Sioux Chief Manufacturing prepared the following guidelines to aid design professionals. Incorporate these guidelines into the appropriate project specification Section. Sioux Chief Manufacturing is not liable in any way for revisions or for the use of this Section by any end user. A qualified design professional should review and edit the document to suit project requirements.

Notes are included to assist the design professional in editing the specifications to suit project requirements and are not intended to be included in the final specification. These notes appear in blue text.

For more information or assistance, contact Sioux Chief Manufacturing.

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Kansas City, MO 64147

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# SECTION 221300 - SANITARY WASTE PIPING SPECIALTIES

Revise this Section by deleting and inserting text to meet Project-specific requirements.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

# **GENERAL**

## RELATED DOCUMENTS

Retain or delete this article in all Sections of Project Manual.

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## SUMMARY

### Section Includes:

#### Backwater valves.

#### Cleanouts.

#### Floor drains.

#### Shower Drains.

#### Linear Shower Drains.

#### Floor sinks.

#### Through-penetration firestop assemblies.

#### Miscellaneous sanitary drainage piping specialties.

## Related Requirements:

Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

#### Section 221423 "Storm Drainage Piping Specialties" for storm drainage piping inside the building, drainage piping specialties, and drains.

#### Section 224300 "Medical Plumbing Fixtures" for plaster sink interceptors.

## DEFINITIONS

Retain terms that remain after this Section has been edited for a project.

### ABS: Acrylonitrile-butadiene-styrene plastic.

### HDPE: High-density polyethylene plastic.

### PVC: Polyvinyl chloride plastic.

## SUBMITTALS

* + - * 1. Submittals: Comply with Division 01.

Retain "Field quality-control reports" Paragraph below if Contractor is responsible for field quality-control testing and inspecting.

### Field quality-control reports.

* + - * 1. Product Data: Submit manufacturer’s product data, including installation instructions.
        2. Manufacturer’s Certification: Submit manufacturer’s certification that materials comply with specified requirements and are suitable for intended application.
        3. Warranty Documentation: Submit manufacturer’s standard warranty.
        4. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.

Retain paragraph below if retaining "Frost-Resistant Vent Terminals" Paragraph in Part 2 "Miscellaneous Sanitary Drainage Piping Specialties" Article.

### Shop Drawings: Show fabrication and installation details for frost-resistant vent terminals.

### Operation and Maintenance Data: For drainage piping specialties to include in emergency, operation, and maintenance manuals.

## QUALITY ASSURANCE

### Drainage piping specialties shall bear label, stamp, or other markings of specified testing agency.

### Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

### Comply with NSF 14, "Plastics Piping Components and Related Materials," for plastic sanitary piping specialty components.

## COORDINATION

### Delivery Requirements: Deliver materials to site in manufacturer’s original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

### Storage and Handling Requirements:

#### Store and handle materials in accordance with manufacturer’s instructions.

#### Keep materials in manufacturer’s original, unopened containers and packaging until installation.

#### Store materials in clean, dry area indoors.

#### Do not store materials directly on floor.

#### Protect materials and finish during storage, handling, and installation to prevent damage.

# PRODUCTS

See Editing Instruction No. 1 in the Evaluations for cautions about named manufacturers and products. For an explanation of options and Contractor's product selection procedures, see Section 016000 "Product Requirements."

## BACKWATER VALVES

Copy paragraphs below and re-edit for each product.

Insert drawing designation for each product required. Use these designations on Drawings to identify each product.

### Horizontal, Cast-Iron Backwater Valves <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide <Insert Specified Manufacture>; <Insert product name or designation>:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Horizontal, Cast-Iron Backwater Valve Description

##### Standard: ASME A112.14.1.

##### Size: Same as connected piping.

##### Body: Cast iron.

##### Cover: Cast iron with [bolted] [threaded] access check valve.

##### End Connections: [Hub and spigot] [Hub and spigot or hubless] [Hubless].

##### Type Check Valve: Removable, bronze and PVC, swing check, factory assembled, or field modified to hang [closed] [open for airflow unless subject to backflow condition].

