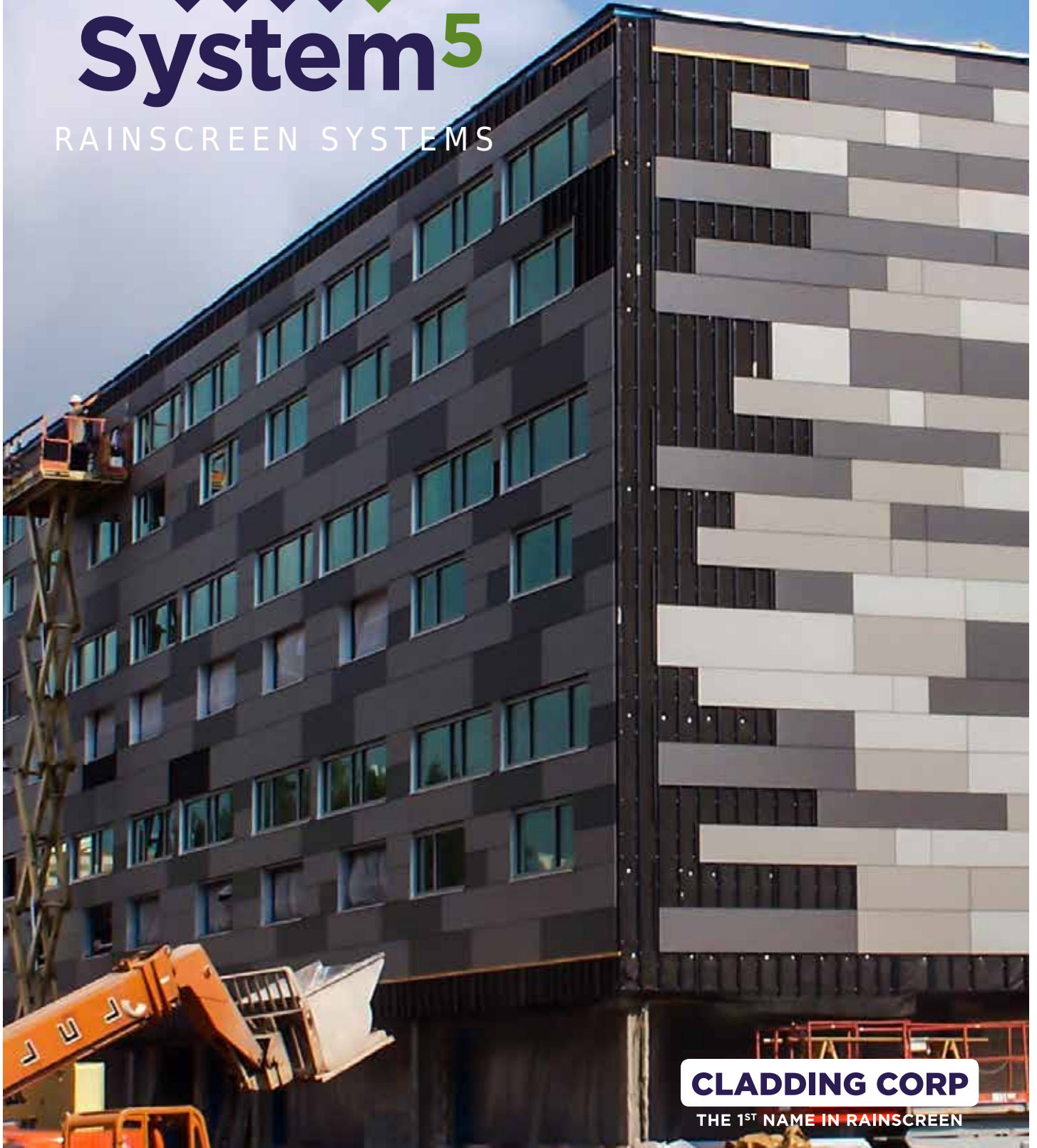




System⁵

RAINSCREEN SYSTEMS



CLADDING CORP

THE 1ST NAME IN RAINSCREEN

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Cladding Corp serves as North America's rainscreen solution provider. In all that we do, our goal is to master the art and science of proper drained and back-ventilated (DBV) rainscreen design for North America. For over 15 years, we have provided rainscreen design services that respond to the increasing need for a systems-based solution for the cladding panels and support structure that consider all the design and structural criteria of the project. We believe in challenging the status quo of improper DBV rainscreen design and installation. We believe that a holistic approach to rainscreen design is necessary - one that takes into account the entire exterior envelope of the wall assembly.

