610-692-7171
www.eastgoshen.org

BOARD OF SUPERVISORS
EAST GOSHEN TOWNSHIP

CHESTER COUNTY
1580 PAOLI PIKE. WEST CHESTER. PA 19380-6199

January 12, 2010

Re: Building Permit Specifications for Finished Basements

To: Property Owner/Contractor
From: Township Code Enforcement Department

The East Goshen Township Code Department is providing any Contractors that conduct work in the Township, with this updated specifications document for finishing basements in order to more efficiently process permit applications and conduct construction inspections.

Outlined below is a breakdown of the basic permit requirements and inspections required for finishing basements in East Goshen. This is not intended to be comprehensive of all possible requirements; however it should address the majority of issues with regard to permitting and building a finished basement in East Goshen Township.

Building Code: IBC 2009/ IRC 2009

Egress: All finished basements shall have at least one openable emergency escape and rescue window or exterior door opening for emergency escape and rescue. If using a window it must meet the escape and rescue requirements of the applicable building code. Below grade openings of 5.7 sq ft is required and 5.0 sq ft at grade level is required also. The window sill heights shall be a maximum of 44".

Ventilation: The minimum openable area to the outdoors shall be 4 percent of the floor area of the finished basement. Openable window area may be substituted by an approved ventilation system capable of producing 0.35-air change per hour in the room or a whole-house mechanical ventilation system is installed, capable of supplying outdoor ventilation air of at least 15 cubic feet per minute per occupant.

Smoke Detectors: All alarms must be hard wired if an existing hard-wired system exists. Battery operated detectors are acceptable if the residence does not have a hardwired alarm system. A smoke alarm is required at a centrally located area of the

finished basement and additional alarms may be required on a case-by-case basis.

Required Information: Construction Details sealed by a registered design professional. **The design specifications submitted must be for the pool design proposed.**
Site Plan; including property lines and proposed grading, placement of pool, pool mechanical equipment, fence, stormwater management system, decking, walls, etc.
Contractors must register with the Township, as required by §124 of the Township Code; failure to register contractors will result in the issuance of a Stop Work Order.

Inspections Required: **Minimum of Two Inspections**

Inspection #1 (Rough-in)

- Rough Plumbing
- Rough Mechanical
- Rough Framing including fire blocking
- Insulation
- Rough Electrical **(Conducted by a licensed Electrical Inspector with proof provided)**

Inspection #2 (Final)

- Final Plumbing
- Final Mechanical
- Final Electric **(Conducted by a licensed Electrical Inspector with proof provided)**
- Alarm testing (smoke detectors)
- Fit and Finish

Inspection Scheduling: All Inspections must be scheduled with the Township permit coordinator at least 24 hours in advance.

Specific Details and Code Requirement available upon request

Upon completion and passing of the final inspection the Township will issue to the resident a Certificate of Completion for the finished basement area.

The East Goshen Township Code Enforcement Department is committed to providing thorough and timely construction review and inspections for our residents and the contractors doing business in the Township.

Thank you for your cooperation.

SECTION R303
LIGHT, VENTILATION AND HEATING

R303.1 Habitable rooms.
All habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural *ventilation* shall be through windows, doors, louvers or other *approved* openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated.

Exceptions:

1. The glazed areas need not be openable where the opening is not required by Section R310 and an *approved* mechanical *ventilation* system capable of producing 0.35 air change per hour in the room is installed or a whole-house mechanical *ventilation* system is installed capable of supplying outdoor *ventilation* air of 15 cubic feet per minute (cfm) (78 L/s) per occupant computed on the basis of two occupants for the first bedroom and one occupant for each additional bedroom.

2. The glazed areas need not be installed in rooms where Exception 1 above is satisfied and artificial light is provided capable of producing an average illumination of 6 footcandles (65 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.

3. Use of sunroom *additions* and patio covers, as defined in Section R202, shall be permitted for natural *ventilation* if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening.

R303.2 Adjoining rooms.
For the purpose of determining light and *ventilation* requirements, any room shall be considered as a portion of an adjoining room when at least one-half of the area of the common wall is open and unobstructed and provides an opening of not less than one-tenth of the floor area of the interior room but not less than 25 square feet (2.3 m^2).

Exception: Openings required for light and/or *ventilation* shall be permitted to open into a thermally isolated sunroom *addition* or patio cover, provided that there is an openable area between the adjoining room and the sunroom *addition* or patio cover of not less than one-tenth of the floor area of the interior room but not less than 20 square feet (2 m^2). The minimum openable area to the outdoors shall be based upon the total floor area being ventilated.

R303.3 Bathrooms.
Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 m^2), one-half of which must be openable.

Exception: The glazed areas shall not be required where artificial light and a mechanical

ventilation system are provided. The minimum *ventilation* rates shall be 50 cubic feet per minute (24 L/s) for intermittent *ventilation* or 20 cubic feet per minute (10 L/s) for continuous *ventilation* . *Ventilation* air from the space shall be exhausted directly to the outside.

R303.4 Opening location.
Outdoor intake and exhaust openings shall be located in accordance with Sections R303.4.1 and R303.4.2.

R303.4.1 Intake openings.
Mechanical and gravity outdoor air intake openings shall be located a minimum of 10 feet (3048 mm) from any hazardous or noxious contaminant, such as vents, chimneys, plumbing vents, streets, alleys, parking lots and loading docks, except as otherwise specified in this code. Where a source of contaminant is located within 10 feet (3048 mm) of an intake opening, such opening shall be located a minimum of 2 feet (610 mm) below the contaminant source.

For the purpose of this section, the exhaust from *dwelling* unit toilet rooms, bathrooms and kitchens shall not be considered as hazardous or noxious.

R303.4.2 Exhaust openings.
Exhaust air shall not be directed onto walkways.

R303.5 Outside opening protection.
Air exhaust and intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles having a minimum opening size of $^1/_4$ inch (6 mm) and a maximum opening size of $^1/_2$ inch (13 mm), in any dimension. Openings shall be protected against local weather conditions. Outdoor air exhaust and intake openings shall meet the provisions for *exterior wall* opening protectives in accordance with this code.

R303.6 Stairway illumination.
All interior and exterior stairways shall be provided with a means to illuminate the stairs, including the landings and treads. Interior stairways shall be provided with an artificial light source located in the immediate vicinity of each landing of the stairway. For interior stairs the artificial light sources shall be capable of illuminating treads and landings to levels not less than 1 foot-candle (11 lux) measured at the center of treads and landings. Exterior stairways shall be provided with an artificial light source located in the immediate vicinity of the top landing of the stairway. Exterior stairways providing access to a *basement* from the outside *grade* level shall be provided with an artificial light source located in the immediate vicinity of the bottom landing of the stairway.

Exception: An artificial light source is not required at the top and bottom landing, provided an artificial light source is located directly over each stairway section.

R303.6.1 Light activation.
Where lighting outlets are installed in interior stairways, there shall be a wall switch at each floor level to control the lighting outlet where the stairway has six or more risers. The

illumination of exterior stairways shall be controlled from inside the *dwelling* unit.

Exception: Lights that are continuously illuminated or automatically controlled.

R303.7 Required glazed openings.
Required glazed openings shall open directly onto a street or public alley, or a *yard* or court located on the same *lot* as the building.

Exceptions:

1. Required glazed openings may face into a roofed porch where the porch abuts a street, *yard* or court and the longer side of the porch is at least 65 percent unobstructed and the ceiling height is not less than 7 feet (2134 mm).

2. Eave projections shall not be considered as obstructing the clear open space of a *yard* or court.

3. Required glazed openings may face into the area under a deck, balcony, bay or floor cantilever provided a clear vertical space at least 36 inches (914 mm) in height is provided.

R303.7.1 Sunroom additions.
Required glazed openings shall be permitted to open into sunroom *additions* or patio covers that abut a street, *yard* or court if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening, and the ceiling height of the sunroom is not less than 7 feet (2134 mm).

R303.8 Required heating.
When the winter design temperature in Table R301.2(1) is below 60°F (16°C), every *dwelling unit* shall be provided with heating facilities capable of maintaining a minimum room temperature of 68°F (20°C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms at the design temperature. The installation of one or more portable space heaters shall not be used to achieve compliance with this section.

