NUCOR BUILDING SYSTEMS

WALL SHEETING ERECTION MANUAL

FOR FIELD USE

PLEASE DISTRIBUTE TO THE ERECTION CREW

WATERLOO, IN
305 Industrial Parkway
Waterloo, IN 46793
Phone: 260-837-7891
Fax: 260-837-7384

SWANSEA, SC
200 Whetstone Road
Swansea, SC 29160
Phone: 803-568-2100
Fax: 803-568-2121

TERRELL, TX
600 Apache Trail
Terrell, TX 75160
Phone: 972-524-5407
Fax: 972-524-5417

LANCASTER, PA
255 Butler Avenue
Suite 200
Lancaster, PA 17601
Phone: 717-735-7766
Fax: 717-735-7769

BRIGHAM CITY, UT
1050 North Watery Lane
Brigham City, UT 84302
Phone: 435-919-3100
Fax: 435-919-3101

DUE TO THE PROCESS OF CONTINUOUS IMPROVEMENT, THE PRODUCTS AND PROCEDURES IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE

ERECTION MANUAL REVISION INFORMATION			
ACTIVITY	ADDENDUM RELEASE #	PAGES REVISED	RELEASE DATE
Most Recent	#10	7,9,14 & 15	7/27/2017
Previous Revisions	#9	14-15	10/07/2016
	#8	3,10	4/12/2016
	#7	22,23	5/1/2014
	#6	10,16-18	8/29/2012

1.0 TABLE OF CONTENTS

1.0 RECEIVING, HANDLING AND STORING MATERIALS

1.1 RECEIVING MATERIALS & FILING CLAIMS

- Check shipment against delivery tickets during unloading.
- Note any damage or discrepancies on the delivery tickets before signing as receiver.
- **Nucor Building Systems** is not responsible for carrier damage or discrepancies not noted on the delivery tickets.
- The customer assumes full responsibility for the condition of this material after deliver by the trucking company.
- **Nucor Building Systems** is not responsible for items accepted in questionable condition.
- Upon acceptance of shipment(s), the **contractor** is responsible for the proper storage and handling of materials as described in this manual.
- **Nucor Building Systems** is not responsible for injury, damage, or loss as a result of improper storage and/or handling.
- All claims must be filed with **Nucor's Quality Services Representative** prior to any field modifications or purchases that may result in a charge to **Nucor Building Systems**. Contact our **Service Representative** at:

WATERLOO, IN
305 Industrial Parkway
Waterloo, IN 46793
Phone: 260-837-7891
Fax: 260-837-7384

SWANSEA, SC
200 Whetstone Road
Swansea, SC 29160
Phone: 803-568-2100
Fax: 803-568-2121

TERRELL, TX
600 Apache Trail
Terrell, TX 75160
Phone: 972-524-5407
Fax: 972-524-5417

LANCASTER, PA
255 Butler Avenue
Suite 200
Lancaster, PA 17601
Phone: 717-735-7766
Fax: 717-735-7769

BRIGHAM CITY, UT
1050 North Watery Lane
Brigham City, UT 84302
Phone: 435-919-3100
Fax: 435-919-3101

This building is designed, manufactured, and delivered in accordance with most recent addition of the **M.B.M.A. METAL BUILDING SYSTEMS MANUAL. CONSULT THE INFORMATION IN THE "COMMON INDUSTRY PRACTICES" SECTION.**

1.2 HANDLING MATERIALS

Nucor wall panels are rolled and banded, with a cover panel placed top and bottom.

Panel bundle weight can be found on i.d. tag at low end of each bundle. Maximum weight is 4300 pounds.

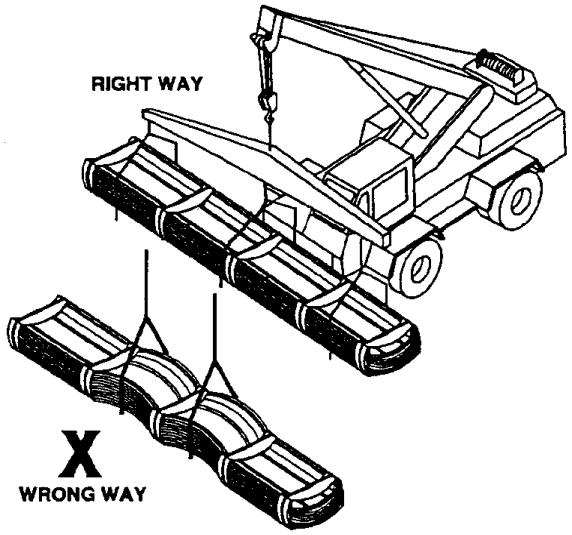
Bundles up to 25 feet can be handled using a forklift. Forks must be spaced a minimum of five feet apart.

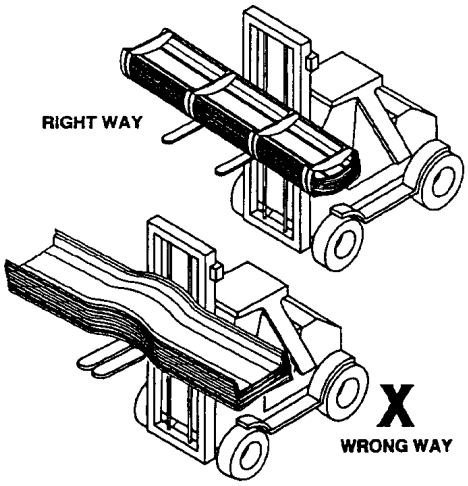
Bundles over 25 feet should be handled with a crane using a spreader bar and nylon slings. Lifting should occur at center of gravity.

Locate slings at 1/4 of the length of the panel from each end of the bundle.

Trim crates/boxes are to be handled the same as panel bundles.

STEEL CHOKERS/SLINGS, CABLES OR CHAINS SHALL NOT BE USED.





1.3 STORING MATERIALS

Panel and trim bundles / crates should be blocked 12 inches above grade.

Elevate one end to allow moisture to drain.

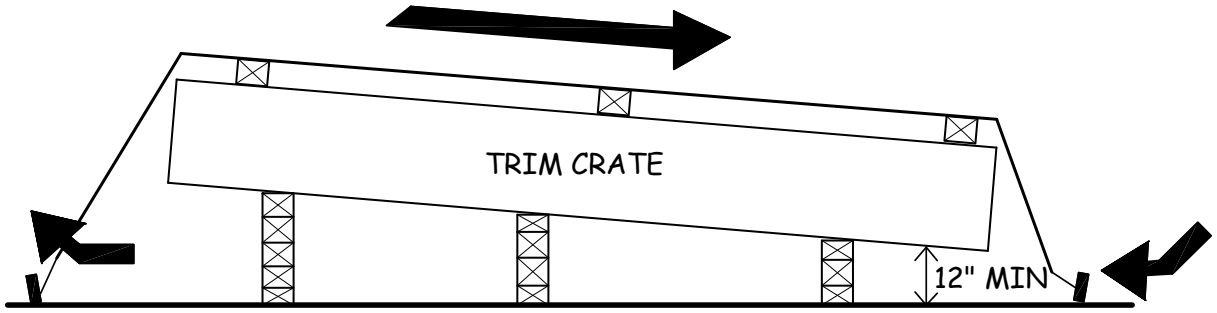
Loosely cover with waterproof tarp to allow proper air circulation.

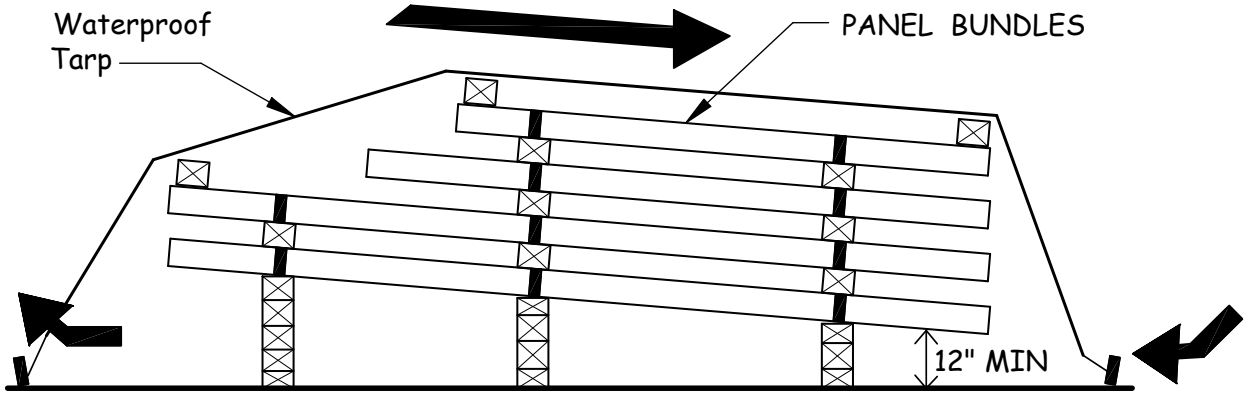
Inspect daily and dry if necessary.