As a result of this conviction, Cladding Corp has developed System⁵ - a fully integrated rainscreen approach that focuses on each of the Five Principles and elements required to create an effectively designed drained and back-ventilated rainscreen assembly. This vision, coupled with our diverse portfolio of terracotta, fiber cement, ceramic and attachment systems, enable us to provide you with single-source cladding solutions for all of your rainscreen design needs.



Terra⁵

As one of North America's most referenced terra-cotta rainscreen and sunscreen providers, Cladding Corp provides a rainscreen solution that offers terracotta in a diverse range of colors and format sizes, engineered for project-specific criteria.

Cem⁵

Cement composite is uniquely suited for a variety of exterior and interior applications and has been embraced as the ideal product for modern rainscreen design. By combining Swisspearl® cement composite panels with System⁵ design approach, Cem⁵ is born.

Ceramic⁵

Made of natural raw materials, porcelain-grade ceramic panels are through-body colored, light-weight and economical. Pollution resistant and maintenance-free, our ceramic panels, when combined with the System⁵ design approach, offer an elegant, high-performance rainscreen solution at an exceptional value.

Plus⁵

Cladding Corp offers a variety of engineered attachment systems for a variety of cladding applications like High Pressure Laminates (HPL), concrete, stone or metal panels. The Plus⁵ system catalog is an unique collection of substructure systems that apply *The 5 Principles of Rainscreen Cladding Design* to create a weathertight cladding assembly.

RAINSCREEN 2.0 - The Next Generation of Wall Design



A successful drained and back-ventilated rainscreen is not limited to the cladding materials and sub-framing system alone, it requires an integration of educated design based upon a holistic approach to the exterior envelope. Cladding Corp is an advocate for this “outside-in” approach, and base our systems around *The 5 Principles of Rainscreen Cladding Design*, starting with the selection of the cladding material and ending with the inner waterproofing of the wall.

Why is this important? With an ever-increasing shift towards sustainable design, the exterior envelope of the building offers some of the most significant opportunities to create high-performance buildings that leave the least impact on the environment.

System⁵ is a fully integrated rainscreen approach that begins with the outer skin of the wall and works its way back to the air/water barrier (AWB). Rather than isolating the design of the cladding materials independent of the entire wall assembly, System⁵ focuses on all of the scientific principals and elements required to create an effectively designed drained and back-ventilated rainscreen assembly.

Unlike other rainscreen product suppliers who offer panel-only or limited, “engineer-your-own” attachment components and systems, Cladding Corp delivers a single source rainscreen cladding assembly - including the connections of the cladding panels, design of the subframing and attachment to the backup wall.



AAMA RAINSCREEN TESTING

Did you know that Cladding Corp was an original industry member of the AAMA Task Force responsible for developing the **AAMA 509 Standard** - the first North American testing standard for Drained and Back-Ventilated (DBV) Rainscreen Cladding?

This ground-breaking new standard was developed to create a benchmark in DBV rainscreen performance and provides specific criteria for ventilation and moisture control.

All Cladding Corp systems follow *The 5 Principles of Rainscreen Cladding Design* and subscribe to the requirements of **AAMA 509**. In fact, Cladding Corp has the first system test report provided by AAMA for the 509 Standard. If you are interested in more information on the new standards, please consult your local Cladding Corp agent.

THE FIVE PRINCIPLES – System⁵

At the onset of every project you will need to define the design parameters, such as wall condition / type and project windloads. What type of wall construction is being used on the project? (In North America, stud/sheathing or block/tilt-up are the most common.)

During the Design Phase, we start working through *The 5 Principles*, beginning with the cladding material selected. It is critical to understand the material deflection and thermal properties, spanning capabilities and water absorption of the cladding material, as these factors will influence the engineering of the substructure and the overall wall assembly. Next, comes consideration for the panel joint design and depth of cavity space behind the wall cladding. During this process you must consider the degree of water infiltration within the system and panel joint design. As you consider cavity depth, you will need to evaluate the goals for insulation, R-values and depth of system.

After these criteria are evaluated, the focus can now turn to which attachment system will best suit your project. Depending upon what type of wall construction is being used, you need to select a horizontal or vertical system. Next, do you prefer a visible or concealed mounting system? (As a rule of thumb, visible or face-fastened systems tend to be less expensive to install than concealed systems.)

1.



1. CLADDING MATERIAL SELECTION

Principle 1 - Select and understand the performance characteristics of the cladding product

2.



2. OUTER MOISTURE CONTROL

Principle 2 - Design cladding and joints to deter water from entering system cavity

3.



3. CLADDING CAVITY DESIGN

Principle 3 - Design the cladding cavity with a specific focus on ventilation, thermal and acoustic performance

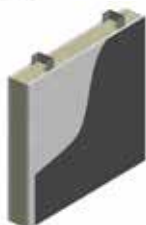
4.



4. ENGINEERED SUBFRAMING

Principle 4 - Design substructure system with a focus on material, structural and seismic performance

5.

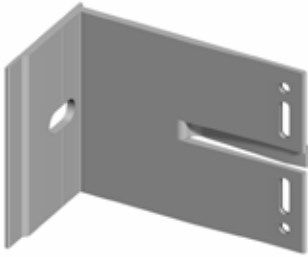


5. INNER MOISTURE CONTROL

Principle 5 - Design air/water barrier with a focus on flashing details and backup wall type

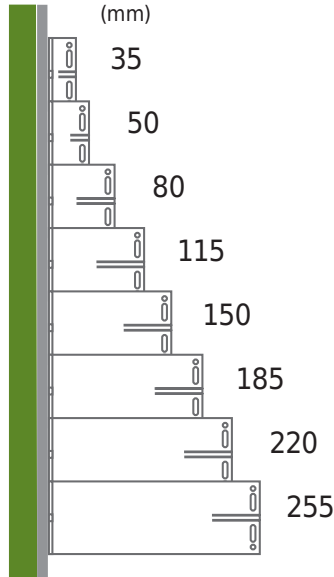
BRACKETS – The Building Blocks

F1 – Vertical Brackets



VERTICAL BRACKETS

Are typically used for mounting on block/tilt-up or masonry walls. The primary profile is mounted vertically using an F1 bracket.



BRACKET SIZE	CAVITY DEPTH RANGE
35mm / 1.38"	37-75mm / 1.46" - 2.95"
50mm / 1.97"	52-90mm / 2.05" - 3.54"
80mm / 3.15"	82-120mm / 3.23" - 4.72"
115mm / 4.53"	117-155mm / 4.61" - 6.10"
150mm / 5.91"	152-190mm / 5.98" - 7.48"
185mm / 7.28"	187-225mm / 7.36" - 8.86"
220mm / 8.66"	222-260mm / 8.74" - 10.24"
255mm / 10.04"	257-295mm / 10.12" - 11.61"

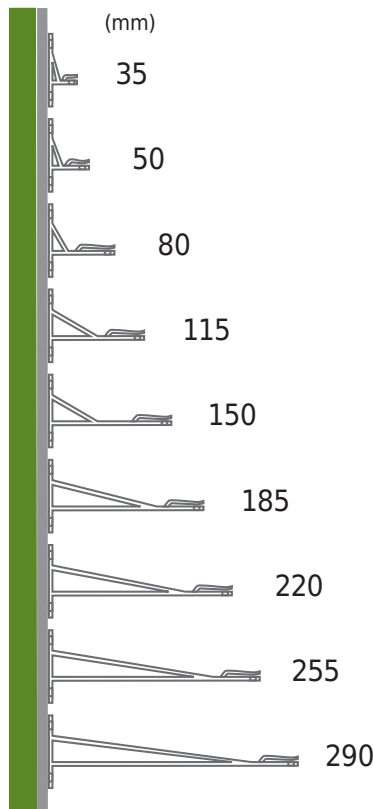
Note: degree of adjustability is $\pm 3/4"$

F2 – Horizontal Brackets



HORIZONTAL BRACKETS

For substrates with steel studs and sheathing, horizontal systems are utilized, with the primary profile mounted horizontally using an F2 bracket.



BRACKET SIZE	CAVITY DEPTH RANGE
35mm / 1.38"	62-100mm / 2.44" - 3.94"
50mm / 1.97"	52-90mm / 2.05" - 3.54"
80mm / 3.15"	82-120mm / 3.23" - 4.72"
115mm / 4.53"	117-155mm / 4.61" - 6.10"
150mm / 5.91"	152-190mm / 5.98" - 7.48"
185mm / 7.28"	187-225mm / 7.36" - 8.86"
220mm / 8.66"	222-260mm / 8.74" - 10.24"
255mm / 10.04"	257-295mm / 10.12" - 11.61"
290mm / 11.42"	292-330mm / 11.50" - 12.99"

Note: degree of adjustability is $\pm 3/4"$

SYSTEM5 ADVANTAGES

1. Brackets Superior to Conventional Hat/Zee Approach

The strength of our bracket design allows us to maximize the distance between attachments to the walls which minimizes penetration through the insulation and air/vapor barrier. This allows Cladding Corp's design to be the best performing system on the market and to reduce the thickness of insulation by over 50% of conventional hat/zee shapes.



2. Quality Rainscreen Design

Cladding Corp was one of the members of the steering committee who developed the AAMA 509 Test Standard for Drained and Back Ventilated Rainscreens. Our systems are the first of its kind for North America and are designed to prevent, collect and discharge water per the guidelines of the standard. In addition, our systems are designed to limit airflow through the system which can encourage condensation-related mold and heat loss.



3. Our Systems Meet or Exceed ASHRAE's Thermal Performance Standards

For highrise and commercial construction, elements like masonry ties or threaded screws are not sufficient to support the combined dead-load, dynamic load or wind load implied on the cladding materials. In these cases, structural elements are necessary to meet basic design loads. Cladding Corp bracket based systems are designed to meet or exceed the requirements of ASHRAE 90.1 2010. By utilizing a system that incorporates brackets, designers minimize thermal shorts in the building envelope created by structural elements. All of our systems can be thermally modeled to prove the insulation performance of the wall.



4. "We're All Thumbs" - Installation Ease and Built in Adjustability

Cladding Corp systems are easy to install. Our systems allow materials to be rapidly set even when backup walls are not plumb or true. The "thumb-hold" feature of our brackets allows the system to have a +/- 3/4in adjustment without the need for external shims. And when we say "we're all thumbs" - that's a good thing since the slotted feature of the brackets hold the primary system profile until it can be fixed with a fastener eliminating the need for clamps or an extra set of hands to hold things in place while levelling. This feature is also perfect for existing out of tolerance walls in recladding situations.



5. Durable Long-Lasting Materials - Aluminum vs Galvanized Steel

The aluminum we use is an architectural marine grade material which provides superior performance against corrosion and outperforms lower grade metals like galvanized steel. This is especially important for open jointed systems that can allow moisture flow into the ventilated cavity. The use of 6063-T6 aluminum, meets or exceeds ASTM B221, AMS 4156 and ASME SB-221 standards. And our finishes meets or exceed AAMA 2604 and AAMA 2605 specifications.



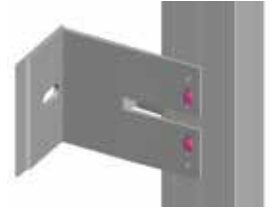
6. Maximizing Air Barrier Performance

Bracket-based system designs allow fewer penetrations through the Continuous Insulation plane and into the weather protective membrane as compared to a conventional hat/zee approach using continuous profiles. Fewer penetrations mean you maximize the air weather barrier's performance by reducing opportunities for air and water leakage. Also, our system brackets are detailed so that they create a seal between the bracket and membrane. Our systems are also detailed to incorporate rigid profiles that control both air and water transmission at the perimeter of the system and at location of penetration through the cladding.



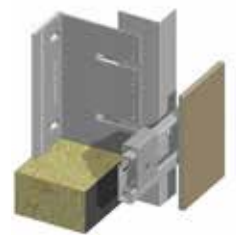
7. Engineered Systems Designed to Limit Material Stresses

Our systems are designed to address material movements associated with thermal expansion and contraction during temperature changes. Connections at brackets, profiles and panel fasteners are detailed to limit panel stresses associated with these thermal movements. Cladding Corp meticulously details the locations of fixed and sliding point connections in the aluminum profiles to limit stresses associated with material movements and highlights these locations to our installer in our shop drawings to assure proper installation procedures.



8. Integrated Wall Design Aesthetics

Cladding Corp systems give the designer the opportunity to use visible or concealed attachments. The visible systems attachment point can be emphasized as a design element either through shape or color selection or minimized by matching the color with the surface of the cladding material selected. Concealed systems allow the cladding product to attach to the sub-framing system in a hidden manner. Flat panels can be drilled on the backside using undercut anchors and attaching a concealed hanger clip.



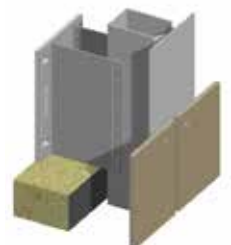
9. Sustainability Efforts to Support Carbon Zero Design

In an effort to reduce the carbon footprint of our cladding systems, Cladding Corp has developed two significant programs to support this effort. A Net Zero Carbon Shipping Program through our truck stop electrification program utilizes carbon credit offsetting techniques to create a significant impact from carbon dioxide emissions. Our systems are LEED compliant specific to the Recycled Content of the aluminum components we use and Cladding Corp certifies that our aluminum components incorporate a minimum of 45-70% post consumer recycled content and 5-10% post industrial recycled content by weight. Future endeavors include offsetting both panel and subframing manufacturing process to create a complete cladding system that can be considered Carbon Neutral.



10. Hi-Spanning Bracket Solutions Are Available

Cladding Corp offers a unique bracket with greater spanning capabilities that limits the amount of brackets needed and increases the distance between attachment points. The bracket is designed to span floor-to-floor but can be oriented either vertically or horizontally. It is also ideal for use on existing walls conditions where limiting penetrations thru the wall is preferred since this can eliminate the need to remove and dispose of the existing skin materials. With minor modifications to the tubular profile, this bracket can be used with all of our cladding products.



SYSTEM SUMMARY

F1.10 VISIBLE RIVET

CEMENT COMPOSITE / HPL / FIBER CONCRETE

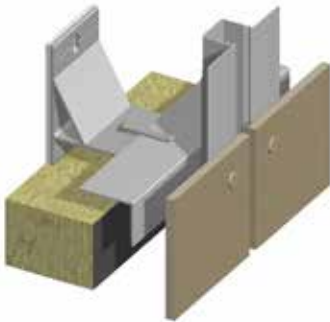


Attachment method with rivets. For use with flat panel products such as fiber cement, HPL or fiber concrete panels. Ideal for concrete substrates with panels in landscape orientation. Rivet attachment guarantees high pull-out values and ease of installation.



F2.10 VISIBLE RIVET

CEMENT COMPOSITE / HPL / FIBER CONCRETE



Attachment method with rivets. For use with flat panel products such as fiber cement, HPL or fiber concrete panels. Ideal for stud back-up walls with panels in landscape orientation. Rivet attachment guarantees high pull-out values and ease of installation.



F2.14 LAP-SIDING

CEMENT COMPOSITE / CERAMIC / HPL / FIBER CONCRETE



Semi-concealed clip fixing for lap-siding applications. Unique clip system devised for fixing fiber cement, ceramic, HPL or fiber concrete panels in a lap-siding configuration. Mechanically fastened clips and variable depth brackets with simple horizontal L-profiles make this system an economical solution for lap-siding applications.



F1.44 CONCEALED

CEMENT COMPOSITE / CERAMIC / STONE / FIBER CONCRETE

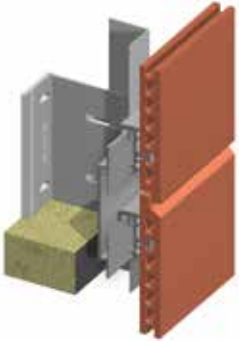


Versatile horizontal rail system with concealed clip. Designed specifically for fiber cement, ceramic, stone, and fiber concrete rainscreen. Allows maximum flexibility in panel layout with running-bond patterns possible. Fully-engineered, economical and easy to install.



F1.45 HORIZONTAL RAIL

TERRACOTTA

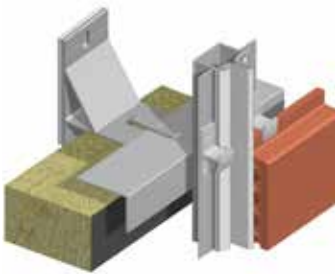


Versatile horizontal rail system designed specifically for the thin, fluted TC18 tile format. Allows maximum flexibility in panel layout with running-bond patterns possible. Fully-engineered, economical and easy to install. For use with either stud or concrete back-up conditions.



F2.22 CONCEALED CLIP

TERRACOTTA

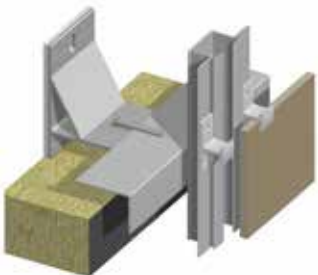


Concealed clip fixing for double-skin terracotta tiles. Designed for TC30 and TC40, double-skin terra-cotta tiles, to limit water penetration and provide a mechanic clip solution for attachment. Clips are concealed in the tile ship-lap. For use with either stud or concrete back-up conditions.



F2.20 VISIBLE CLIP

CERAMIC / STONE



Attachment method with visible clips. Cost-effective visible clip attachment system used for anchoring ceramic or natural stone panels for cladding applications. Clips are color matched to the panels and are discreet, especially for multiple story construction. For use with either stud or concrete back-up conditions.



F1.40 CONCEALED CEMENT COMPOSITE / CERAMIC / STONE / HPL / FIBER CONCRETE



Attachment method with undercut for cement composite, ceramic, stone, HPL and fiber concrete panels. The back of each panel is pre-drilled using undercut drill bit to receive the hanger clip and expanding bolt anchor.



CLADDING CORP SUPPORT

With the System⁵ approach to substructure design, designers now have the ability to interchange multiple cladding materials on the same elevation seamlessly with the same substructure components and bracket assembly. Design materials such as fiber cement, terra-cotta, ceramic, HPL, fiber concrete and natural stone can now be integrated in a drained and back-ventilated rainscreen wall assembly with one uniform attachment approach.

For the North American market, Cladding Corp is committed to providing a fully-engineered system package, in which both cladding and substructure are engineered to accommodate project wind loads, seismic loads, building slab to slab deflections and thermal movements of materials.

Through our technical expertise, industry relationships and real-life experience with a full product line of cladding materials, we offer attachment solutions for your rainscreen needs from the Design Development Phase all the way through the Installation Phase.

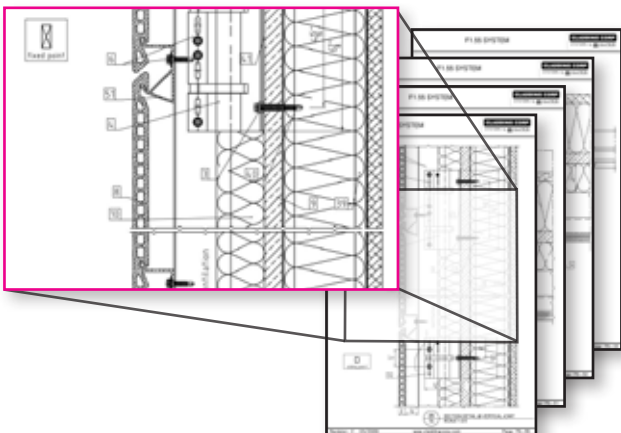


COMPLETE, ENGINEERED PACKAGE

From initial design and detailing assistance to shop drawings and engineered calculations to jobsite training and final installation, Cladding Corp provides a full range of services as part of our 'systems approach' that guarantee proper installation and long-life performance.

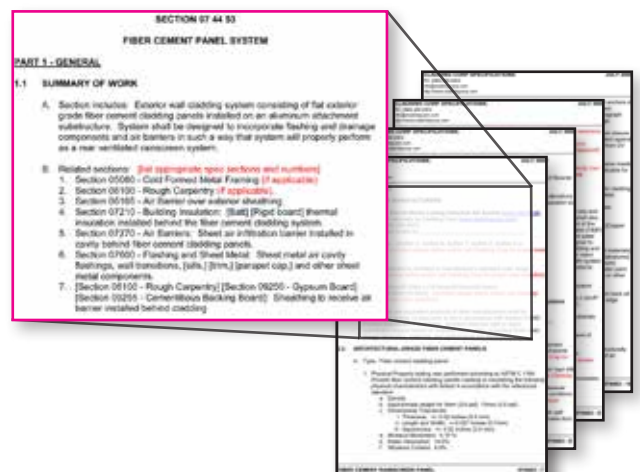
DETAILING

For every System, complete sets of typical details are available in both print and down loadable form. With every set of typical details, you will find a typical elevation, overview of fastening distances, table of variable bracket depths and a standard detail for the most important structural connections such as e.g. vertical and horizontal sections, foundation, parapet, windowsill, reveal, corner conditions, etc.



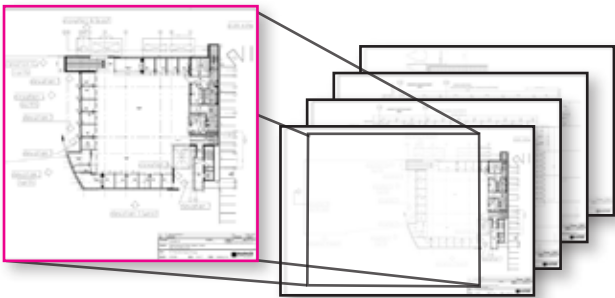
SPECIFICATIONS

Specifications for each cladding system are provided in CSI MasterFormat for reliable integration into the Project Manual. We provide these templates to simplify the administrative design work and ensure that your project specification accurately outlines the proper cladding and system criteria.



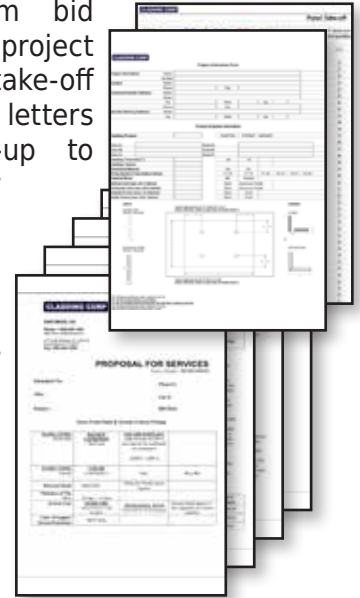
BUDGETING

As part of the design review process, we offer design phase budgeting as part of our approach to assure that the execution of detailing and specification process is done in a way to optimize value. Early pre-bid budgeting exercises can have a tremendous impact on the realization of a rainscreen wall design and we seek to assist in providing cladding and system solutions to meet definable budget requirements.



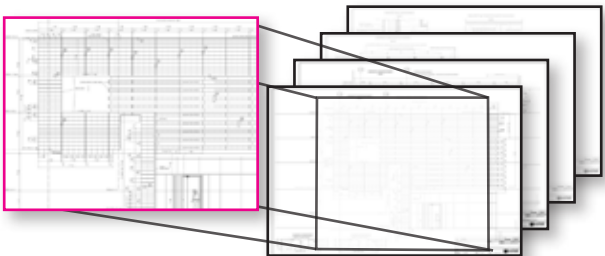
BIDDING

When it comes time for a project to bid, we serve as a resource to the sub-contractors we work with, providing them bid support through our project information and panel take-off forms. Pre-bid scope letters and post-bid follow-up to review the scope of our proposals ensures that the sub-contractors we partner with will have a detailed understanding of our system's package.



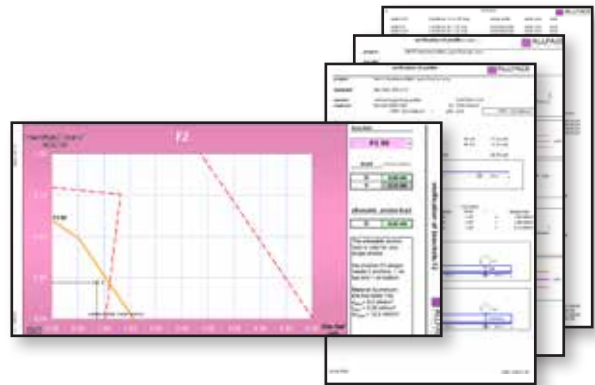
SHOP DRAWINGS

Perhaps one of the greatest advantages that we offer to sub-contractors is our ability to produce full sets of installation drawings for the cladding substructure and panel layout. Accurate Shop Drawings form the basis for an efficient and reliable installation and we provide installation drawings, from substructure layout to panel location and installation to specific detail conditions for all of the unique situations on the project.



ENGINEERING

Depending upon the specific requirements of the project, we provide a variety of engineering services as part of our scope. In addition to our standard static calculation analysis, we also provide stamped structural calculations upon request.



INSTALLER TRAININGS

Cladding Corp is committed to the sub-contractors we partner with during every stage of the project installation. As part of our approach, we offer on-site support and training sessions for all of our systems and products.





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CLADDING CORP
THE 1ST NAME IN RAINSCREEN



CLADDING CORP GREEN INITIATIVE