##### Extension: ASTM A 74, Service class; full-size, cast-iron, soil-pipe extension to field-installed cleanout at floor; replaces backwater valve cover.

### Horizontal, Polymer Backwater Valves <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief 869 Series:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Horizontal, Polymer Backwater Valve Description

##### Size: Same as connected piping.

##### Body: [ABS] [PVC].

##### Cover: Same material as body with access to check valve; [Threaded] [Turn-Lock Collar].

##### Check Valve: Removable swing check.

##### End Connections: Socket type.

##### Accessories: [Deep-Bury Adapter], [Shallow Access Sleeve]

### Drain-Outlet Backwater Valves <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide <Insert Specified Manufacture>; <Insert product name or designation>:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Drain-Outlet Backwater Valve Description

##### Size: Same as floor drain outlet.

##### Body: Cast iron or bronze made for vertical installation in bottom outlet of floor drain.

##### Check Valve: Removable ball float.

##### Inlet: Threaded.

##### Outlet: [Threaded] [spigot]

Floor drains with integral backwater valves are specified as floor drains.

Plastic backwater valves in paragraph below are available in NPS 2 to NPS 6 (DN 50 to DN 150). Most are made of PVC.

## CLEANOUTS

Copy paragraphs below and re-edit for each product.

Insert drawing designation for each product required. Use these designations on Drawings to identify each product.

### Floor Cleanouts

Adjustable Floor Cleanouts – 854, 822-C.

Post Pour Adjustable Floor Cleanouts – 834, 822-CF.

Special Duty Floor Cleanouts- 834-DiH, 834-DNH, 852-AiH, 852-PiH, 852-ANH, 852-PNH.

#### Cast-Iron Floor Cleanouts: <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [834-D Series] [834-9D Series] [854 Series] [851 Series] [822 Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Polymer Floor Cleanouts: <Insert drawing designation if any>:

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [834-A Series] [834-P Series] [852-A Series] [852-P Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Floor Cleanout Description:

##### Standard: ASME A112.36.2M.

##### Type: Post Pour Adjustable Floor Cleanout.

##### Floor Cleanout Body:

###### Outlet Connection: [No-Hub] [Push Connect].

###### Body or Ferrule: [Cast Iron] [ABS] [PVC]

###### Clamping Device: [Above-Grade] [Not Required].

###### Size: Same as connected branch.

##### Floor Cleanout Closure Plug:

###### Closure Plug Material: [Polymer] [Brass]

###### Closure Plug Type: Slotted.

##### Floor Cleanout Top Cover & Frame:

###### Frame and Cover Material and Finish: [Nickel-bronze] [Painted cast iron] [Stainless steel]

###### Frame and Cover Shape: [Round] [Square]

###### Top Loading Classification: [Light] [Medium] [Heavy] [Extra Heavy] [Special Heavy] Duty.

###### Vandal Proof: [Required] [Not Required].

###### Carpet Marker: [Required] [Not Required].

##### Floor Cleanout Coring Sleeve Material: [Cast Iron] [ABS] [PVC].

##### Floor Cleanout Accessories:

###### Locating Bristle: Required.

###### Extension: [Required] [Not Required]

##### Drain Anchor: [Required] [Not Required] reference section MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES.

### Sanitary Floor Cleanouts

#### Stainless-Steel Floor Cleanouts: <Insert drawing designation if any>:

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [834-SS Series] [854 Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Sanitary Floor Cleanout Description:

##### Standard: ASME A112.3.1

##### Type: Post Pour Adjustable Floor Cleanout.

##### Sanitary Floor Cleanout Body:

###### Outlet Connection: [No-Hub] [Push Connect].

###### Body or Ferrule: Stainless Steel.

###### Clamping Device: [Above-Grade] [Not Required].

###### Size: Same as connected branch.

##### Sanitary Floor Cleanout Closure Plug:

###### Closure Plug Material: [Polymer] [Brass]

###### Closure Plug Type: Slotted.

##### Sanitary Floor Cleanout Top Cover & Frame:

###### Frame and Cover Material and Finish: Stainless Steel.

###### Frame and Cover Shape: [Round] [Square]

###### Top Loading Classification: [Light] [Medium] Duty.

###### Vandal Proof: [Required] [Not Required].

###### Carpet Marker: [Required] [Not Required].

##### Sanitary Floor Cleanout Coring Sleeve Material: Stainless Steel.

##### Sanitary Floor Cleanout Floor Cleanout Accessories:

###### Locating Bristle: Required.

### Heavy Duty Floor Cleanout

#### Cast-Iron, Heavy-Duty Floor Cleanouts: <Insert drawing designation if any>:

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [834-DiR Series] [834-DiRH Series] [834-DH Series] [834-DNRH Series] [834-DNQH Series] [834-9DiR Series] [854-i Series] [854-iQ Series] [854-iN Series] [854-iNQ Series] [854-iS Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Polymer Heavy-Duty Floor Cleanouts: <Insert drawing designation if any>:

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [852-AiY Series] [852-PiY Series] [852-AiHY Series] [852-PiHY Series] [852-ANRHY Series] [852-PNRHY Series] [852-ANQHY Series] [852-PNQHY Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Heavy Duty Floor Cleanout Description:

##### Standard: ASME A112.36.2M.

##### Type: Post Pour Adjustable Floor Cleanout.

##### Heavy Duty Floor Cleanout Body:

###### Outlet Connection: [No-Hub] [Push Connect].

###### Body or Ferrule: [Cast Iron] [ABS] [PVC]

###### Clamping Device: Not Required.

###### Size: Same as connected branch.

##### Heavy Duty Floor Cleanout Closure Plug:

###### Closure Plug Material: [Polymer] [Brass]

###### Closure Plug Type: Slotted.

##### Heavy Duty Floor Cleanout Top Cover & Frame:

###### Frame and Cover Material and Finish: [Nickel-Bronze Veneer] [Painted cast iron].

###### Frame and Cover Shape: [Round] [Square]

###### Top Loading Classification: [Heavy] [Extra Heavy] [Special Heavy] Duty.

###### Vandal Proof: [Required] [Not Required].

###### Carpet Marker: [Required] [Not Required].

##### Heavy Duty Floor Cleanout Coring Sleeve Material: Cast Iron.

##### Heavy Duty Floor Cleanout Floor Cleanout Accessories:

###### Locating Bristle: Required.

###### Extension: [Required] [Not Required]

### Deck Flange Floor Cleanout

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Cast-Iron Deck Flange Cleanouts: <Insert drawing designation if any>:

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [822-C Series] [822-CF Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Polymer Deck Flange Cleanouts: <Insert drawing designation if any>:

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [822-CA Series] [822-CFA Series] [822-CP Series] [822-CFP Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Deck Flange Cleanout Description:

##### Standard: ASME A112.36.2M

##### Type: Post Pour Adjustable Deck Flange Cleanout.

##### Deck Flange Cleanout Body:

###### Outlet Connection: [No-Hub] [Push Connect].

###### Body or Ferrule: [Cast iron] [ABS] [PVC]

###### Size: Same as connected branch.

##### Deck Flange Cleanout Closure Plug:

###### Closure Plug Material: [Polymer] [Brass]

###### Closure Plug Type: Raised-Head.

##### Deck Flange Cleanout Top Cover & Frame:

###### Frame and Cover Material and Finish: [Nickel-bronze] [Painted Cast Iron] [Stainless steel].

###### Frame and Cover Shape: [Round] [Square]

###### Top Loading Classification: [Light] [Medium] Duty.

###### Vandal Proof: [Required] [Not Required].

###### Carpet Marker: [Required] [Not Required].

##### Deck Flange Cleanout Coring Sleeve Material: [Cast Iron] [ABS] [PVC].

### Exterior Cleanout

#### Exterior Cleanout Housing <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

###### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [850-9 Series]:

Substitutions: [Under provisions of Division 01.] [Not permitted.]

