



SECTION 07720
ROOF DRAIN AND VENT ACCESSORIES

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Roof Drains.
- B. Roof Vents
- C. Roof Security Vent Flashing
- D. Roof Penetration Flashings

1.2 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry.
- B. Section 07260 - Air Barriers.
- C. Division 07 - Adjacent Roofing Systems.
- D. Section 07620 - Sheet Metal Flashing and Trim.
- E. Section 07920 - Joint Sealants.
- F. Section 15145 - Plumbing Piping.

1.3 REFERENCES

- A. ASME A112.6.4 - Roof, Deck, and Balcony Drains.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, and accessories.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 50 years manufacturing similar products.

- B. Installer Qualifications: Minimum 2 years installing similar products.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in manufacturer's unopened packaging with labels intact and legible until ready for installation.
- B. Store off the ground and under cover. Protect internal parts, ends, inlets, outlets, and specialties against corrosion, dirt, and damage.

1.7 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Marathon Roofing Products Inc., which is located at: 3310 Benzing Rd.; Orchard Park, NY 14127-1538; Toll Free Tel: 800-828-8424; Tel: 716-332-7673; Fax: 716-332-7676; Email: [request info \(mrp@marathondrains.com\)](mailto:request info (mrp@marathondrains.com)); Web: www.marathondrains.com | www.mrpsupports.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 ROOF DRAINS

- A. Aluminator Drain: All aluminum retrofit drain with aluminum body
 1. Construction:
 - a. Heavy duty spun aluminum (.125 gauge).
 - b. Heavy duty aluminum ring that is 1-1/4 inches tall
 - 1) 12 scallops to maximize drainage
 - 2) Seep holes on bottom of ring and bolt in place
 - 3) 3 bolt aluminum strainer that is 10 inches by 6 inches tall
 - c. Standard with ProSeal rubber seal that prevents water back-up issues
 - d. Larger stud diameter for increased strength of hardware
 - e. 16 inch flange diameter
 - f. 12 inch drain outlet length
 2. Drain Size:
 - a. 2 inch - Fits pipe I.D 1-3/4 inches to 2-1/4 inches, with expanding tape for seal.
 - b. 3 inch - Fits pipe I.D 2-7/8 inches to 3-1/4 inches.
 - c. 4 inch - Fits pipe I.D 3-7/8 inches to 4-1/4 inches.
 - d. 5 inch - Fits pipe I.D 4-7/8 inches to 5-1/4 inches.
 - e. 6 inch - Fits pipe I.D 5-7/8 inches to 6-1/4 inches.
 - f. 8 inch - Fits pipe I.D 7-3/4 inches to 8-1/4 inches, with expanding tape for seal.
 3. Options:
 - a. 2 inch low profile strainer
 - b. 2 inch high overflow

- c. 4 inch high overflow
- d. TPO flange coating
- e. PVC flange coating
- f. Asphalt primed

B. Aluminum Fast Flow Drain (retrofit)

1. Construction:
 - a. Heavy gauge (.125) spun aluminum
 - b. New PVC clamping ring style for single-ply systems, cast iron or aluminum rings optional
 - c. Bolt in place PVC strainer dome standard, cast iron or aluminum strainers optional
2. Fast Flow Drain: Fits existing drain size.
 - a. FF175: 1-3/4 inch to 2-1/4 inch
 - b. FF275: 2-3/4 inch to 3-1/4 inch
 - c. FF375: 3-3/4 inch to 4-1/4 inch
 - d. FF475: 4-3/4 inch to 5-1/4 inch
 - e. FF575: 5-3/4 inch to 6-1/4 inch
3. Fast Flow Drain with clamping ring: Fits existing drain size.
 - a. FF175CR: 1-3/4 inch to 2-1/4 inch
 - b. FF275CR: 2-3/4 inch to 3-1/4 inch
 - c. FF375CR: 3-3/4 inch to 4-1/4 inch
 - d. FF475CR: 4-3/4 inch to 5-1/4 inch
 - e. FF575CR: 5-3/4 inch to 6-1/4 inch
4. Fast Flow Drain with expanding anti-back-up tape: Fits existing drain size.
 - a. FF175-S: 1-3/4 inch to 2-1/4 inch
 - b. FF275-S: 2-3/4 inch to 3-1/4 inch
 - c. FF375-S: 3-3/4 inch to 4-1/4 inch
 - d. FF475-S: 4-3/4 inch to 5-1/4 inch
 - e. FF575-S: 5-3/4 inch to 6-1/4 inch
5. Fast Flow Drain with expanding anti-back-up tape and clamping ring: Fits existing drain size.
 - a. FF175-SCR: 1-3/4 inch to 2-1/4 inch
 - b. FF275-SCR: 2-3/4 inch to 3-1/4 inch
 - c. FF375-SCR: 3-3/4 inch to 4-1/4 inch
 - d. FF475-SCR: 4-3/4 inch to 5-1/4 inch
 - e. FF575-SCR: 5-3/4 inch to 6-1/4 inch
6. Connection Options:
 - a. Straight rubber coupling
 - b. XJ rubber coupling
 - c. Bushing reducers
 - d. FURNCO 90 degree elbow
7. Flange Options
 - a. Asphalt Primed finish
 - b. PVC coated
 - c. TPO coated
8. Strainer Options
 - a. 8 inch aluminum strainer
 - b. 8 inch cast iron strainer
 - c. 8 inch plastic strainer
 - d. 10 inch cast iron strainer
 - e. 10 inch aluminum strainer
 - f. 10 inch plastic strainer