SECTION R304
MINIMUM ROOM AREAS

R304.1 Minimum area.
Every *dwelling* unit shall have at least one habitable room that shall have not less than 120 square feet (11 m^2) of gross floor area.

R304.2 Other rooms.
Other habitable rooms shall have a floor area of not less than 70 square feet (6.5 m^2).

Exception: Kitchens.

R304.3 Minimum dimensions.

Habitable rooms shall not be less than 7 feet (2134 mm) in any horizontal dimension.

Exception: Kitchens.

R304.4 Height effect on room area.
Portions of a room with a sloping ceiling measuring less than 5 feet (1524 mm) or a furred ceiling measuring less than 7 feet (2134 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required habitable area for that room.

SECTION R305
CEILING HEIGHT

R305.1 Minimum height.
Habitable space , hallways, bathrooms, toilet rooms, laundry rooms and portions of *basements* containing these spaces shall have a ceiling height of not less than 7 feet (2134 mm).

Exceptions:

1. For rooms with sloped ceilings, at least 50 percent of the required floor area of the room must have a ceiling height of at least 7 feet (2134 mm) and no portion of the required floor area may have a ceiling height of less than 5 feet (1524 mm).

2. Bathrooms shall have a minimum ceiling height of 6 feet 8 inches (2032 mm) at the center of the front clearance area for fixtures as shown in Figure R307.1. The ceiling height above fixtures shall be such that the fixture is capable of being used for its intended purpose. A shower or tub equipped with a showerhead shall have a minimum ceiling height of 6 feet 8 inches (2032 mm) above a minimum area 30 inches (762 mm) by 30 inches (762 mm) at the showerhead.

R305.1.1 Basements.
Portions of *basements* that do not contain *habitable space* , hallways, bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet 8 inches (2032 mm).

Exception: Beams, girders, ducts or other obstructions may project to within 6 feet 4 inches (1931 mm) of the finished floor.

SECTION R306
SANITATION

R306.1 Toilet facilities.
Every *dwelling* unit shall be provided with a water closet, lavatory, and a bathtub or shower.

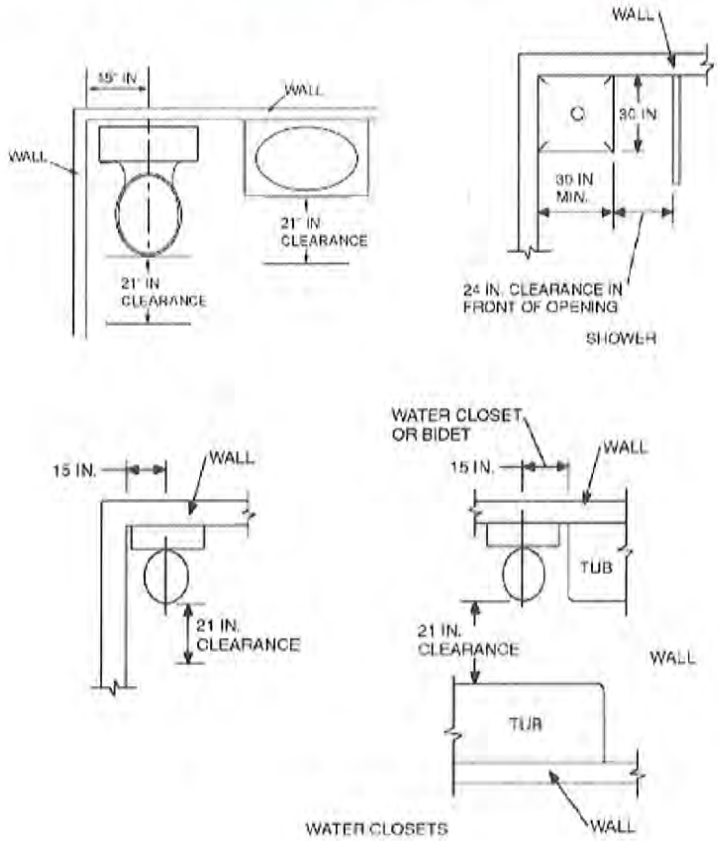
R306.2 Kitchen.
Each *dwelling* unit shall be provided with a kitchen area and every kitchen area shall be provided with a sink.

R306.3 Sewage disposal.
All plumbing fixtures shall be connected to a sanitary sewer or to an *approved* private sewage disposal system.

R306.4 Water supply to fixtures.
All plumbing fixtures shall be connected to an *approved* water supply. Kitchen sinks, lavatories, bathtubs, showers, bidets, laundry tubs and washing machine outlets shall be provided with hot and cold water.

SECTION R307
TOILET, BATH AND SHOWER SPACES

R307.1 Space required.
Fixtures shall be spaced in accordance with Figure R307.1, and in accordance with the requirements of Section P2705.1.



For SI: 1 inch = 25.4 mm.

FIGURE R307.1
MINIMUM FIXTURE CLEARANCES

R307.2 Bathtub and shower spaces.
Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a nonabsorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet (1829 mm) above the floor.

SECTION R308
GLAZING

R308.1 Identification.
Except as indicated in Section R308.1.1 each pane of glazing installed in hazardous locations as defined in Section R308.4 shall be provided with a manufacturer's designation specifying who applied the designation, designating the type of glass and the safety glazing standard with which it complies, which is visible in the final installation. The designation shall be acid etched, sandblasted, ceramic-fired, laser etched, embossed, or be of a type which once applied cannot be removed without being destroyed. A *label* shall be permitted in lieu of the manufacturer's designation.

Exceptions:

1. For other than tempered glass, manufacturer's designations are not required provided the *building official* approves the use of a certificate, affidavit or other evidence confirming compliance with this code.

2. Tempered spandrel glass is permitted to be identified by the manufacturer with a removable paper designation.

R308.1.1 Identification of multiple assemblies.
Multipane assemblies having individual panes not exceeding 1 square foot (0.09 m^2) in exposed area shall have at least one pane in the assembly identified in accordance with Section R308.1. All other panes in the assembly shall be *labeled* "CPSC 16 CFR 1201" or "ANSI Z97.1" as appropriate.

R308.2 Louvered windows or jalousies.
Regular, float, wired or patterned glass in jalousies and louvered windows shall be no thinner than nominal $^3/_{16}$ inch (5 mm) and no longer than 48 inches (1219 mm). Exposed glass edges shall be smooth.

R308.2.1 Wired glass prohibited.
Wired glass with wire exposed on longitudinal edges shall not be used in jalousies or louvered windows.

R308.3 Human impact loads.
Individual glazed areas, including glass mirrors in hazardous locations such as those indicated as defined in Section R308.4, shall pass the test requirements of Section R308.3.1.

Exceptions:

1. Louvered windows and jalousies shall comply with Section R308.2.
2. Mirrors and other glass panels mounted or hung on a surface that provides a continuous backing support.
3. Glass unit masonry complying with Section R610.

R308.3.1 Impact test.
Where required by other sections of the code, glazing shall be tested in accordance with CPSC 16 CFR 1201. Glazing shall comply with the test criteria for Category I or II as indicated in Table R308.3.1(1).

TABLE R308.3.1(1)
MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING CPSC 16 CFR 1201

EXPOSED SURFACE AREA OF ONE SIDE OF ONE LITE	GLAZING IN STORM OR COMBINATION DOORS (Category Class)	GLAZING IN DOORS (Category Class)	GLAZED PANELS REGULATED BY ITEM 7 OF SECTION R308.4 (Category Class)	GL/ RE SE (Ca
9 square feet or less	I	I	NR	
More than 9 square feet	II	II	II	

For SI: 1 square foot = 0.0929 m^2.
NR means "No Requirement."

TABLE R308.3.1(2)
MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING ANSI Z97.1

EXPOSED SURFACE AREA OF ONE SIDE OF ONE LITE	GLAZED PANELS REGULATED BY ITEM 7 OF SECTION R308.4 (Category Class)	GLAZED PANELS RE ITEM 6 OF SECTIC (Category Cl
9 square feet or less	No requirement	B
More than 9 square feet	A	A

For SI: 1 square foot = 0.0929 m^2.
a. Use is permitted only by the exception to Section R308.3.1.