###### Exterior Cleanout Description:

Standard: ASME A112.36.2M

Body: Cast iron.

Frame and Cover Material and Finish: Painted cast iron.

Frame and Cover Shape: Round.

Top Loading Classification: Extra Heavy Duty.

Vandal Proof: Required.

Internal Cleanout: [853-F24i] [853-F26i] with slotted brass closure plug.

### Wall Cleanouts

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Cast-Iron Wall Cleanouts: <Insert drawing designation if any>:

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [853-T Series] [853-F Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Wall Cleanout Description:

##### Standard: ASME A112.36.2M. Include wall access.

##### Body Type: as required to match connected piping.

##### Size: Same as connected drainage piping.

##### Closure Plug Material: [Polymer] [Brass].

##### Closure Plug Type: Slotted.

##### Closure Plug Size: Same as or not more than one size smaller than cleanout size.

Wall Access Cover: Required. <Reference Wall Cleanout Access covers under MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES>

## FLOOR DRAINS

Copy paragraphs below and re-edit for each product.

Insert drawing designation for each product required. Use these designations on Drawings to identify each product.

Adjustable Floor Drains – 862 Series, 863

Post Pour Adjustable Floor Drains – 832, 833

Deck Flange Floor Drains – 822

Heavy-Duty Floor Drains - 860-i, 860-N, 862-i, 862-iN, 860-I,

Extra-Heavy-Duty Floor Drains - 860-iX, 860-iNX,

### Cast-Iron Floor Drains <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [832-D Series] [832-5D Series] [832-9D Series] [833-D Series] [833-5D Series] [833 Series] [833-5 Series] [862 Series] [863-R Series] [863-Q Series] [863-RYD Series] [863-QYD Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### Polymer Floor Drains <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [832-A Series] [832-P Series] [832-5A Series] [832-5P Series] [833-A Series] [833-P Series] [833-5A Series] [833-5P Series] [841-ANR Series] [841-PNR Series] [841-9PNR Series] [841-ANQ Series] [841-PNQ Series] [841-ASR Series] [841-PSR Series] [841-AiR Series] [841-PiR Series] [842-AR Series] [842-PR Series] [842-AQ Series] [842-PQ Series] [842-Ai Series] [842-Pi Series] [863-3R Series] [863-4R Series] [863-3Q Series] [863-4Q Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### Cast Iron Deck Flange Floor Drains <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [822-MDR Series] [822-MDQ Series] [822-MFDR Series] [822-MFDQ Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### Polymer Deck Flange Floor Drains <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [822-MAR Series] [822-MPR Series] [822-MAQ Series] [822-MPQ Series] [822-MFAR Series] [822-MFPR Series] [822-MFAQ Series] [822-MFPQ Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### Floor Drain Description:

#### Standard: ASME A112.6.3

#### Floor Drain Body:

##### Pattern: Post Pour Adjustable Floor Drain.

##### Body Material: [Cast Iron] [ABS] [PVC].

##### Coring Sleeve: [Cast Iron] [ABS] [PVC].

Above-Grade Clamping Device in first subparagraph below is usually used in applications with water proofing membranes.

##### Clamping Device: [Above-Grade Weep Holes Required] [Not Required].

##### Connection Type: [No Hub] [Push Joint] [Push-joint to fit Sch. 40 ABS/PVC].

##### Connection Size: Same as connected drainage piping.

#### Floor Drain Top Strainer:

##### Top Strainer Material: [Ductile Iron] [Nickel Bronze] [Stainless Steel].

##### Top Strainer Shape: [Round] [Square].

##### Top Strainer Type: [Standard] [Extended Rim] [Hinged] [Recessed Terrazzo/Tile].

##### Dimensions of Top Strainer: [3.5 inch] [4 inch] [4.25 inch] [4.5 inch] [5 inch] [6 inch] [7 inch] [8 inch].

##### Top Loading Classification: [Light Duty] [Medium Duty] [Heavy Duty] [Extra Heavy-Duty].

##### Drain Options: Vandel Proof: [Required] [Not Required].

#### Floor Drain Options:

##### Construction Cover: Required.

##### Locating Bristle: Required.

##### Coating on Interior and Exposed Exterior Surfaces: [Acid-resistant epoxy] [Not required].

##### Sediment Bucket or Debris Basket: [Required] [Not required].

##### Extension: [Required] [Not Required].

#### Floor Drain Accessories:

##### Trap Seal: [Required] [Not required] reference section MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES.

##### Drain Anchor: [Required] [Not required] reference section MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES.

