Building Preparation Manual
Standard Style Wood Frame
Inside Mount

July 2017

SAFETY **You are responsible for the safe use of this product. Unsafe use could result in property damage, serious personal injury, serious injury to others or a fatality.**

Do not operate the door until you understand all the safety instructions. If you have any questions, contact your door provider or go to www.powerliftdoors.com for assistance.

Recognize safety information and labels:

- The labels are located on the pump and at eye level at each door frame jamb.
- Understand the label's meaning and the potential risk it identifies
- Follow all information on the label
- Keep the labels in good condition
- Replace unreadable labels by contacting:
  your door installer or www.powerliftdoors.com

Follow all safety instructions:

- Read and understand all safety, operation and maintenance instructions
- Allow only those persons who have read and understand the instructions to operate the door
- Turn off power when making electrical connections or conducting any electrical work
- Install all electrical connections per state and local codes
- Do not re-adjust or modify the settings completed by the door installer
- Avoid electrical shock by not operating controls with wet hands or standing on a wet surface
- Operate the door only for the door's intended purpose
- Inspect and verify that the area in the path of the door swing is free of equipment, vehicles or obstructions.
- Stay alert and watch during the door's operation
- Keep fingers and extremities away from pinch points located between the door and door frame
- Keep children and pets away from the door while door is operating
- Maintain the door in good operating condition
- Wear safety glasses when using hydraulic connections
- If a remote control is ordered, do not leave the remote transmitter where unauthorized persons could operate the control
- If hurricane pins are provided, verify the bolts are not engaged prior to door operation

Maintenance

Yearly inspect hoses, lines and connectors for signs of deterioration. Contact your door installer if deterioration is detected.
In high moisture buildings, (dairy buildings, livestock confinements) replace the hydraulic oil to prevent moisture accumulation. Protect motor from excessive moisture.

Installation Instructions for Wood Framing (Inside Mount)

PowerLift Hydraulic Doors is delighted to be providing our product on your project. We look forward to working with you and arranging for a quick and trouble-free installation. All PowerLift Hydraulic Doors are professionally installed by company trained representatives. By working together, we can provide an expedited project schedule. Several procedures should be completed for a trouble free installation.

Prior to door fabrication and installation:

The rough opening should be completed with the side columns plumb, straight and the header level, straight and without bow or twist. To eliminate any building movement, installation of roof trusses, wall girts, bracing and roof sheathing should be completed. (Review Suggested Framing Recommendations)

The project must have drivable access to the project site and door rough opening.

Door installation is preferred to be completed prior to concrete floor placement. By allowing our door frame posts to be extended and the concrete placed around them, the post are soundly secured. For completed concrete floors, the PowerLift door installer will install anchor bolts and anchor plates.

Door side jamb trim installed prior to door installation. This method is quicker and less problematic for the builder than installing the trim after the door is installed.

PowerLift Hydraulic Doors fasten to the inside of the header. Bracing should not extend closer than 3” from the bottom of the header opening. (See Header Detail drawing)

The door purchaser is responsible for providing a telehandler, or other acceptable equipment capable of lifting the door from the trailer and carrying the door to the building opening. Consult your local PowerLift Manufacturing Location for options.

Five gallons of hydraulic oil, compatible to the Owner’s equipment, available for pump installation. ISO 32 hydraulic oil is recommended.

Permanent electrical power is not required for the door installation. However, a typical PowerLift Hydraulic Door will require 220v and 30-amp breaker for permanent door operation. Other power options are available. Please consult your PowerLift Manufacturing Location for available options.

Door arrival:

The door will arrive on a trailer pulled by our delivery truck with at least one door installer. The door and frame will arrive as one painted component. All horizontal wood or steel girts, cylinders and hydraulic lines will be installed with the door.

The door will be moved from the trailer to the door rough opening with the help of the contractor supplied equipment. The PowerLift Installer, will then position, adjust and fasten the door to the building. Fastening is completed in two stages. First stage is by

installing long lags through door frame legs into the side post of the building. The second stage is by installing lags through the header mounting angle into the building header. (See Typical Header Detail and Typical Wood Building Side Jamb Detail drawings).

Upon completion of securing the door, the hydraulic pump and connecting hydraulic hoses will be installed on the designated door side. The pump is fastened to framing members by four ¼" lags. If the pump requires to be removed (for example, for lining the building interior) lags of the same diameter but of longer length can be used. The recommended height of the pump controls is 72" or higher from the finished floor to discourage young or unauthorized individuals from operating the door, however the pump controls can be located per the customers specifications.