Exception: Glazing not in doors or enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers shall be permitted to be tested in accordance with ANSI Z97.1. Glazing shall comply with the test criteria for Class A or B as indicated in Table R308.3.1(2).

R308.4 Hazardous locations.
The following shall be considered specific hazardous locations for the purposes of glazing:

1. Glazing in all fixed and operable panels of swinging, sliding and bifold doors.

   Exceptions:

   1. Glazed openings of a size through which a 3-inch diameter (76 mm) sphere is unable to pass.

   2. Decorative glazing.

2. Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24-inch (610 mm) arc of the door in a closed position and whose bottom edge is less than 60 inches (1524 mm) above the floor or walking surface.

   Exceptions:

   1. Decorative glazing.

   2. When there is an intervening wall or other permanent barrier between the door and the glazing.

   3. Glazing in walls on the latch side of and perpendicular to the plane of the door in a closed position.

   4. Glazing adjacent to a door where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth.

   5. Glazing that is adjacent to the fixed panel of patio doors.

3. Glazing in an individual fixed or operable panel that meets all of the following conditions:

   3.1. The exposed area of an individual pane is larger than 9 square feet (0.836 m^2); and

   3.2. The bottom edge of the glazing is less than 18 inches (457 mm) above the floor; and

   3.3. The top edge of the glazing is more than 36 inches (914 mm) above the floor; and

3.4. One or more walking surfaces are within 36 inches (914 mm), measured horizontally and in a straight line, of the glazing.

Exceptions:

1. Decorative glazing.

2. When a horizontal rail is installed on the accessible side(s) of the glazing 34 to 38 inches (864 to 965) above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and be a minimum of $1^1/_2$ inches (38 mm) in cross sectional height.

3. Outboard panes in insulating glass units and other multiple glazed panels when the bottom edge of the glass is 25 feet (7620 mm) or more above *grade* , a roof, walking surfaces or other horizontal [within 45 degrees (0.79 rad) of horizontal] surface adjacent to the glass exterior.

4. All glazing in railings regardless of area or height above a walking surface. Included are structural baluster panels and nonstructural infill panels.

5. Glazing in enclosures for or walls facing hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) measured vertically above any standing or walking surface.

   Exception: Glazing that is more than 60 inches (1524 mm), measured horizontally and in a straight line, from the waters edge of a hot tub, whirlpool or bathtub.

6. Glazing in walls and fences adjacent to indoor and outdoor swimming pools, hot tubs and spas where the bottom edge of the glazing is less than 60 inches (1524 mm) above a walking surface and within 60 inches (1524 mm), measured horizontally and in a straight line, of the water's edge. This shall apply to single glazing and all panes in multiple glazing.

7. Glazing adjacent to stairways, landings and ramps within 36 inches (914 mm) horizontally of a walking surface when the exposed surface of the glazing is less than 60 inches (1524 mm) above the plane of the adjacent walking surface.

   Exceptions:

   1. When a rail is installed on the accessible side(s) of the glazing 34 to 38 inches (864 to 965 mm) above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and be a minimum of $1^1/_2$ inches (38 mm) in cross sectional height.

2. The side of the stairway has a guardrail or handrail, including balusters or in-fill panels, complying with Sections R311.7.6 and R312 and the plane of the glazing is more than 18 inches (457 mm) from the railing; or

3. When a solid wall or panel extends from the plane of the adjacent walking surface to 34 inches (863 mm) to 36 inches (914 mm) above the walking surface and the construction at the top of that wall or panel is capable of withstanding the same horizontal load as a *guard* .

8. Glazing adjacent to stairways within 60 inches (1524 mm) horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glazing is less than 60 inches (1524 mm) above the nose of the tread.

Exceptions:

1. The side of the stairway has a guardrail or handrail, including balusters or in-fill panels, complying with Sections R311.7.6 and R312 and the plane of the glass is more than 18 inches (457 mm) from the railing; or

2. When a solid wall or panel extends from the plane of the adjacent walking surface to 34 inches (864 mm) to 36 inches (914 mm) above the walking surface and the construction at the top of that wall or panel is capable of withstanding the same horizontal load as a guard .

SECTION R310
EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 Emergency escape and rescue required.
Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where *basements* contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2. Emergency escape and rescue openings shall open directly into a public way, or to a *yard* or court that opens to a public way.

Exception: *Basements* used only to house mechanical *equipment* and not exceeding total floor area of 200 square feet (18.58 m^2).

R310.1.1 Minimum opening area.
All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.530 m^2).

Exception: *Grade* floor openings shall have a minimum net clear opening of 5 square feet (0.465 m^2).

R310.1.2 Minimum opening height.
The minimum net clear opening height shall be 24 inches (610 mm).

R310.1.3 Minimum opening width.
The minimum net clear opening width shall be 20 inches (508 mm).

R310.1.4 Operational constraints.
Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge.

R310.2 Window wells.
The minimum horizontal area of the window well shall be 9 square feet (0.9 m^2), with a minimum horizontal projection and width of 36 inches (914 mm). The area of the window well shall allow the emergency escape and rescue opening to be fully opened.

Exception: The ladder or steps required by Section R310.2.1 shall be permitted to encroach a maximum of 6 inches (152 mm) into the required dimensions of the window well.

R310.2.1 Ladder and steps.
Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.

R310.3 Bulkhead enclosures.
Bulkhead enclosures shall provide direct access to the *basement* . The bulkhead enclosure with the door panels in the fully open position shall provide the minimum net clear opening required by Section R310.1.1. Bulkhead enclosures shall also comply with Section R311.7.8.2.

R310.4 Bars, grilles, covers and screens.
Bars, grilles, covers, screens or similar devices are permitted to be placed over emergency escape and rescue openings, bulkhead enclosures, or window wells that serve such openings, provided the minimum net clear opening size complies with Sections R310.1.1 to R310.1.3, and such devices shall be releasable or removable from the inside without the use of a key, tool, special knowledge or force greater than that which is required for normal operation of the escape and rescue opening.

R310.5 Emergency escape windows under decks and porches.
Emergency escape windows are allowed to be installed under decks and porches provided the location of the deck allows the emergency escape window to be fully opened and provides a path not less than 36 inches (914 mm) in height to a *yard* or court.

SECTION R311
MEANS OF EGRESS

R311.1 Means of egress.
All *dwellings* shall be provided with a means of egress as provided in this section. The means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the *dwelling* to the exterior of the *dwelling* at the required egress door without requiring travel through a garage.

R311.2 Egress door.
At least one egress door shall be provided for each *dwelling* unit. The egress door shall be side-hinged, and shall provide a minimum clear width of 32 inches (813 mm) when measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). The minimum clear height of the door opening shall not be less than 78 inches (1981 mm) in height measured from the top of the threshold to the bottom of the stop. Other doors shall not be required to comply with these minimum dimensions. Egress doors shall be readily openable from inside the *dwelling* without the use of a key or special knowledge or effort.

R311.3 Floors and landings at exterior doors.
There shall be a landing or floor on each side of each exterior door. The width of each landing shall not be less than the door served. Every landing shall have a minimum dimension of 36 inches (914 mm) measured in the direction of travel. Exterior landings shall be permitted to

have a slope not to exceed $^1/_4$ unit vertical in 12 units horizontal (2-percent).

Exception: Exterior balconies less than 60 square feet (5.6 m^2) and only accessible from a door are permitted to have a landing less than 36 inches (914 mm) measured in the direction of travel.

R311.3.1 Floor elevations at the required egress doors.
Landings or floors at the required egress door shall not be more than $1^1/_2$ inches (38 mm) lower than the top of the threshold.

Exception: The exterior landing or floor shall not be more than $7^3/_4$ inches (196 mm) below the top of the threshold provided the door does not swing over the landing or floor.

When exterior landings or floors serving the required egress door are not at *grade* , they shall be provided with access to *grade* by means of a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

R311.3.2 Floor elevations for other exterior doors.
Doors other than the required egress door shall be provided with landings or floors not more than $7^3/_4$ inches (196 mm) below the top of the threshold.