Accessories must be kept dry and free of contamination. Store indoors if possible.

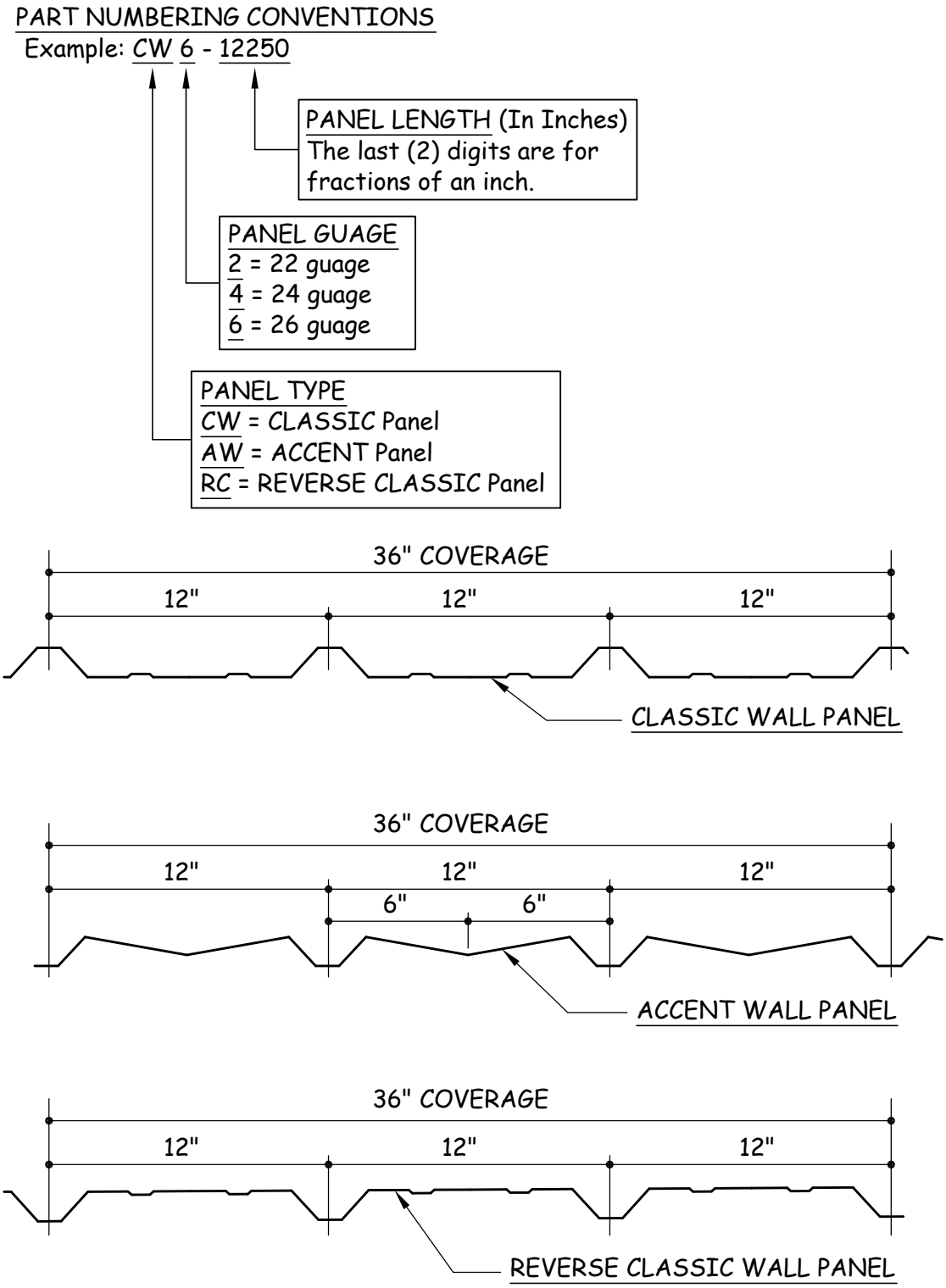
If the panels are wet, the bundles should be opened and then the panels should be dried and re-stacked to prevent damage.

IMPORTANT NOTE: The finish on these panels may not perform as intended if not erected within **90 days** from receipt at the job site. The finish is also subject to severe damage if moisture, debris, or dust is allowed to get between the panels; therefore, panels **MUST BE STORED UNDER COVER** with one end elevated to allow for drainage and protection against moisture, dust, or debris until erected. The manufacturer will not accept claims for non-performing panels if not properly stored at the jobsite. The customer assumes full responsibility for the condition of this material after deliver by the trucking company.





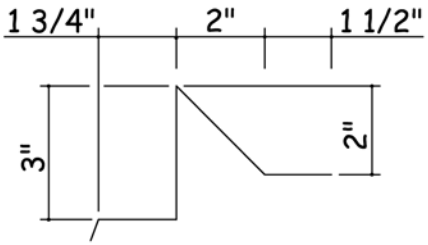
2.0 PANEL PROFILES



3.0 STANDARD PARTS

STANDARD BASE TRIM

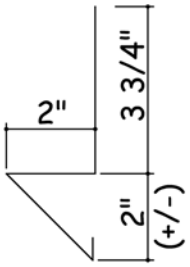
18 Gauge Steel



Part Numbers
BSA01 x 10'-1"
BSA02 x 20'-2"

OPTIONAL BASE TRIM

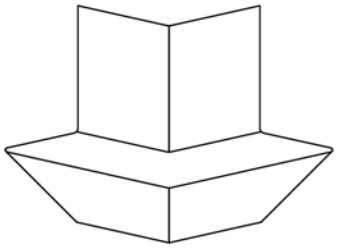
26 Gauge Steel



Part No. BSB01

OUTSIDE CORNER

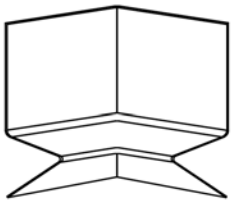
(For Optional Base Trim)



Part No. H4200

INSIDE CORNER

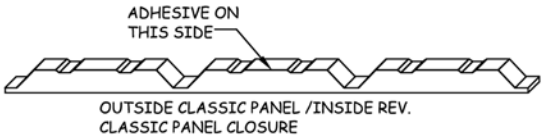
(For Optional Base Trim)



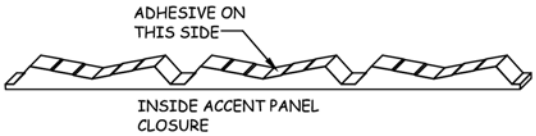
Part No. H4210

OPTIONAL FOAM WALL PANEL CLOSURES

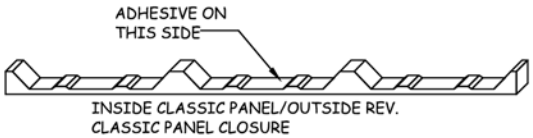
OPTIONAL STRAIGHT AND BEVELED FOAM CLOSURES ARE AVAILABLE IN THESE PROFILES
Beveled Closures are available from 2:12 to 9:12 roof slope.
(See Construction drawing set for more Info & part marks)



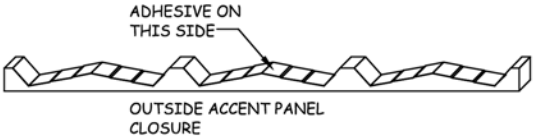
OUTSIDE CLASSIC PANEL /INSIDE REV.
CLASSIC PANEL CLOSURE



INSIDE ACCENT PANEL
CLOSURE



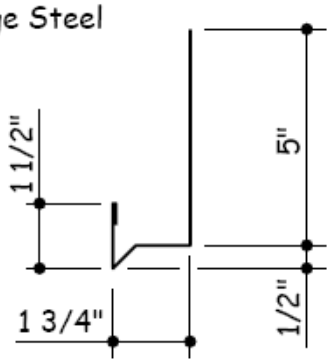
INSIDE CLASSIC PANEL/OUTSIDE REV.
CLASSIC PANEL CLOSURE



OUTSIDE ACCENT PANEL
CLOSURE

HEAD TRIM

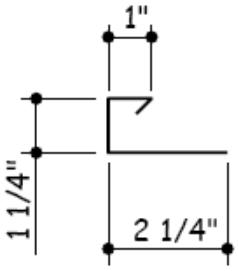
26 Gauge Steel



Part No. HTA__

JAMB TRIM

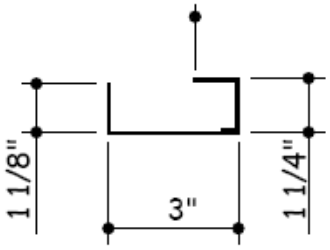
For Classic and Accent Panel
26 Gauge Steel