C. Aluminum Fast Flow Drain (direct connect)

1. Construction:

- a. Heavy gauge (.125) spun aluminum
 - b. New PVC clamping ring style for single-ply systems, cast iron or aluminum rings optional
 - c. Bolt in place PVC strainer dome standard, cast iron or aluminum strainers optional
2. Fast Flow Size:
 - a. FF200: 2 inch
 - b. FF300: 3 inch
 - c. FF400: 4 inch
 3. Fast Flow Size with clamping ring:
 - a. FF200CR: 2 inch
 - b. FF300CR: 3 inch
 - c. FF400CR: 4 inch
 4. Connection Options:
 - a. Straight rubber coupling
 - b. XJ rubber coupling
 - c. Bushing reducers
 - d. FURNCO 90 degree elbow
 5. Flange Options
 - a. Asphalt Primed finish
 - b. PVC coated
 - c. TPO coated
 6. Strainer Options
 - a. 8 inch aluminum strainer
 - b. 8 inch cast iron strainer
 - c. 8 inch plastic strainer
 - d. 10 inch cast iron strainer
 - e. 10 inch aluminum strainer
 - f. 10 inch plastic strainer
- D. CENTURY Series Copper Roof Drain
1. Construction:
 - a. All copper drain
 - b. 9 inch outlet length standard (longer lengths available)
 - c. Polyethylene clamping ring standard (metal or aluminum ring optional)
 2. Century Straight Style: Fits drain pipe size
 - a. CS29: 2 inch drain size, 14 inch flange
 - b. CS39: 3 inch drain size, 14 inch flange
 - c. CS49: 4 inch drain size, 14 inch flange
 3. Century Straight Style / Clamping Ring: Fits drain pipe size
 - a. CS29 CR(E): 2 inch drain size, 14 inch flange
 - b. CS39 CR(E): 3 inch drain size, 14 inch flange
 - c. CS49 CR(E): 4 inch drain size, 14 inch flange
 4. Century Straight Style: Fits drain pipe size
 - a. CPS29: 2 inch drain size, 18 inch flange
 - b. CPS39: 3 inch drain size, 18 inch flange
 - c. CPS49: 4 inch drain size, 18 inch flange
 - d. CPS69: 6 inch drain size, 18 inch flange
 5. Century Straight Style / Clamping Ring: Fits drain pipe size
 - a. CPS29 CR(E): 2 inch drain size, 18 inch flange
 - b. CPS39 CR(E): 3 inch drain size, 18 inch flange
 - c. CPS49 CR(E): 4 inch drain size, 18 inch flange
 - d. CPS69 CR(E): 6 inch drain size, 18 inch flange
 6. Connection Options:
 - a. Straight rubber coupling
 - b. XJ rubber coupling

- c. FURNCO 90 degree elbow
 - 7. Flange Options
 - a. Asphalt primed finish
 - b. PVC coated
 - c. TPO coated
 - 8. Strainer Options
 - a. 10 inch High density polyethylene
 - b. 10 inch cast iron strainer
 - c. 10 inch aluminum strainer
- E. COPPERTITE Roof Drain
 - 1. Construction:
 - a. Copper retro-fit drain
 - b. 2 inch wide expandable sealant tape designed to expand approximately an inch to prevent water back-ups or proseal
 - c. 9 inch outlet length standard (longer lengths available)
 - d. Polyethylene clamping ring standard (metal or aluminum ring optional)
 - 2. Coppertight Straight Style: Fits drain pipe size
 - a. CTS29: 1-3/4 inch to 2-1/4 inch, 14 inch flange
 - b. CTS39: 2-7/8 inch to 3-1/4 inch, 14 inch flange
 - c. CTS49: 3-7/8 inch to 4-1/4 inch, 14 inch flange
 - d. CTS59: 4-7/8 inch to 5-1/4 inch, 18 inch flange
 - e. CTS69: 5-7/8 inch to 6-1/4 inch, 18 inch flange
 - f. CTS89: 7-3/4 inch to 8-1/4 inch, 18 inch flange
 - g. CTS109: 9-7/8 inch to 10-1/4 inch, 18 inch flange
 - 3. Coppertight Straight Style / Clamping Ring: Fits drain pipe size
 - a. CTS29CR: 1-3/4 inch to 2-1/4 inch, 14 inch flange
 - b. CTS39CR: 2-7/8 inch to 3-1/4 inch, 14 inch flange
 - c. CTS49CR: 3-7/8 inch to 4-1/4 inch, 14 inch flange
 - d. CTS59CR: 4-7/8 inch to 5-1/4 inch, 18 inch flange
 - e. CTS69CR: 5-7/8 inch to 6-1/4 inch, 18 inch flange
 - f. CTS89CR: 7-3/4 inch to 8-1/4 inch, 18 inch flange
 - g. CTS109: 9-7/8 inch to 10-1/4 inch, 18 inch flange
 - 4. Flange Options
 - a. Asphalt primed finish
 - b. PVC coated
 - c. TPO coated
 - 5. Strainer Options
 - a. High density polyethylene
 - b. Cast iron strainer
- F. PROLINER series drain: Retrofit roof drain.
 - 1. Construction:
 - a. Provides multiple seals for water back-up prevention
 - b. Polyethylene clamping ring standard (metal or aluminum ring optional)
 - 2. Proliner Straight Style: Fits drain pipe size
 - a. PS2: 1-7/8 inch to 2-1/4 inch drain size, 18 inch flange
 - b. PS3: 2-7/8 inch to 3-1/4 inch drain size, 18 inch flange
 - c. PS4: 3-7/8 inch to 4-1/4 inch drain size, 18 inch flange
 - d. PS5: 4-7/8 inch to 5-1/4 inch drain size, 18 inch flange
 - e. PS6: 5-7/8 inch to 6-1/4 inch drain size, 18 inch flange
 - 3. Proliner Straight Style: Fits drain non-standard pipe size
 - a. PS200: 2-1/4 inch to 2-5/8 inch drain size, 18 inch flange
 - b. PS300: 3-1/4 inch to 3-5/8 inch drain size, 18 inch flange
 - c. PS400: 4-1/4 inch to 4-5/8 inch drain size, 18 inch flange
 - d. PS500: 5-1/4 inch to 5-5/8 inch drain size, 18 inch flange