Exception: A landing is not required where a stairway of two or fewer risers is located on the exterior side of the door, provided the door does not swing over the stairway.

R311.3.3 Storm and screen doors.
Storm and screen doors shall be permitted to swing over all exterior stairs and landings.

R311.4 Vertical egress.
Egress from habitable levels including habitable attics and *basements* not provided with an egress door in accordance with Section R311.2 shall be by a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

R311.5 Construction.

R311.5.1 Attachment.
Exterior landings, decks, balconies, stairs and similar facilities shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal.

R311.6 Hallways.
The minimum width of a hallway shall be not less than 3 feet (914 mm).

R311.7 Stairways.

R311.7.1 Width.

Stairways shall not be less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4.5 inches (114 mm) on either side of the stairway and the minimum clear width of the stairway at and below the handrail height, including treads and landings, shall not be less than $31^1/_2$ inches (787 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are provided on both sides.

> **Exception:** The width of spiral stairways shall be in accordance with Section R311.7.9.1.

R311.7.2 Headroom.

The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.

> **Exception:** Where the nosings of treads at the side of a flight extend under the edge of a floor opening through which the stair passes, the floor opening shall be allowed to project horizontally into the required headroom a maximum of $4^3/_4$ inches (121 mm).

R311.7.3 Walkline.

The walkline across winder treads shall be concentric to the curved direction of travel through the turn and located 12 inches (305 mm) from the side where the winders are narrower. The 12-inch (305 mm) dimension shall be measured from the widest point of the clear stair width at the walking surface of the winder. If winders are adjacent within the flight, the point of the widest clear stair width of the adjacent winders shall be used.

R311.7.4 Stair treads and risers.

Stair treads and risers shall meet the requirements of this section. For the purposes of this section all dimensions and dimensioned surfaces shall be exclusive of carpets, rugs or runners.

R311.7.4.1 Riser height.

The maximum riser height shall be $7^3/_4$ inches (196 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than $^3/_8$ inch (9.5 mm).

R311.7.4.2 Tread depth.

The minimum tread depth shall be 10 inches (254 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than $^3/_8$ inch (9.5 mm).

Consistently shaped winders at the walkline shall be allowed within the same flight of stairs as rectangular treads and do not have to be within $^{3}/_{8}$ inch (9.5 mm) of the rectangular tread depth.

Winder treads shall have a minimum tread depth of 10 inches (254 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline. Winder treads shall have a minimum tread depth of 6 inches (152 mm) at any point within the clear width of the stair. Within any flight of stairs, the largest winder tread depth at the walkline shall not exceed the smallest winder tread by more than $^{3}/_{8}$ inch (9.5 mm).

R311.7.4.3 Profile.
The radius of curvature at the nosing shall be no greater than $^{9}/_{16}$ inch (14 mm). A nosing not less than $^{3}/_{4}$ inch (19 mm) but not more than $1^{1}/_{4}$ inches (32 mm) shall be provided on stairways with solid risers. The greatest nosing projection shall not exceed the smallest nosing projection by more than $^{3}/_{8}$ inch (9.5 mm) between two stories, including the nosing at the level of floors and landings. Beveling of nosings shall not exceed $^{1}/_{2}$ inch (12.7 mm). Risers shall be vertical or sloped under the tread above from the underside of the nosing above at an angle not more than 30 degrees (0.51 rad) from the vertical. Open risers are permitted, provided that the opening between treads does not permit the passage of a 4-inch diameter (102 mm) sphere.

Exceptions:

1. A nosing is not required where the tread depth is a minimum of 11 inches (279 mm).

2. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762 mm) or less.

R311.7.4.4 Exterior wood/plastic composite stair treads.
Wood/plastic composite stair treads shall comply with the provisions of Section R317.4.

R311.7.5 Landings for stairways.
There shall be a floor or landing at the top and bottom of each stairway.

Exception: A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided a door does not swing over the stairs. A flight of stairs shall not have a vertical rise larger than 12 feet (3658 mm) between floor levels or landings. The width of each landing shall not be less than the width of the stairway served. Every landing shall have a minimum dimension of 36 inches (914 mm) measured in the direction of travel.

R311.7.6 Stairway walking surface.
The walking surface of treads and landings of stairways shall be sloped no steeper than one unit vertical in 48 inches horizontal (2-percent slope).

R311.7.7 Handrails.
Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.

R311.7.7.1 Height.
Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

Exceptions:

1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.

2. When handrail fittings or bendings are used to provide continuous transition between flights, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.

R311.7.7.2 Continuity.
Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than $1^1/_2$ inch (38 mm) between the wall and the handrails.

Exceptions:

1. Handrails shall be permitted to be interrupted by a newel post at the turn.

2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

R311.7.7.3 Grip-size.
All required handrails shall be of one of the following types or provide equivalent graspability.

1. Type I. Handrails with a circular cross section shall have an outside diameter of at least $1^1/_4$ inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than $6^1/_4$ inches (160 mm) with a maximum cross

section of dimension of $2^1/_4$ inches (57 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

2. Type II. Handrails with a perimeter greater than $6^1/_4$ inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of $^3/_4$ inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least $^5/_{16}$ inch (8 mm) within $^7/_8$ inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least $^3/_8$ inch (10 mm) to a level that is not less than $1^3/_4$ inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be $1^1/_4$ inches (32 mm) to a maximum of $2^3/_4$ inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

R311.7.7.4 Exterior wood/plastic composite handrails.
Wood/plastic composite handrails shall comply with the provisions of Section R317.4.

R311.7.8 Illumination.
All stairs shall be provided with illumination in accordance with Section R303.6.

R311.7.9 Special stairways.
Spiral stairways and bulkhead enclosure stairways shall comply with all requirements of Section R311.7 except as specified below.

R311.7.9.1 Spiral stairways.
Spiral stairways are permitted, provided the minimum clear width at and below the handrail shall be 26 inches (660 mm) with each tread having a $7^1/_2$-inch (190 mm) minimum tread depth at 12 inches (914 mm) from the narrower edge. All treads shall be identical, and the rise shall be no more than $9^1/_2$ inches (241 mm). A minimum headroom of 6 feet 6 inches (1982 mm) shall be provided.

R311.7.9.2 Bulkhead enclosure stairways.
Stairways serving bulkhead enclosures, not part of the required building egress, providing access from the outside *grade* level to the *basement* shall be exempt from the requirements of Sections R311.3 and R311.7 where the maximum height from the *basement* finished floor level to *grade* adjacent to the stairway does not exceed 8 feet (2438 mm) and the *grade* level opening to the stairway is covered by a bulkhead enclosure with hinged doors or other *approved* means.

R311.8 Ramps.

R311.8.1 Maximum slope.

Ramps shall have a maximum slope of 1 unit vertical in 12 units horizontal (8.3 percent slope).

Exception: Where it is technically infeasible to comply because of site constraints, ramps may have a maximum slope of one unit vertical in eight horizontal (12.5 percent slope).

R311.8.2 Landings required.
A minimum 3-foot-by-3-foot (914 mm by 914 mm) landing shall be provided:

1. At the top and bottom of ramps.
2. Where doors open onto ramps.
3. Where ramps change direction.

R311.8.3 Handrails required.
Handrails shall be provided on at least one side of all ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33-percent slope).

R311.8.3.1 Height.
Handrail height, measured above the finished surface of the ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

R311.8.3.2 Grip size.
Handrails on ramps shall comply with Section R311.7.7.3.

R311.8.3.3 Continuity.
Handrails where required on ramps shall be continuous for the full length of the ramp. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than $1^1/_2$ inches (38 mm) between the wall and the handrails.

SECTION R312
GUARDS

R312.1 Where required.
Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or *grade* below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a *guard* .

R312.2 Height.
Required *guards* at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads.

Exceptions:

1. *Guards* on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.

2. Where the top of the *guard* also serves as a handrail on the open sides of stairs, the top of the *guard* shall not be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.

R312.3 Opening limitations.
Required *guards* shall not have openings from the walking surface to the required *guard* height which allow passage of a sphere 4 inches (102 mm) in diameter.

Exceptions:

1. The triangular openings at the open side of a stair, formed by the riser, tread and bottom rail of a *guard* , shall not allow passage of a sphere 6 inches (153 mm) in diameter.