Part No. JTA__

JAMB TRIM

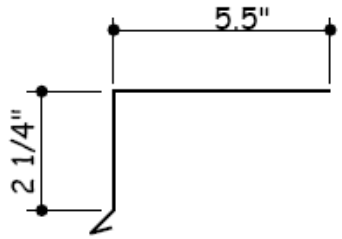
For Reverse Classic Panel
26 Gauge Steel



Part No. JTD__

SILL TRIM

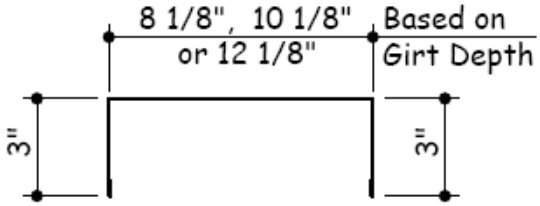
26 Gauge Steel



Part No. STA__

JAMB COVER TRIM

26 Gauge Steel



Part Numbers
CCA01-8" Girts
CCB01-10" Girts
CCC01-12" Girts

PLASTIC DOOR END CLOSURE

(For Optional Base Trim at F. O.'s)
Left and Right Part included as shown

Part No. H4220

4.0 PROPER FASTENER INSTALLATION

SEE THE FASTENER SCHEDULE BELOW

RECOMMENDED TOOL TYPES:
2000 - 2500 rpm screw gun with torque adjustable clutch

Manual or electric rivet tool

6-7 amp or higher rated tools **(DO NOT USE CORDLESS SCREW GUNS)**

DO NOT USE IMPACTING TOOLS
To assure proper voltage to the tool, extension cords should be checked for proper wire size/chord length.

16 gage wire, maximum chord length = **100'**

14 gage wire, maximum chord length = **200'**

12 gage wire, maximum chord length = **300'**

DRIVING TIPS:
Drive fasteners perpendicular to panel surface

Compress the insulation at fastener location with one hand while driving the fastener with the other. This will help keep the panel flat and prevent the fastener from "walking".

Excessive pressure can cause drill point failure. Let the fastener do the work.

FIELD CUTTING OF PANELS:

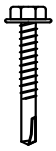
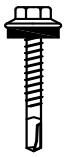
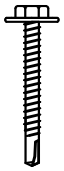
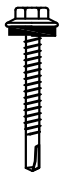
When field cutting or mitering wall panels, non-abrasive cutting tools such as nibblers or tin-snips shall be used. Abrasive cutting tools such as mechanical grinders or power saws can damage the material finish and create excess metal shavings that can corrode the panels. The use of non-approved cutting devices may void the factory warranty.

IMPORTANT NOTE: NOSE CONES SHOULD BE USED ON SCREW GUNS TO PREVENT DISTORTING THE PANEL AND TO HELP AVOID OVER-DRILLING THE FASTENERS.

FASTENER SEQUENCE
FASTENERS SHOULD BE INSTALLED FROM THE BASE TO THE EAVE. This will help prevent the panels from oil-canning. See section **7.4** for detail.

IMPORTANT NOTE: After a panel has been installed, be sure to brush off all metal filings. Leaving these filings from the self-drilling fasteners may stick to the panel finish and cause rust staining to take place. Failure to remove these filings may void panel finish warranty.

4.0 PROPER FASTENER INSTALLATION

FASTENER	SPECIFICATIONS	USAGE
H1040 	SELF-DRILLING SCREW 12-14x1 1/4" TCP 2 W/O Washer 5/16" HEAD Recommended Tool Types: -2000 RPM; Torque Adjustable Clutch -DO NOT use Impacting Tools	Used to attach wall panel, wall flashing and light gauge parts. Maximum insulation thickness is < 6"
H1041 	SELF-DRILLING SCREW 12-14x1 1/4" TCP 2 FLAT TOP W/Wash. 5/16" HEAD Recommended Tool Types: -2000 RPM; Torque Adjustable Clutch -DO NOT use Impacting Tools	Used to attach wall panel, wall flashing and light gauge parts. Maximum insulation thickness is < 6"
H1045 	SELF-DRILLING SCREW 12-14x2" TCP 3 W/O Washer 5/16" HEAD Recommended Tool Types: -2000 RPM; Torque Adjustable Clutch -DO NOT use Impacting Tools	Used to attach wall panel, wall flashing and light gauge parts. Use at insulation thickness of =/> 6"
H1047 	SELF-DRILLING SCREW 12-14x2" TCP 3 FLAT TOP W/ Washer 5/16" HEAD Recommended Tool Types: -2000 RPM; Torque Adjustable Clutch -DO NOT use Impacting Tools	Used to attach wall panel, wall flashing and light gauge parts. Use at insulation thickness of =/> 6"
H1060 	SELF-DRILLING SCREW No. 1/4-14x 7/8" TCP1 W/O Washer 5/16" HEAD Recommended Tool Types: -2000 RPM; Torque Adjustable Clutch -DO NOT use Impacting Tools	Used to attach light gauge wall trim end laps and trim to wall panels.
H1061 	SELF-DRILLING SCREW No. 1/4-14x 7/8" TCP1 W/ Washer 5/16" HEAD Recommended Tool Types: -2000 RPM; Torque Adjustable Clutch -DO NOT use Impacting Tools	Used to attach light gauge wall trim end laps and trim to wall panels.
H1100 	POP RIVET 1/8" x 3/16" Stainless Steel Blind Pop Rivet Recommended Tool Types: -Manual or Electric Rivet Tool -DO NOT use Impacting Tools	Used at trim laps, corner caps and attaching light gauge material to siding where screws can't be used.

WSEM0050

5.0 PANEL PREPARATION

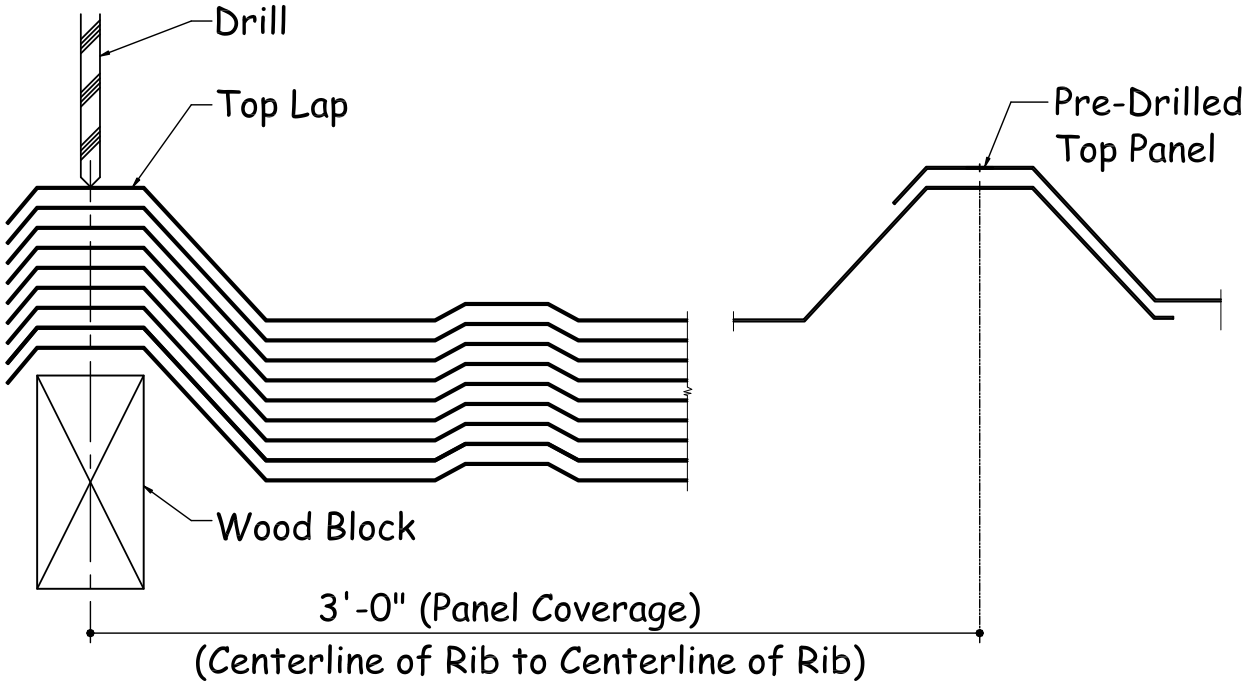
5.1 PRE-DRILLING PANELS

NUCOR RECOMMENDS PRE-DRILLING OF SIDELAP JOINTS, WHICH IN MANY CASES, WILL SPEED ERECTION AND MAKE A TIGHT JOINT.