The Powerlift Installer will connect temporary power and pour the hydraulic oil (supplied by the customer) into the pump reservoir. The door will be temporarily operated through several cycles. Any final adjustments will be completed prior to the installer leaving the project. If the Owner is available, operating instructions will be provided by the installer. An Owner's Installation Checklist will also be zip tied to the pump.

A rubber membrane is provided as a weatherstripping to cover the hinges at the top of the door. The weatherstripping is fastened prior to door cladding installation. The weatherstripping should be placed on the building behind the steel above the door, approximately 2" in height. The weatherstripping will lay across the hinges, and be fastened to the door. Care should be taken to remove wrinkles and provide a smooth neat appearance when installing the weatherstripping. The weatherstripping is fastened on the outside of the door cladding. In the case of steel panels, fasten the weatherstripping with screws in every raised rib location through the J-channel. (See Typical Header Detail drawing.) Any door trim and cladding must be sealed with a good quality sealant to prevent moisture from penetrating the door envelope. Installation of the rubber membrane is completed by the owner or the contractor, the PowerLift Installer will leave the rubber membrane at the jobsite after the door install is completed.

Inspect the door to verify that the vertical margins are equal between the door and the building jambs. Window framing, windows and service doors can now be installed.

When installing the door trims and cladding a minimal distance of 5 ½" must be maintained between the trim or cladding above the header and the trim or cladding on the door. This allows the door to open past 90 degrees without damaging either material. Cladding material with deeper than 1" profiles will require more distance. In this circumstance, raise the building trims and cladding above the rough opening and operate the door to verify that the trims and cladding will not collide. (See Typical Header Detail drawing)

The door bottom weatherstripping has been installed. The PowerLift Installer will trim to fit and add/adjust metal closeout plates on each end of the door. If the concrete is not installed at the time of the door installation the owner or contractor may need to adjust the closeout plates. The closeout plates can easily be adjusted by loosening the screws and moving the slotted rubber membrane up or down and then retightening the screws. This provides the best door seal.

Seal the door frame to building jamb materials with a color matching sealant.

PowerLift Hydraulic Doors are fabricated with the anticipation that the door will be insulated and completed with a liner panel. No additional door modifications are required if this application is undertaken in the future.

Wainscoting

If wainscoting is scheduled, the bottom of the lowest girt will be the top of the wainscot height from the finished floor. A 2x framing member is fastened vertically under the girt in the field by the builder. This results in 5" of fastening space for the wainscot and trims.

Wiring Connections

Both the pump and the remote control option can be wired by the same power supply. A 220v 30-amp breaker is required. All wiring is completed using the color coded wiring located in the pump switch box. (See Typical Electrical Connections drawing.) For a list of additional wiring connections please refer to the specifications page on our website (www.powerliftdoors.com) or contact your local PowerLift Manufacturing Location.

ELECTRICAL WIRING SHALL BE INSTALLED BY AN ELECTRICAL CONTRACTOR AND MEET FEDERAL, STATE AND LOCAL CODES.

Operating the door temporarily until permanent power is provided.

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

The door is provided with pioneer type hydraulic nipples. These are located on the hydraulic lines directly above the locking valve. A tractor or other piece hydraulic equipment can be used to operate the door using these connections. Hydraulic connections should be left attached for the entire door cycle to prevent pressure buildup.

If a generator must be used to supply temporary power for door operation, wiring, connections and power must be of adequate size. Do NOT starve the pump unit of electrical power. This will adversely affect the lifetime of the power unit and void the warranty. **Only use a generator that can provide 10,000 watts**. PowerLift Hydraulic Doors cannot be responsible for field conditions or temporary connections associated with temporary generators.

Suggested Framing Requirements

DUE TO FIELD CONDITIONS AND VARYING BUILDING PRACTICES POWERLIFT HYDRAULIC DOORS CAN ONLY MAKE RECOMMENDATIONS BASED UPON PAST EXPERIENCE. THE BUILDING SUPPLIER IS RESPONSIBLE FOR INCORPORATING ANY REACTIONS OR STRESSES IMPOSED BY POWERLIFT HYDRAULIC DOORS INTO THE BUILDING DESIGN. THE FINAL BUILDING STRUCTURE'S INTEGRITY IS THE RESPONSIBILITY OF THE BUILDING SUPPLIER.