4. Proliner Straight Style / Clamping Ring: Fits drain pipe size
 - a. PS2CR: 1-7/8 inch to 2-1/4 inch drain size, 18 inch flange
 - b. PS3CR: 2-7/8 inch to 3-1/4 inch drain size, 18 inch flange
 - c. PS4CR: 3-7/8 inch to 4-1/4 inch drain size, 18 inch flange
 - d. PS5CR: 4-7/8 inch to 5-1/4 inch drain size, 18 inch flange
 - e. PS6CR: 5-7/8 inch to 6-1/4 inch drain size, 18 inch flange
 5. Proliner Straight Style / Clamping Ring: Fits drain non-standard pipe size
 - a. PS200CR: 2-1/4 inch to 2-5/8 inch drain size, 18 inch flange
 - b. PS300CR: 3-1/4 inch to 3-5/8 inch drain size, 18 inch flange
 - c. PS400CR: 4-1/4 inch to 4-5/8 inch drain size, 18 inch flange
 - d. PS500CR: 5-1/4 inch to 5-5/8 inch drain size, 18 inch flange
 6. Flange Options
 - a. Asphalt primed finish
 - b. PVC coated
 - c. TPO coated
 7. Strainer Options
 - a. High density polyethylene
 - b. Cast iron strainer
 - c. Cast aluminum strainer
- G. PROSEAL Copper Drain: Retrofit roof drain.
1. Construction:
 - a. Supplied with ProSeal mechanical seal for water back-up prevention.
 2. ProSeal Straight: Fits drain pipe size.
 - a. ProSeal (STR) 3: 3 inch
 - b. ProSeal (STR) 4: 4 inch
 - c. ProSeal (STR) 5: 5 inch
 - d. ProSeal (STR) 6: 6 inch
 3. Outlets: Available in variable lengths up to 15 inches.
 4. Strainer
 - a. 10 inch high density polyethylene
 - b. 10 inch cast iron
 - c. 10 inch aluminum
 5. Flange Options
 - a. Asphalt primed finish
 - b. PVC coated
 - c. TPO coated
- H. Side Outlet Copper Drain
1. Construction
 - a. Copper 90 degree outlet.
 - b. Direct connect
 2. Style:
 - a. Standard with dome
 - b. Promenade style deck drain with low profile grate.
 3. Size:
 - a. 2 inch
 - b. 3 inch
 - c. 4 inch
 4. Coupling Options
 - a. Straight rubber
 - b. Fernco 90 degree style
 - c. Straight Reducer style
 5. Options
 - a. Clamping rings
 - b. PVC coated

- c. TPO coated
 - d. Asphalt primed finish
 - e. Metal drain guards
 - 6. Strainer Options
 - a. High density polyethylene
 - b. Cast iron strainer
 - c. Aluminum strainer
- I. ENPOCO/URLD PVC Drain: Fully assembled kit
1. Construction:
 - a. RD1, PVC, ABS, or cast iron roof drain with aluminum alloy flashing clamp, and secured poly or cast iron dome.
 2. Pipe Size:
 - a. RD1-2PVC: 2 inch PVC
 - b. RD1-2ABS: 2 inch ABS
 - c. RD1-2NH: 2 inch No Hub
 - d. RD1-3PVC: 3 inch PVC
 - e. RD1-3ABS: 3 inch ABS
 - f. RD1-3NH: 3 inch No Hub
 - g. RD1-4PVC: 4 inch PVC
 - h. RD1-4ABS: 4 inch ABS
 - i. RD1-4NH: 4 inch No Hub
 - j. RD1-6PVC: 6 inch PVC
 - k. RD1-6ABS: 6 inch ABS
 - l. RD1-6NH: 6 inch No Hub
 3. Options
 - a. -D Deck Clamp
 - b. -E Adjustable Extension
 - c. -GG SS Gravel Guard
 - d. -A Aluminum Dome
 - e. -P Sump Receiver
 - f. -R 2 inch External Overflow Dam
 - g. -VP Vandal Proof Screws
 - h. -X Flotrol Device
 - i. -2DP Poly Dome Dome Only
 - j. -2D Cast Iron Dome Only
- J. Cast Pak Drain - RD1
1. Construction:
 - a. Epoxy coated cast iron body, no hub outlet
 - b. Epoxy coated aluminum clamping ring with gravel stop.
 - c. Grooved for positive drainage on smooth surfaced roofs
 - d. Aluminum underdeck clamp fastens drain securely to deck
 - e. Flexible rubber coupling connects to PVC, ABS or cast iron pipe
 - f. Molded polyethylene dome strainer bolts securely to clamping ring
 2. Drain Pipe Size:
 - a. 3 inch, dome size 10.25 inch, dome height 5 inch, tail depth 3.25 inch.
 - b. 4 inch, dome size 10.25 inch, dome height 5 inch, tail depth 3.25 inch.
 - c. 6 inch, dome size 15.625 inch, dome height 8 inch, tail depth 5.5 inch by 12 inch strainer.
 - d. 8 inch, dome size 15.625 inch, dome height 8 inch, tail depth 5.5 inch by 12 inch strainer.
 - e. 10 inch, dome size 15.625 inch, dome height 8 inch, tail depth 5.5 inch by 12 inch strainer.
 3. Overflow option available
 4. Options

