25	35
W/C siphonic , flushometer	25	35
W/C close couple	3	20
W/C blow out flushometer	25	45

- **Contractors and designers be aware of existing street pressure or well pressure limitations**

Chapter 6 continued

- **606.2 Location of full open valves** (Not to be confused with location of shutoff valve requirements 606.2)
  - 1. Curb box
  - 2. At entrance
  - 3. Discharge side of water meter
  - 4. Base of every riser (with exceptions)
  - 5. Top of down feed piping
  - 6. entrance to dwelling unit
  - 7. water supply pipe to water tank
  - 8. supply to water heater

Chapter 6 continued

- **606.7 Labeling of water distribution pipes in bundles (Required)** ★

Chapter 6 continued

- **607.4 Flow of hot water to fixtures, (left side)**

- **607.5 Pipe insulation. (Recirculating hot water systems required to be insulated)** ★

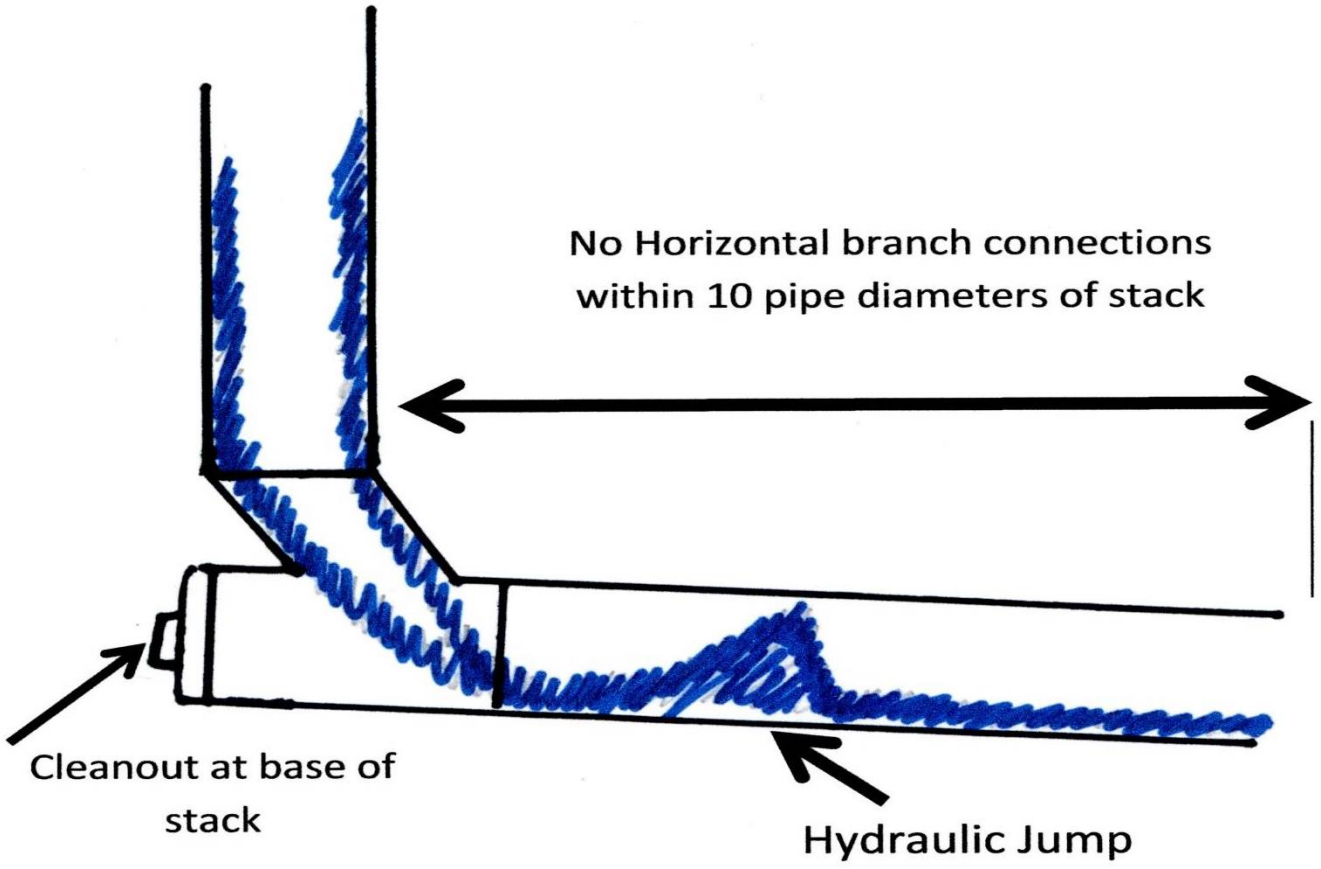
Chapter 7
2012 IPC

SANITARY DRAINAGE

Chapter 7 continued

- **704.3 Connections to offsets and bases of stacks** ★
- **Horizontal branches connected downstream 10 times the diameter of drainage stack.**
  - **(not found in 2012 IRC)**
  - **Sec. 708.3.4 requires C/O at base of stack**

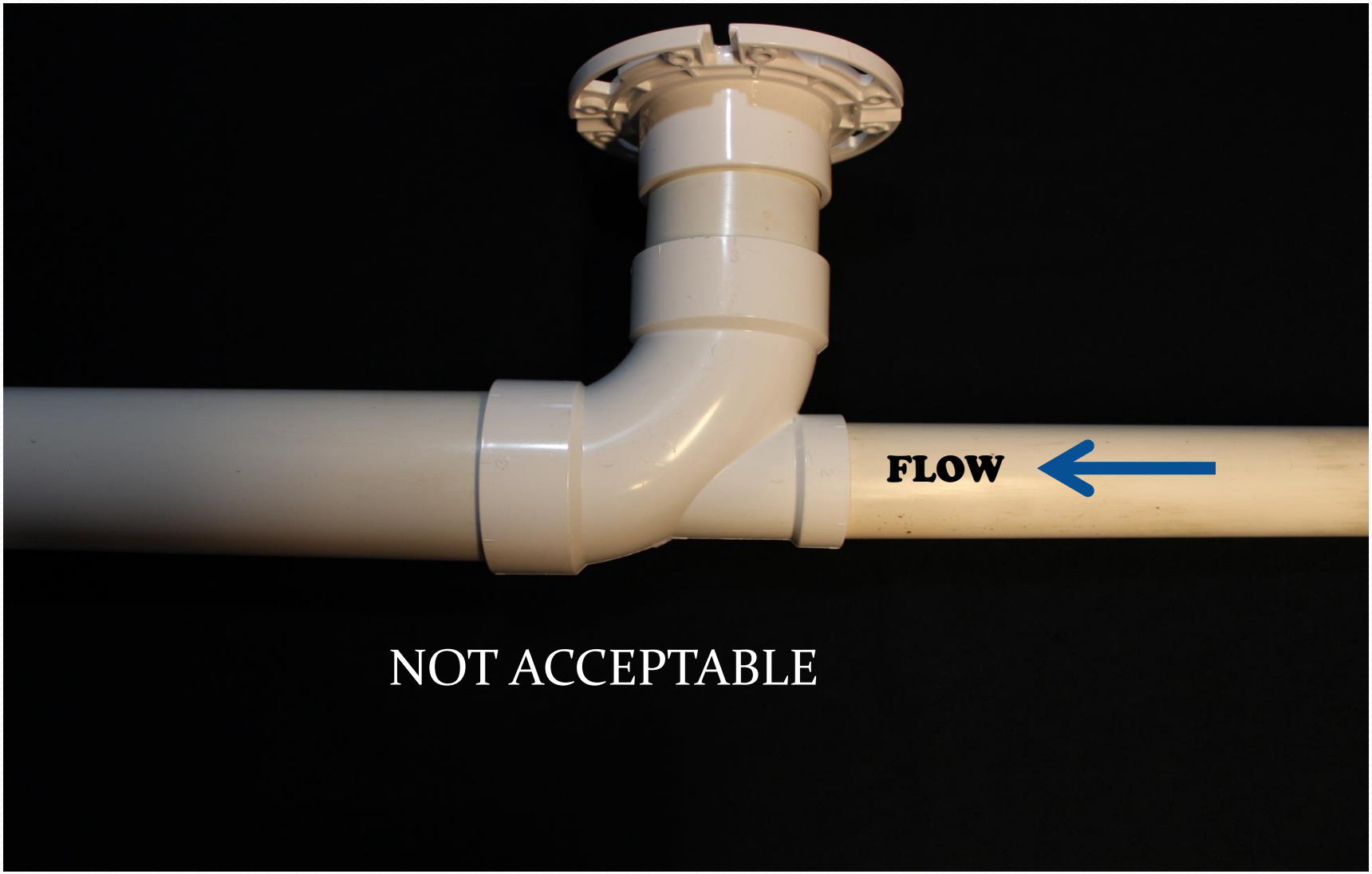
Hydraulic jump



Chapter 7 continued

- **706.4 Heel or side-inlet quarter bends, allowed with exceptions** ★
  - **Also found in 2012 IRC**