Wood Buildings:

Side Jambs: The framed post should run from the grade height continuous to the top of the rafters. Three rows of nails penetrating at least two members, 16” on center with two rows within 1” of the edges. Joints staggered in the plies not closer than 4’. On all doors up to 15’ in height a minimum of 4 ply 2x8 post. Recommendations for doors wider than 30’ and higher than 15‘should have 5 plies of 2x8 framing. Doors wider than 30’ and higher than 17’ are recommended to have 6 plies of 2x8 or 4 plies of 2x10 framing. On all doors wider than 30’ and higher than 19’, 5 plies of 2x10 are recommended. Install diagonal bracing from the post near the top of the door opening to the top of next rafter truss.

Header: Minimum 2 plies of 2x wood framing (3” thick) to a height of 8” from the bottom of the header opening. Recommended diagonal bracing angle is 45 degrees. Install diagonal framing from the header to the top of the next rafter (possible two rafter spaces to maintain recommended 45-degree angle). Provide diagonal bracing at a minimum of each hinge location and the upper cylinder mount on 20’ high doors.

Windows:

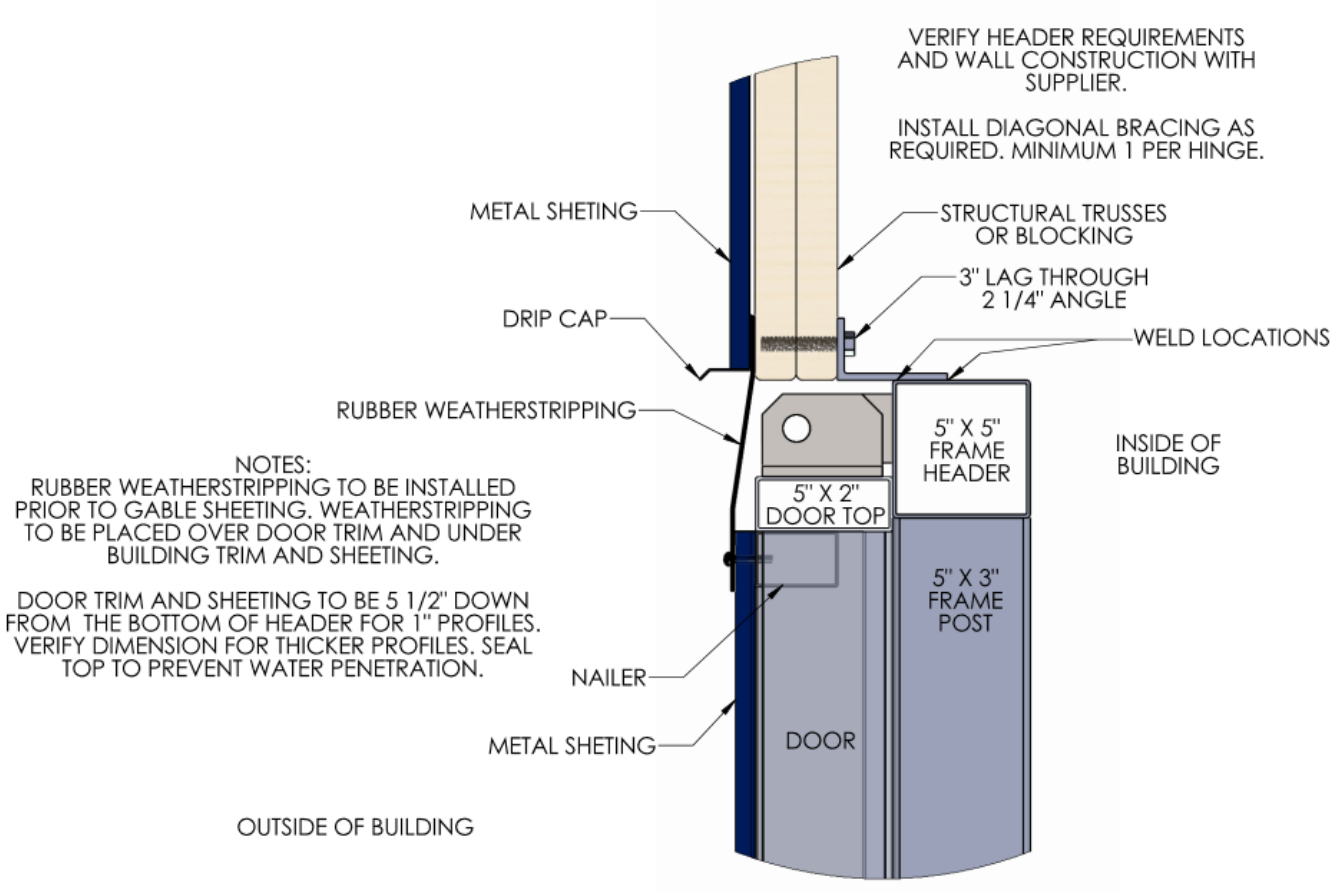
Windows can be installed in every PowerLift Hydraulic Door. The window type selected is restricted to awning, fixed or sliding. The recommended rough opening or total size can be no larger than 5’ wide or 4’ high with no individual pane of glass being larger than 9 square feet (width multiplied by height). Tempered glass is recommended no matter the size of the window. Recommended window mounting is by continuous molded or permanently attached window nail flange lapping the rough opening at least 1” at each edge and permanently fastened per manufactures instructions. All windows shall be installed per applicable building codes. Window supplier is responsible for: (a) providing windows of the correct glazing type, (b) sufficient framing and track depth so windows remain intact for door movement or varying horizontal positions, (c) installation of windows per manufacturer’s instructions and (d) warranty for installation conditions. Due to varying conditions, Powerlift Hydraulic Doors cannot be held liable for any conditions or circumstances resulting from window installation.