- a. D Under Deck Clamp
 - b. E Extension Flange
 - c. R 2 inch External Overflow Dam
 - d. M Cast Iron Dome
 - e. A Aluminum Dome
 - f. P Bearing Pan
 - g. W Waterproofing Flange
 - h. X Flotrol Device
- K. Extra Large Body Cast Iron Drain
- 1. 4 bolt pattern ring
 - 2. Ballast guard available in many sizes
 - 3. Pipe Size:
 - a. RD-300-2: 2 inch
 - b. RD-300-3: 2 inch
 - c. RD-300-4: 2 inch
 - d. RD-300-5: 5 inch
 - e. RD-300-6: 6 inch
 - f. RD-300-8: 8 inch
 - g. RD-300-10: 10 inch
 - 4. Options
 - a. -13 Galvanized Body and Clamp
 - b. -B Sump Receiver
 - c. -D Underdeck Clamp
 - d. -F Adjustable Extension Flange
 - e. -GSS Stainless Steel Ballast Guard
 - f. -K Ductile Iron Dome
 - g. -K13 Galvanized Dome
 - h. -K40 Ductile Iron Low Dome (4 inches high)
 - i. -K80 Aluminum Dome
 - j. -K81 Rough Bronze Dome
 - k. -K83 SS Mesh Covered Dome
 - l. -L Vandal Proof Dome
 - m. -R 2 inch External Water Dam
 - n. -W Adjustable Internal Water Dam
 - o. -85 IRMA Perf. SS Extension
- L. Extra Large Body Cast Iron Drain - RD100CP
- 1. Construction:
 - a. Epoxy coated cast iron promenade roof drain with flashing clamp with integral gravel stop, 12-3/4 inch by 12-3/4 inch square epoxy coated ductile iron promenade top, and no hub (standard) outlet.
 - 2. Pipe Size:
 - a. RD-100-2: 2 inch
 - b. RD-100-3: 3 inch
 - c. RD-100-4: 4 inch
 - d. RD-100-5: 5 inch
 - e. RD-100-6: 6 inch
 - 3. Options
 - a. -1 All Nickel Bronze Top
 - b. -6 Vandal Proof Top
 - c. -9 Hinged Grate
 - d. -12 Galvanized Top
 - e. -13 Galvanized Body and Flashing Clamp
 - f. -B Sump Receiver
 - g. -D Underdeck Clamp

- h. -F Adjustable Extension Flange
 - i. -SO Side Outlet (2, 3,4 inch Only)
 - 4. Optional Body Material
 - a. -60 PVC Body with Socket Outlet
 - b. -61 ABS Body with Socket Outlet

- M. Small Body Cast Iron Drain - RD200CP
 - 1. Construction:
 - a. Epoxy coated cast iron promenade roof drain with flashing clamp with integral gravel stop, 8 inch by 8 inch square epoxy coated ductile iron promenade top, and no hub (standard) outlet.
 - 2. Pipe Size:
 - a. RD-200-2: 2 inch
 - b. RD-200-3: 3 inch
 - c. RD-200-4: 4 inch
 - 3. Outlet Type:
 - a. NH: No Hub
 - b. P: Push On
 - c. T: Threaded Outlet
 - d. X: Inside Caulk
 - 4. Options
 - a. -1 All Nickel Bronze Top
 - b. -6 Vandal Proof Top
 - c. -9 Hinged Grate
 - d. -12 Galvanized Top
 - e. -13 Galvanized Body and Flashing Clamp
 - f. -B Sump Receiver
 - g. -D Underdeck Clamp
 - h. -F Adjustable Extension Flange
 - i. -SO Side Outlet (2, 3,4 inch Only)
 - 5. Optional Body Material
 - a. -60 PVC Body with Socket Outlet
 - b. -61 ABS Body with Socket Outlet

- N. Side Outlet Cast Iron Balcony Drain - RD230
 - 1. Construction:
 - a. Epoxy coated cast iron side outlet balcony drain with flashing clamp, cast nickel bronze strainer and IPS threaded outlet.
 - 2. Pipe Size:
 - a. RD-230-2: 2 inch
 - b. RD-230-3: 3 inch
 - c. RD-230-4: 4 inch
 - 3. Options
 - a. -6 Vandal Proof Top
 - b. -13 Galvanized Body and Flashing Clamp
 - c. -14 Flat Grate
 - d. -83 Stainless Steel Screened Dome

- O. Cast Iron Balcony Drain - RD240
 - 1. Construction:
 - a. Epoxy coated cast iron bottom outlet balcony drain with flashing clamp, cast nickel bronze strainer and IPS threaded outlet.
 - 2. Pipe Size:
 - a. RD-240-2: 2 inch
 - b. RD-240-3: 2 inch
 - c. RD-240-4: 2 inch