Section 706.4 Heel and side-inlet quarter bends

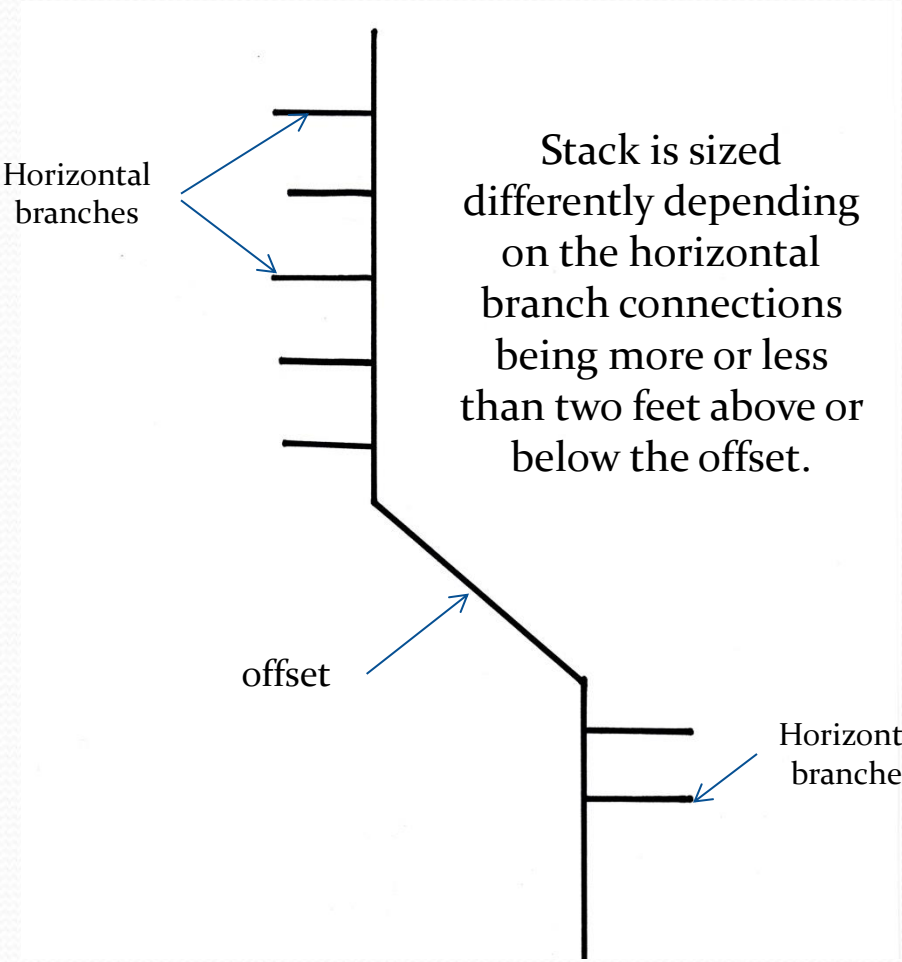


Section 706.4 Heel and side-inlet quarter bends

Chapter 7 continued

- **711.2.1 Omission of vents for horizontal stack offsets** ★

Section 711, offsets in drainage piping in buildings of five stories or more



- System designers be aware of this change along with Fig. 711.1(1), 711.1(2),711.1.1, 711.2(1), 711.2(2),and 711.2.1 when branch connections are within two feet above or below vertical and horizontal stack offsets. (where to install the vent). This section can be very confusing and requires further investigation when buildings of this type are encountered.