##### Drain Funnel: [Required] [Not required] reference section MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES.

P-Trap: [Required] [Not required] reference section MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES.

##### Trap Primer: [Required] [Not required] reference section

##### Backwater Valve: [Required] [Not required] reference section MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES.

### Sanitary Floor Drains

#### Stainless-Steel Floor Drains <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [832-SS Series] [860-SS Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Sanitary Floor Drain Description:

##### Standard: ASME A112.6.3

##### Floor Drain Body:

##### Pattern: Post Pour Adjustable Floor Drain.

###### Body Material: Stainless Steel.

###### Coring Sleeve: Stainless Steel.

Above-Grade Clamping Device in first subparagraph below is usually used in applications with water proofing membranes.

###### Clamping Device: [Above-Grade Weep Holes Required] [Not Required].

###### Connection Type: [No Hub] [Push Joint].

###### Connection Size: Same as connected drainage piping.

##### Sanitary Floor Drain Top Strainer:

###### Top Strainer Material: Stainless Steel.

###### Top Strainer Shape: [Round] [Square].

###### Top Strainer Type: [Standard] [Extended Rim] [Hinged].

###### Dimensions of Top Strainer: [5 inch] [6 inch].

###### Top Loading Classification: [Light] [Medium] Duty.

###### Drain Options: Vandel Proof: [Required] [Not Required].

##### Sanitary Floor Drain Options:

###### Construction Cover: Required.

###### Locating Bristle: Required.

###### Sediment Bucket or Debris Basket: [Required] [Not required].

##### Sanitary Floor Drain Accessories:

###### Trap Seal: [Required] [Not required] reference section MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES.

## Shower Drains

### Cast Iron Shower Drains <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [821-CP Series] [821-QCP Series] [821-NS Series] [821-FS Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### Polymer Shower Drains <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [820 Series] [821-2A Series] [821-2P Series] [821-200A Series] [821-200P Series] [821-270A Series] [821-270P Series] [822-SA Series] [822-SP Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### Shower Drain Description:

#### Standard: ASME A112.18.2/ CSA B125.2

#### Shower Drain Body:

##### Body Material: [ABS] [PVC].

##### Clamping Device: [Required] [Not Required].

##### Connection Type: [ABS] [PVC]

##### Connection Size: Same as connected drainage piping.

#### Shower Drain Top Strainer:

##### Top Strainer Shape: [Round] [Square].

##### Dimensions of Top Strainer: [3.5 inch] [4 inch] [4.25 inch] [4.5 inch] [5 inch] [6 inch].

##### Top Strainer Type: [Standard] [Tile Insert].

##### Top Strainer Material: [Polished Brass] [Nickel Bronze] [Satin Nickel] [Oil Rubbed Bronze] [Stainless Steel] [Polished Stainless] [Matt Stainless] [Chrome] [Matt Black] [White Enamel].