Cane Bolts:

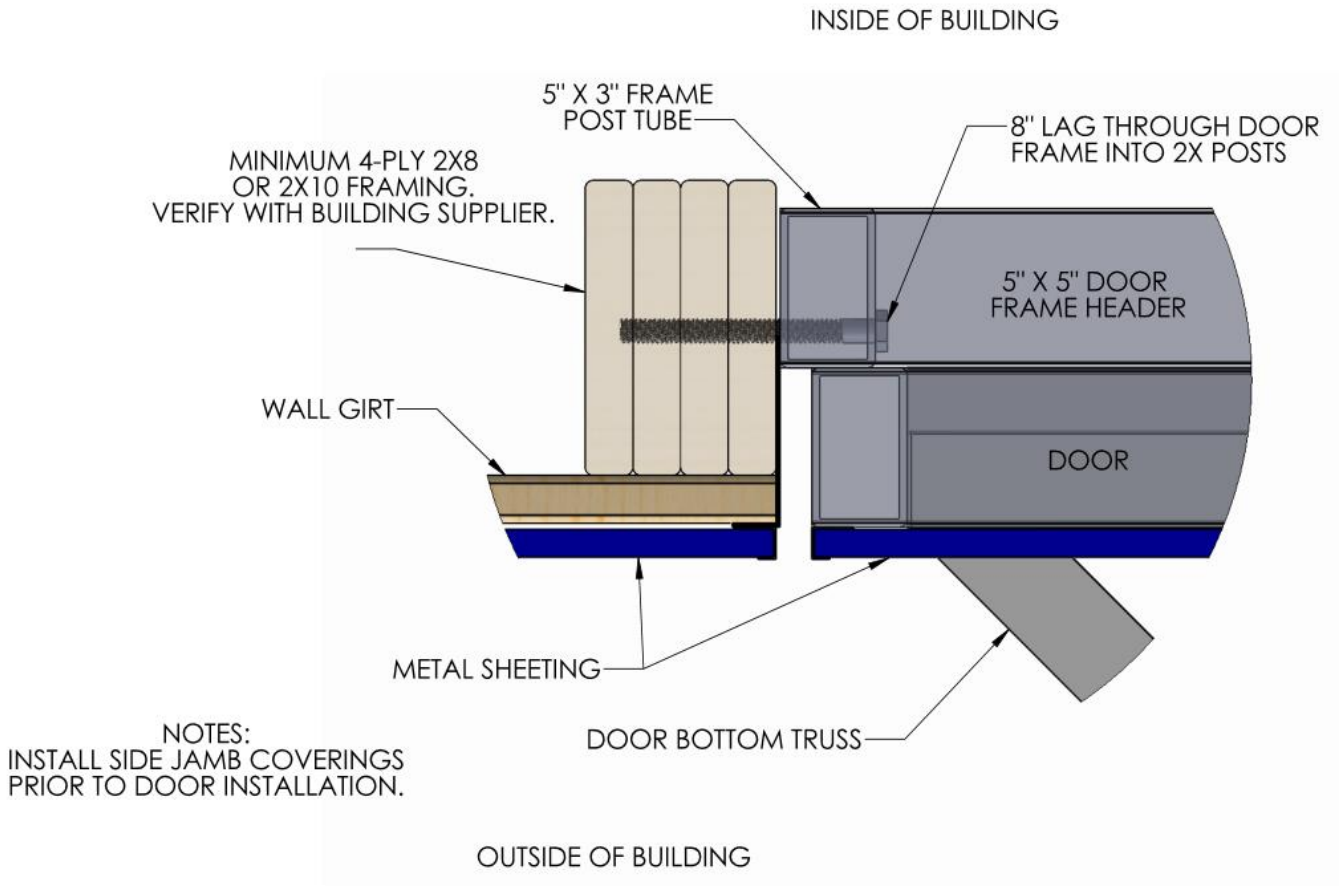
On larger width doors, cane bolts may be added to the inside of the truss near the center of the door. While the PowerLift door can withstand significant wind loads, the use of cane bolts adds additional strength at the door truss location. If severe or abnormal weather is anticipated the cane bolt can be engaged by lowering the bolt into a hole in the floor slab. This procedure may aid in preventing unwanted building or door damage. Under normal weather conditions the cane bolt may be left in the raised or unengaged position.