Chapter 7 continued

- **715.1 Sewage backflow ★**

- **Backwater valves required where any openings in drainage system are below the next upstream manhole cover.**

Backwater valves

No backwater valve required

Basement

First floor and basement require backwater valve

Basement

Entire house requires backwater valve

Basement

Level of next upstream manhole

Actual road grade

Chapter 8
2012 IPC

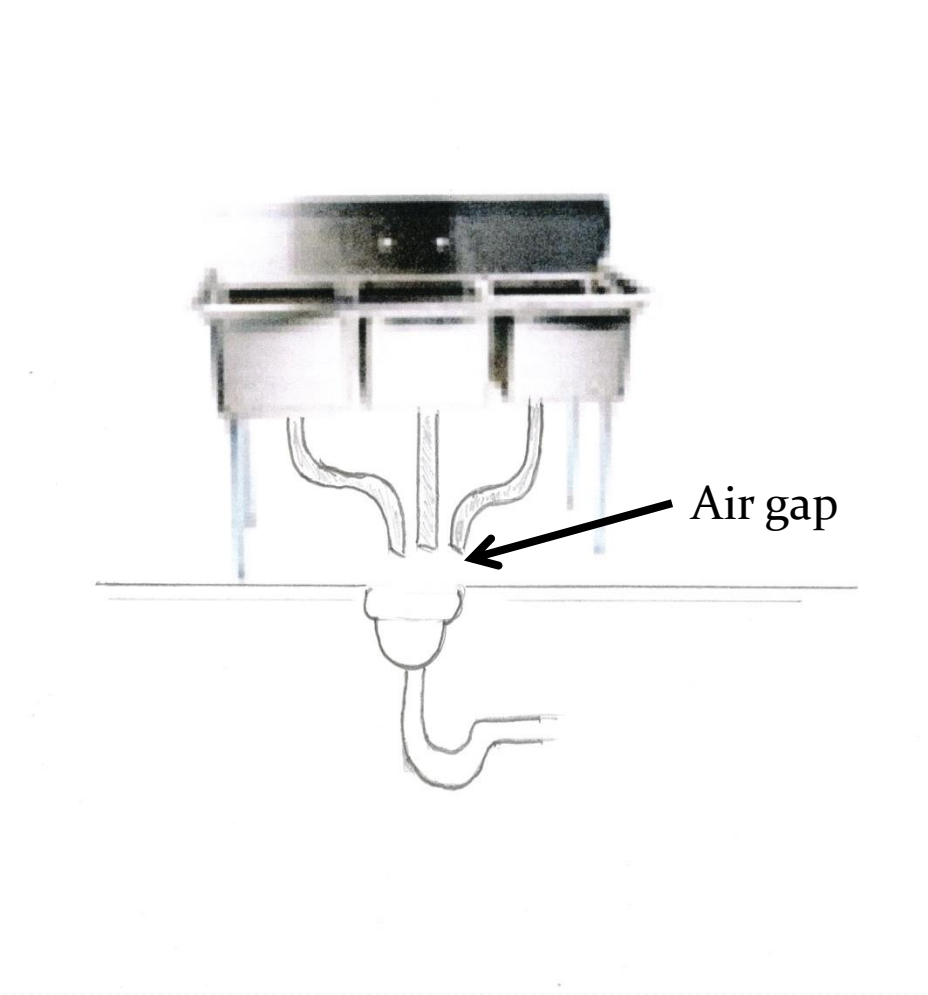
INDIRECT/SPECIAL WASTE

Chapter 8

- **802, 802.1 Where required**
  - **FOOD HANDLING EQUIPMENT AND CLEAR WATER WASTE**

- **802.1.8 Food utensils, dishes, pots and pans sinks** ★

Food Handling



- **Food prep and 3 bay sinks required to be indirectly connected through air gap**