2. *Guards* on the open sides of stairs shall not have openings which allow passage of a sphere $4^{3}/_{8}$ inches (111 mm) in diameter.

R312.4 Exterior woodplastic composite guards.
Woodplastic composite *guards* shall comply with the provisions of Section R317.4.

BUILDING PERMIT SPECIFICATIONS
FOR FINISHED BASEMENTS

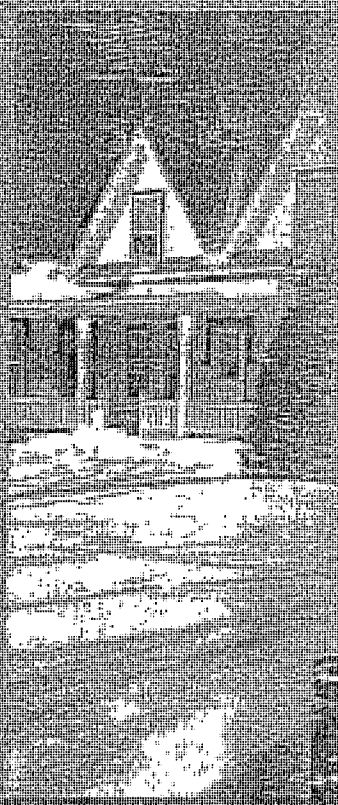
The following are copies of examples of an Emergency Egress Window Assembly and a Ventilation System that meet the 2000 IRC Codes.

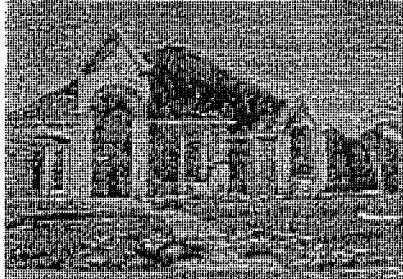
These are only examples. The products and manufacturers are not endorsed by East Goshen Township or its employees.

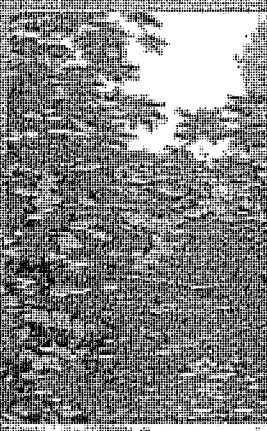
10/22/a

RenewAire

Energy Recovery Ventilators







A Fresh Outlook on Home Ventilation

Ask Your Builder and Heating Contractor for...

Brings Healthful Fresh Air Indoors

And guards your family against the hazards of polluted, stagnant air.

Maximizes Energy Efficiency

RenewAire technology reduces the burden on your heating system in winter and pre-cools/dehumidifies summer air so your cooling system does less work too. You save money while helping the environment.

Satisfies Safety Requirements

Balanced exhaust and fresh airflow eliminates backdraft in chimneys and facilitates building code compliance.

Preserves Structural Integrity

Controlled humidity levels protect windows and woodwork while preventing excessive accumulation of moisture in walls.

Optimizes Ventilation Automatically

The right amount of ventilation, all the time. No open ducts to the outdoors. No windows to open. No wasteful, noisy exhaust fans.

Simple to Install

Can be mounted in any orientation, in any accessible location including crawl spaces, attics, basements and garages.

Easy to Maintain

Long life blower/motor package is the only moving part. Condensate and ice formation is passively controlled eliminating the need for heaters or damper/defrost systems in virtually all applications. No need for condensate pans or drains.

Quiet

Powerful enough to generate ample airflow, yet virtually silent when operating.

Proven, Time-Tested Reliability

When we introduced our first ventilation system in 1983, it featured the world's largest selling core technology. Today, RenewAire is a well established leader in bringing the many benefits of fresh outdoor air into homes throughout the U.S. and Canada.

Peace of Mind

A ten year warranty on the RenewAire core (with two years on the balance of the unit) gives you the security of knowing that you've made a wise investment decision.

1-800-627-7499 www.renewaire.com

RenewAire *Please*

The RenewAire Core

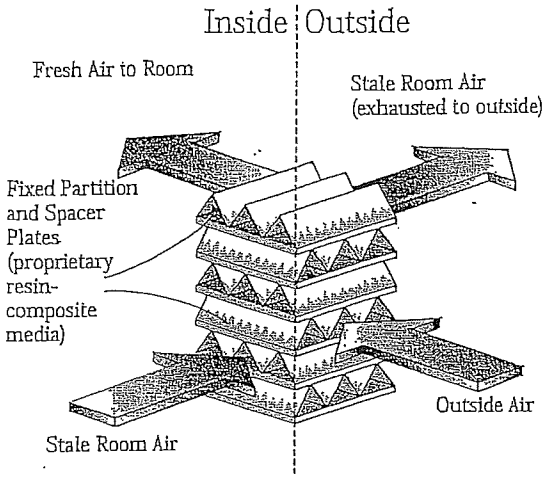
Room air loaded with indoor air pollutants is exhausted to the outside; its heating or cooling energy is transferred to the fresh air delivered to the room.

RenewAire efficiently transfers both heat (sensible energy) and water vapor (latent energy), while excluding pollutants... without moving parts.

The enthalpic (sensible and latent) energy transfer gives RenewAire a big advantage over most flat-plate exchangers: in winter, RenewAire can recover up to 30% more energy, and in summer can reject as much as three times the unwanted outside heat and moisture.

RenewAire's heat exchange core is manufactured by Mitsubishi Electric Corporation. Developed in 1971 specifically for energy recovery ventilation, this technology has gained worldwide acceptance with literally millions of successful installations. Decades of use have demonstrated that the core operates without loss of operating efficiency, retaining its strong resistance to transfer of pollutants and to biological contamination.

U.S. production of the RenewAire product began in 1983. Since then this durable, frost-resistant technology has provided reliable, trouble-free service for tens of thousands of homes from Maine to California and from Alaska to Puerto Rico.



Years of use have demonstrated that this core operates without loss of operating efficiency over the long term, and retains its strong resistance to transfer of pollutants and to biological contamination. This durable, frost-resistant technology has provided reliable, trouble-free service in thousands of North American RenewAire installations for over a decade.

Why Advanced Ventilation is Required

Today's homes almost entirely eliminate wasteful air leaks, helping to control energy costs. But the gas pollutants generated indoors are trapped. The health hazards from indoor air pollutants are broadly recognized as one of today's top environmental hazards.

VOCs
Odors
Radon
Smoke
CO_2
Humidity

Poor Ventilation May be Harmful to Your Health... Formaldehyde and other Volatile Organic Compounds (VOCs), cigarette smoke, radon, household cleaners, even perfumes can threaten your health. Or lingering odors may simply be a daily annoyance.

Excess Moisture Can Damage Your Home... Breathing, showering, cooking–all these generate moisture in your home (about one gallon per person, every day). When that moisture is trapped in your home, the result can be "sweaty windows" and other moisture damage.

RenewAire Provides the Required Ventilation at Minimal Energy Cost

Studies have shown that the air in our homes is more polluted than outside air. An air exchange system can remove the trapped pollutants from your home.

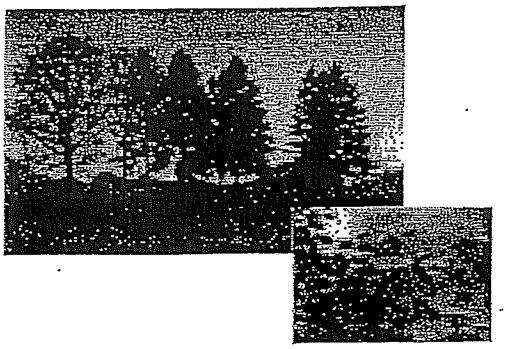
RenewAire provides the required ventilation but costs just pennies a day to operate, thanks to its efficient blowers and recovery of heating and cooling energy from the exhausted air.