3. Options
 - a. -6 Vandal Proof Top
 - b. -13 Galvanized Body and Flashing Clamp
 - c. -14 Flat Grate
 - d. -83 Stainless Steel Screened Dome
- P. One Piece Cast Iron Combination Drain - RD250
1. Construction:
 - a. Epoxy coated cast iron combination roof drain / overflow with deck flange, overflow standpipe, self locking cast iron dome, and no hub outlets
 2. Pipe Size:
 - a. RD-250-2: 2 inch
 - b. RD-250-3: 3 inch
 - c. RD-250-4: 4 inch
 3. Options
 - a. -6 Vandal Proof Top
 - b. -
- Q. Cast Iron Scupper Drain - RD270
1. Construction:
 - a. Epoxy coated cast iron scupper drain with flashing clamp, secured angle grate, and no hub (standard) outlet.
 2. Pipe Size:
 - a. RD-270-2: 2 inch
 - b. RD-270-3: 3 inch
 - c. RD-270-4: 4 inch
 3. Options
 - a. - A 45 Degree Outlet
 - b. -T Threaded Outlet
 - c. -1 Nickel Bronze Grate and Frame
 - d. -6 Vandal Proof Top
 - e. -13 Galvanized Body and Flashing Clamp
- R. One Piece Cast Iron Drain - RD280
1. Construction:
 - a. Cast iron roof drain with deck flange, drain body, flashing clamp with integral gravel guard, self locking cast iron dome, and no hub outlet.
 2. Pipe Size:
 - a. RD-280-2: 2 inch
 - b. RD-280-3: 3 inch
 - c. RD-280-4: 4 inch
 3. Options
 - a. -6 Vandal Proof Dome
 - b. -R 2 inch external water dam.
- S. One Piece Cast Iron Side Outlet Drain - RD280-SO
1. Construction:
 - a. Cast iron roof drain with deck flange, drain body, flashing clamp with integral gravel guard, self locking cast iron dome, and no hub outlet.
 2. Pipe Size:
 - a. RD-280-SO-2: 2 inch
 - b. RD-280-SO-3: 3 inch
 - c. RD-280-SO-4: 4 inch
 3. Options
 - a. -L Vandal Proof Dome
 - b. -R 2 inch external water dam.

- T. Extra Large Area Dual Overflow Cast Iron Roof Drain - RD700
 - 1. Construction:
 - a. Epoxy coated cast iron dual outlet roof drain / overflow combination with flashing clamp with integral gravel stop, 4 inch high internal overflow standpipe, secured ductile iron dome, and no hub outlets.
 - 2. Pipe Size:
 - a. RD-700-3: 3 inch
 - b. RD-700-4: 4 inch
 - c. RD-700-6: 6 inch
 - 3. Options
 - a. -B Sump Receiver
 - b. -D Underdeck Clamp
 - c. -F Adjustable Extension Flange
 - d. - L Vandal Proof Dome
 - e. - W2 2 inch Overflow
 - f. -13 Galvanized body and clamp

- U. Nickel Bronze Downspout Nozzle - RD940
 - 1. Construction:
 - a. Cast nickel bronze downspout nozzle with anchor flange, countersunk mounting holes, and threaded IPS threaded (standard), no hub, or push on connections.
 - 2. IPS Threaded Connection Pipe Size:
 - a. RD-942: 2 inch
 - b. RD-943: 3 inch
 - c. RD-944: 4 inch
 - d. RD-946: 6 inch
 - e. RD-948: 8 inch
 - 3. No Hub Connection Pipe Size:
 - a. RD-942-NH: 2 inch
 - b. RD-943-NH: 3 inch
 - c. RD-944-NH: 4 inch
 - d. RD-945-NH: 5 inch
 - e. RD-946-NH: 6 inch
 - f. RD-948-NH: 8 inch
 - g. RD-9410-NH: 10inch
 - h. RD-9412-NH: 12 inch
 - 4. Push-On Connection Pipe Size:
 - a. RD-943-P: 3 inch
 - b. RD-944-P: 4 inch
 - c. RD-946-P: 6 inch
 - 5. Options
 - a. -83 Stainless Steel Bird Screen

- V. Small Body Cast Iron Drain - RD200
 - 1. Construction:
 - a. Epoxy coated cast iron roof drain with flashing clamp with integral gravel stop, self locking polyethylene dome, and no hub (standard) outlet.
 - 2. Pipe Size:
 - a. RD-200-2: 2 inch
 - b. RD-200-3: 3 inch
 - c. RD-200-4: 4 inch
 - 3. Outlet Type:
 - a. NH No Hub)
 - b. P Push On
 - c. T Threaded Outlet

