A. Factory assembled dome and frame assemblies with welded corners manufactured by Kingspan / Bristolite or American Skylights are specified to establish a quality standard. Equal products are acceptable provided they comply with the following requirements:

1. Glazing sheet thickness required for a minimum of 30 pounds per square foot external and 30 pounds per square foot internal loading; and to comply with the minimum thickness and wind pressure requirements of AAMA/WDMA/CSA 101/I.S.2/A440 as set forth in paragraph 2405.5 of the NYS Uniform Fire Prevention and Building Code.
2. Outer Domes: Dome shaped polycarbonate meeting the following tests:
   a. Burn Rate — ASTM D635 - Not over 2.5
   b. Smoke Developed — ASTM D2843
   c. Smoke Density — Not over 75%
3. Inner Panel: Clear multiwall polycarbonate panel meeting the following tests:
   a. Burn Rate — ASTM D635 - Not over 2.5
   b. Smoke Developed — ASTM D2843
   c. Smoke Density — Not over 75%
4. Fall Protection: Fabricate the skylights so the dome and panel will not disengage from the frame upon impact of 755 foot pounds, and to comply with OSHA 1910.23 Fall Protection Guidelines.
5. Energy Performance Ratings:
   a. Maximum U-Value 0.50
   b. Maximum Solar Heat Gain Coefficient (SHGC) of 0.40

B. Curb Construction: Provide units with integral internal gutters and weep holes to drain condensation; fabricated with formed and extruded thermally broken welded aluminum frames and retaining angles for installation on field constructed curb assemblies.

C. Safety Screens: 4 inch by 4 inch 6 gauge welded wire screens and 1/4 inch thick 1-1/2 by 1-1/2 steel perimeter angle support frames, fabricated to fit within the skylight curb - to protect the skylights from underside damage and increase fall protection.
1. Prime and paint the screens flat white before installation.
2. Install screens at skylights above gymnasiums.
3. Install screens at over-sized skylights where the glazing doesn't provide fall protection.

2.3 DRAINS, DRAIN PIPES, AND COUPLINGS

A. Conventional cast iron bottom and side outlet roof drains, installed with drain receivers, under deck clamps, cast iron strainers, cast iron clamping rings and factory installed stainless steel gravel screens Series 1011 as manufactured by Jay R. Smith Manufacturing Company.

B. Match the drain outlet size and style to the building drain line, except if the drain line is a copper pipe, then furnish the drain body with a threaded outlet and use a male adapter to connect the drain body to the drain line.

C. Drain pipe: cast iron pipe with no hub fittings, minimum 3 inch diameter, and larger to match the existing building drain lines.

D. No-hub couplings: heavy duty rubber neoprene sleeve couplings with full length Type 304 stainless steel shields and at least 4 worm drive clamps, conforming to ASTM A564.

2.4 PIPE INSULATION AND FITTING COVERS

A. Insulation: minimum 1 inch thick pre-molded 3.5 lb. heavy density fiberglass pipe insulation with UL rated non-combustible service jackets.

B. .030 inch thick factory fabricated white PVC "Smoke Safe" fitting and drain bowl covers as manufactured by the Speedline Corporation, with a maximum Flame Spread Value of 25 and a maximum Smoke Developed Value of 50 in accordance with ASTM E8450.

2.5 ALUMINUM ACCESS HATCHES

A. Hatches constructed of welded 11 gauge mill finish aluminum, with 12 inch high curbs and integral cap flashings, heavy pintle hinges, compression spring operators, a spring latch with interior and exterior handles, an interior padlock hasp, and stainless steel hardware, as manufactured by the Bilco Company, in the sizes needed to fit the deck openings, and as indicated.

2.6 HATCH SAFETY RAILS

A. Safety rails shall comply with OSHA Standard CFR 29 1910.23 and CFR 29 1910.27

B. Safety rails shall be bolted to the exterior surface of the curb above the flashing with 3/8 inch diameter stainless steel bolts, constructed of 1-1/2 inch diameter hot rolled electrically welded tubing meeting ASTM A500 Grade B, sized and configured to provide a safety railing on four sides of the hatch 42 inches above the roof surface with a self closing gate supported with heavy duty hinges with 5/8 inch diameter pins - basis of design: Roof Hatch Safety Rails by SafePro Roof Top Fall Protection.

C. Gate shall be fabricated of galvanized steel tubing, with no chains or latches.

2.7 GALVANIZED STEEL ROOF ACCESS LADDERS AND STAIRS

A. Fabricate ladders from 1-1/4 inch inside diameter steel pipe rails, spaced 22 inches apart, and 3/4 inch solid steel rebar rungs spaced 12 inches on center. Fit the rungs into drilled holes in the centerline of the rails, weld and grind the welds smooth. Extend the ladder rails and form goose-neck returns to finish 42 inches above the roof surface.

1. Hot dip galvanize coat the ladder and mounting brackets after fabrication. Install with Type 316 stainless steel hardware.