RenewAire Protects Your Home From Extremes in Humidity... All Year Long

Homes in different parts of the country can face a range of outdoor humidity conditions–from very dry to extremely wet. When bringing in outdoor air to control indoor air pollutants, the challenge is to maintain a healthy level of humidity inside. RenewAire's humidity transfer capability acts as a buffer to reduce the impact of these humidity extremes. The result: ideal ventilation year-round.

In winter... RenewAire quickly brings excess humidity under control. RenewAire's partial moisture recovery then maintains humidity at a comfortable level.

In humid summer weather... RenewAire reduces the amount of moisture in ventilation air, minimizing the dehumidification load on your air-conditioning system.

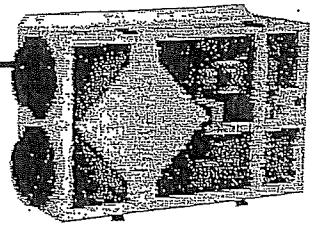


Models and Specifications

RenewAire is the Leader in Quality and Performance

Compare RenewAire's quality of fit and finish, fully insulated cabinet, and durable precision metal blower assemblies. Compare RenewAire's independently certified performance that is superior to aluminum and other plastic plate exchangers.

EV130 ventilates up to 2700 square feet of living space.



Specifications

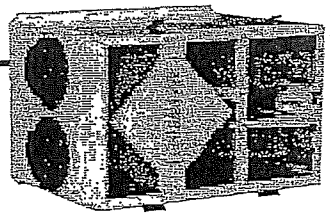
Ventilation Type: Static Plate, Heat and Humidity Transfer				
Typical Airflow Range: 50-140 CFM				
ARI 1060 Certified Core: One L50*				
Airflow Rating Points (for ARI): 95 CFM and 71 CFM				
Number Motors: One, 0.07 hp				
V	HZ	Phase	Input Watts	FLA
115	60	Single	124 @ .4" esp.	1.1
Control Voltage: 24 VAC				
Filters: Cleanable, spun polyester media. 10½" x 10½" x 1"				
Weight: 52 lbs (unit), 57 lbs (shipping weight)				
Shipping Dimensions: 21" W x 32" L x 15½" H				
Options: Percentage runtime control Point of use controls Dehumidistat control 24 hour timer control Wall caps				

Performance

Airflow CFM	ESP in. H_2O	Temp EFF%	Total EFF% Winter/Summer*
35	0.80	84	74/57
71	0.70	80	70/53
95	0.60	76	66/48
111	0.50	75	65/44
118	0.40	74	64/43
127	0.30	73	63/42
131	0.20	73	62/41
140	0.10	72	61/40

*At ARI 1060 standard conditions
(See certified data for core components.)

EV200 ventilates up to 4000 square feet of living space.



Specifications

Ventilation Type: Static Plate, Heat and Humidity Transfer				
Typical Airflow Range: 100-200 CFM				
ARI 1060 Certified Core: One L100*				
Airflow Rating Points (for ARI): 200 CFM and 150 CFM				
Number Motors: One, 0.1 hp				
V	HZ	Phase	Input Watts	FLA
115	60	Single	151 @ .2" esp.	1.5
Control Voltage: 24 VAC				
Filters: Cleanable, spun polyester media. 10½" x 21¾" x 1"				
Weight: 80 lbs (unit), 88 lbs (shipping weight)				
Shipping Dimensions: 21" W x 32" L x 26½" H				
Options: Percentage runtime control Point of use controls Dehumidistat control 24 hour timer control Wall caps				

Performance

Airflow CFM	ESP in. H_2O	Temp EFF%	Total EFF% Winter/Summer*
129	0.80	82	72/53
141	0.70	81	71/52
150	0.65	80	70/51
172	0.50	80	70/50
178	0.40	79	69/48
188	0.30	78	68/47
192	0.20	77	67/46
200	0.10	76	66/45

*At ARI 1060 standard conditions
(See certified data for core components.)

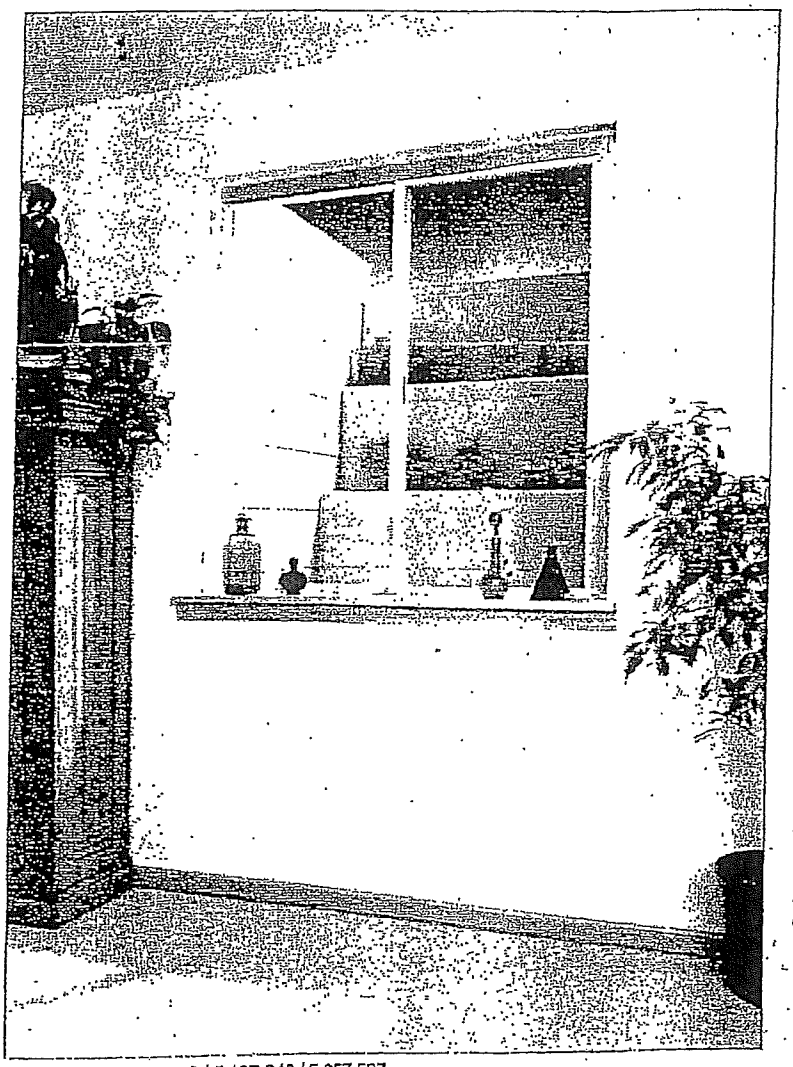
RenewAire
Energy Recovery Ventilators

2201 Advance Road, Madison, WI 53718 USA
Telephone: 608-221-4499 • Toll Free: 1-800-627-4499
Fax: 608-221-2824 • Web: www.renewaire.com

02/01 Part # 134828 © RenewAire LLC 2001

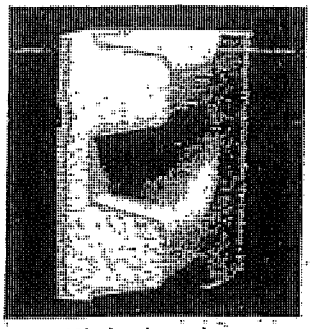
SCAPEWEL® Window Well System

Re-inventing the window well into a state-of-the-art patented product for basement safety, aesthetics and code compliance . . .