- d. X Inside Caulk
 - 4. Options
 - a. -13 Galvanized Body and Clamp
 - b. -B Sump Receiver
 - c. -D Underdeck Clamp
 - d. -F Adjustable Extension Flange
 - e. -GSS Stainless Steel Ballast Guard
 - f. -K Ductile Iron Dome
 - g. -K80 Aluminum Dome
 - h. -L Vandal Proof Dome
 - i. -R 2 inch External Water Dam
 - j. -SO Side Outlet
 - k. -W Adjustable Internal Water Dam
 - 5. Optional Body Material
 - a. -60 PVC Body with Socket Outlet
 - b. -61 ABS Body with Socket Outlet
- W. DURA Plastic Drain
- 1. Construction:
 - a. Thermoplastic rubber
 - b. Highly resistant to ultraviolet rays and other atmospheric conditions
 - c. Compatible with Bur, Modified and EPDM membranes
 - 2. Size: 12-1/4 inch by 12-1/4 inch by 9-3/4 inch deep
 - 3. Style: Dura Retrofit Anti-Backup Roof Drains.
 - a. Roof Drain Optional Accessories:
 - 1) DUA 10 Perforated Ring w/Strainer Dome
 - 2) DUA 20 Basket Strainer for Dura Anti-Backup for 3 inch and 5 inch openings
 - 3) DUA 30 Basket Strainer for 6 inch Dura Drain
 - 4. Style: Dura Scupper Drains
 - a. SCP 44C (canted) Length 12 inch Opening 4 foot by 4 inch c/w SAG (canted grate).
 - b. SCP 44NC (no cant) Length 16-3/4 Opening 4 foot by 4 inch. Grate not available
 - c. Scupper Drain Optional Accessories:
 - 1) SA-ES4 Elbow for 4 inch by 4 inch square openings
 - 2) SA-ER3 Elbow for 4 inch square to 3 inch round openings
 - 3) SA-ER4 Elbow for 4 inch square to 4 inch round openings
 - 4) SA-SR4 Straight reducer for 4 inch square to 4 inch round openings
 - 5) SA-DB/GR Drain box with cover - Gray
 - 6) SA-DB/BRN Drain box with cover - Brown
 - 5. Style: Dura PB Pipe Boot: Flange has flexible 12 inch diameter ribbed collar for secure flashing.

2.3 ROOF VENTS AND VENT FLASHING

- A. Commercial SOL-A- VENT
 - 1. Construction: Solar power Nicad battery with hermetically sealed motor to keep out moisture.
 - 2. Model: MS 8 inches H by 8-3/4 inch base outside diameter by 12-5/8 inch flange outside diameter.
 - a. - A, Plain aluminum.
 - b. - A, Plain aluminum with asphalt coated flange
 - c. - P ,PVC style: base and cap, white PVC.
 - d. - C, Chrome cap on aluminum or PVC vent body.
 - 3. Model: MS-LP (Low Profile) 5-1/4 inches H by 8-3/4 inch base outside diameter by 15

inch flange outside diameter.

- B. HIGH SECURITY Aluminum Roof Flashing
 - 1. Construction:
 - a. Heavy Duty .051 inch aluminum.
 - b. Locked on cap secures plumbing vent stacks
 - c. Aluminum vent stack base
 - 2. Size:
 - a. Base opening: 7 inches.
 - b. Base Flange overall diameter: 15-1/4 inches
 - c. Cap Diameter: 5-3/4 inches
 - d. Vent Outlet Diameter 4-3/4 inches
 - e. Height: 15-1/4 inches.
 - f. Maximum Hub Height over Roof Level: 5-1/4 inches
 - g. Flashing Width: 4 inches

- C. INSULVENT Aluminum Vent
 - 1. Construction:
 - a. Spun heavy gauge aluminum
 - b. Cap design shields against entry of wind-blown rain or snow
 - c. Flange may be coated with PVC, TPO or Asphalt priming
 - 2. Type:
 - a. One way vent
 - b. Two way vent
 - 3. Options
 - a. PVC coated flange
 - b. TPO coated flange
 - c. Asphalt primed flange
 - d. Foam insert to prevent moisture from condensing on the inside of the standpipe
 - 4. Size:
 - a. Base opening: 4 inches.
 - b. Base opening with insulation insert: 3 inches
 - c. Base Flange overall diameter: 10-3/4 inches
 - d. Cap Height: 2-1/2 inches
 - e. Vent Outlet Diameter 4 inches
 - f. Height: 8-1/2 inches.
 - 5. Recommended Spacing: 1 per 1,000 SF.

- D. LARGE CAPACITY (LC) Vent
 - 1. Construction:
 - a. Spun heavy gauge aluminum
 - b. Cap design shields against entry of wind-blown rain or snow
 - c. Flange may be coated with PVC, TPO or Asphalt priming
 - 2. Type:
 - a. One way vent
 - b. Two way vent
 - 3. Options
 - a. PVC coated flange
 - b. TPO coated flange
 - c. Asphalt primed flange
 - d. Foam insert to prevent moisture from condensing on the inside of the standpipe
 - 4. LC Vent Size:
 - a. Base opening: 8 inches.
 - b. Base opening with insulation insert: 6 inches
 - c. Base Flange overall diameter: 13 inches
 - d. Vent Outlet Diameter 8-1/2 inches