Chapter 9
2012 IPC

VENTS

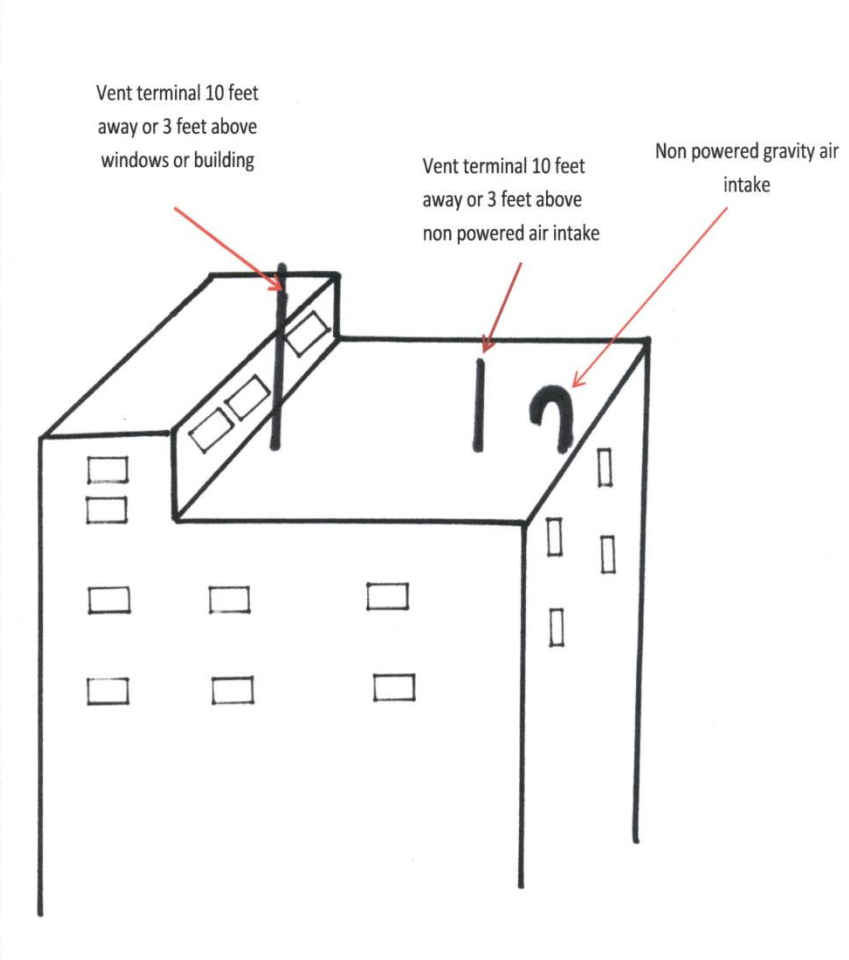
Chapter 9 continued

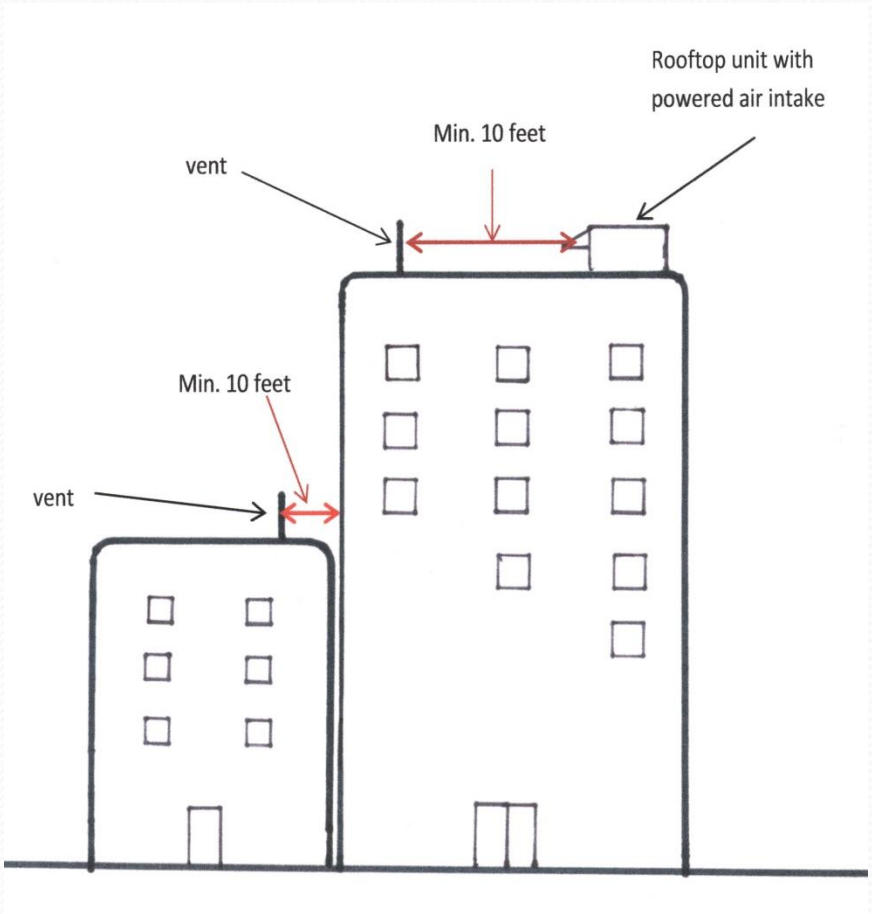
- **901.3 Chemical systems ★**
- **Chemical Air Admittance valves allowed**