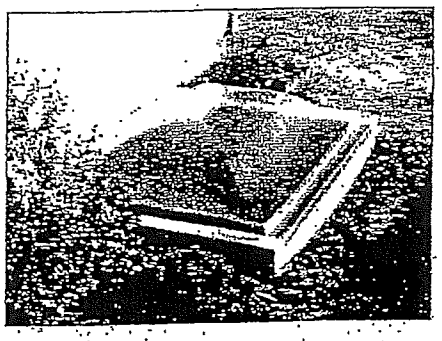


U.S. Patents 4,876,833 / 5,107,640 / 5,657,587

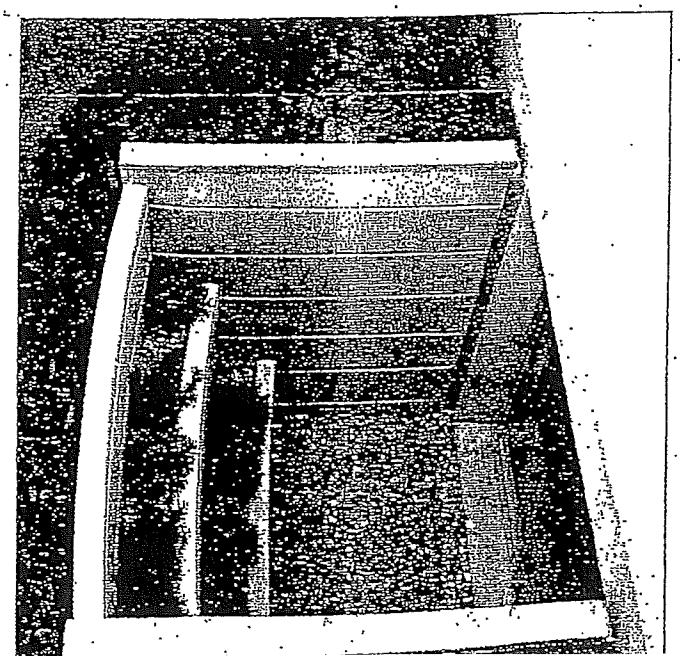
- Component System simply snaps together on site
- Terraced step design for emergency escape
- Attractive sandstone color complements basement interior and blends with any architecture
- Allows more natural light into basement
- Provides planting space for visual enhancement
- Ideal for new construction and remodeling projects
- The perfect companion to escape windows
- Satisfies basement egress codes: Section 310.4 of UBC, Section 310.1 of CABO One and Two Family Dwelling Code
- Mounting flanges attach direct to foundation and are compatible with most window bucks
- Maintenance free and UV stabilized for long life



High-density polyethylene panels with Structural Foam Core



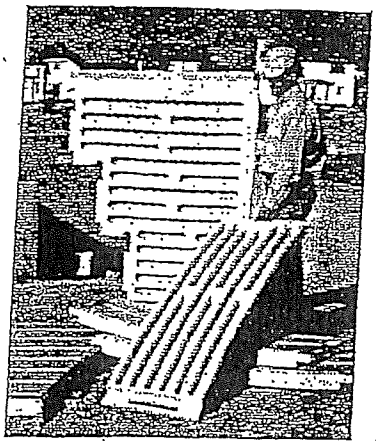
A clear polycarbonate cover with hold-down clips is available for all window well sizes



Bilco®

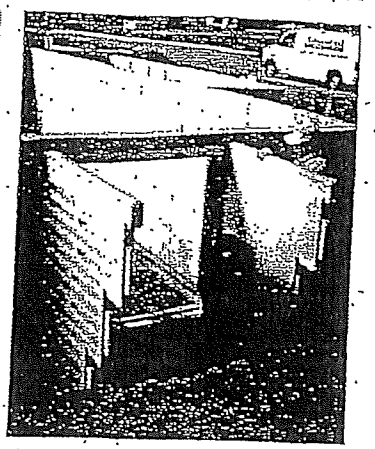
Better Living™

SCAPEWEL® Assembly & Installation

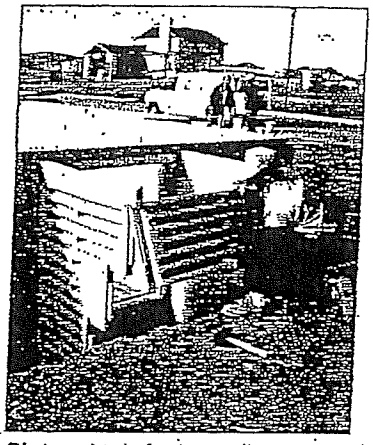


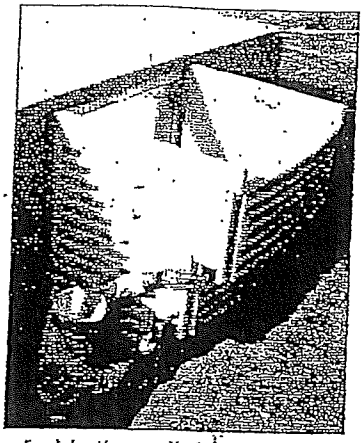
Easy to install component system includes side panels and step panels that simply snap together.

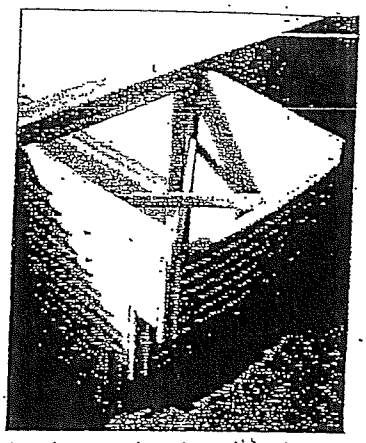
Window Buck Mounting * : Simply attach side panels using window buck back-out screws.



Foundation Wall Mounting * : Side panels are easily attached with a few simple measurements, a power drill and appropriate 1/4" anchors.







Slot and tab feature allows panels to snap into place from outside, or inside the well, for a firm, secure fit. Cross pinning steps to side panels completes the assembly.

2 x 4 cross bracing placed diagonally ensures that the well will not shift during back-fill operations.

** Note: Side panels must extend 4 inches above grade level and 3-1/2 inches below the window sill*

SCAPEWEL® Models & Dimensions

Model	No. of Tiers	Inside Width	Projection from Foundation	Height * of Side Panels	Maximum Width of Opening		Optional Cover Model for Window Well
					Wall Mount	Buck Mount	
4048-42	2	42"	41"	48"	42"	38"	4042C
4048-54	2	54"	41"	48"	54"	50"	4054C
4048-66	2	66"	41"	48"	66"	62"	4066C
4862-42	3	42"	49"	62"	42"	38"	4842C
4862-54	3	54"	49"	62"	54"	50"	4854C
4862-66	3	66"	49"	62"	66"	62"	4866C

Available in either foundation wall mount or window buck mount direct from the factory

*** Side panels must extend 4 inches above grade level and 3-1/2 inches below the window sill**

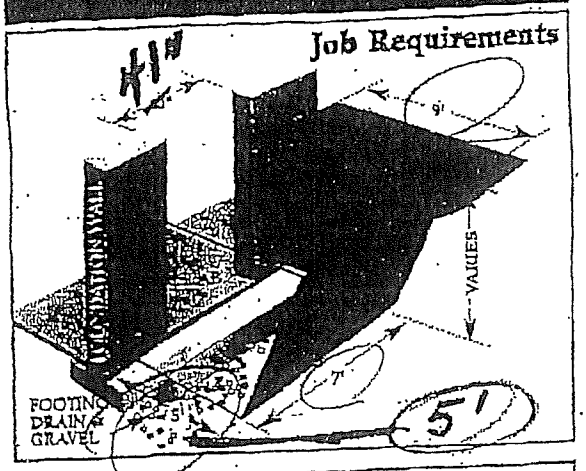
Bilco®

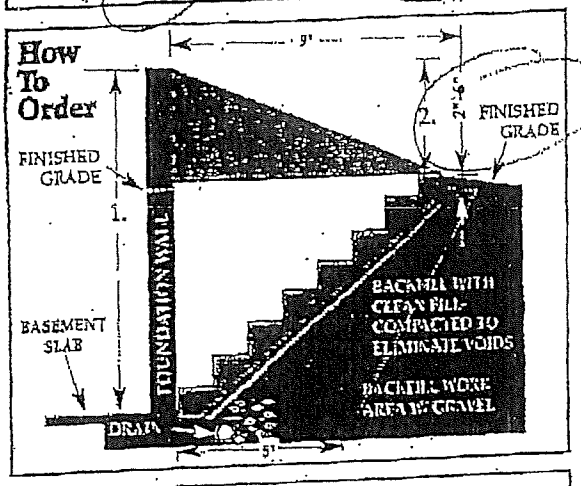
Better Living™ BASEMENTS

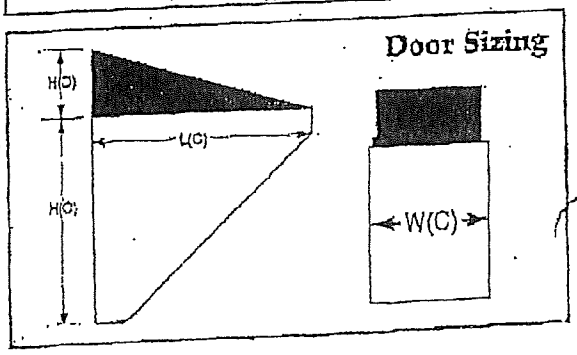
Available at:

BERKS PRODUCTS
80 Willow St. Kutztown, PA 19530
610/683-7391 800/342-0025
Fax: 610/683-3031 ext 246

SPECIAL ORDER







Bilco

Pre-installation Requirements:

1. Provide truck access to within 10' of the center of the PermEntry unit.
2. Foundation footing and opening should be LEVEL, PLUMB and SQUARE.
3. Width of opening in foundation wall should be ~~48"~~ 41" Maximum for all sizes.
4. Ensure proper soil drainage at base of unit. A footing drain to day light is recommended.
5. When foundation is backfilled, leave minimum work area for PermEntry installation as shown.
6. Basement floor or equivalent slab should be poured in the concrete wall.
7. Hold foundation tar coating back minimum 12" each side of opening.

How To Measure:

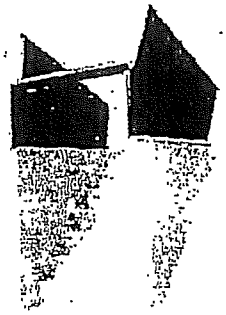
1. Determine the measurement from the finished grade to the foundation footing.
2. Refer to table below to select proper size. Top of casting should be a minimum of 2" above finished grade.
3. Double check your pre-installation requirements and check site to determine that there is proper truck access to and from the PermEntry installation site.

Post-Installation Requirements:

1. Properly backfill and compact excavation with clean, suitable fill and/or stone. NEVER USE CONSTRUCTION DEBRIS and NEVER backfill higher than 2" below top of concrete casting.
2. Final grade should be adjusted to leave 2"-6" of casting above finished grade, immediately slope grade away from the PermEntry unit in all directions.
3. Avoid locating down spouts or sump discharge near the PermEntry unit.
4. An insulated door at bottom of stairs is recommended to reduce heat loss.
5. A finish coat of alkyd metal enamel in a light color must be applied to all metal surfaces inside and out. DO NOT USE AN OIL BASE WOOD PAINT.

A PermEntry® Unit for Every Home...

FOOTING TO GRADE	PE SIZE	CASTING (C) HEIGHT	CASTING (C) LENGTH	CASTING (C) WIDTH	DOOR (D) HEIGHT
35"-41"	S	43"	45"	51½"	52"
52"-58"	O	60"	60"	51½"	30"
59"-66"	B	68"	68"	55½"	22"
67"-74"	C	76"	74"	55½"	19½"
75"-82"	D	84"	86"	55½"	22"



PermEntry®

The Complete Basement Entrance

The PermEntry Stairwell

- Precast in one piece
- Thoroughly vibrated for maximum density
- Manufactured to rigid specifications for controlled high quality
- A performance-proven product
- Thousands installed since 1960

The Bilco Door

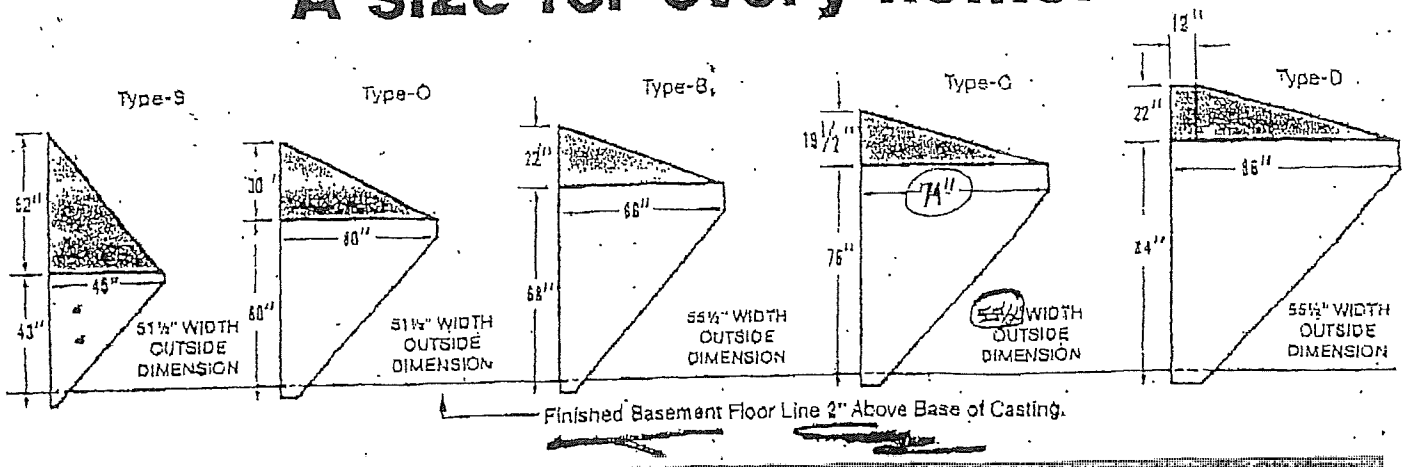
- Manufactured by the Bilco Company
- Rugged heavy gauge steel
- Neat, trim appearance
- Torsion bar door operators
- Inside locking device
- Automatic hold open door catches
- Optional Keyed Lock Kit

Licensed Dealer

BERKS PRODUCTS
80 Willow Street P. O. Box 344
Kutztown, PA 19530
610/683-7391 800/342-0025
Fax: 610/683-3031

PRECAST ext 246

A size for every home.



Job Requirements:

1. Width of opening in foundation wall should be 40" Maximum for all types.
2. When foundation is backfilled leave minimum work area for PermEntry installation as shown.
3. Ensure proper soil drainage at base of unit recommend exterior drain tile to daylight.

Minimum Work Area for PermEntry Door and Stairwell

How To Order:

1. Determine the height of foundation wall from top of footing.
2. Determine dimension from proposed finished grade to top of foundation wall.
3. Refer to types available and select size to assure top of PermEntry stairwell will be 2" to 6" above finished grade.

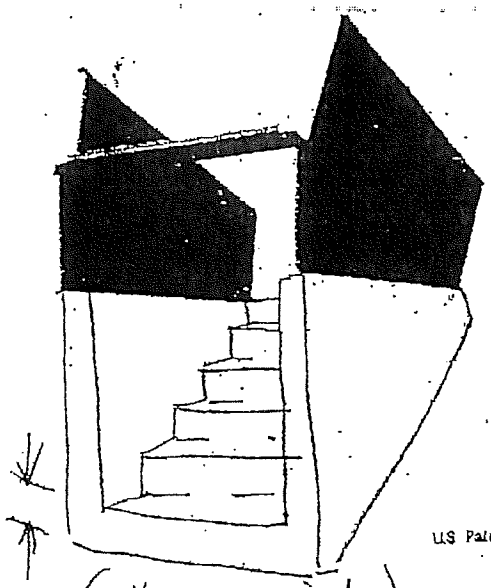
Section Thru Installed PermEntry Door and Stairwell

The PermEntry Door:

- Rugged heavy gauge steel throughout
- Neat, trim appearance
- Torsion bar door operators
- Inside locking device
- Automatic hold open door catches
- Flanged, watertight construction

The PermEntry Stairwell:

- Precast in one piece
- Thoroughly vibrated for maximum density
- Manufactured to rigid specifications for controlled high quality
- A performance-proven product
- Thousands installed since 1960



US Patents 3,307,308
3,310,275

10" (2" overlap with step in wall)

BERKS PRODUCTS CORPORATION

(610) 683-7391
(800) 342-0025 (Within PA)

80 Willow Street
Kutztown, PA 19530

ext 246

THE PERMENTRY COMPANY, P.O. BOX 1203, NEW HAVEN, CT 08505

FORM P-1