

# Technical Note No. 044



## Installing LP® SmartSide® Lap Siding or Trim over Concrete or Masonry Walls

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This Technical Note is an addendum to the LP® SmartSide® ExpertFinish®, LP® SmartSide® Strand Substrate Lap Siding Application Instructions and LP® SmartSide® Trim and Fascia Application Instructions. Refer to LP® SmartSide® Strand Substrate Lap Siding and LP® SmartSide® Trim and Fascia Application Instructions for all other product installation details.

### **Strand Substrate Trim and Lap siding installed over concrete or masonry walls:**

- Non-Compressible Drainable Housewrap (NCDH) is required behind trim and lap siding installed over concrete or masonry walls.
  - Refer to Technical Bulletin #031 for definition of NCDH
  - Examples of available NCDH include, but not limited to:
    - Benjamin Obdyke HydroGap® Drainable Housewrap
    - TamlynWrap® Drainable Housewrap
  - Attach NCDH to concrete or masonry walls per manufacturer’s instructions or minimum 3/8 inch long “stub nail”
  - Properly tape and/or seal wall penetrations in accordance with the NCDH manufacturer’s instructions
- Concrete or masonry wall construction must comply with applicable national and local building codes.
- When installing trim or lap siding directly to concrete masonry units (CMU), the CMU’s must comply with ASTM C 90.
- Refer to Technical Note #014 for installation of LP SmartSide trim and lap siding on concrete or masonry walls over furring strips.

### **Trim**

- Trim Fastener Specifications:
  - Fasteners must be suitable for concrete or masonry applications as specified by the fastener manufacturer
  - Minimum shank diameter = 0.140 inch
  - Minimum length = 1.75 inches
  - Corrosion Resistant: capable of preventing rust, stain and deterioration of the fasteners under normal outdoor environmental conditions for a period of no less than 50 years

- A fastener with a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 62 lbf/fastener or greater based on the load duration factor of 1.6
  - Commonly used concrete or masonry fasteners include, but not limited to:
    - Aerosmith® PowerPin™ 5454HPG PT2000 plating, head diameter 0.300 inch x shank diameter 0.145 inch x length 1.75 inches, smooth shank
- Trim Fastening:
  - Trim under 7 inches wide use a minimum of 2 nails per width, trim 7 to 12 inches wide use a minimum of 3 nails per width, trim over 12 inches wide use a minimum of 4 nails per width
  - Fasteners spaced a maximum of every 24 inches o.c. along the length of the trim
  - **Avoid overdriven fasteners** (See Figure 2)
  - Leave a 3/16 inch expansion joint at all end joints
    - Exception: trim ends may lightly touch around windows and doors

### Lap Siding

- Lap Fastener Specifications:
  - Fasteners must be suitable for concrete or masonry applications as specified by the fastener manufacturer
  - Minimum shank diameter = 0.140 inch
  - Minimum length = 1.25 inches
  - Corrosion Resistant: capable of preventing rust, stain and deterioration of the fasteners under normal outdoor environmental conditions for a period of no less than 50 years
  - A fastener with a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 62 lbf/fastener or greater based on the load duration factor of 1.6
    - Commonly used concrete or masonry fasteners include, but not limited to:
      - Aerosmith® PowerPin™ 5323HPG PT2000 plating, head diameter 0.300 inch x shank diameter 0.145 inch x length 1.25 inches, smooth shank
- Lap Fastening:
  - **Lap siding shall be installed with top (blind) nailing a maximum of 10 inches o.c. with the nails placed 3/8 inch from either end, a minimum of 3/4 inch from the top edge of the board**
    - Immediately below frieze boards and horizontal trim fasteners will be exposed every 10 inches o.c. on lap siding
    - Fasteners below windowsill shall be spaced a maximum of 8 inches o.c. (See Figure 1)

- **Avoid overdriven fasteners** (See Figure 2)
- Overlap siding a minimum of 1 inch
- Leave 3/16 inch expansion joint at all end joints and field (butt) joints

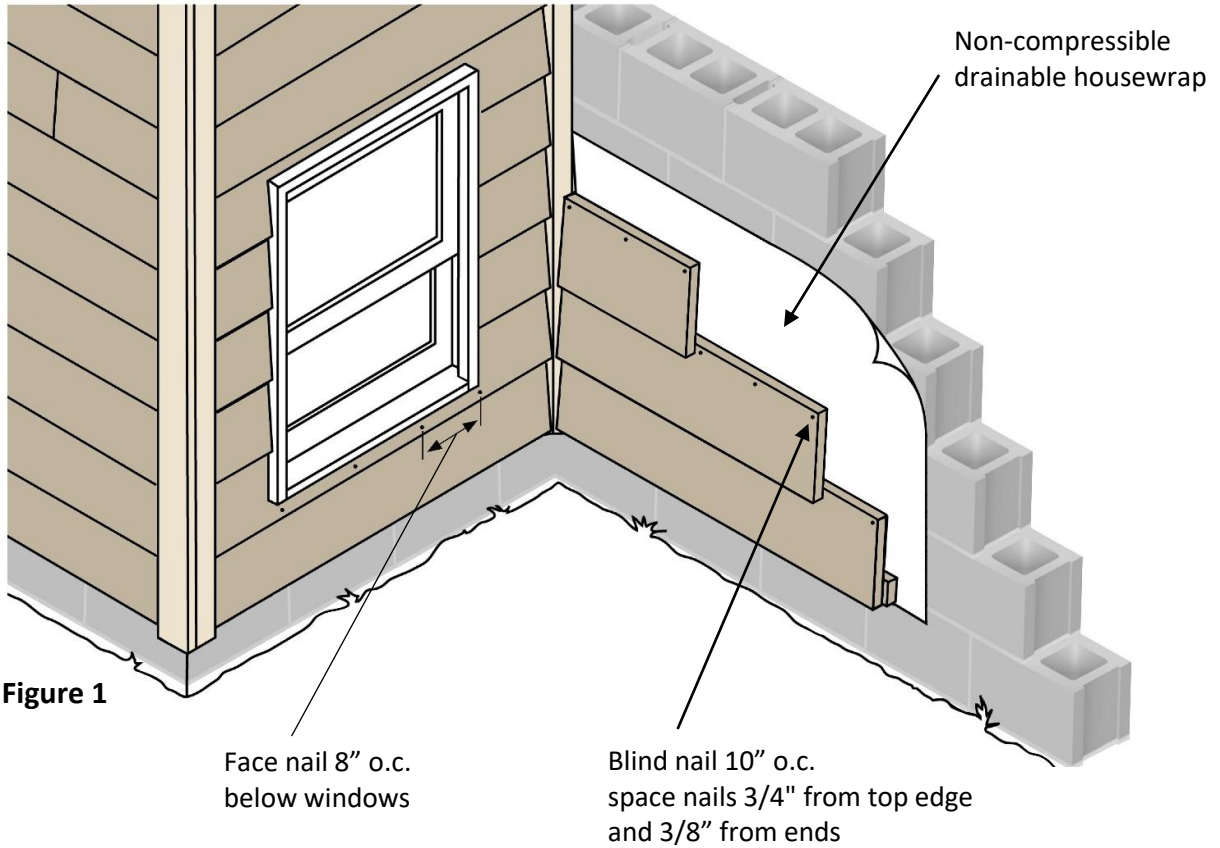


Figure 1

Face nail 8" o.c.  
below windows

Blind nail 10" o.c.  
space nails 3/4" from top edge  
and 3/8" from ends

### Nailing Schedule

- **Fasteners:** Apply and correct overdriven fasteners as shown in Figure 2.
- **Sealant:** Use an exterior-quality, non-hardening, paintable sealant.
  - Class 25 or higher exterior sealant meeting the ASTM C920 Standard Specification for Elastomeric Joint Sealants.
  - Follow the sealant manufacturer's instructions for application.

CONDITION	CORRECTION
Snug	OK
Flush	Paint
Visible fiber	Paint
Countersunk 1/16" - 1/8"	Apply sealant
Countersunk more than 1/8"	Apply sealant and re-nail

Figure 2