##### Top Loading Classification: Light Duty.

## LINEAR SHOWER DRAINS

### LINEAR SHOWER DRAIN <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to require a specific product or a comparable product from manufacturers listed.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [823-TX Series] [823-T2 Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Linear Shower Drain Description:

##### Standard: ASME A112.18.2/CSA B125.2.

##### Drain Body Material: [ABS] [PVC].

##### Channel Material: ABS.

##### Clamping Collar: Required.

##### Channel Width: 3-3/8 inch.

##### Channel Length: [26 inch] [30 inch] [36 inch] [40 inch] [48 inch] [60 inch].

##### Channel Depth: 1.5 inch to 3 inch adjustable.

##### Grate Material & Finish: Brushed Stainless Steel.

##### Grate Pattern: [Square Hole] [wedge Wire] [Tile Insert].

##### Outlet Type: [PVC] [ABS].

##### Outlet Size: 2 inch.

##### ADA: Required.

##### Trap Seal: [Required] [Not Required].

### LOW PROFILE LINEAR SHOWER DRAIN <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to require a specific product or a comparable product from manufacturers listed.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [823-P Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Low Profile Linear Shower Drain Description:

##### Standard: ANSI A108 and TCNA guidelines.

##### Channel Material: PVC.

##### Clamping Collar: Required.

##### Channel Width: 4.5 inch.

##### Channel Length: [24 inch] [32 inch] [40 inch] [60 inch].

##### Channel Depth: 1.25 inch or less.

##### Grate Material & Finish: Brushed Stainless Steel.

##### Grate Pattern: [Slotted] [Tile Insert].

##### Outlet Type: PVC Sch. 40 Hub, offset.

##### Outlet Size: 2 inch.

##### ADA: Required.

##### Trap Seal: [Required] [Not Required].

## Floor Sinks

### Cast-Iron Floor Sinks <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to require a specific product or a comparable product from manufacturers listed.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [860 Series] [861-Q226 Series] [861-R228 Series] [861-Q228 Series] [861-Q221 Series] [861-R286 Series] [861-Q286 Series] [864 Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### Stainless Steel Floor Sinks <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to require a specific product or a comparable product from manufacturers listed.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [861-SQ228 Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### Polymer Floor Sinks <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to require a specific product or a comparable product from manufacturers listed.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [860-WP] [861-P] [864-WP]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### Floor Sink Description:

#### Standard: ASME A112.6.7.

#### Floor Sink Body:

##### Body Material: [Cast Iron with Porcelain Enamel Coated Interior] [Stainless Steel] [PVC].

##### Body Shape: [Round] [Square]

Anchor Flange with Seepage Holes: [Required] [Not Required].

Outlet Connection: No-hub.

#### Floor Sink Top Grate:

##### Dimensions of Top Grate: [8 inch] [12-inch X 12- inch].

##### Top Grate: [No Grate] [Loose] [Hinged] [3/4 Grate].

##### Top of Body and Grate Finish: [Nickel bronze] [Acid-resistant enamel] [Stainless Steel].

##### Top Loading Classification: No traffic.

#### Floor Sink Options:

##### Sediment Bucket: [Required] [Not Required].

##### Internal Strainer: Dome.

#### Floor Sink Accessories:

##### Trap Seal: [Required] [Not required] reference section MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES.

##### Funnel: [Required] [Not Required] reference section MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES.

## THROUGH-PENETRATION FIRESTOP ASSEMBLIES

Copy paragraph below and re-edit for each product.

Insert drawing designation for each product required. Use these designations on Drawings to identify each product.

### Through-Penetration Firestop Assemblies <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

##### Basis-of-Design Product: Subject to compliance with requirements, provide <Insert Specified Manufacture>; <Insert product name or designation>:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Standard: UL 1479 assembly of sleeve and stack fitting with firestopping plug.

#### Size: Same as connected soil, waste, or vent stack.

#### Sleeve: Molded PVC plastic, of length to match slab thickness and with integral nailing flange on one end for installation in cast-in-place concrete slabs.

Fitting in subparagraph below is for use with plastic stacks.

#### Stack Fitting: ASTM A 48/A 48M, gray-iron, hubless-pattern, wye branch with neoprene O-ring at base and gray-iron plug in thermal-release harness. Include PVC protective cap for plug.

Coating in subparagraph below is for use with corrosion-resistant plastic stacks.

#### Special Coating: Corrosion resistant on interior of fittings.

## MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES

Copy paragraphs below and re-edit for each product.

Insert drawing designation for each product required. Use these designations on Drawings to identify each product.

### Wall Cleanout Access Covers: <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [870-PK1 Series] [870 Series with 874-4] [870-9 Series with 874-4] [870-B Series] [871 Series with 874-4W] [872 Series with 874-4C] [871-1 Series with 874-6W] [872-1 Series with 874-6C] [873 Series] [971 Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Wall Cleanout Access Cover Description:

##### Wall Access Type: [ABS Flat Cover with Screw] [ABS Raised Cover with Screw] [ABS Access Panel] [Stainless Steel Access panel] [Stainless Steel Cover with Screw] [Chrome Plated Cover with Screw].

##### Wall Access Shape: [Round] [Square]

##### Wall Access Gauge: [20] [16] <Delete if not needed>

##### Wall Access Dimensions: [3 inch] [4 inch] [5 inch] [6 inch] [8 inch] [10 inch] [12 inch] [7-inch X 7-inch] [9-inch X 9-inch].

##### Wall Access Finish: [Stainless Steel] [Nickel Bronze] [White ABS] [Chrome Plated ABS]

##### Wall Access Vandel Proof: Required.

### Open Drains <Insert drawing designation if any>:

#### Description: Shop or field fabricate from ASTM A 74, Service class, hub-and-spigot, cast-iron, soil-pipe fittings. Include P-trap, hub-and-spigot riser section; and where required, increaser fitting joined with ASTM C 564, rubber gaskets.

#### Size: Same as connected waste piping [ with increaser fitting of size indicated].

### Funnel: <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [863-FACQ] [863-FNCQ] [863-FNOCQ] with screws:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Drain Funnel Description:

##### Funnel Material: [Aluminum] [ Nickel Bronze].

##### Funnel Shape: [Round] [Oval]

##### Funnel Dimensions: [4 inch] [4-inch X 9 inch]

### Drain Anchor: <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

Drain Anchor in first subparagraph below is usually used only with 2”, 3”, 4” & 6” (No Hub or Push Joint) drains.

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [836 Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

##### Drain Anchor Description:

###### Drain Anchor Material: Ductile Iron.

###### Connection Size: Same as connected drainage piping.

###### Connection Type: No-Hub.

### Trap-Primer: <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [695 Series] [695-D Series] [695-Y] [695-E Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

##### Trap Primer Description:

###### Trap-Primer Type: [Mechanical] [Electrical]

###### Trap-Primer Mechanical Splitter: [Wye] [Two Branch] [Three Branch] [Four Branch] [Two .25-inch MSWT, Two Spun-Closed] [Two .5-inch FSWT, Two Spun-Closed] [Four .5-inch FIP with Two Plugs]

###### Trap-Primer Electronic Splitter: [5 Port] [10 Port] [15 Port] [20 Port] [30 Port]

### P-Trap: <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

##### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [800-P Series] [800-PBW Series]:

###### Substitutions: [Under provisions of Division 01.] [Not permitted.]

##### P-Trap Description:

###### Standard: ASME A112.6.3.

###### P-Trap Material: Polymer.

###### P-Trap Pattern: Standard P-trap.

###### Top Grate: [Polypropylene] [Nickel Bronze] [Stainless Steel] [Ductile Iron].

###### Top Grate Shape: [Round] [Square].

###### Load Rating: Light Duty.

###### Connection Size: Same as connected drainage piping.

###### P-Trap Features: Cleanout and trap-seal primer valve drain connection.

### Trap Seal: <Insert drawing designation if any>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [835 Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Trap Seal Description:

##### Description: Cast iron, with threaded inlet and threaded or spigot outlet, and trap-seal primer valve connection.

###### Standard: [ASSE 1072].

###### Size: Same as floor drain outlet with NPS 1/2 (DN 15) side inlet.

### Sleeve Flashing Device <Insert drawing designation if any>:

#### Description: Manufactured, cast-iron fitting, with clamping device, that forms sleeve for pipe floor penetrations of floor membrane. Include galvanized-steel pipe extension in top of fitting that will extend [1 inch (25 mm)] [2 inches (51 mm)] <Insert dimension> above finished floor and galvanized-steel pipe extension in bottom of fitting that will extend through floor slab.