STEP 1: Stack panels with ends flush on a level place on the ground in piles not exceeding 10 panels. Then place small wooden blocks under side lapping edge of stack of panels to hold them at correct height and position while drilling screw holes. Hold panels tightly together at each end with “Vise Grip Pliers”. Carefully mark positions for sidelap fasteners on top of high rib. Fasteners should be located “ON CENTER” of high rib AS SHOWN BELOW.

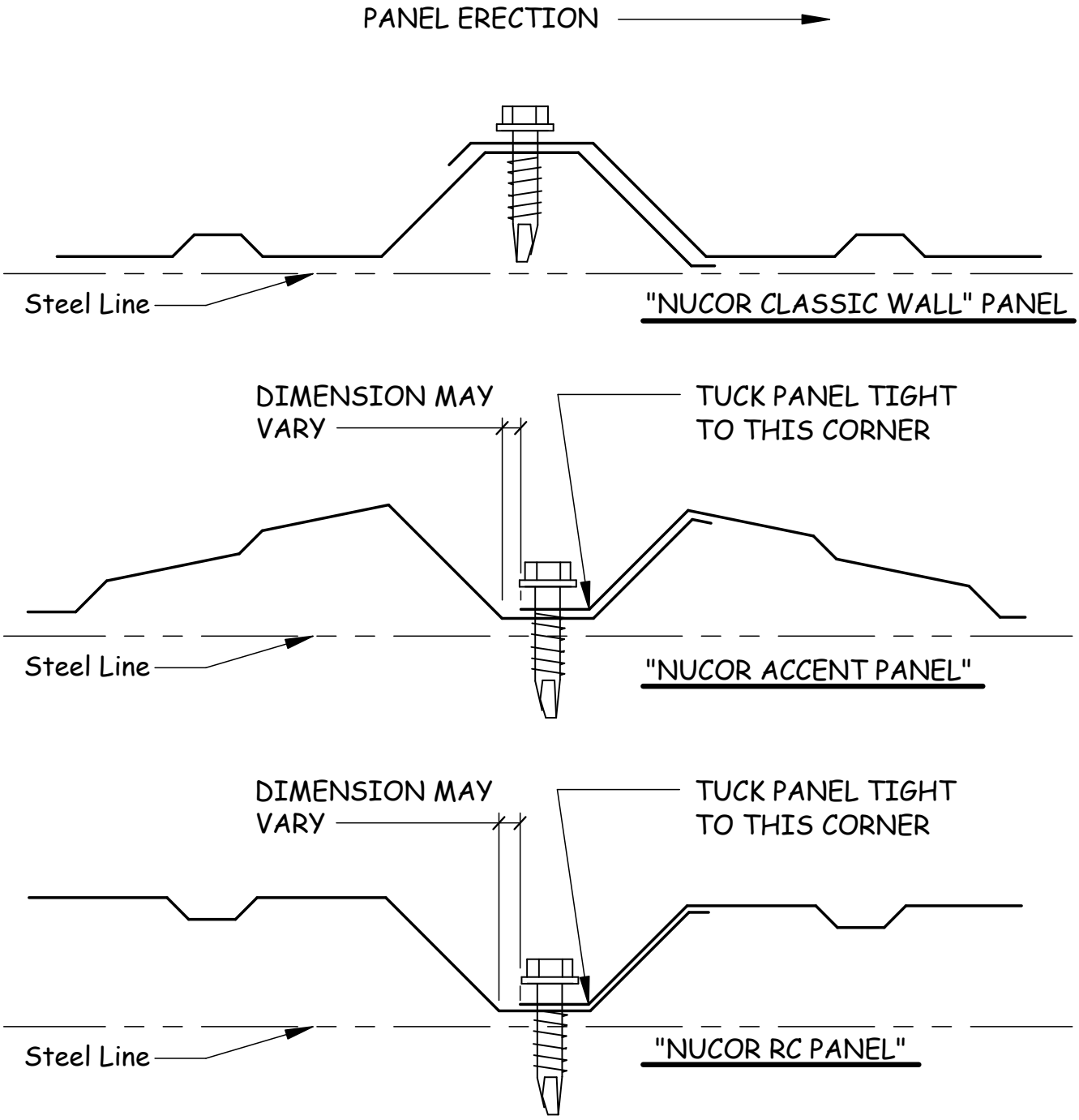
STEP 2: Drill holes for “Stitch” screws (Use #1,-7/32”-15/64” drill-bit) on top sheet of sidelap. Be sure panels are well nested before drilling.

WHEN USING OTHER TYPE FASTENERS, SIZE OF DRILL-BIT MAY CHANGE!



5.2 IMPORTANT INFORMATION ABOUT WALL PANEL ORIENTATION

Nucor **"ACCENT"** and **"REVERSE CLASSIC"** wall panels are **"HANDED"** panels. The **"UPTURNED"** leg of the panel **ALWAYS** goes on the bottom. See the details below.



5.3 WALL PANEL ERECTION NOTES

- **Block girts to "level" position before starting panel erection.** Keep this blocking (blocking is not provided by NBS) in place until the wall panel to girt fasteners are installed.

- Make sure that the first wall panel is **aligned and plumb.**

- To prevent "Oil-Canning", **all panel fasteners should start from the base** and then be fastened to each girt location working toward the eave

- Make sure that the foundation is **square, level, and correct** to the out-to-out steel line dimensions.

- The erection crew is responsible for **cleaning all wall panels** before leaving the job site.

- Prevailing wind, main traffic area, etc. should be taken into consideration when sheeting the wall.

- **Panels must be stored properly to prevent moisture damage.** Reference section **1.3** for additional information.

- At flush girt conditions, pre-drill columns (& stubs if req'd) for ease of panel attachment at these areas.

6.0 BASE TRIM INSTALLATION

6.1 STANDARD BASE ANGLE TRIM

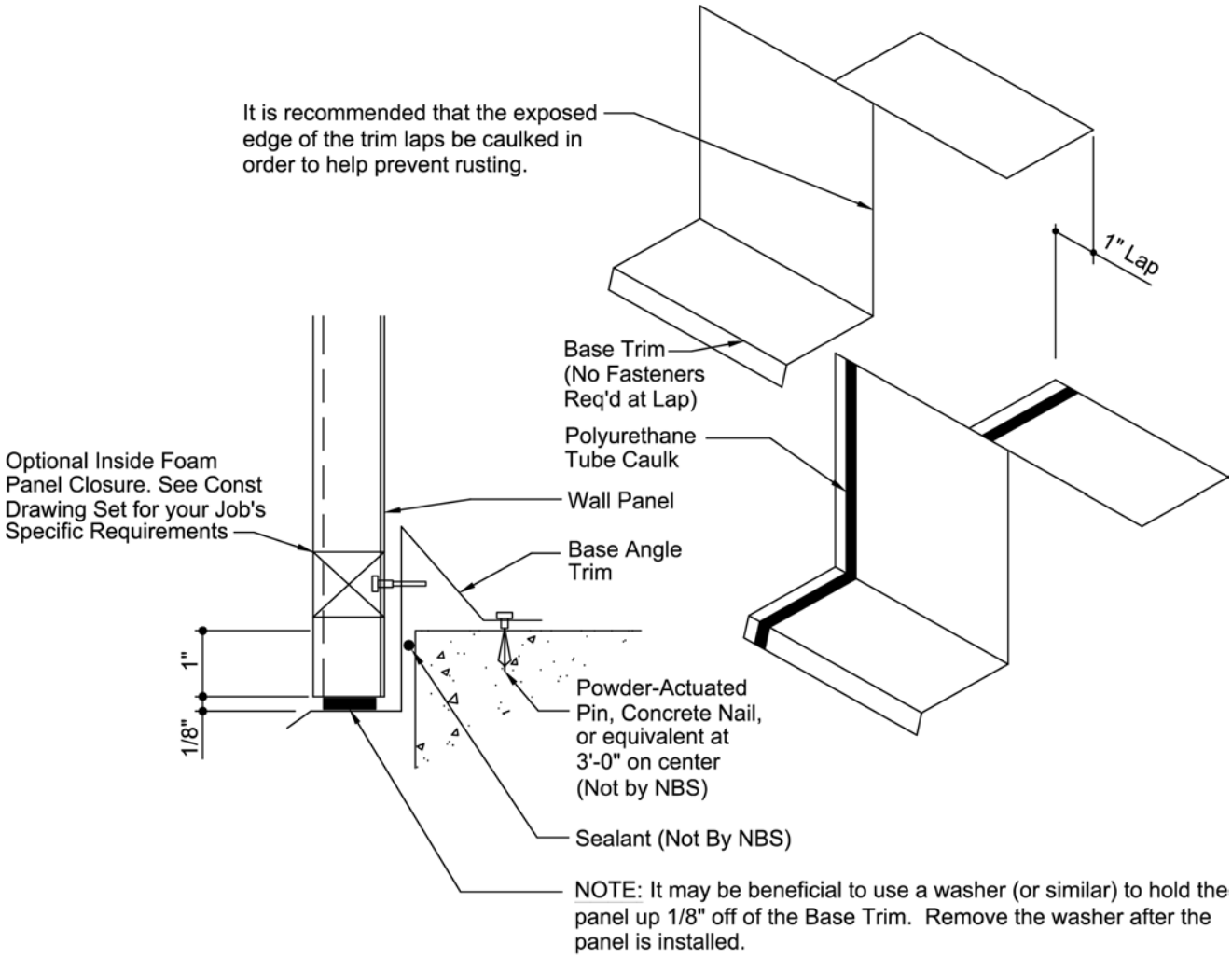
At Standard Base Angle Trim laps, apply a bead of **polyurethane tube caulk (H3152)** to all adjoining surfaces and lap 1".