Never operate the door when the cane bolt is in the engaged or lowered position.

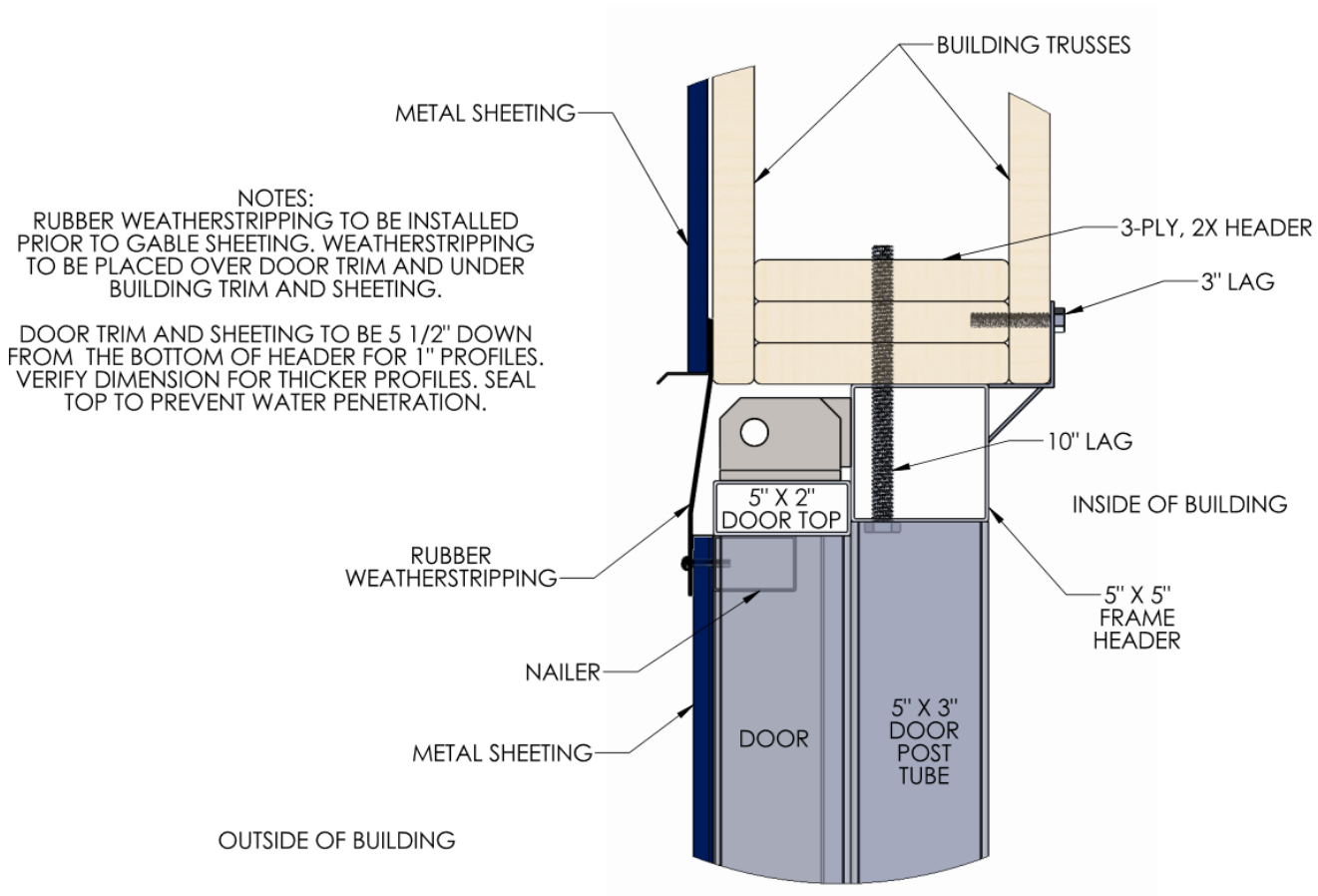
Typical Header Detail



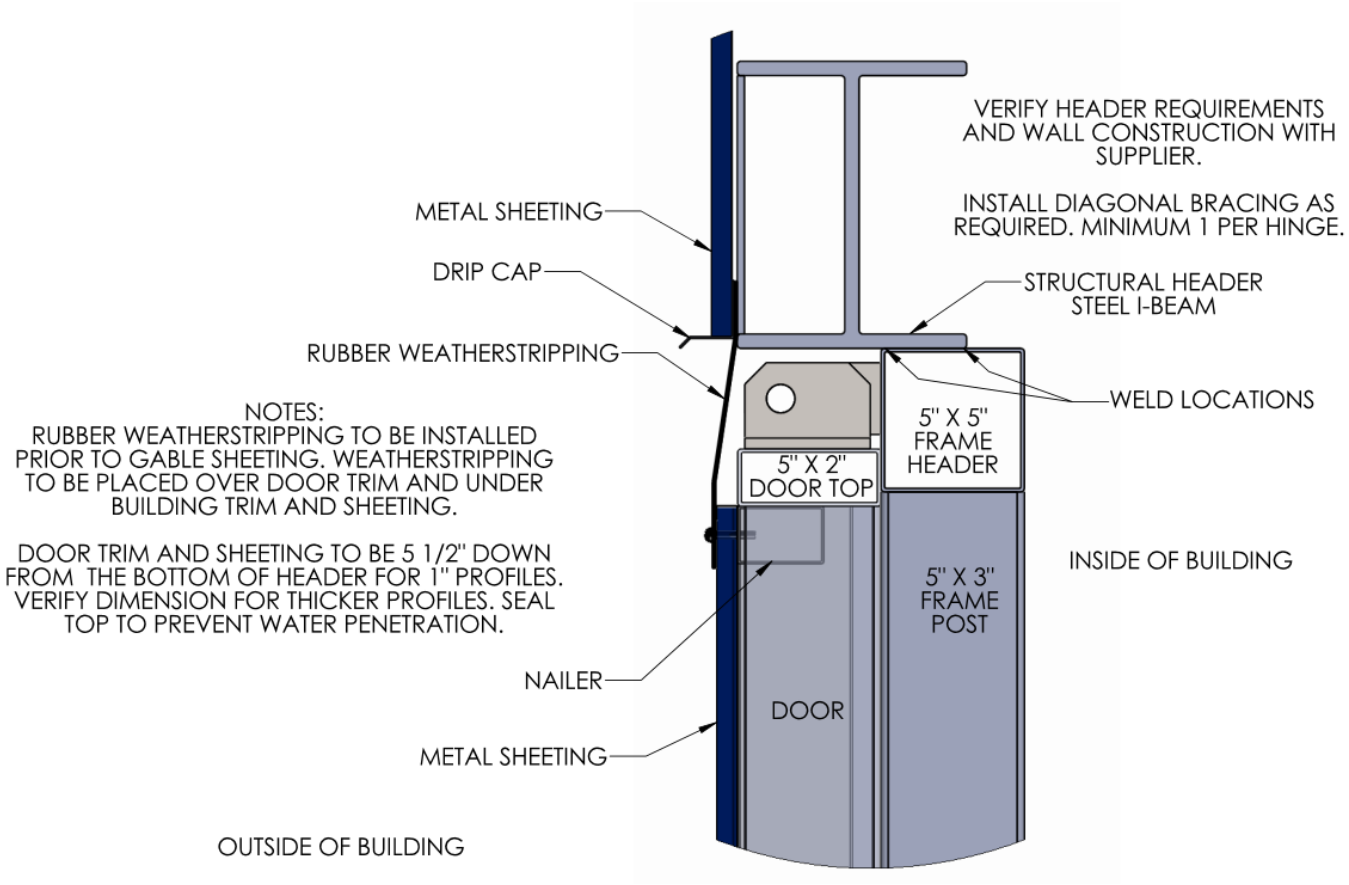
Typical Wood Building Side Jamb Detail



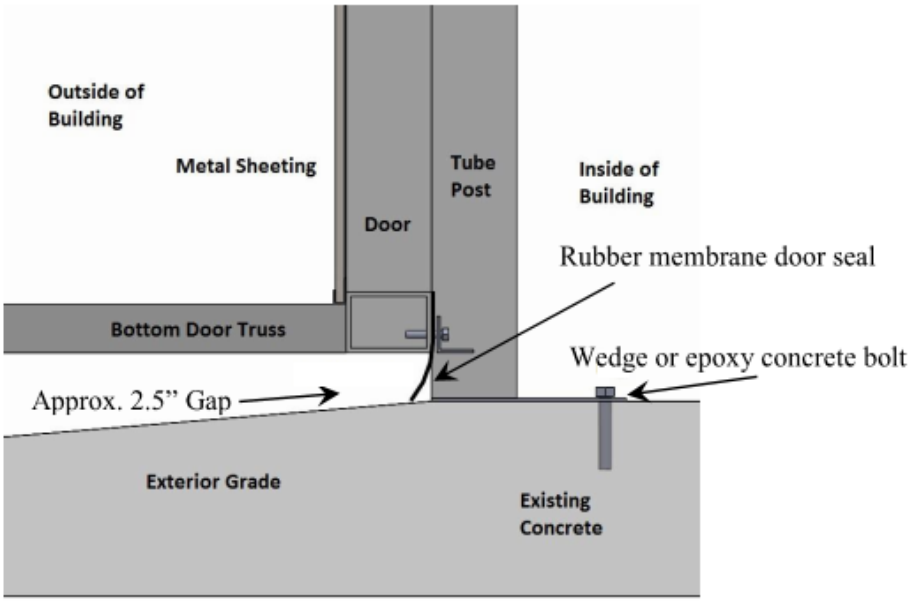
Morton Buildings Header Detail



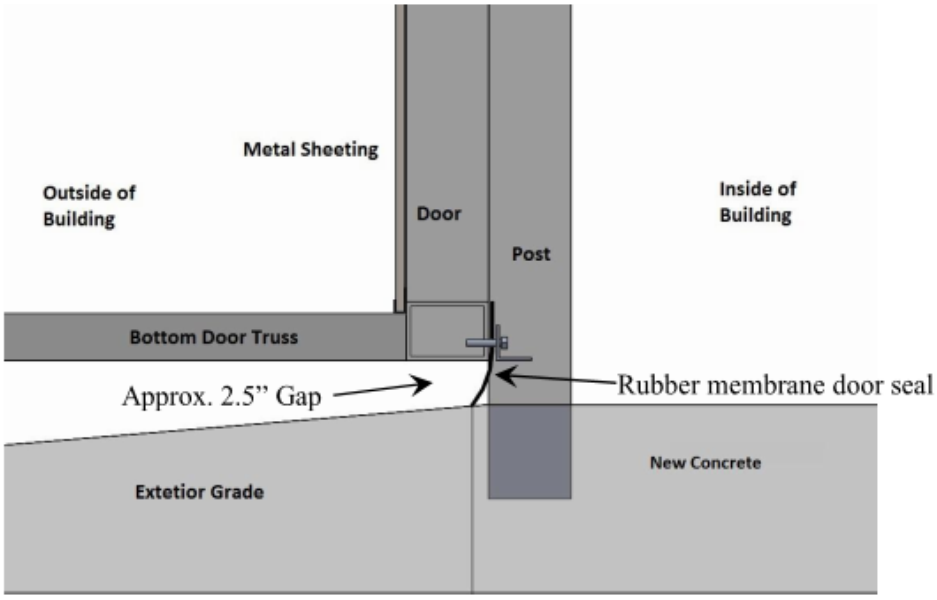
Typical I-Beam Building Header Detail