- e. Height: 7-3/4 inches.
 - 5. Recommended Spacing: 1 per 1,000 SF.
- E. MEDIUM CAPACITY (MC) Vent
- 1. Construction:
 - a. Spun heavy gauge aluminum
 - b. Cap design shields against entry of wind-blown rain or snow
 - c. Flange may be coated with PVC, TPO or Asphalt priming
 - 2. Type:
 - a. One way vent
 - b. Two way vent
 - 3. Options
 - a. PVC coated flange
 - b. TPO coated flange
 - c. Asphalt primed flange
 - d. Foam insert to prevent moisture from condensing on the inside of the standpipe
 - 4. MC Vent Size:
 - a. Base opening: 6-1/2 inches.
 - b. Base opening with insulation insert: 5-3/8 inches
 - c. Base Flange overall diameter: 10 inches
 - d. Vent Outlet Diameter 6-1/2 inches
 - e. Height: 9-1/2 inches.
 - 5. Recommended Spacing: 1 per 1,500 SF.
- F. ROOFNEK Aluminum Base Standpipe
- 1. Construction:
 - a. Aluminum base standpipe
 - b. Solvent welded PVC hooded outlet
 - c. 3 cable openings plus 3 additional knockouts
 - 2. Size:
 - a. Overall Height: 22-3/4 inches
 - b. Flange Diameter: 11-3/4 inches
 - c. Opening Above Deck: 20-3/4 inches
 - d. Flashing Width: 4 inches
- G. EXTRA LARGE CAPACITY (XLC) Vent
- 1. Construction:
 - a. Spun heavy gauge aluminum
 - b. Cap design shields against entry of wind-blown rain or snow
 - c. Flange may be coated with PVC, TPO or Asphalt priming
 - 2. Type:
 - a. One way vent
 - b. Two way vent
 - 3. Options
 - a. PVC coated flange
 - b. TPO coated flange
 - c. Asphalt primed flange
 - d. Foam insert to prevent moisture from condensing on the inside of the standpipe
 - 4. XLC Vent Size:
 - a. Base opening: 12-1/2 inches.
 - b. Base Flange overall diameter: 17-1/4 inches
 - c. Vent Outlet Diameter 8-1/2 inches
 - d. Height: 7-3/4 inches.
 - 5. Recommended Spacing: 1 per 2,000 SF.
- H. PREVENT PVC Vent

1. Construction:
 - a. SUPER Heavy duty PVC plastic U.V. stabilized to reduce deterioration or fading from the sun
 - b. Meets 1-150 or 1-300 National Venting Code in combination with inlet vents
 - c. Special insect resistant wire screen standard
 - d. White Finish
 2. Type:
 - a. One way vent
 - b. Two way vent
 3. Vent Size:
 - a. Base opening: 10-1/4 inches.
 - b. Base Flange overall diameter: 14-3/4 inches
 - c. Vent Outlet Diameter 13-1/2 inches
 - d. Height: 9 inches.
 - e. Venting Area: 144 sq.in. free area.
- I. Vandal Resistant Epoxy Coated Vent Cap - RD-680
1. Construction:
 - a. Vandal resistant epoxy coated cast Iron vent cap
 - b. Vandal resistant galvanized cast Iron vent cap
 2. Model/Size:
 - a. RD-680-VC-2134 (51), 2 inch Pipe Size
 - b. RD-680-VC-2134 (76), 3 inch Pipe Size
 - c. RD-680-VC-2134 (102), 4 inch Pipe Size
 - d. RD-680-VC-2134 (152) 6 inch Pipe Size
 - e. RD-680-VC-2134 (203) 8 inch Pipe Size
- J. EX-FLOW/M -105 Plastic Vent
1. Construction:
 - a. High-density polyethylene (black) for BUR and Modified bitumen applications
 - b. U.V. stabilized PVC (white) for PVC membrane and polyurethane foam applications
 2. Type:
 - a. One way vent
 - b. Two way vent
 3. Vent Size:
 - a. Base opening: 5-1/4 inches.
 - b. Base Flange overall diameter: 10-1/2 inches
 - c. Vent Outlet Diameter 13-1/2 inches
 - d. Height: 8 inches.
 - e. Venting Area: 144 sq.in. free area.
- K. Retro-fit Adjustable Drain Guards
1. Construction:
 - a. Cast aluminum construction
 - b. Fits drain outlets between 3 inches to 12 inches
 2. Drain guard diameter
 - a. 5 inch for small drains
 - b. 8" for normal drains
 - c. 10 inch low profile (2 inches tall)
 - d. 10 inch for normal drains
 - e. 13-1/4 inch for large drain openings
 - f. 18 inch for extra-large drain openings
- L. Aluminum Retro Ring and Dome:
1. Construction:

- a. Replacement for broken or missing roof drain rings and domes
 - b. Low profile 5 inch overall height
 - c. Bolt down security
 - d. Cast aluminum construction
 - e. Cast Iron construction
2. Type/Size: 3 or 4 bolt patterns ranging from 6-1/4 inches to 11-3/4 inches

M. DEKTITES Roof Flashing

1. Construction:
- a. Black EPDM: Withstands constant temperatures at the roofline of minus 50 degrees C (minus 122 degrees F) to 115 degrees C (239 degrees F) and up to 150 degrees C (302 degrees F) intermittently.
 - b. Black Grey EPDM: Withstands constant temperatures at the roofline of minus 50 degrees C (minus 122 degrees F) to 115 degrees C (239 degrees F) and up to 150 degrees C (302 degrees F) intermittently.
 - c. Red Silicone: Withstands constant temperatures at the roofline of minus 50 degrees C (minus 122 degrees F) to 200 degrees C (392 degrees F) and up to 250 degrees C (485 degrees F) intermittently.
2. Size:
- a. DFE 0-35: Pipe Size: 0 to 1 inch, Base: 39 inches, Pitch: 0-60 degrees
 - b. DFE 5-55: Pipe Size: 1/4 to 2-1/8 inch, Base: 54 inches, Pitch: 0-45 degrees
 - c. DFE 5-120: Pipe Size: 1/4 to 4-3/4 inch, Base: 85-3/4 inches, Pitch: 0-45 degrees
 - d. DFE 50-70: Pipe Size: 2 to 2-3/4 inch, Base: 69-1/2 inches, Pitch: 0-45 degrees
 - e. DFE 110-170: Pipe Size: 4-1/2 to 6-3/4 inch, Base: 111-3/4 inches, Pitch: 0-45 degrees
 - f. DFE 160-220: Pipe Size: 6-1/4 to 8-3/4 inch, Base: 143-1/2 inches, Pitch: 0-45 degrees
 - g. DFE 160-300: Pipe Size: 6-1/4 to 11-3/4 inch, Base: 178-1/2 inches, Pitch: 0-45 degrees
 - h. DFE 290-440: Pipe Size: 11-1/2 to 17-3/8 inch, Base: 228-1/2 inches, Pitch: 0-45 degrees