#### Size: As required for close fit to riser or stack piping.

### Stack Flashing Fittings <Insert drawing designation if any>:

#### Description: Counterflashing-type, cast-iron fitting, with bottom recess for terminating roof membrane, and with threaded or hub top for extending vent pipe.

#### Size: Same as connected stack vent or vent stack.

### Vent Caps <Insert drawing designation if any>:

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [868-V234 Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Description: Cast-iron body with threaded or hub inlet and vandal-proof design. Include vented hood and setscrews to secure to vent pipe.

#### Size: Same as connected stack vent or vent stack.

### Frost-Resistant Vent Terminals <Insert drawing designation if any>:

#### Description: Manufactured or shop-fabricated assembly constructed of copper, lead-coated copper, or galvanized steel.

#### Design: To provide 1-inch (25-mm) enclosed air space between outside of pipe and inside of flashing collar extension, with counterflashing.

# EXECUTION

## INSTALLATION

In this article, retain only those sanitary piping specialties that are specified in Part 2. Additional instructions may be required for special applications. Show locations of specialties in plans, details, and schematics on Drawings.

### Install backwater valves in building drain piping. For interior installation, provide cleanout deck plate flush with floor and centered over backwater valve cover, and of adequate size to remove valve cover for servicing.

### Install cleanouts in aboveground piping and building drain piping according to the following, unless otherwise indicated:

#### Size same as drainage piping up to NPS 4 (DN 100). Use NPS 4 (DN 100) for larger drainage piping unless larger cleanout is indicated.

#### Locate at each change in direction of piping greater than 45 degrees.

#### Locate at minimum intervals of 50 feet (15 m) for piping NPS 4 (DN 100) and smaller and 100 feet (30 m) for larger piping.

#### Locate at base of each vertical soil and waste stack.

### For floor cleanouts for piping below floors, install cleanout deck plates with top flush with finished floor.

### For cleanouts located in concealed piping, install cleanout wall access covers, of types indicated, with frame and cover flush with finished wall.

### Install floor drains at low points of surface areas to be drained. Set grates of drains flush with finished floor, unless otherwise indicated.

Coordinate four subparagraphs and associated subparagraphs below with Drawings.

#### Position floor drains for easy access and maintenance.

#### Set floor drains below elevation of surrounding finished floor to allow floor drainage. Set with grates depressed according to the following drainage area radii:

##### Radius, 30 Inches (750 mm) or Less: Equivalent to 1 percent slope, but not less than 1/4-inch (6.35-mm) total depression.

##### Radius, 30 to 60 Inches (750 to 1500 mm): Equivalent to 1 percent slope.

##### Radius, 60 Inches (1500 mm) or Larger: Equivalent to 1 percent slope, but not greater than 1-inch (25-mm) total depression.

#### Install floor-drain flashing collar or flange so no leakage occurs between drain and adjoining flooring. Maintain integrity of waterproof membranes where penetrated.

#### Install individual traps for floor drains connected to sanitary building drain, unless otherwise indicated.

### Install trench drains at low points of surface areas to be drained. Set grates of drains flush with finished surface, unless otherwise indicated.

### Install traps on plumbing specialty drain outlets. Omit traps on indirect wastes unless trap is indicated.

## CONNECTIONS

Coordinate piping installations and specialty arrangements with schematics on Drawings and with requirements specified in piping systems. If Drawings are explicit enough, these requirements may be reduced or omitted.

### Comply with requirements in Section 221316 "Sanitary Waste and Vent Piping" for piping installation requirements. Drawings indicate general arrangement of piping, fittings, and specialties.

### Install piping adjacent to equipment to allow service and maintenance.

## FIELD QUALITY CONTROL

### Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.

### Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

## PROTECTION

### Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.

### Place plugs in ends of uncompleted piping at end of each day or when work stops.

# END OF SECTION 221300