If job has optional foam panel closures, attach to inside of wall panel at base and fasten through panel and closure, into base trim. (as shown) Fastening pattern will vary per wall panel type.

Refer to this manual; sections **7.1-7.4** and/or the const drawing set for more fastening info.

Field mitre base angle at corners.

INSULATION HINT: At the base, fold the insulation backer over the fiber to help prevent water from wicking.



6.2 OPTIONAL BASE TRIM

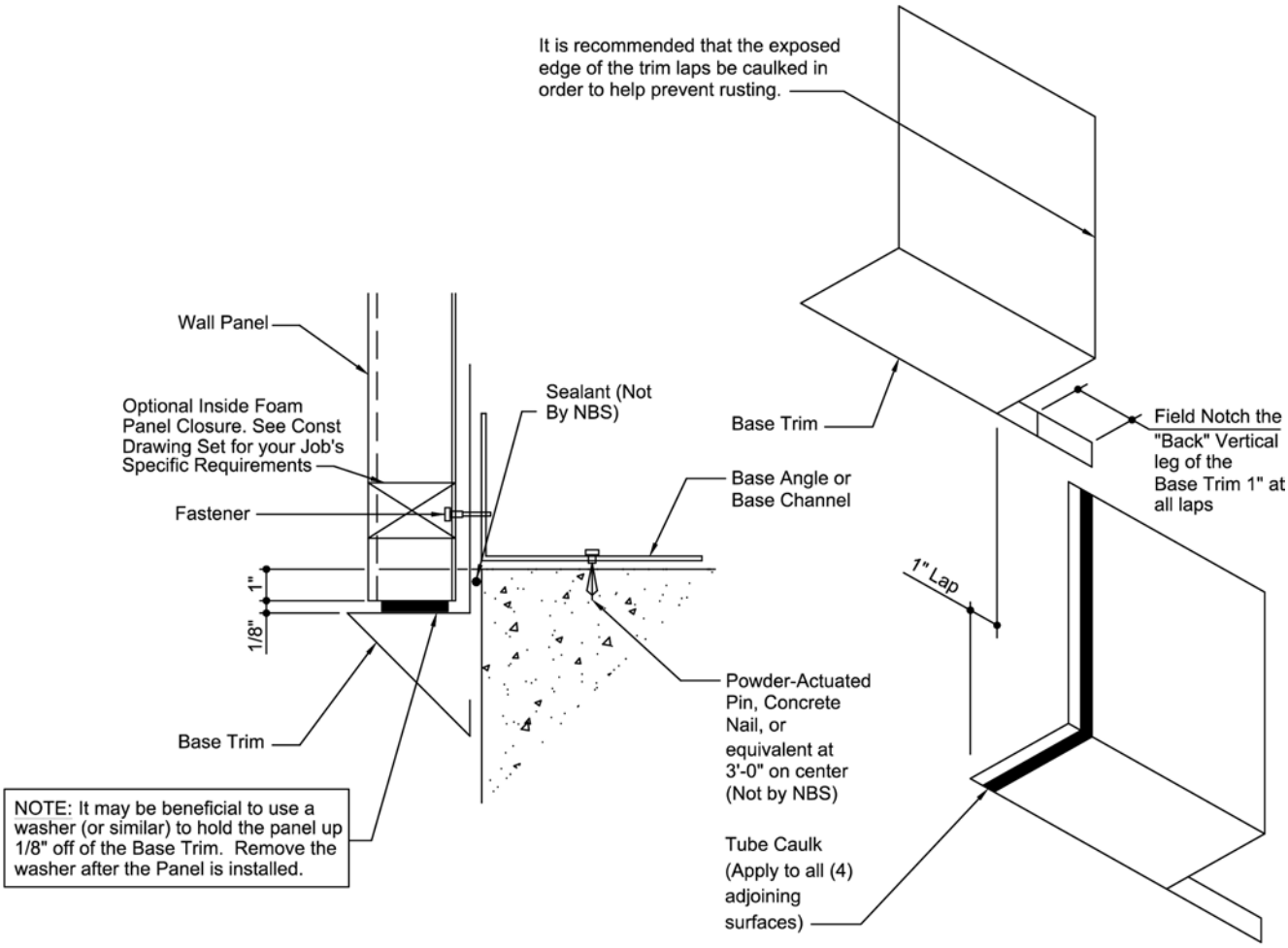
Before lapping trim, field cut the back vertical leg of the adjoining trim piece 1" as shown below. This will help to make the trim lap more readily.

If job has optional foam panel closures, attach to inside of wall panel at base and fasten through panel and closure, into base trim. (as shown) Fastening pattern will vary per wall panel type. Refer to this manual; sections **7.1-7.4** and/or the const drawing set for more fastening info

At Optional Base Trim laps, apply a bead of **polyurethane tube caulk (H3152)** to all adjoining surfaces and lap 1".

See the erection drawing details for base trim corner termination parts numbers.

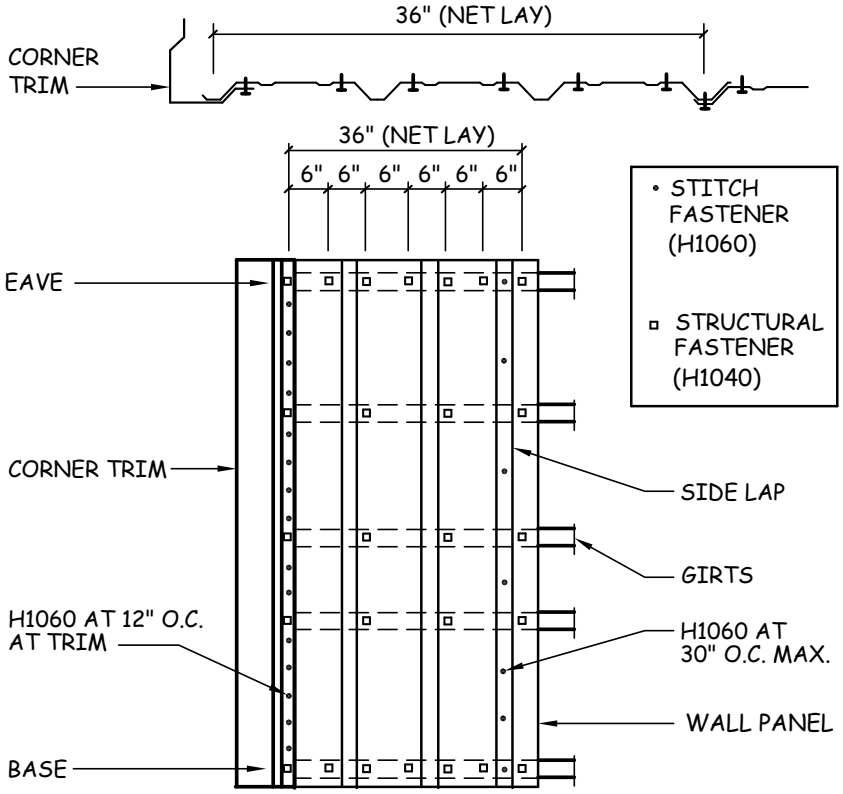
INSULATION HINT: At the base, fold the insulation backer over the fiber to help prevent water from wicking.