N. DEKTITES Retro Roof Flashing

1. Construction:
- a. Black EPDM: Withstands constant temperatures at the roofline of minus 50 degrees C (minus 122 degrees F) to 115 degrees C (239 degrees F) and up to 150 degrees C (302 degrees F) intermittently.
 - b. Black Grey EPDM: Withstands constant temperatures at the roofline of minus 50 degrees C (minus 122 degrees F) to 115 degrees C (239 degrees F) and up to 150 degrees C (302 degrees F) intermittently.
 - c. Red Silicone: Withstands constant temperatures at the roofline of minus 50 degrees C (minus 122 degrees F) to 200 degrees C (392 degrees F) and up to 250 degrees C (485 degrees F) intermittently.
2. Size:
- a. RF 801/EPDM: Pipe Size: 3/4 to 2-3/4 inch, Base: 6-1/3 inches, Pitch: 0-40 degrees
 - b. RF 802/EPDM: Pipe Size: 2 to 2-7/8 inch, Base: 10-3/4 inches, Pitch: 0-40 degrees
 - c. RF 803/EPDM: Pipe Size: 3-1/2 to 2-7/8 inch, Base: 14-1/2 inches, Pitch: 0-40 degrees
 - d. RFS-4/EPDM: Pipe Size: 9-1/4 to 16-3/4 inch, Base: 30 by 26-3/4 inches, Pitch: 0-40 degrees
 - e. RF 901/Silicone: Pipe Size: 3/4 to 2-3/4 inch, Base: 6-1/3 inches, Pitch: 0-40 degrees

- f. RF 902/Silicone: Pipe Size: 2 to 2-7/8 inch, Base: 10-3/4 inches, Pitch: 0-40 degrees
 - g. RF 903/Silicone: Pipe Size: 3-1/2 to 2-7/8 inch, Base: 14-1/2 inches, Pitch: 0-40 degrees
 - h. RFS-24/Silicone: Pipe Size: 9-1/4 to 16-3/4 inch, Base: 30 by 26-3/4 inches, Pitch: 0-40 degrees
- O. MARA-FLEX Roof Flashing
- 1. Construction:
 - a. Made of heavy duty material to provide reliable long life performance
 - b. Rippled portion offers an accordion action to accommodate variable applications
 - c. Designed to fit all pitches of roof
 - 2. Size:
 - a. Model 225: Pipe Size: 2 inch, Base: 12 inch by 12 inch, 2.5 lbs. Flashing
 - b. Model 240: Pipe Size: 2 inch, Base: 12 inch by 12 inch, 4 lbs. Flashing
 - c. Model 325: Pipe Size: 3 inch, Base: 12 inch by 12 inch, 2.5 lbs. Flashing
 - d. Model 340: Pipe Size: 3 inch, Base: 12 inch by 12 inch, 4 lbs. Flashing
 - e. Model 425: Pipe Size: 4 inch, Base: 12 inch by 12 inch, 2.5 lbs. Flashing
 - f. Model 440: Pipe Size: 4 inch, Base: 12 inch by 12 inch, 4 lbs. Flashing
 - g. Model 525: Pipe Size: 5 inch, Base: 12 inch by 12 inch, 2.5 lbs. Flashing
- P. MARABOOT Aluminum Roof Penetration System
- 1. Construction:
 - a. Mara-Boot Aluminum base with grooves for EPDM cap.
 - b. EPDM cap made for maximum resistance to weathering, ozone, U.V. and extreme hot and cold temperatures
 - c. Caps mechanically seal to dual beads on the Mara-boot aluminum base and grooves on the inside of the EPDM cap
 - d. Provides permanent, water-tight and maintenance free applications for penetrating roofs
 - 2. EPDM Cap: Each cap accommodates (2) 1/4 inch, 1-1/2 inch, 2 inch pipe sizes or (2) 3/8 inch, 1/2 inch, 3/4 inch and 1 inch pipes sizes
 - 3. Mara-Boot Aluminum base has a 8 inch diameter with a 6 inch stack height and a 14 inch diameter bottom flange
- Q. Snow Guards
- 1. Construction:
 - a. Made of high strength polycarbonate
 - b. Tested to withstand minus 40 degrees
 - c. U.V. resistance
 - d. Pre-spotted holes for proper installation

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.

- B. Inspect and mating pipe for form and cleanliness.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Roof Drains
 1. Install in the locations indicated.
 2. Maintain integrity of waterproof membranes where penetrated.
 3. Flashing collar or flange: Install between drain and roofing materials.
- C. Roof Vents and penetration flashings
 1. Install in the locations indicated.
 2. Maintain integrity of waterproof membranes where penetrated.
 3. Flashing collar or flange: Install between drain and roofing materials.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Protect drains for duration of construction period from traffic, dirt, and debris.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION