

E-LITE

FABRICATION/ASSEMBLY AND INSTALLATION INSTRUCTIONS



Part NO. YWLS

April 15 2020

WHERE WINDOWS ARE JUST THE BEGINNING®



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Minimizing Condensation

Note: Please reference EFCO's "Understanding Condensation" brochure which can be obtained through your EFCO representative.

Condensation will form on any surface when unfavorable conditions (interior temperature and relative humidity and exterior temperature) are present. When the formation of excessive condensation is a concern, it is highly recommended that a design professional is utilized to perform an analysis of the shop drawings to recommend the best possible installation methods. Please contact your EFCO representative for information on EFCO's Thermal Analysis Services.

Many current installation practices lead to an increase in the possibility of the formation of condensation.

Though not all inclusive, the list of examples below illustrates conditions under which condensation is likely to occur:

1. Bridging system thermal break with non-thermally broken metal flashing or lintels that are exposed to the exterior
2. System exposure to cold air cavities
3. Interior relative humidity levels not maintained at recommended levels, see EFCO's "Understanding Condensation" brochure
4. Inadequate separation between system and surrounding condition at perimeter
5. Product combinations during the shop drawing stage that result in bridging thermal breaks of one or all products involved

Note: These installation instructions are a supplement to the approved shop drawings and are to be used in conjunction with those drawings.

Section I: General Notes and Guidelines

- A. HANDLING / STORING / PROTECTING ALUMINUM** - The following precautions are recommended to assure early acceptance of your products and workmanship.
- 1. HANDLE CAREFULLY**- Store with adequate separation between components so the material will not rub together. Store material off the ground. Protect materials against weather elements and other construction trades.
 - 2. KEEP MATERIAL AWAY FROM WATER, MUD, AND SPRAY** - Prevent cement, plaster, and other materials from contacting and damaging the finish. Do not allow moisture to be trapped between the finished surface and the wrapping material.
 - 3. PROTECT MATERIALS AFTER ERECTION** - Wrap or erect screens of plastic sheeting over material. Cement, plaster, terrazzo, and other alkaline materials are very harmful to the finish and are to be removed with soap and water before hardening. Under no circumstances should these materials be allowed to dry or permanent staining will occur.
- B. GENERAL GUIDELINES** - The following practices are recommended for all installations:
- 1. REVIEW APPROVED SHOP DRAWINGS** – Become thoroughly familiar with the project. Shop drawings govern when conflicting information exists in these installation instructions.
 - 2. INSTALL ALL FRAMING MATERIAL PLUMB, LEVEL, AND TRUE** – Proper alignment and relationships to benchmarks and column centerlines, as established by the architectural drawings and the general contractor, must be maintained.
 - 3. THE SEQUENCE OF ERECTION SHOULD BE COORDINATED WITH THE PROJECT SUPERINTENDENT TO PREVENT DELAYS AND MINIMIZE THE RISK OF MATERIAL DAMAGE. NOTE: IF ADDITIONAL ANCHORS ARE REQUIRED, COORDINATE AND SUPERVISE ANCHOR PLACEMENT WITH THE GENERAL CONTRACTOR.**
 - 4.** Verify that all job site conditions and accompanying substrates receiving the installation are in accordance with the contract documents. If deviations occur, notification must be given **IN WRITING** to the general contractor and differences resolved before proceeding further with the installation in the questionable area.

Section I: General Notes and Guidelines

5. Prevent all aluminum from coming in direct contact with masonry or dissimilar materials by means of an appropriate primer.
6. Follow EFCO framing installation instructions.

Verify contents of all material shipments received upon their arrival. Verify quantity and correct finishes. NOTIFY EFCO IMMEDIATELY OF ANY DISCREPANCIES OR DAMAGE, WHICH MAY HAVE OCCURRED

Basic Design Guidelines

E-Lite is to be used for maximizing daylight potential in Southern Exposed Glazed Framing Products.

E-Lite should be located at a height above the floor that does not interrupt flow of foot traffic.

E-Lite projection must not exceed 36" from the mounting wall product or substrate.

E-Lite nonexposed internal structural components are typically mill finish; however, they may be painted or anodized per preference. Aluminum panels will be painted as specified. It is suggested that a nonspecular light colored finish be used for the upper surface of the shelf to maximize the reflection of daylight into the space.

[It is advised that local building and fire code officials be consulted for applications with E - Lite and fire sprinkler systems.]

E-Lite is designed to be a self supporting sun control device. It is not intended to be used for storage of potted plants, books, etc. Do not place any objects on the E - Lite System or use as a support handle or step.

[Additional loads (potted plants, books, etc.) may be possible to accommodate on a per project basis.]

E-Lite System is designed as an accessory for EFCO Corporation Curtain Wall and Storefront Products. Contact your local representative for product specific attachment details.

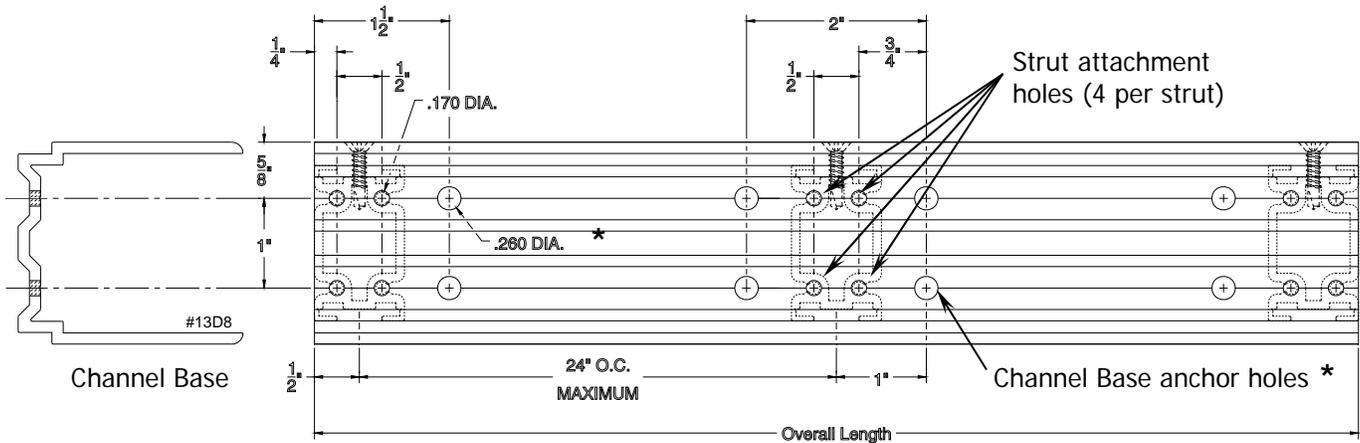
E-Lite System **CANNOT** be installed on any **INSIDE GLAZED** Curtain Wall or Storefront horizontals. Contact your local representative for specific product details.

E-Lite System **MUST NOT** "bridge" any expansion joint or expansion mullion.

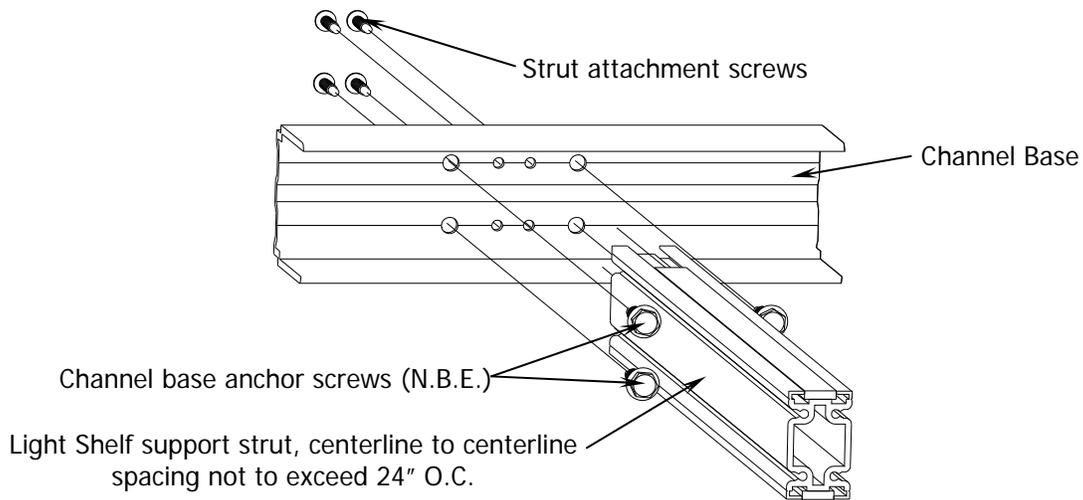
Section II: E-Lite "Stick Built" Channel Base Assembly

1.) Fabricate, Assemble, and Anchor E-Lite Channel Base.

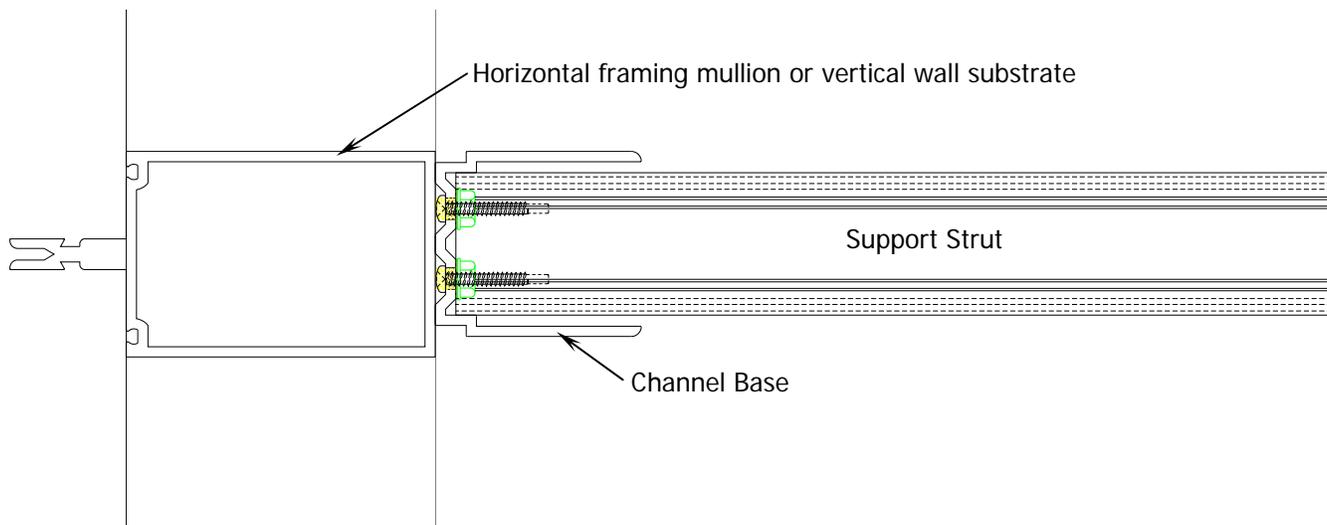
A.) Start with the channel base. Cut to length, locate and drill all anchor and support strut attachment holes.



B.) Attach all struts with the lead-point attachment screws through the channel base into the strut and tighten firmly.



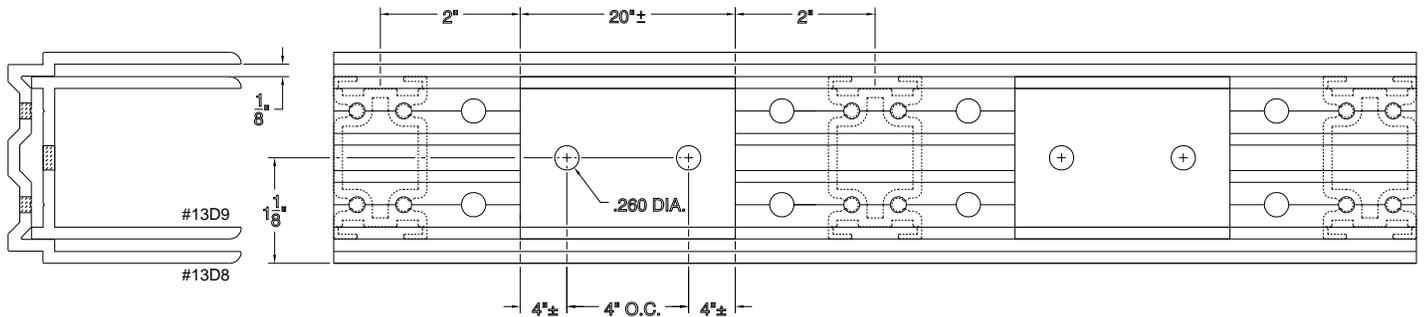
C.) Attach the channel base support / strut assembly to the glazed wall product or substrate with * appropriate size and quantity of fasteners. (* Attachment fasteners are only sized and provided by EFCO when attachment is to EFCO material.)



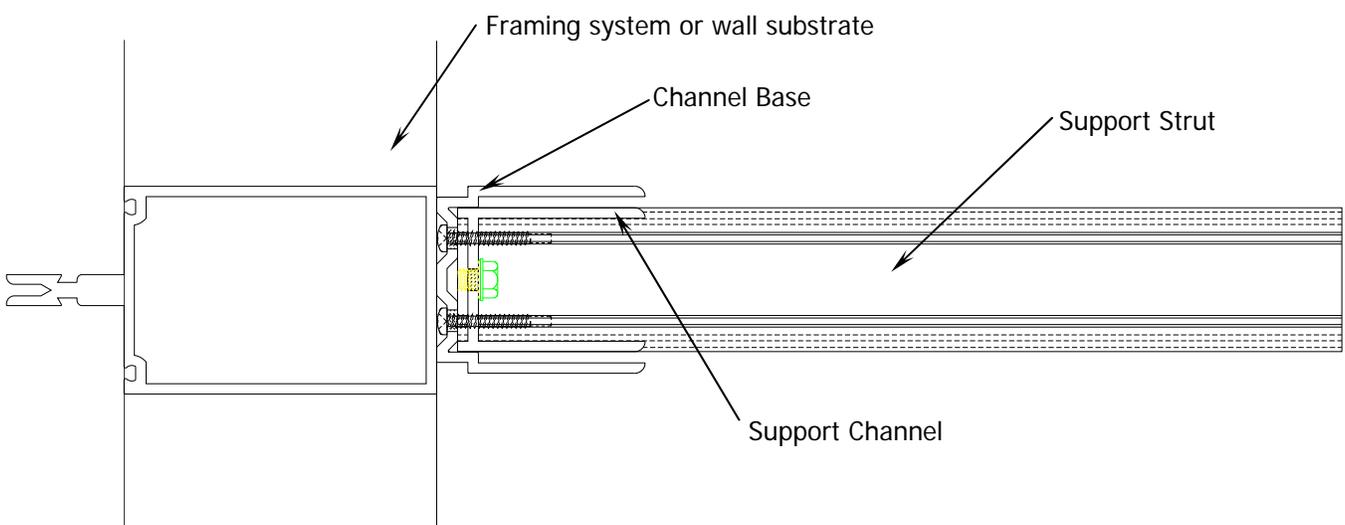
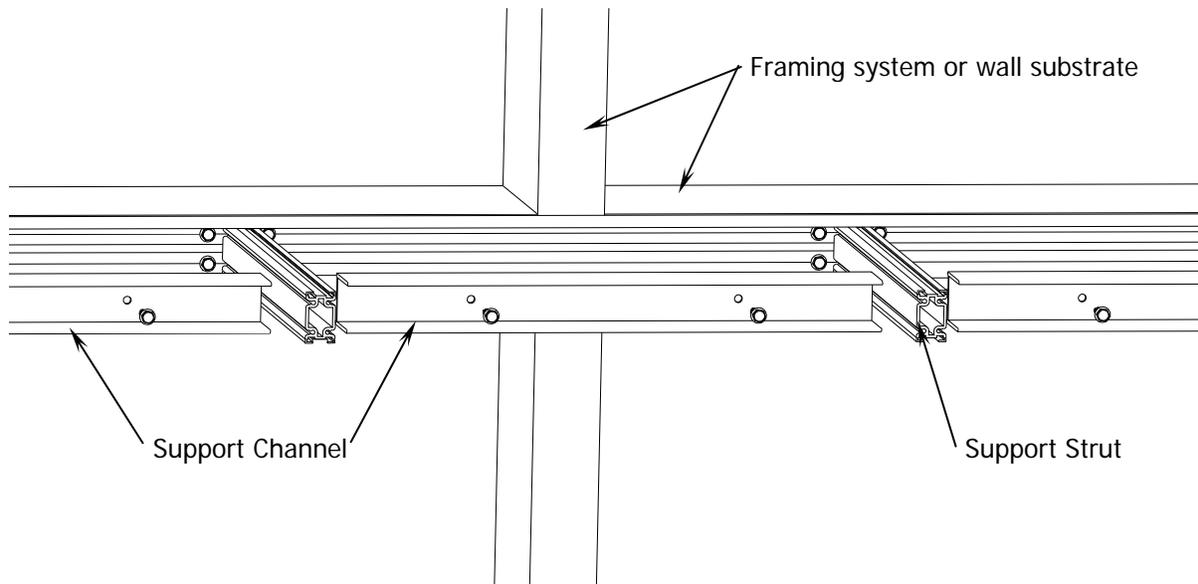
Section III: E-Lite "Stick Built" Internal Support Channel Assembly

1. Fabricate and Install Internal Support Channel.

- A.)** The internal support channel must be cut to length (nominally 4" less than strut centerline to centerline dimension). Locate and drill all attachment holes in the support channel. (Typically the same anchor screw is used at the internal channel support as used to anchor the channel base.)



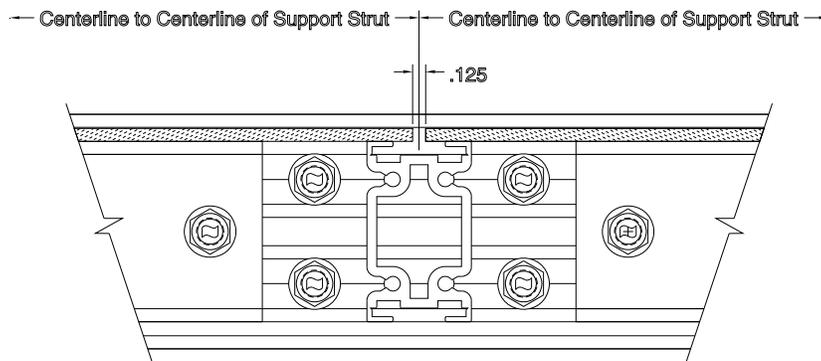
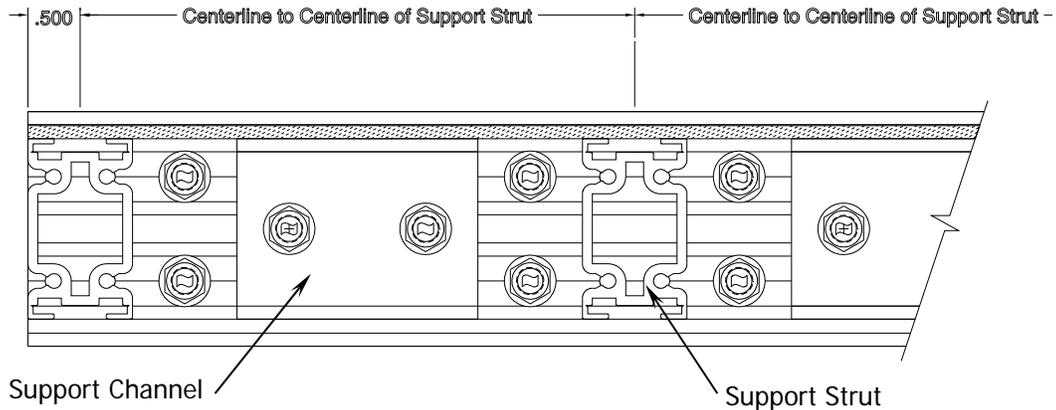
- B.)** Align drill a clear hole in the channel base and a pilot hole in the horizontal mullion. (This is recommended even if self drilling screws are used to avoid binding or breaking of the screw.)
- C.)** Install internal support channel equally spaced between the support struts. Tighten attachment screws firmly.



Section IV: E-Lite "Stick Built" Aluminum Panel Installation

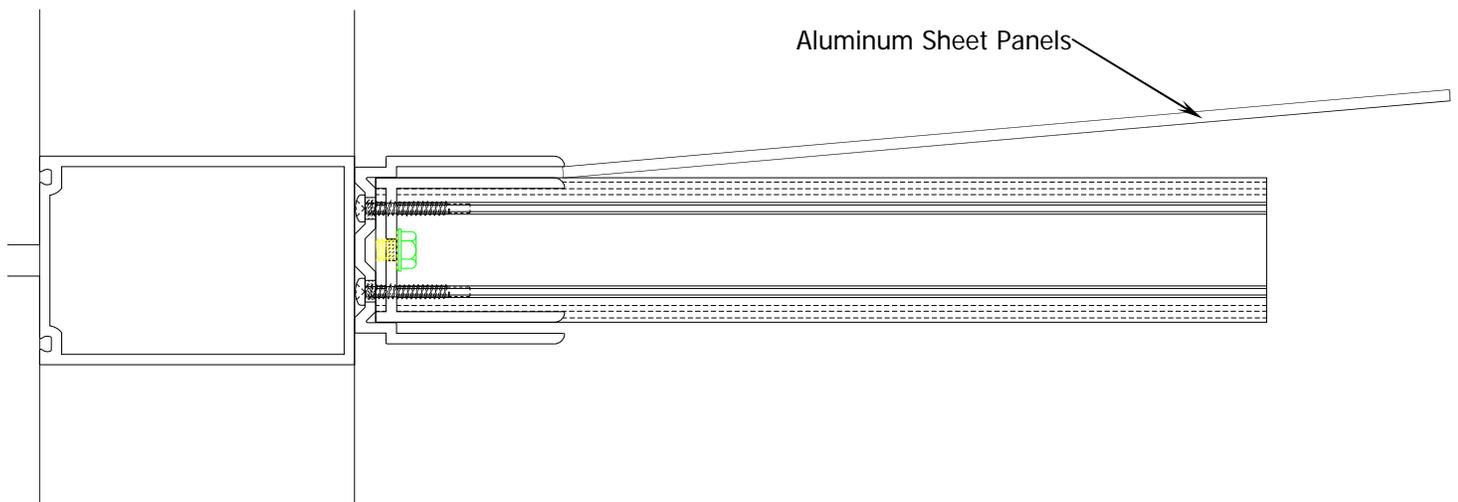
1. Sizing the 1/8" aluminum sheet (sheared to make size dimensions).

- A.) The make size dimensions for the 1/8" aluminum sheet are not to exceed 36" X 120". The make sizes can be easily calculated by adding up the centerline to centerline dimensions of the support struts in long runs, and subtracting .125 at the intermediate panel locations, and adding .562 at the end panel locations. It is also recommended that a .125 gap be left between the aluminum panels at increments not to exceed 120" of panel length. The .125 gaps **MUST OCCUR** at the support strut locations.



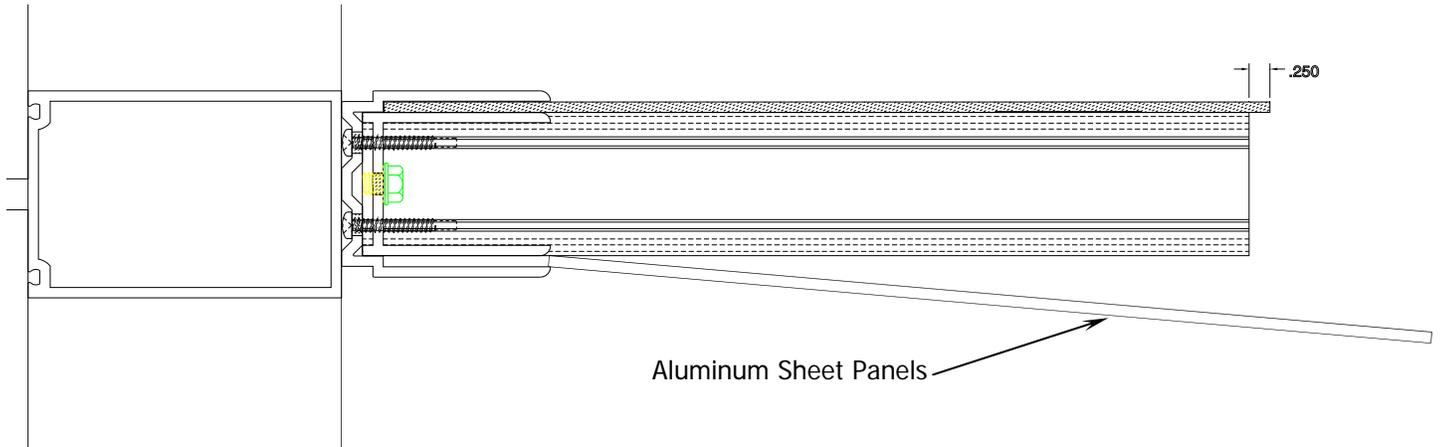
2. Loading the Aluminum Sheet Panels.

- A.) The top aluminum sheet panel can be slid into place with the nonspecular reflective finish facing up. Take care to square the panels and the struts. **DO NOT FASTEN** the panel to the struts.

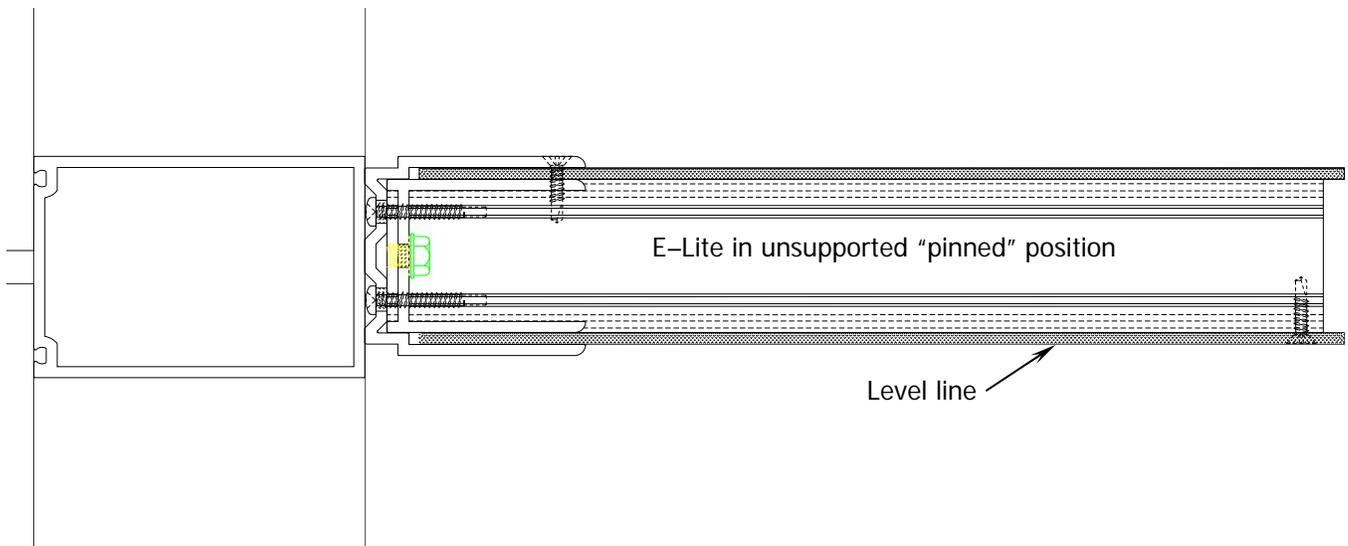
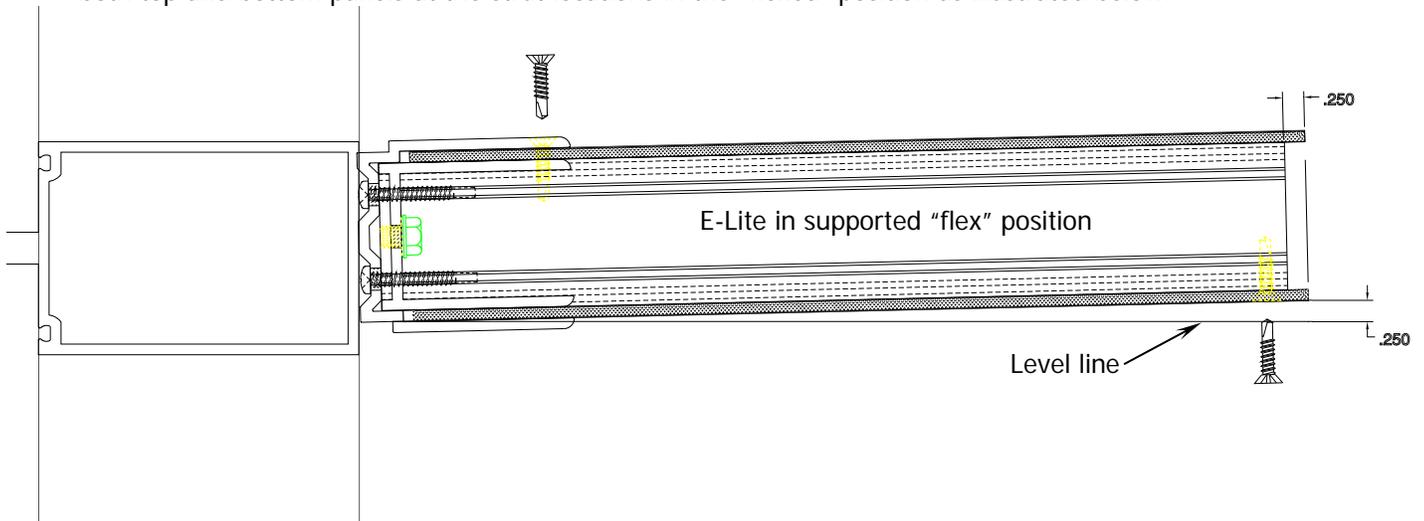


Section IV: E-Lite "Stick Built" Aluminum Panel Installation

- B.) Insert the bottom panel in the same manner as the upper, squaring and spacing the struts down the length of the light shelf. The aluminum panel, once seated, should extend approximately $\frac{1}{4}$ " past the end of the struts.



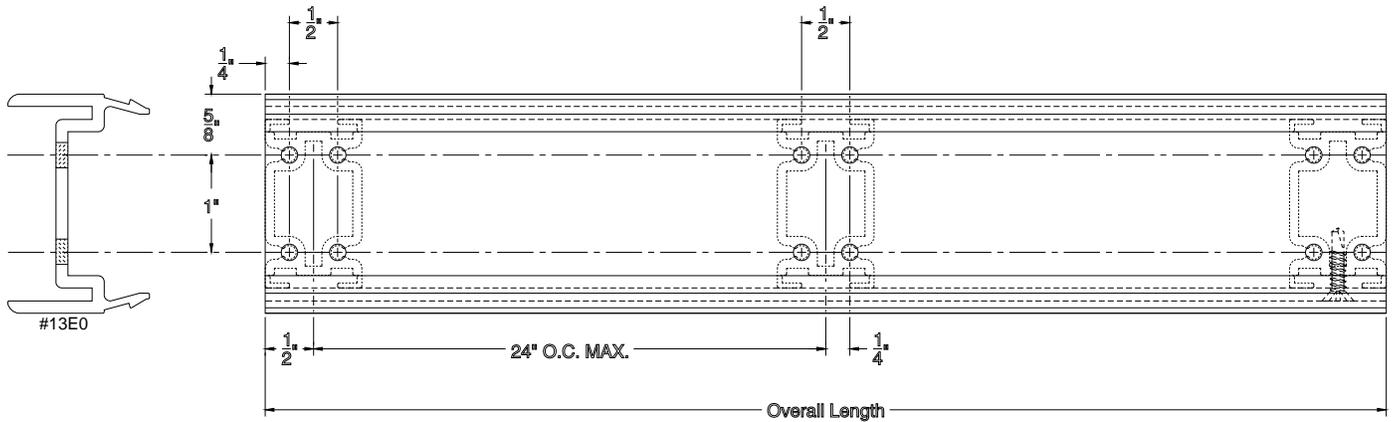
- C.) Once the bottom panels are in place, support the assembly at each strut approximately $\frac{1}{4}$ " higher than the desired level above the finished floor. With panels supported and level along the run, align drill and countersink the bottom panel at each strut location. Then pin with the flat head fasteners provided. This will minimize unleveling due to sag over time. On panels that extend up to the maximum depth, it may be necessary to pin both top and bottom panels at the strut locations in the "flexed" position as illustrated below.



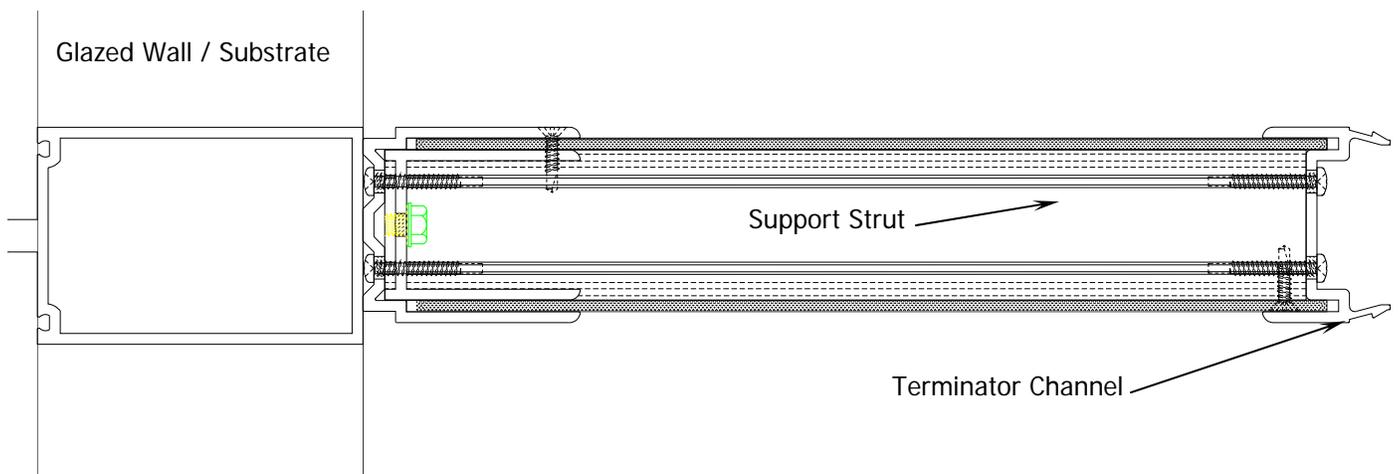
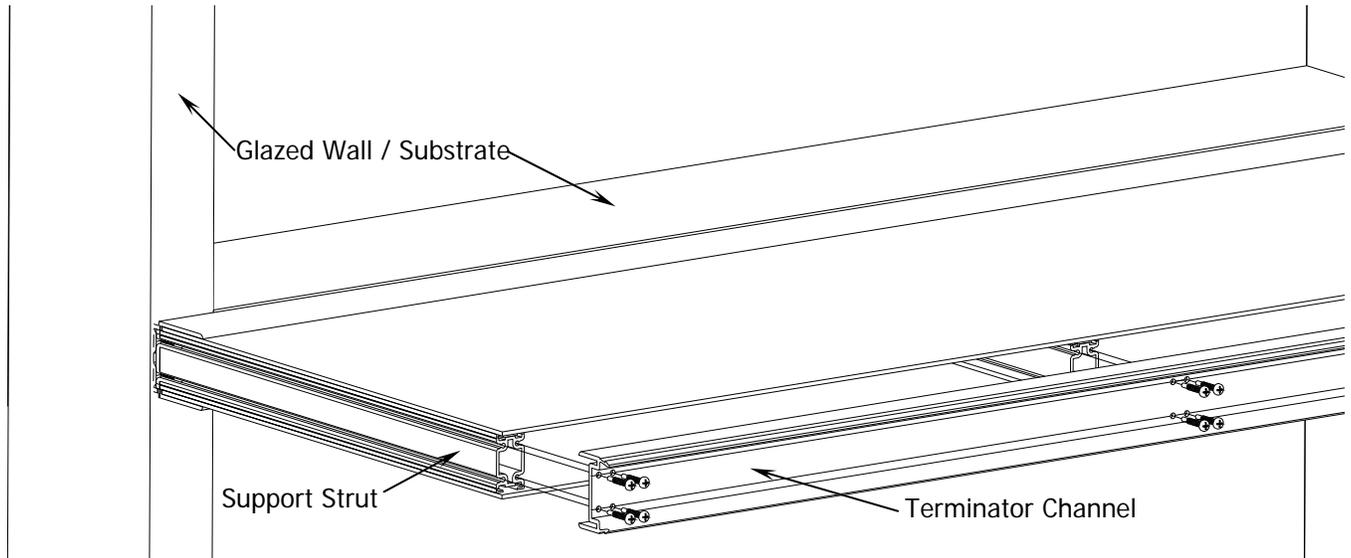
Section V: E-Lite "Stick Built" Terminator Channel Attachment

1. Fabricate and Install Terminator Channel.

A.) The terminator channel must be cut to length. Locate and drill all strut attachment holes in the channel.



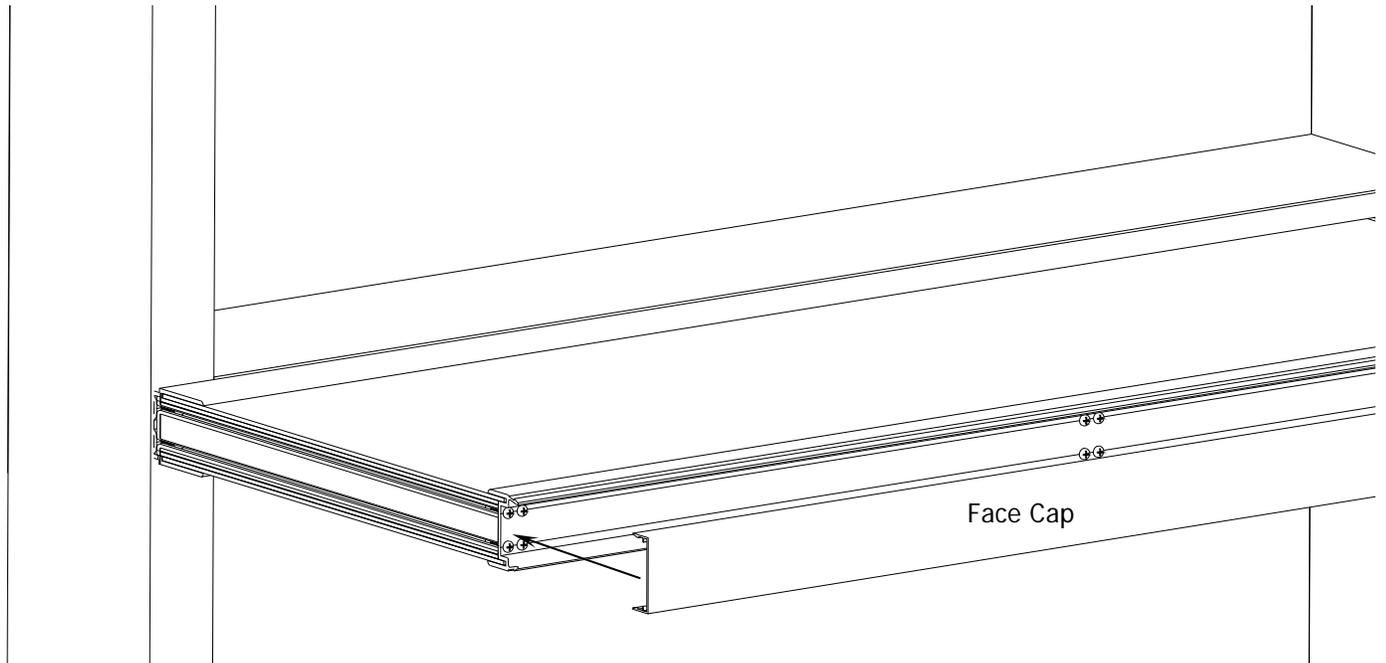
B.) Align the holes in the terminator channel with the races in the end of the strut, and attach with the lead-point screws. After all screws have been started, go back and tighten all screws firmly.



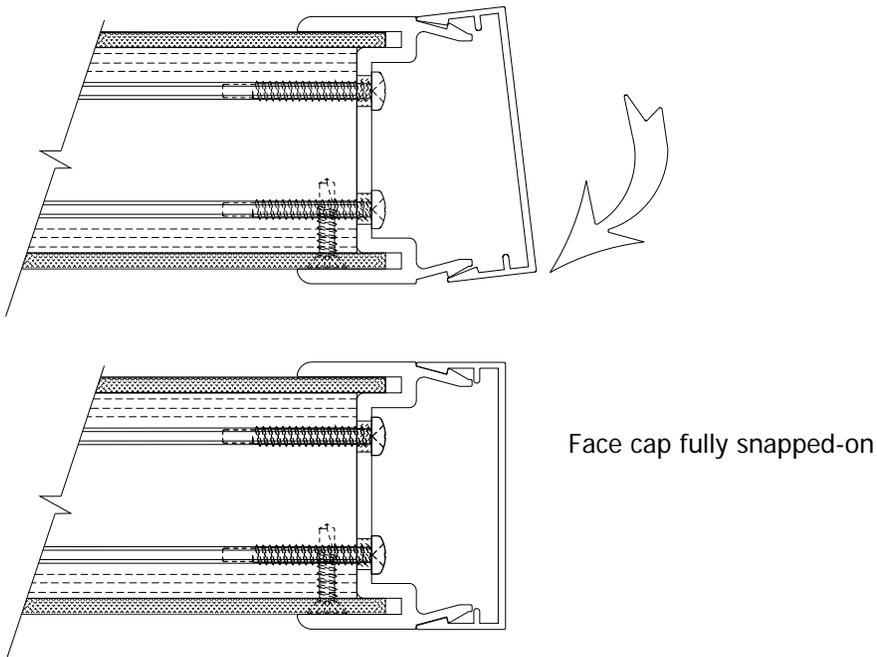
Section VI: E-Lite "Stick Built" Face Cap Attachment

1. Fabricate and Install Face Cap.

A.) The face cap must be cut to length.



B.) Engage the face cap on the upper snap and rotate onto the lower snap. It may be necessary to use a block of wood and a mallet.

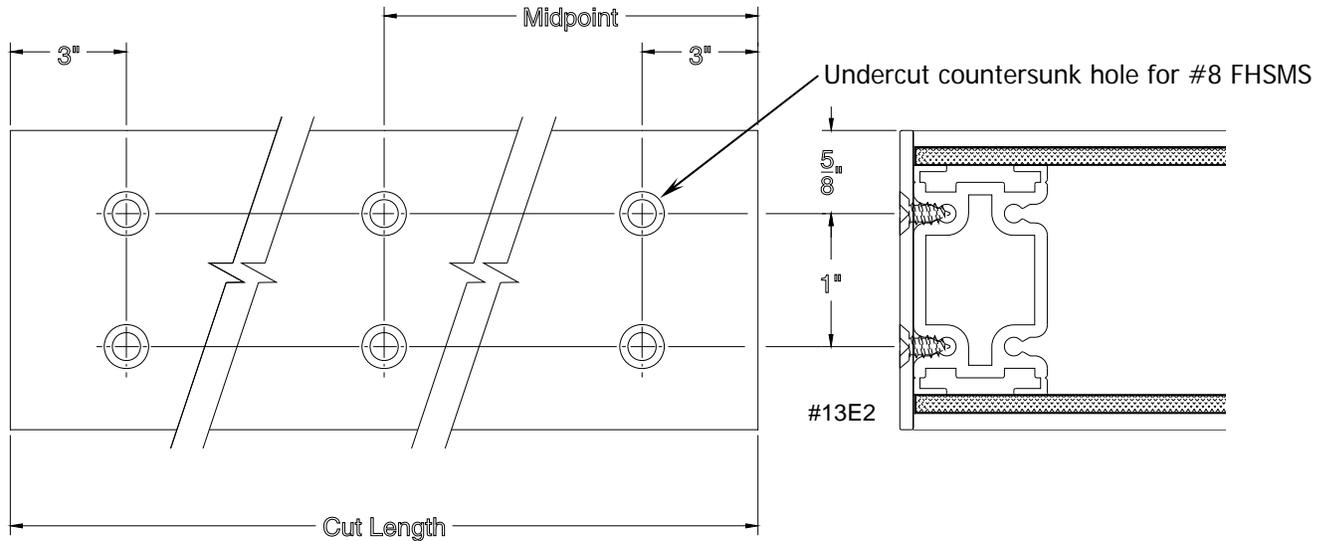


Section VII: E-Lite (Optional) End Cap Attachment

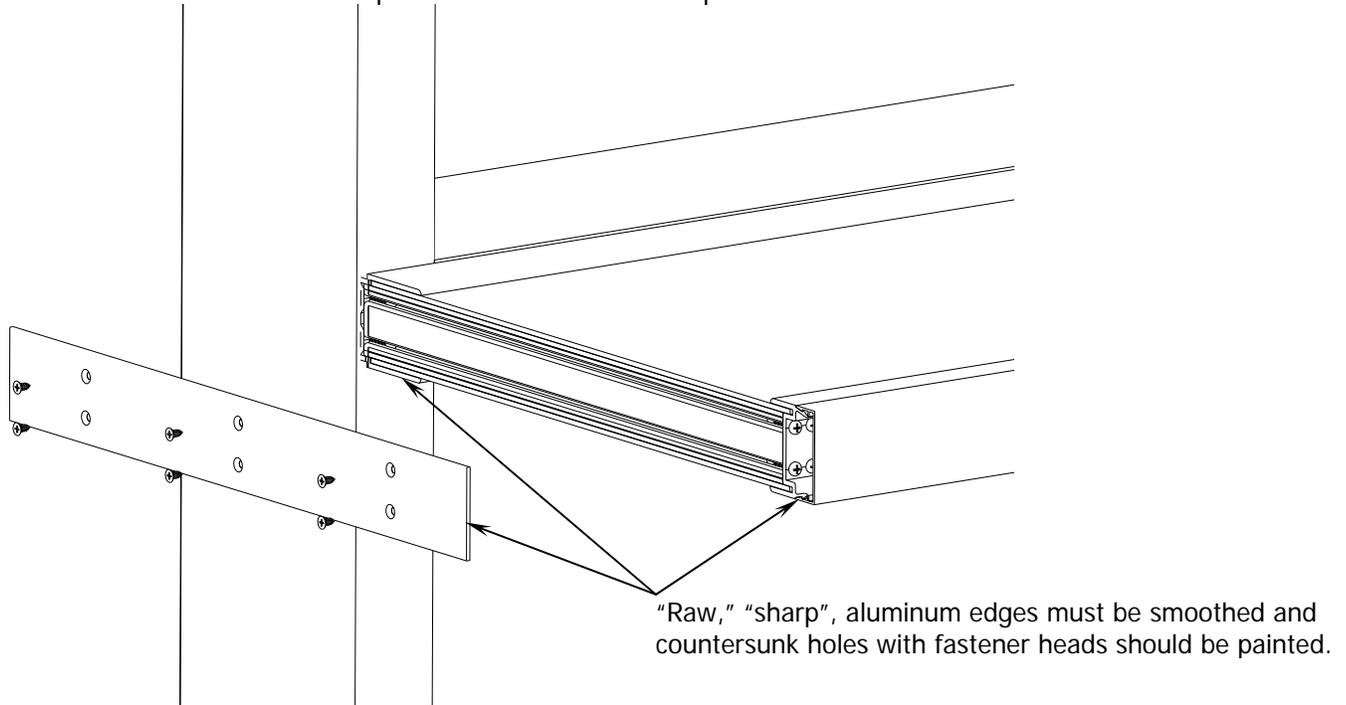
On some applications, the light shelf does not terminate at an abutting wall, and the raw edges of the horizontal members are exposed. In this case, EFCO offers an optional finished end cap plate to be attached to the support struts to close off the end(s) of the light shelf unit.

1. Fabricate and Attach End Cap.

Note: The end cap may be square cut to the depth of the light shelf and attached to the support strut with screws. There are a number of alternative attachment methods that could be used, including mastic, pop-rivets, etc. However, EFCO recommends using screws to provide a secure attachment that may also be disassembled should the need arise.



Note: Any "raw or sharp" aluminum edges should be smoothed with a file or emery cloth and touch-up paint applied. EFCO provides air dry touch-up paint in any of the standard colors. For custom air dry touch-up paint, contact your local representative for availability and pricing. Any exposed flat head screws should be filled and painted to minimize their exposure.

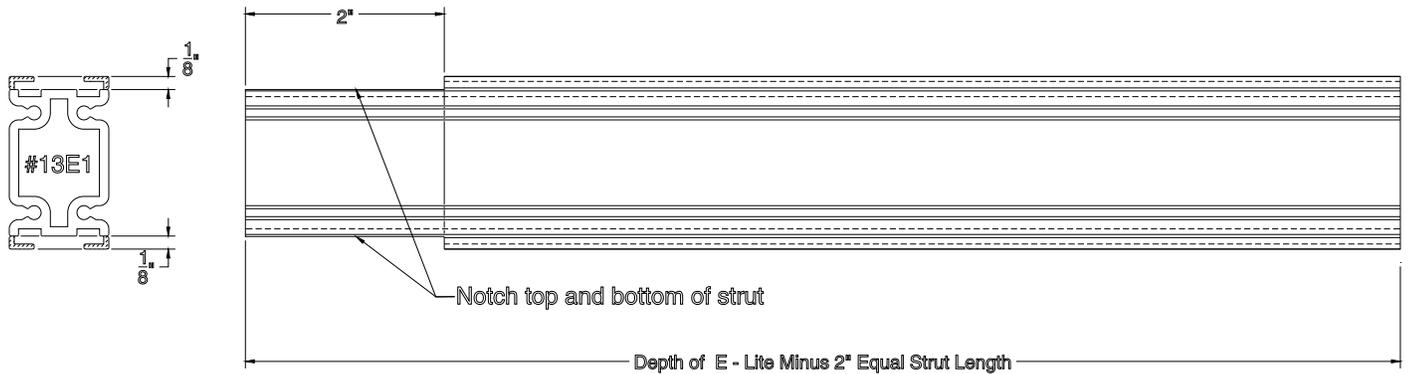


Section VIII: E-Lite "Module Built" Base Frame Assembly

The "Module Built" E-Lite refers to the system of fabrication and assembly, so as to allow the light shelf to be fabricated and built into modules, transported to the job-site, and loaded into the Anchor Base Channel. The E-Lite Module Built system uses the same material; it is only fabricated and assembled in a different manner. The assumption is that the E-Lite material can be ordered in stock lengths, fabricated, and assembled in the customer's shop, then attached to a previously set curtain wall, storefront, or substrate wall.

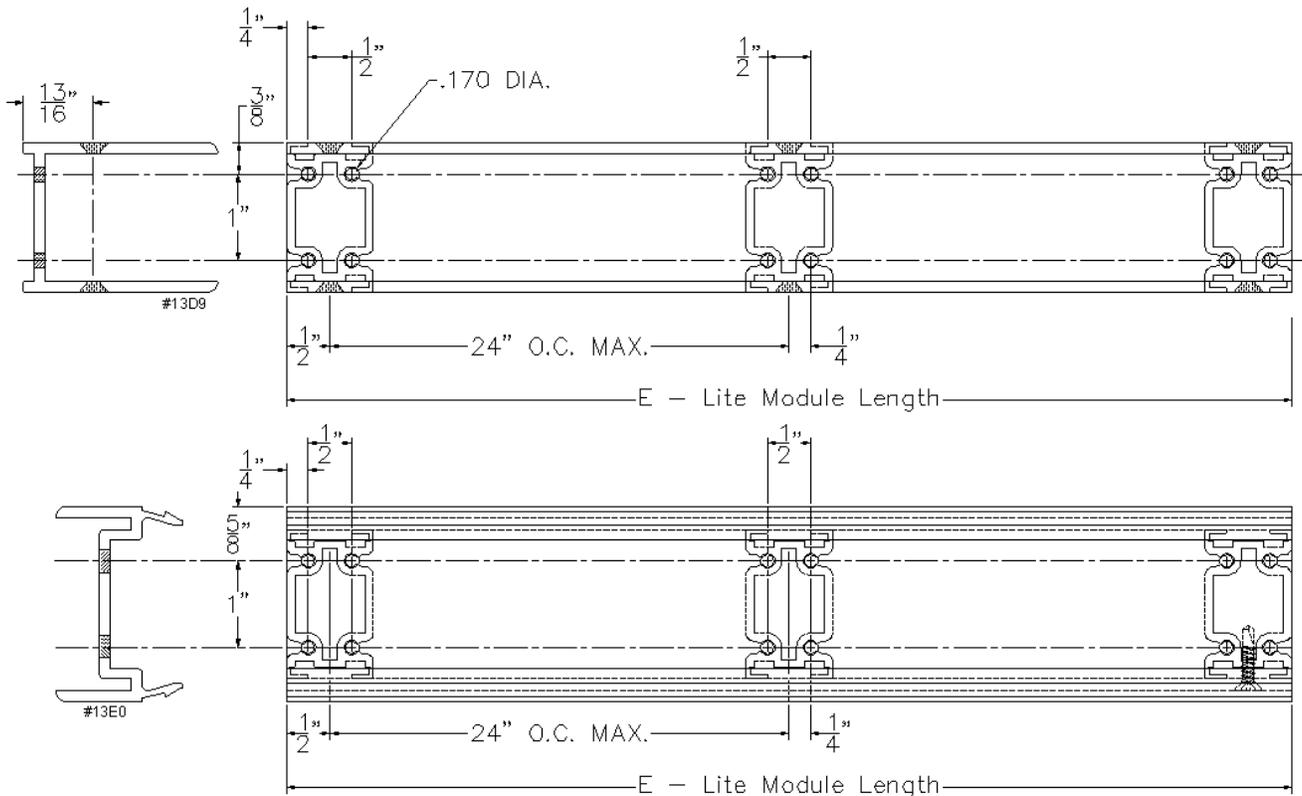
1. Fabricate the Support Struts.

- A.) The struts have what is called a "peel vee" and can be run across a table saw to cut a kerf at the 2" mark so the material to be removed can be broken off with a pair of pliers.



2. Fabricate Internal Support Channel and Terminator Channel.

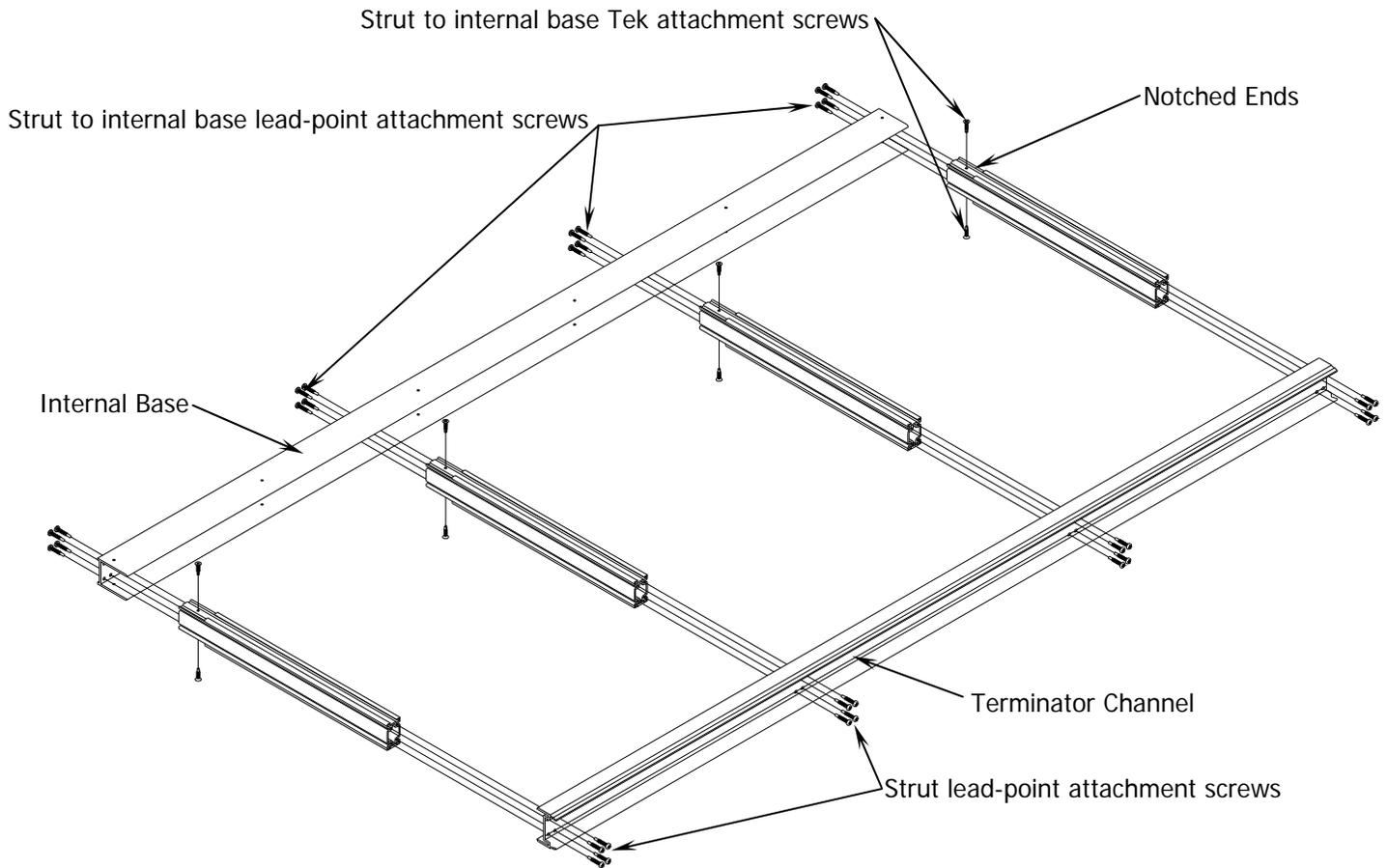
- A.) Locate and drill all strut attachment hole patterns in the support and terminator channels as indicated below.



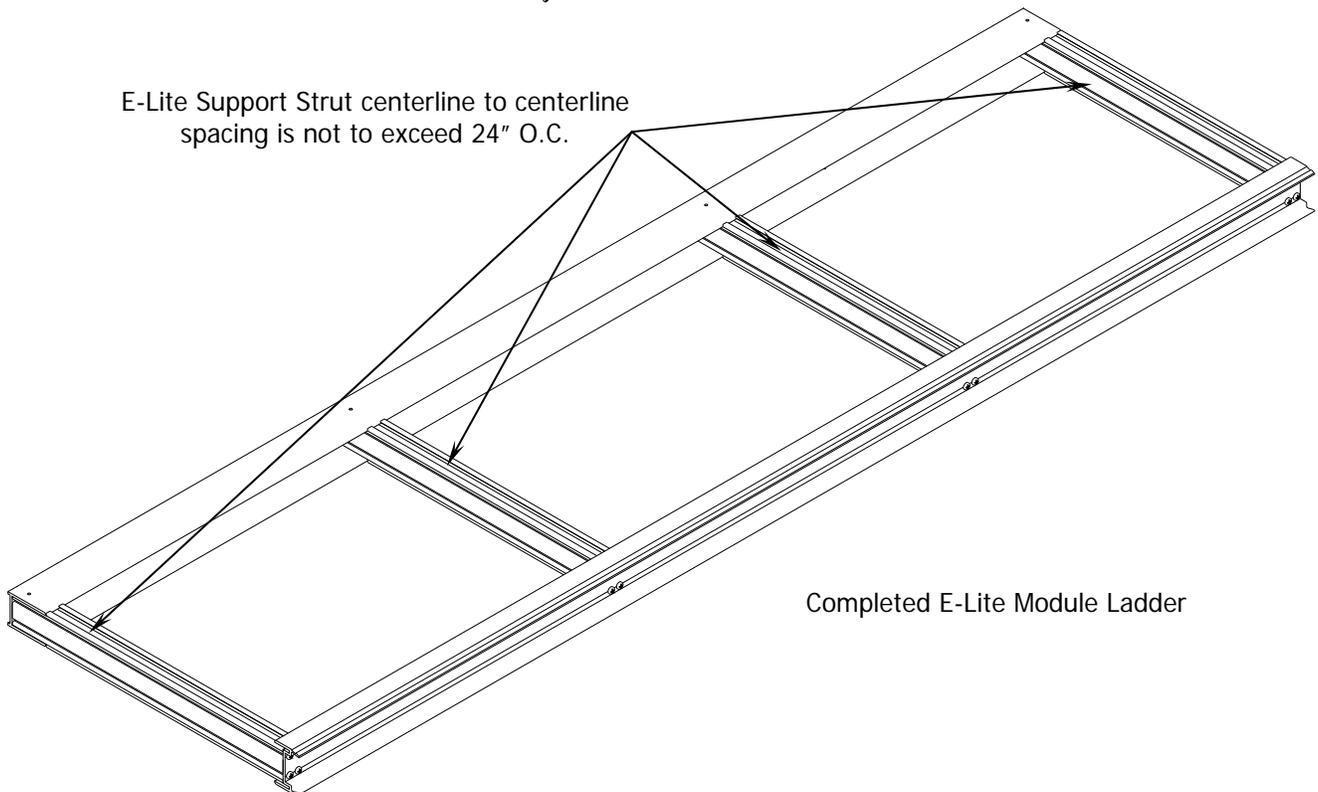
Section VIII: E-Lite "Module Built" Base Frame Assembly

2. Assemble E-Lite Module Frame.

A.) Assemble components as shown into ladders, tighten all fasteners firmly.



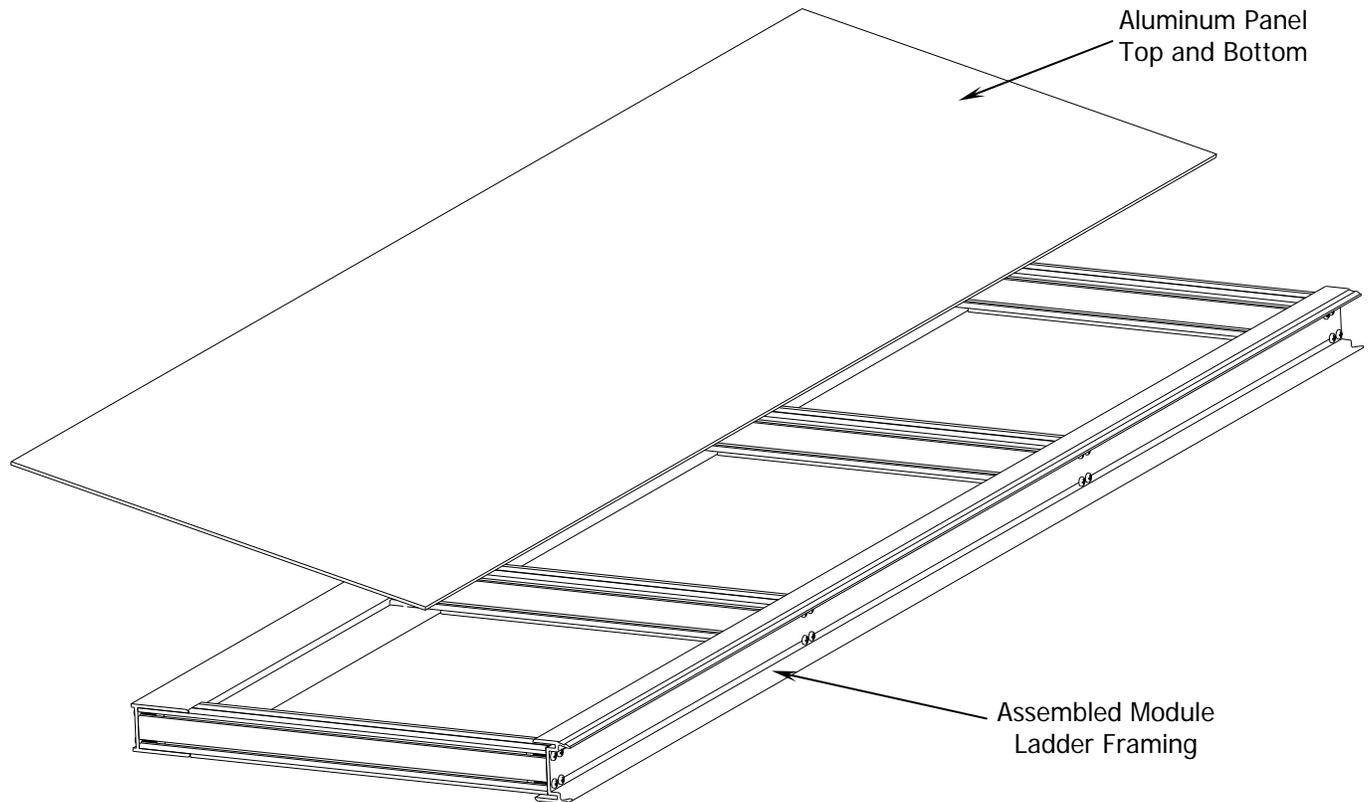
E-Lite Support Strut centerline to centerline spacing is not to exceed 24" O.C.



Section IX: E-Lite "Module Built" Aluminum Panel

1.) Load Aluminum Panels into E-Lite Module Ladder.

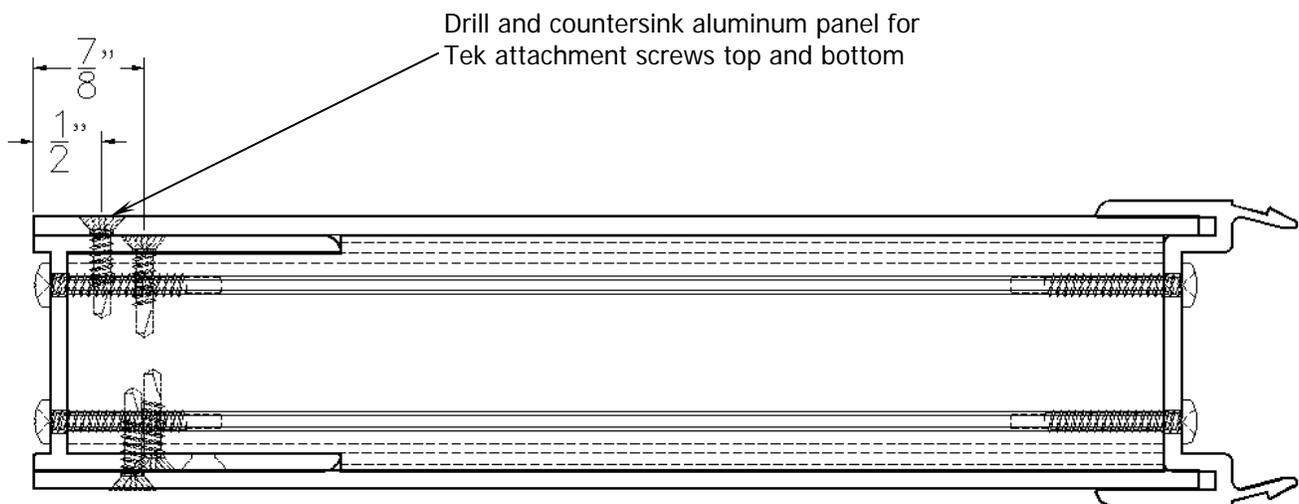
A.) Assemble components as shown into ladders, tighten all fasteners firmly.



2.) Square the E-Lite Module Ladder to the Panels and Pin.

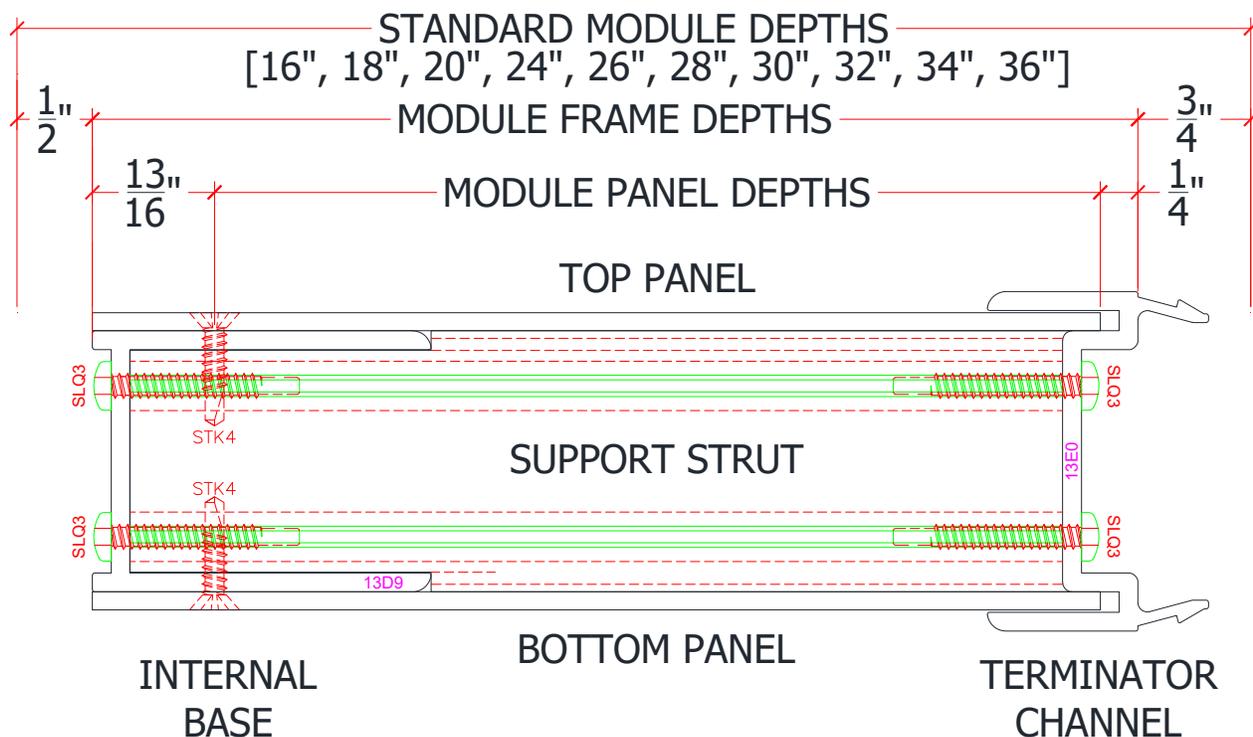
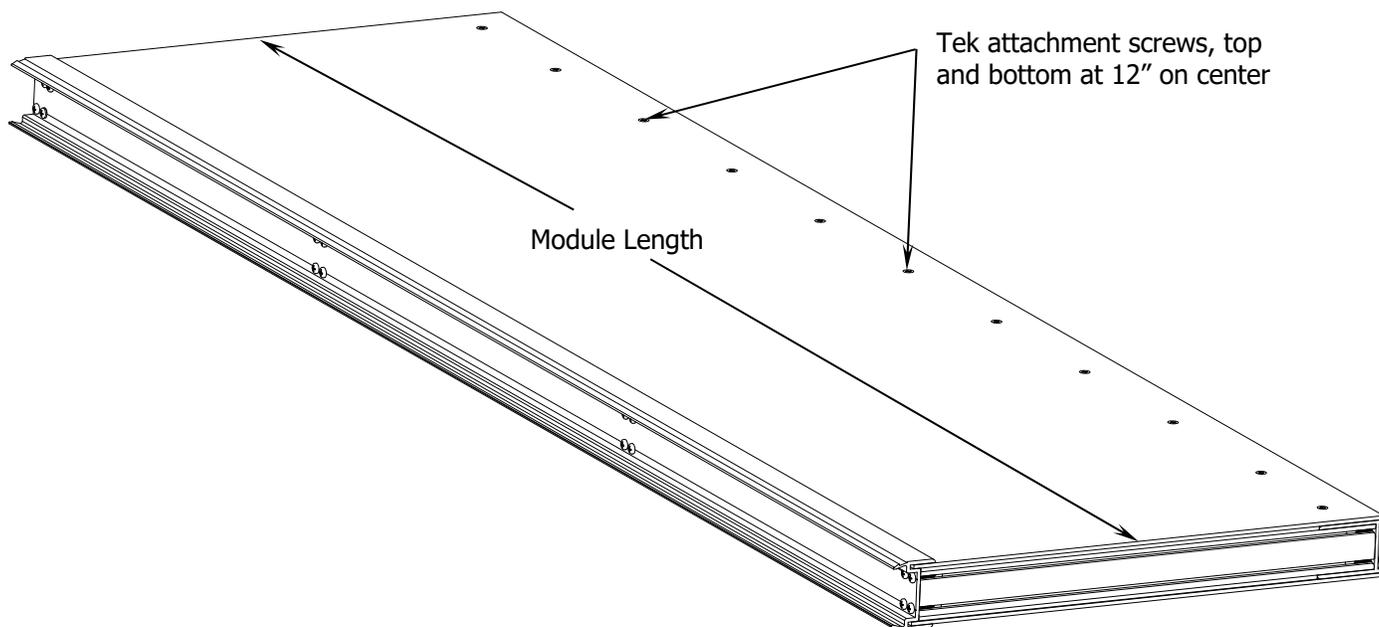
A.) Flush the edges of the aluminum panel with the module ladder and clamp as a unit. Recheck for squareness.

B.) Align drill and countersink the aluminum panels at 12" on center. Pin the panel with the Tek screws supplied, tighten all fasteners firmly. Make sure the fastener heads are at least flush or better yet, slightly recessed below the surface of the aluminum panel to minimize interference.



Section X: E-Lite "Module Built" Aluminum Panel Module

1.) E-Lite Module Panel



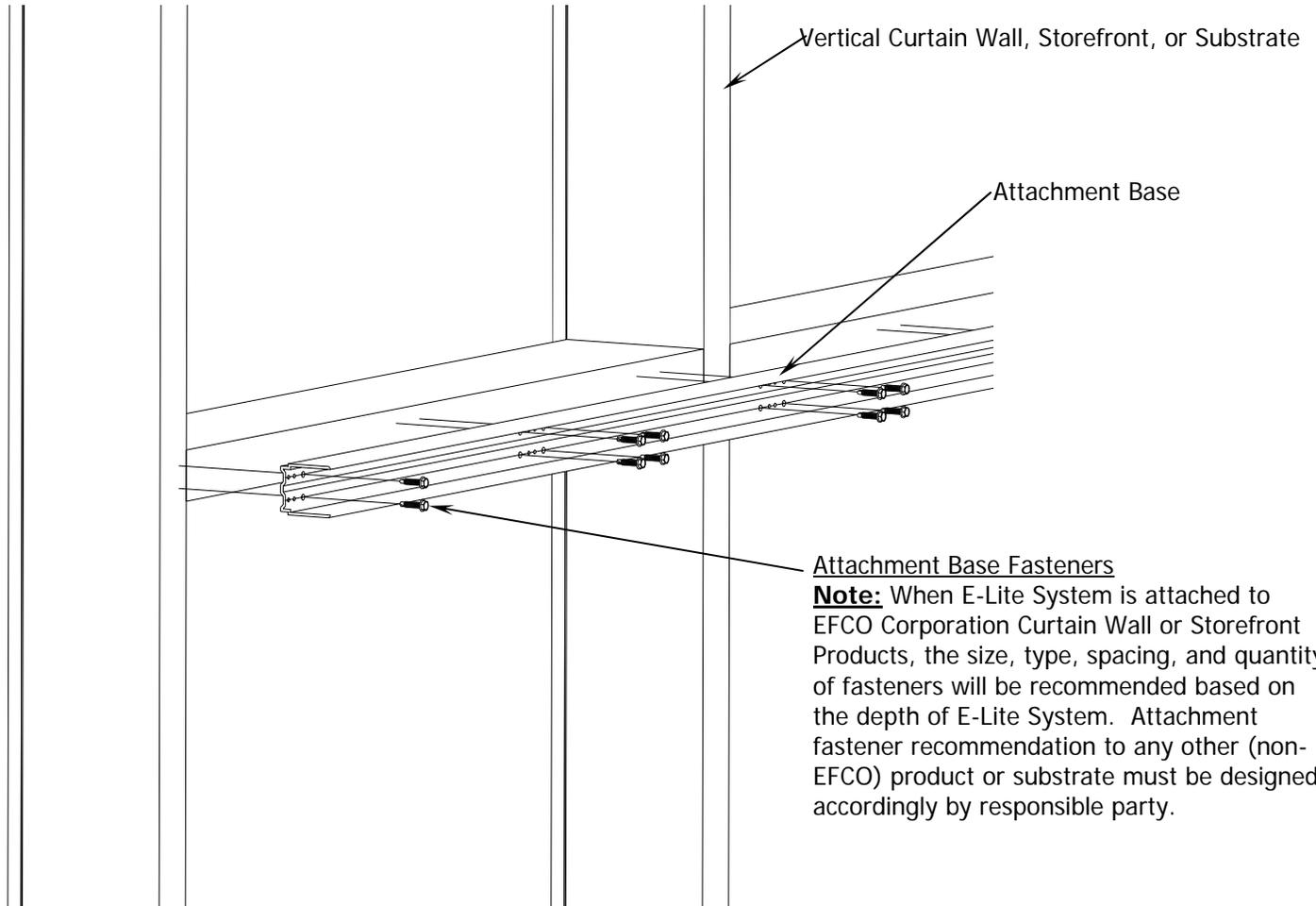
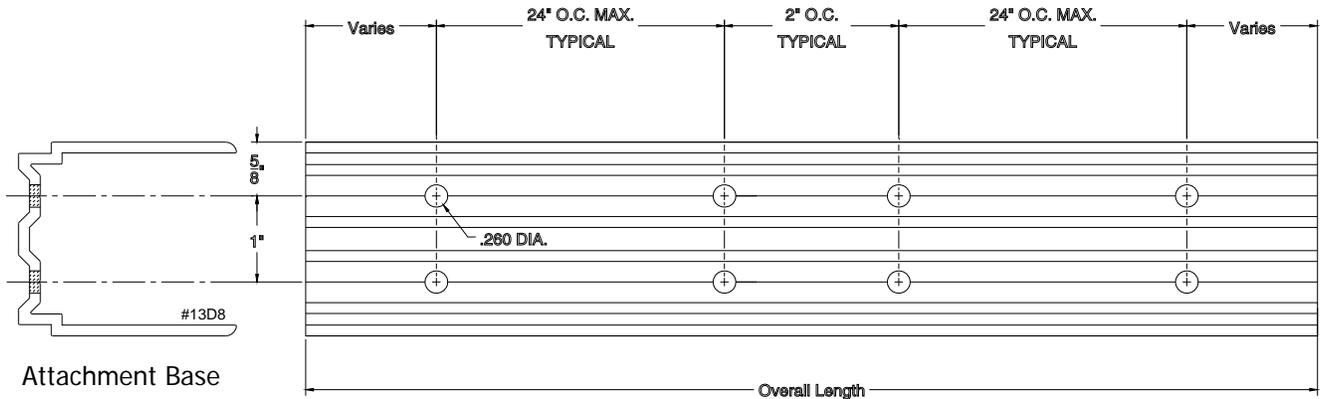
Section XI: E-Lite “Module Built” Base Attachment

1.) E-Lite Base

A.) Locate the horizontal component or substrate where the E-Lite will be attached.

Note: Typically the top of the base will be flush with the top of the horizontal.

B.) Level the E-Lite Attachment Base in the “perpendicular to the wall” plane. While securing the base to the vertical wall, avoid “flexing” or “bowing” the E-Lite Base extrusion. (This will make it difficult to load the rigid E-Lite Module panels into the base.)



Section XII: E-Lite Module Installation

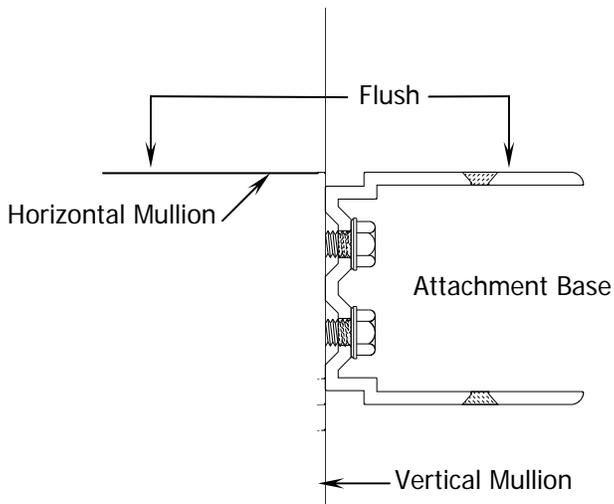
1.) Install Light Shelf Panel Module into Base.

A.) **Load** the E-Lite Panel Module into the Base and support temporarily.

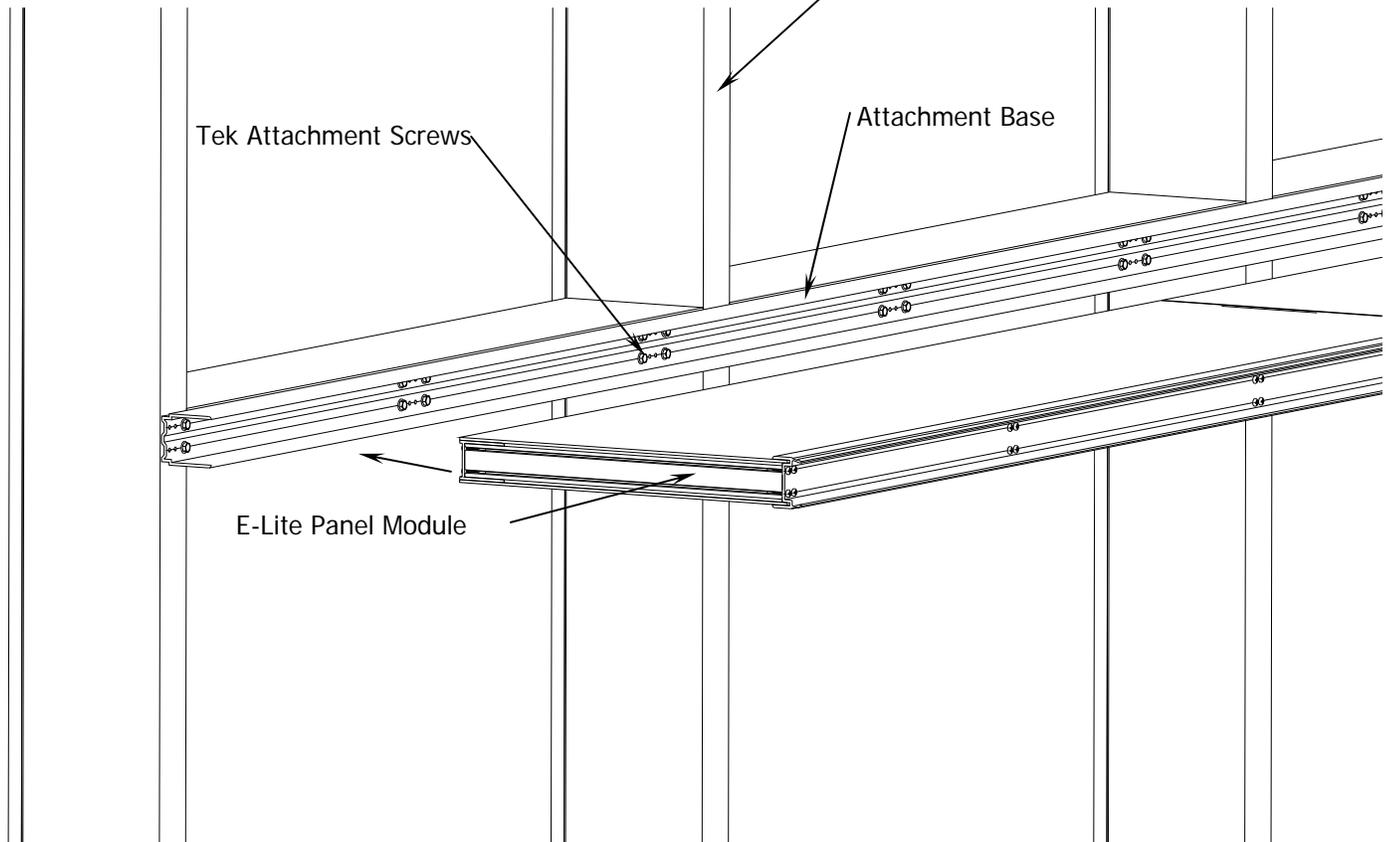
B.) **Leave** a recommended nominal 1/8" gap between the panel modules.

(This gap should be defined on the shop drawings.)

Note: Typically the top of the Base will be flush with the top of the horizontal mullion.

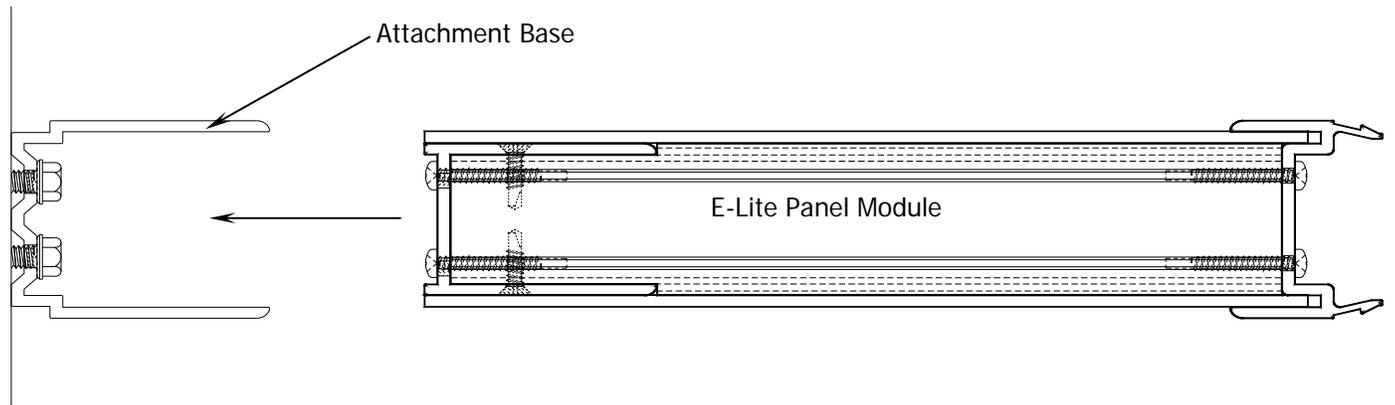


Note:
E-Lite MUST NOT bridge any expansion joint or expansion mullion.

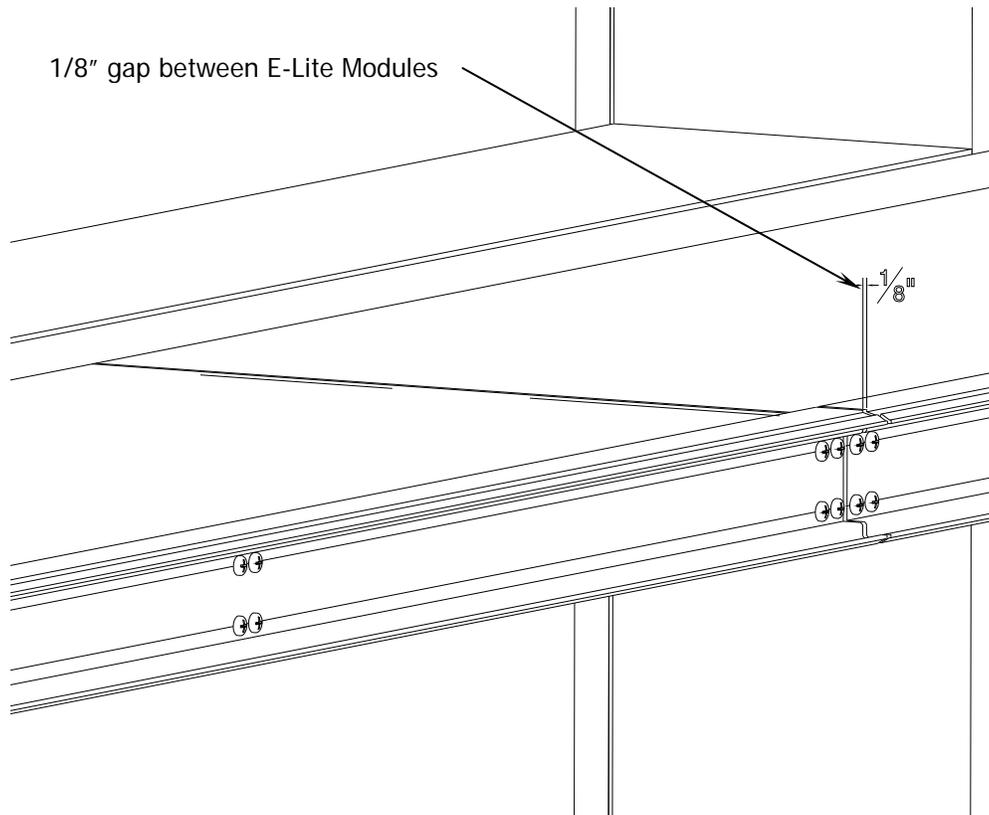
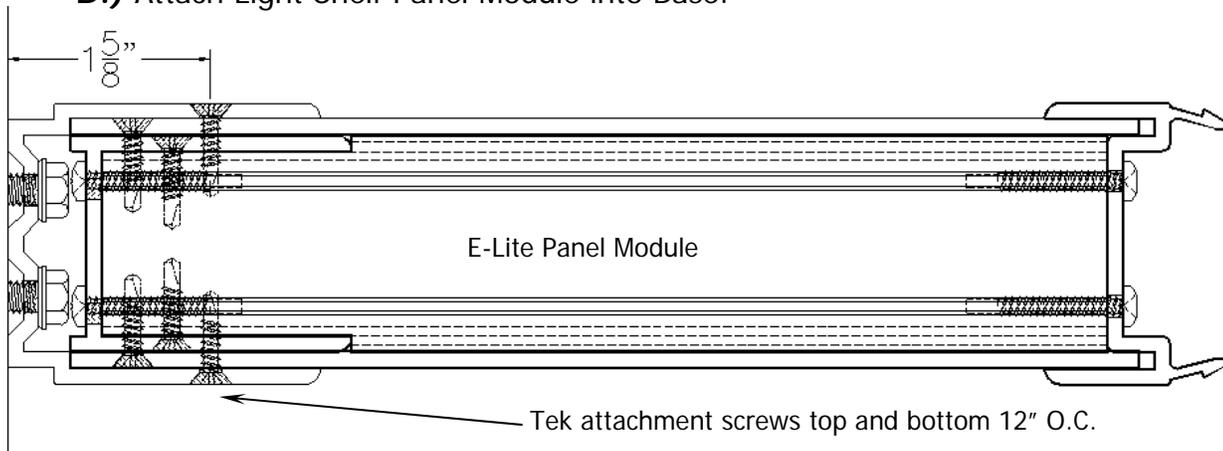


Section XII: E-Lite Module Installation

C.) Align Light Shelf Panel Module into Base (Temporarily support terminating edge).



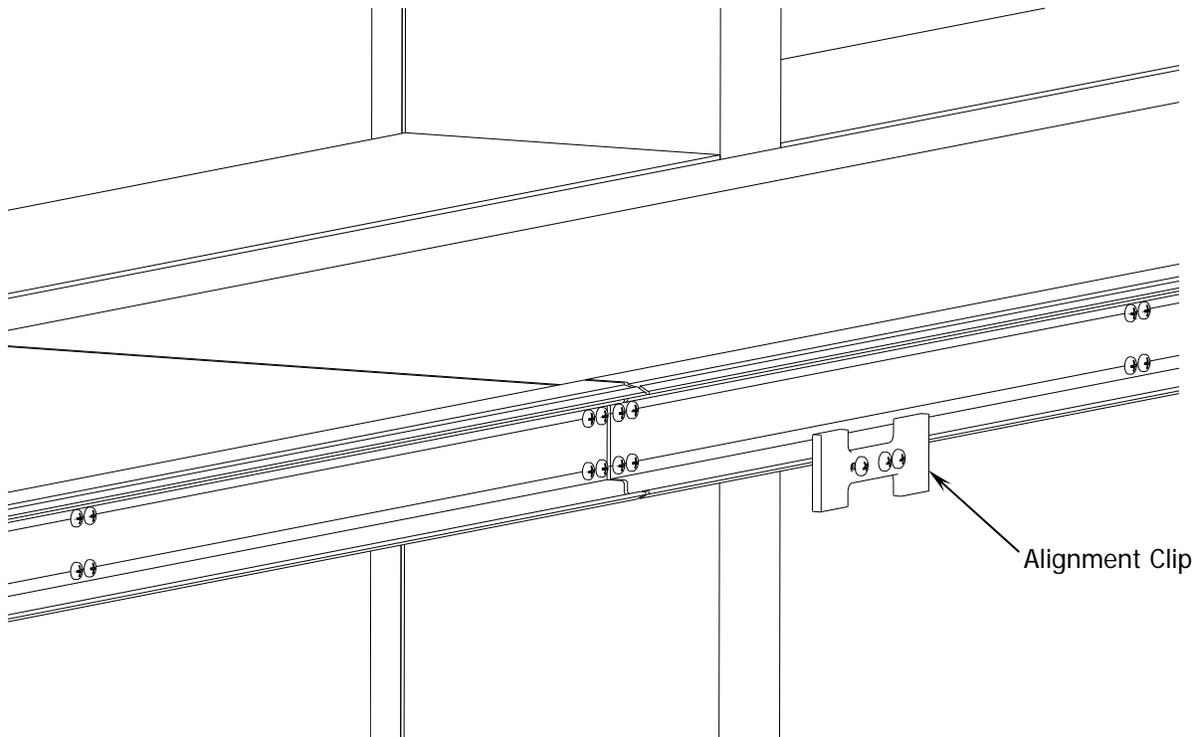
D.) Attach Light Shelf Panel Module into Base.



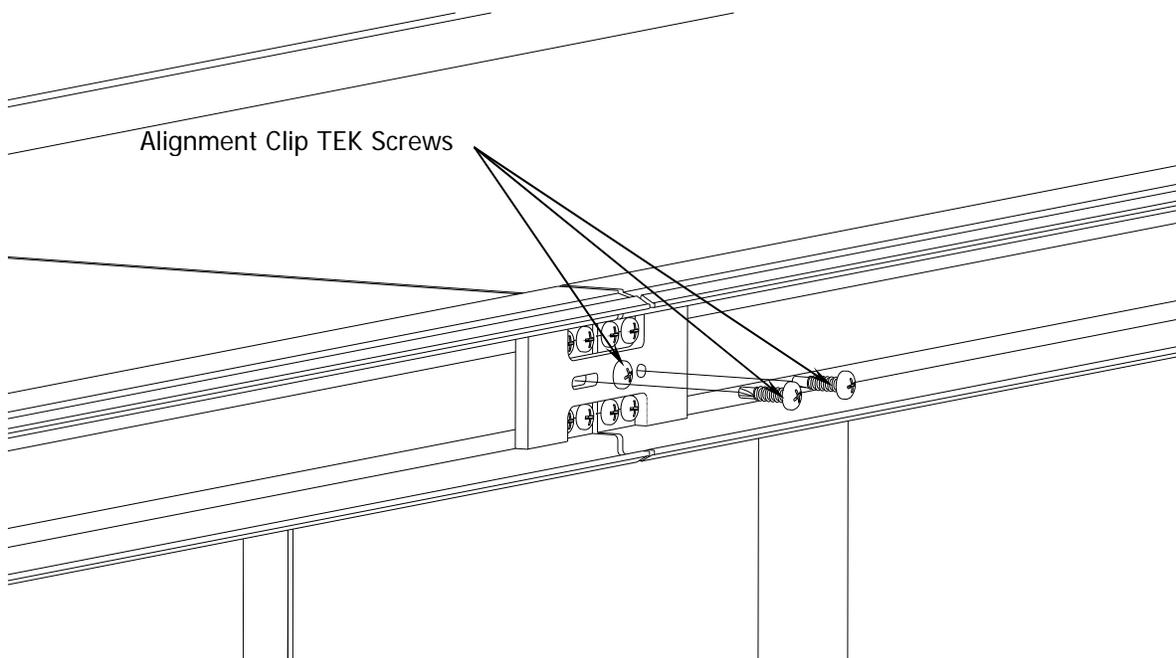
Section XIII: E-Lite Module Alignment Clips Installation

1.) Attach Alignment Clip.

A.) Locate the alignment clips at the nominal 1/8" module gaps. The clips are designed to bridge the gap and clear all of the module frame assembly screws.



B.) Attach the clip with the Tek screws supplied. One (1) screw for each of the fixed holes first and one (1) screw in the approximate center of the adjacent slotted hole into the next light shelf module. It is expected that some minor alignment / adjustments will be needed before the clip is firmly seated, and then the screws are tightened.



C.) See SECTION VI for the Face Cap Attachment and SECTION VII for the End Cap Attachment.