7.0 FASTENER REQUIREMENTS FOR EACH PANEL TYPE

7.1 FASTENER REQUIREMENTS FOR "CLASSIC" WALL PANEL

NOTE: USE NOSE CONES ON SCREW GUNS TO PREVENT DISTORTING THE PANEL AND TO HELP AVOID OVER-DRIVING THE FASTENERS



N.B.S. "CLASSIC WALL" ERECTION NOTES

ERECTOR NOTE: 1/2" SIDELAP MASTIC (H3010) IS REQ'D IN SNOWDRIFT CONDITIONS. REFER TO THE ELEVATIONS FOR LOCATION REQUIREMENTS.

CLASSIC PANEL

Fasten to base and eave structural members with 12-14 x 1 1/4" TCP 2 structural fasteners (H1040) at 6" o.c. (next to each rib)

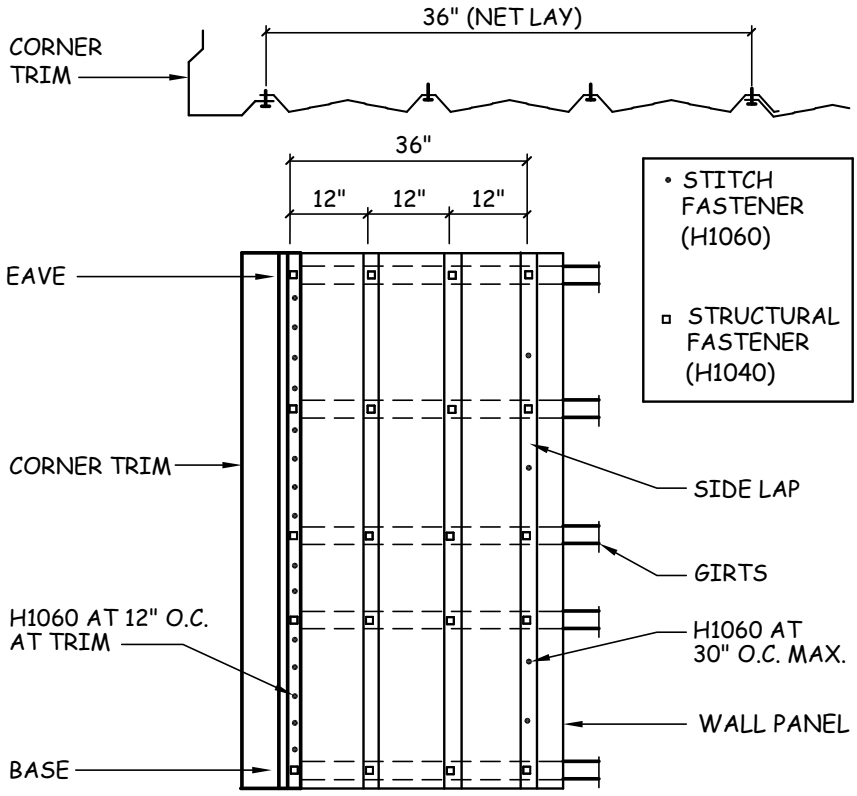
Fasteners to intermediate structural members with 12-14 x 1 1/4" TCP 2 structural fasteners (H1040) at 12" o.c. (3" each side of rib)

Fasten sidelaps with 12-14 x 7/8" self-drilling screws (H1060):
- At girts
- 30" o.c. between supports

Fasten trim with 12-14 x 7/8" delf-drilling screws (H1060) at 12" O.C.

7.2 FASTENER REQUIREMENTS FOR "ACCENT" WALL PANEL

NOTE: USE NOSE CONES ON SCREW GUNS TO PREVENT DISTORTING THE PANEL AND TO HELP AVOID OVER-DRIVING THE FASTENERS



N.B.S. "ACCENT PANEL" ERECTION NOTES

ERECTOR NOTE: 1/2" SIDELAP MASTIC (H3010) IS REQ'D IN SNOWDRIFT CONDITIONS. REFER TO THE ELEVATIONS FOR LOCATION REQUIREMENTS.

ACCENT PANEL:

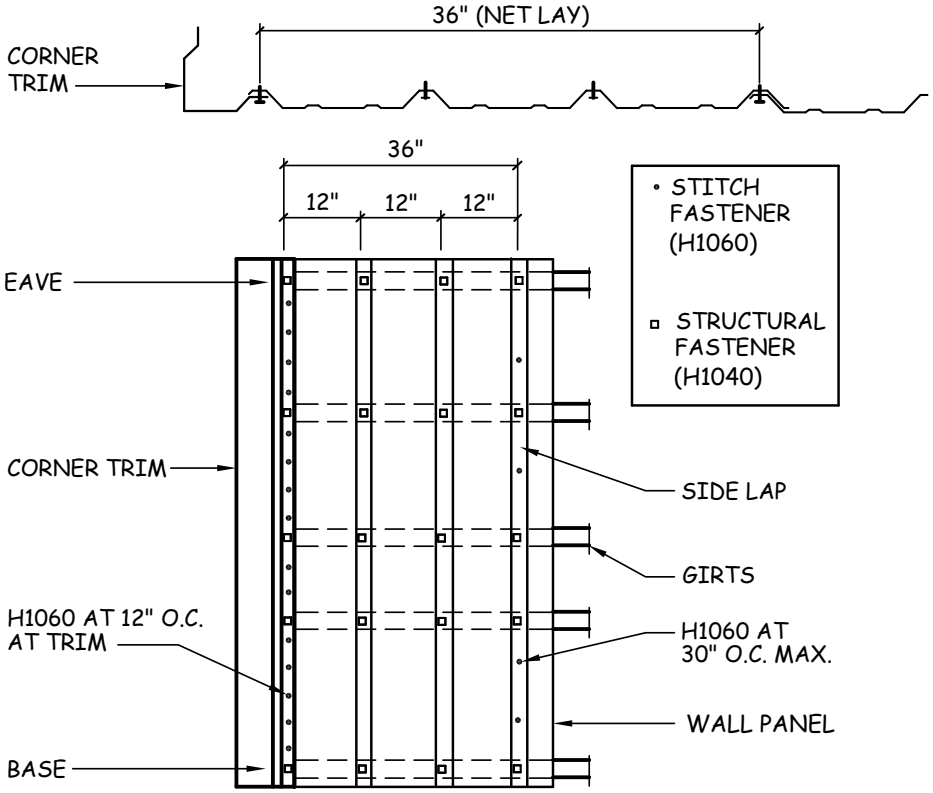
Fasten structural members with 12-14 x 1 1/4" TCP 2 structural fasteners (H1040) at 12" o.c. (in each rib)

Fasten sidelaps with 12-14 x 7/8" TCP1 self-drilling screws (H1060):
- At girts
- 30" o.c. between supports

Fasten trim with 12-14 x 7/8" TCP1 self-drilling screws (H1060) at 12" O.C.

7.3 FASTENER REQUIREMENTS FOR "REVERSE CLASSIC" WALL PANEL

NOTE: USE NOSE CONES ON SCREW GUNS TO PREVENT DISTORTING THE PANEL AND TO HELP AVOID OVER-DRIVING THE FASTENERS



N.B.S. REVERSE "CLASSIC WALL" ERECTION NOTES

ERECTOR NOTE: 1/2" SIDELAP MASTIC (H3010) IS REQ'D IN SNOWDRIFT CONDITIONS. REFER TO THE ELEVATIONS FOR LOCATION REQUIREMENTS.