Typical Inside Mount Threshold Detail w/Placed Concrete



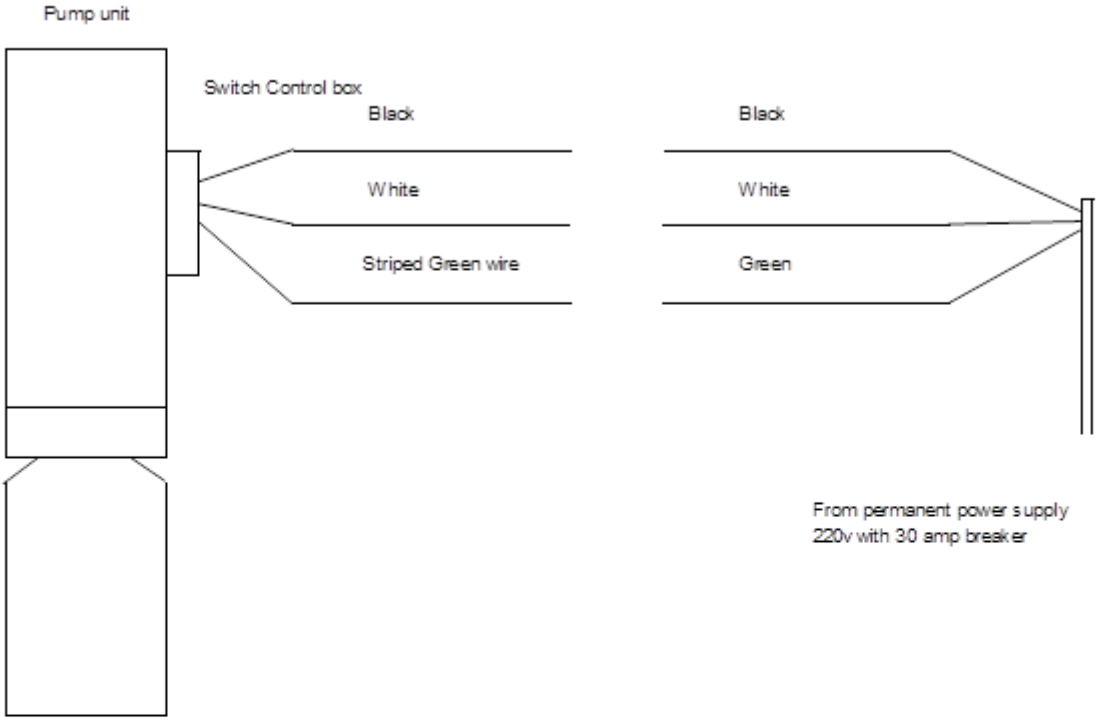
Typical Inside Mount Threshold with New Concrete



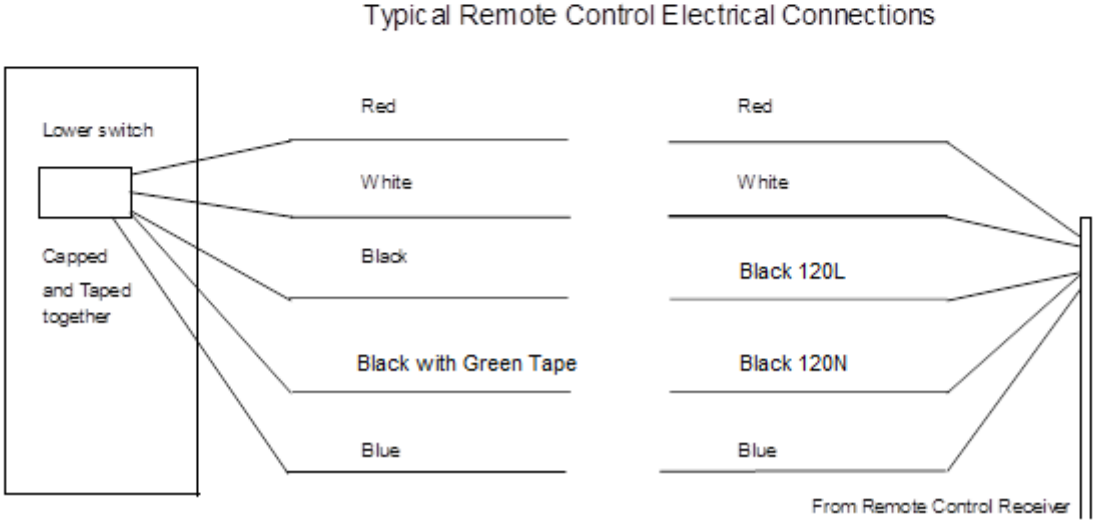
POWERLIFT™ Hydraulic Doors

Typical Electrical Connections

Typical Motor Power Connections



Typical Remote Control Electrical Connections



IF NO BLUE WIRE IS PROVIDED IN THE MOTOR
THE REMOTE CONTROL BLUE WIRE MUST BE CAPPED