Chapter 9 continued

- **903.5 Location of vent terminal ★**

Vent terminal locations





Chapter 9 continued

- **Section 917, Single stack vent system** (not in 2009 or 2012 IRC) ★

- **Entire section has been added**

- **917.1 Where permitted**
- **917.2 Stack size** (see Table 917.2)

Sec. 917, Single Stack Vent System

- For multistory buildings where toilet rooms are stacked one above the other.
- Drainage stack serves as a single stack vent system
- Drainage stack and branch piping shall be the vents for the drainage system
- The drainage stack shall have a stack vent

MAXIMUM HORZ. DEVELOPED LENGTH FOR OTHER FIXTURES IN A SINGLE STACK VENT SYSTEM

- In properly designed and installed system other fixtures such as urinals, showers, tubs etc. may be up to 12 feet away from stack.

- Additional offset venting of stack required when additional branches are installed below offset.

Chapter 9 continued

- **918.3 Air admittance valves, Where permitted**
  - **(numerous options for air admittance valve installation)**

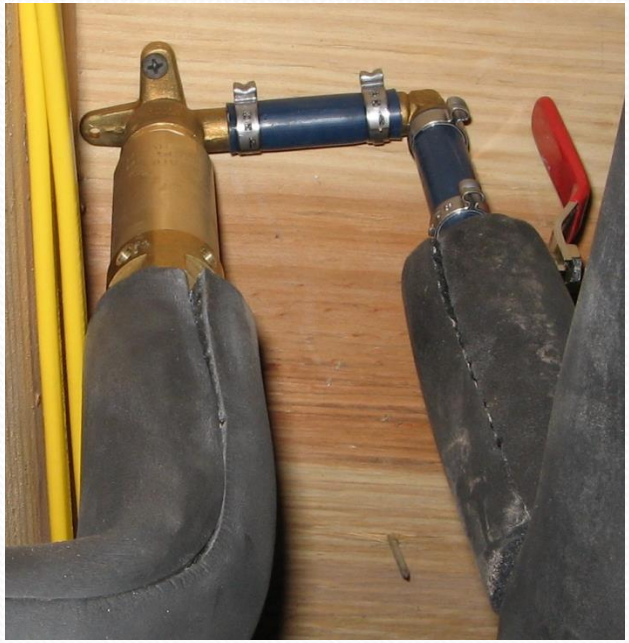
Chapter 10
2012 IPC

TRAPS, INTERCEPTORS AND SEPARATORS

Chapter 10

- **1002.4 Trap seals**
  - **(SHALL BE MAINTAINED WHERE TRAP SEAL IS SUBJECT LOSS BY EVAPORATION)**

TRAP PRIMERS

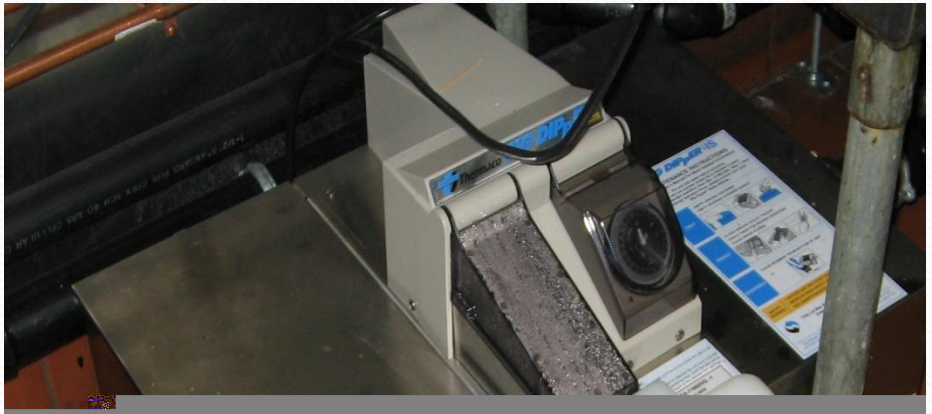


ALSO AVAILABLE ARE TRAP SEAL PROTECTORS WITH ELASTOMERIC SEALS

Chapter 10

- **1003.1 Interceptors and separators, where required**
- **1003.3 Grease interceptors**
- **1003.3.1 Grease interceptors and automatic grease removal devices**

GREASE INTERCEPTORS



QUESTIONS

THE
END