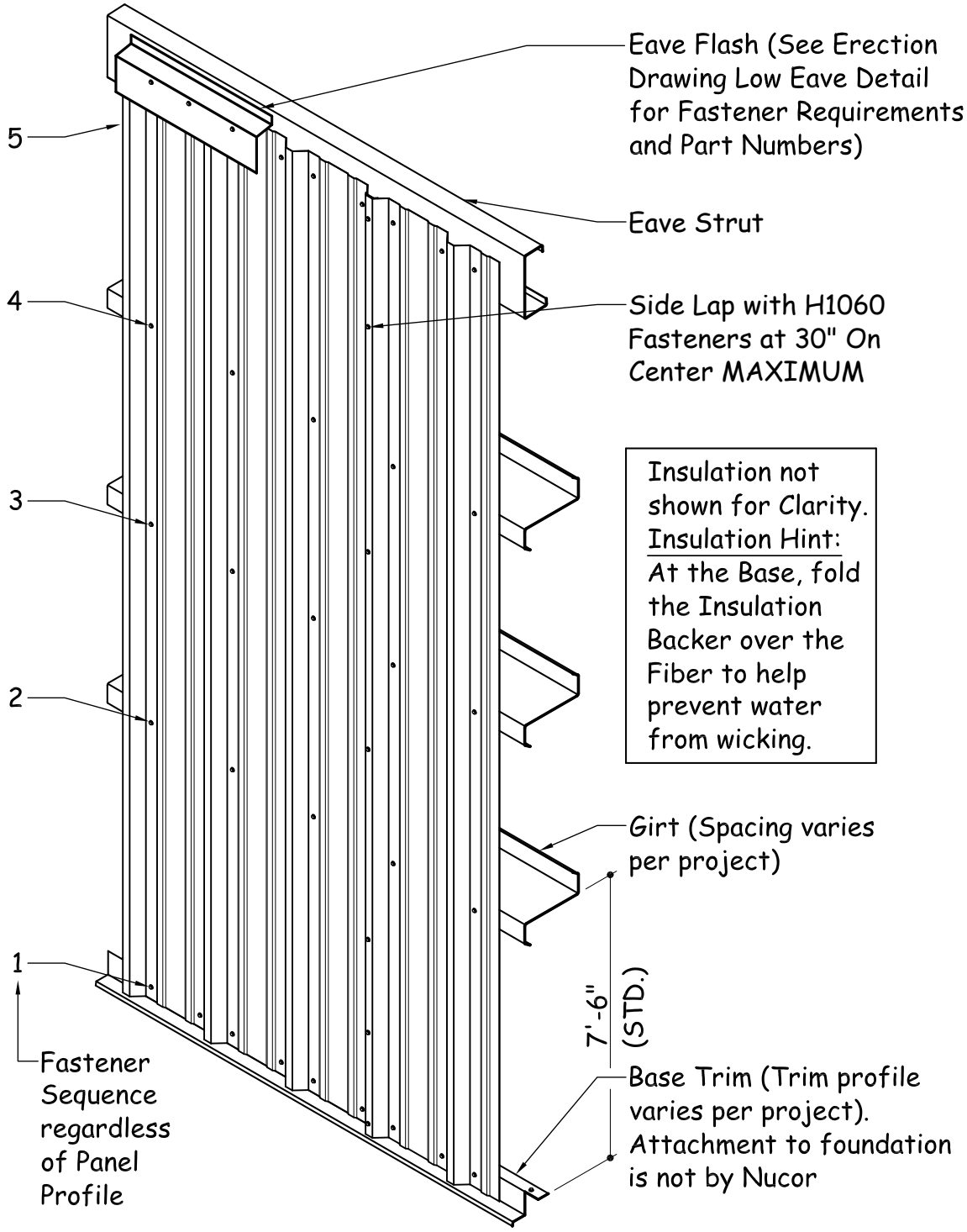
REVERSE CLASSIC PANEL:

Fasten structural members with 12-14 x 1 1/4" TCP 2 structural fasteners (H1040) at 12" o.c. (in each rib)

Fasten sidelaps with 12-14 x 7/8" TCP1 self-drilling screws (H1060):
- At girts
- 30" o.c. between supports

Fasten trim with 12-14 x 7/8" TCP1 self-drilling (H1060) screws at 12" o.c.

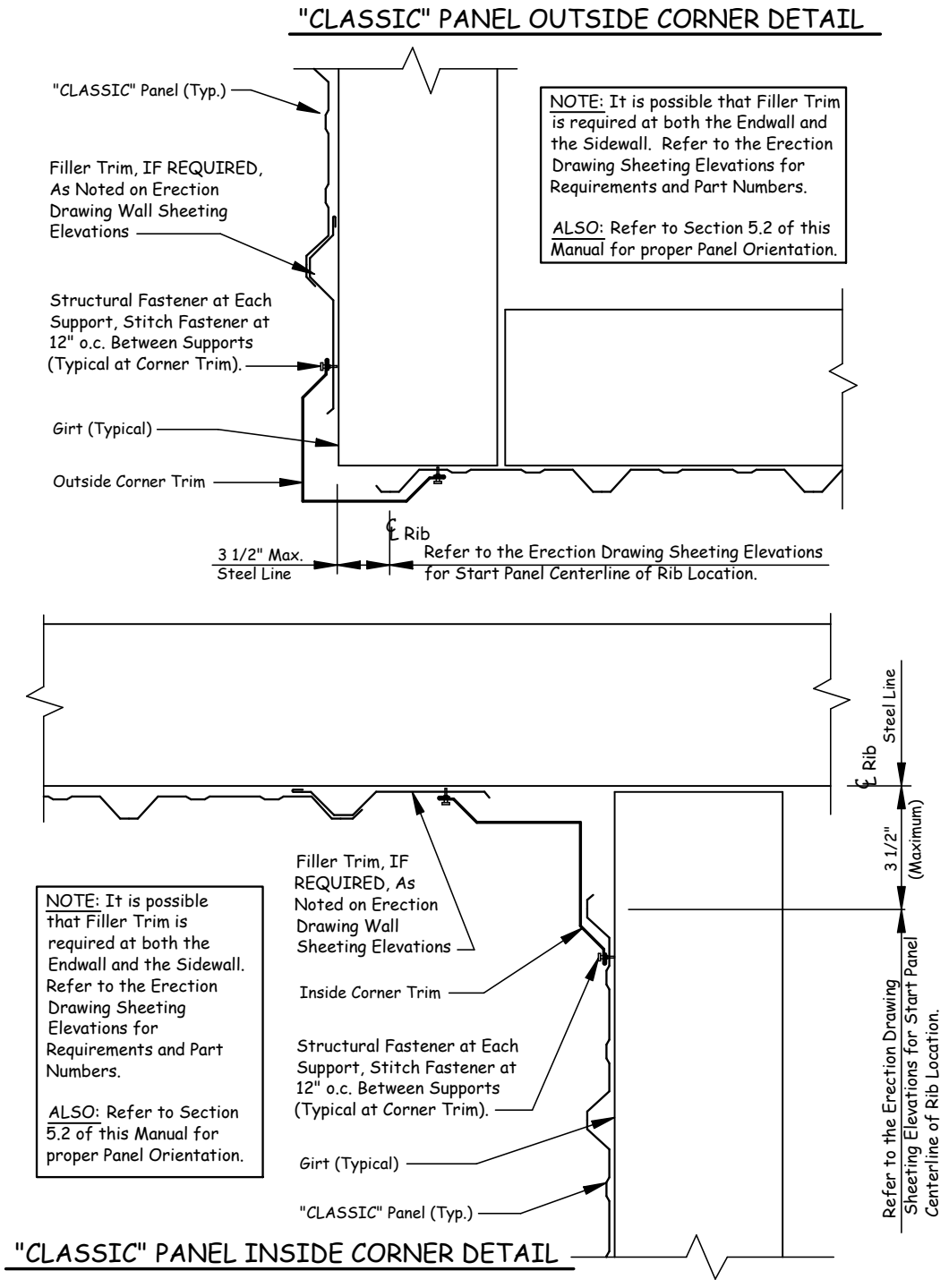
7.4 PROPER FASTENER SEQUENCE DETAIL



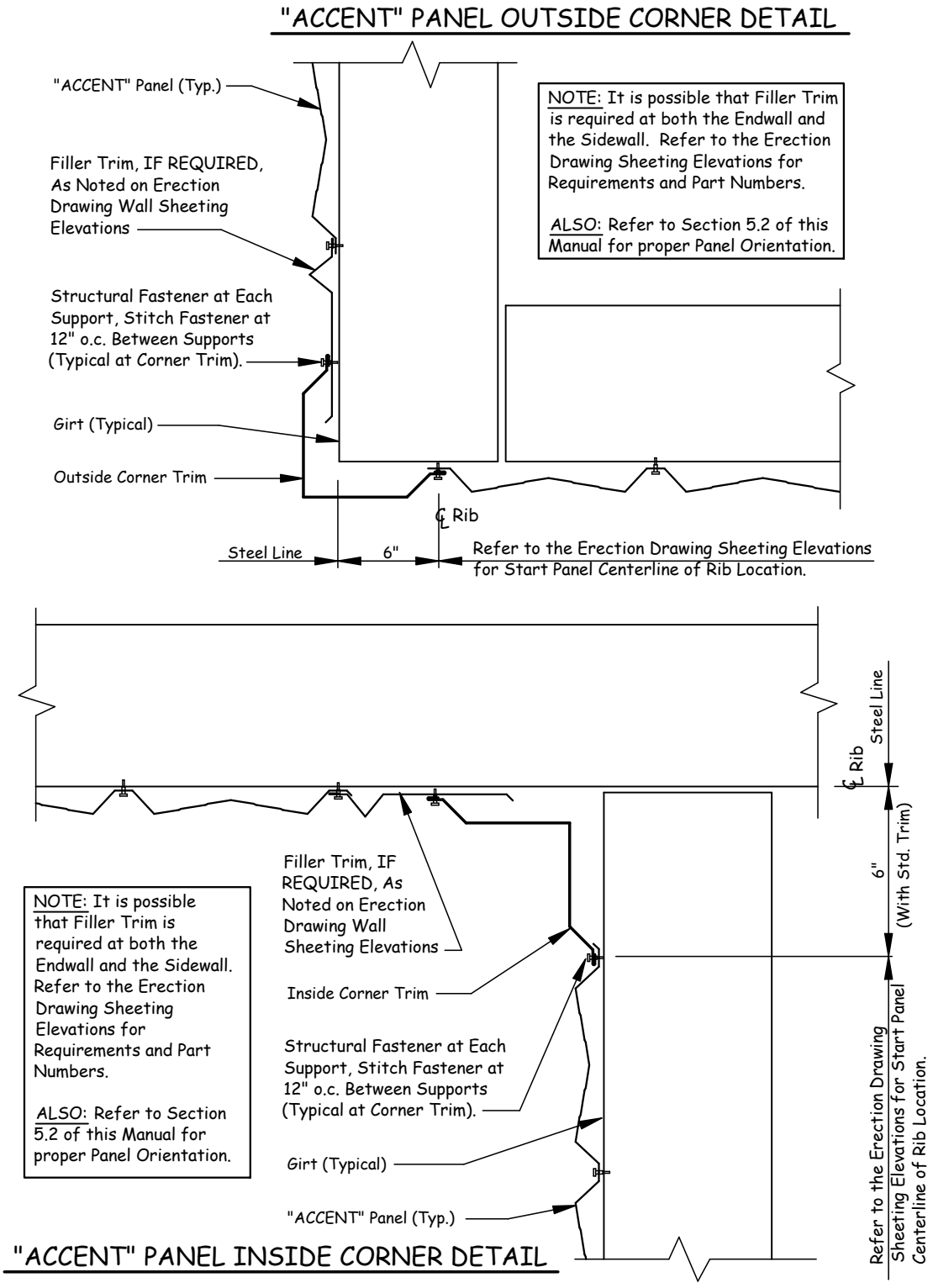
NOTE: "CLASSIC" Profile shown. Refer to Sections 7.2 and 7.3 for Fastener quantity requirements for "ACCENT" and "REVERSE CLASSIC" profiles.

8.0 CORNER TRIM INSTALLATION

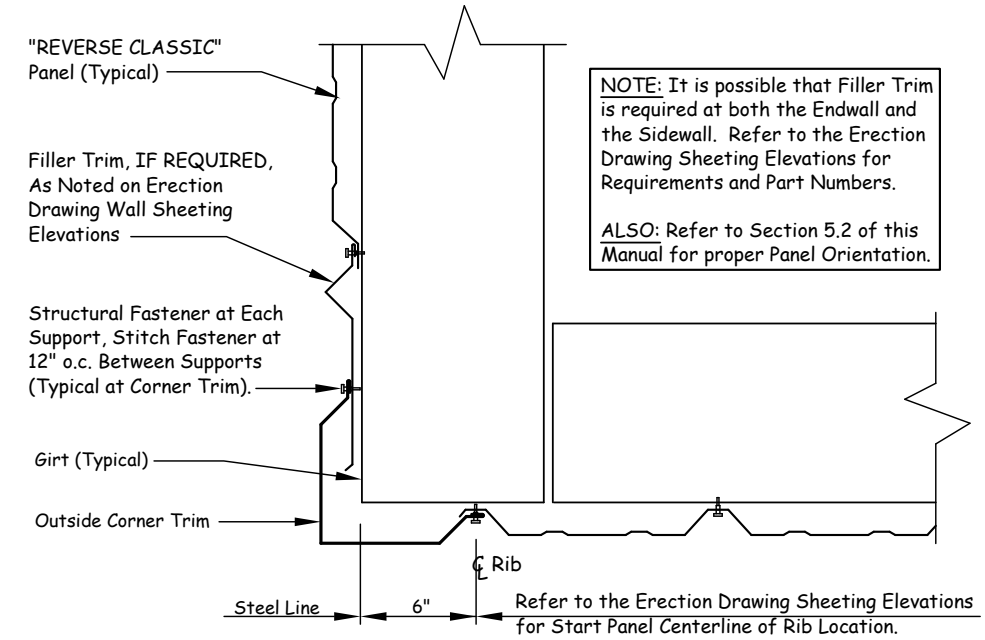
8.1 "CLASSIC" PANEL

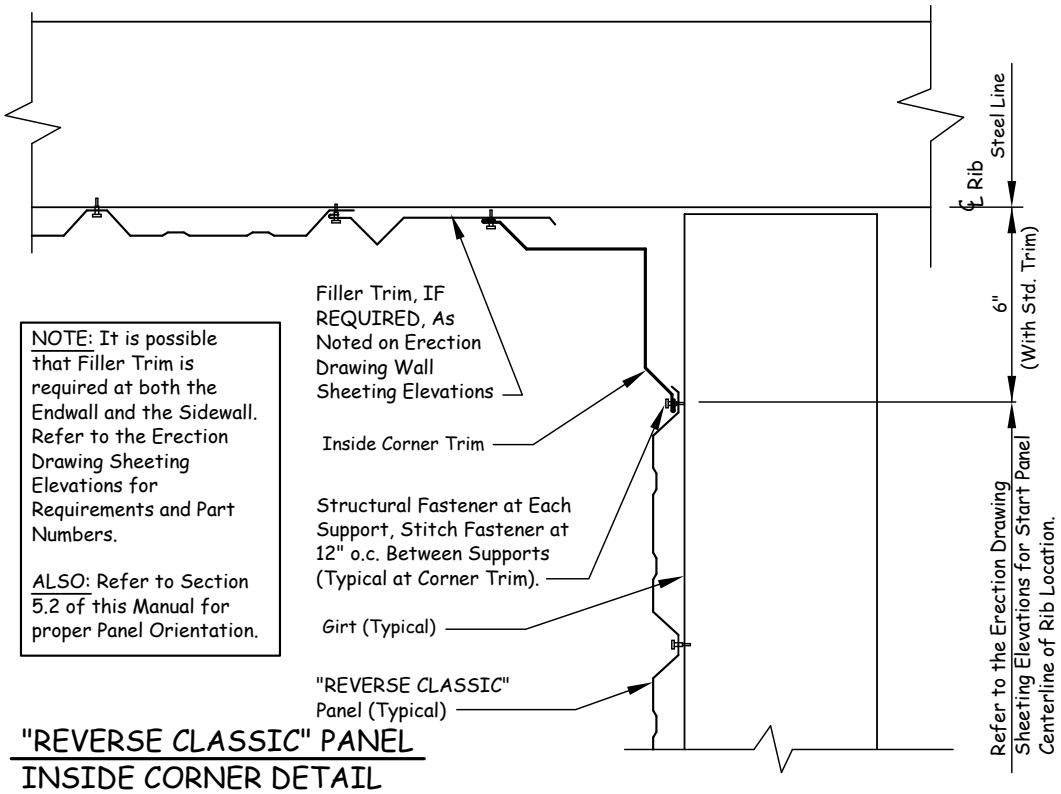


8.2 "ACCENT" PANEL



8.3 "REVERSE CLASSIC" PANEL





9.0 GENERAL NOTES

9.1 TRANSLUCENT PANEL

NBS 5’-4” translucent panels are to be used strictly in vertical wall applications. This panel is not to be installed in a roof application where fall hazards could occur. NBS assumes no responsibility for the misuse of this panel.

9.2 FRAMED OPENING TRIM INSTALLATION

See Erection Drawings for Framed Opening trim installation instructions.