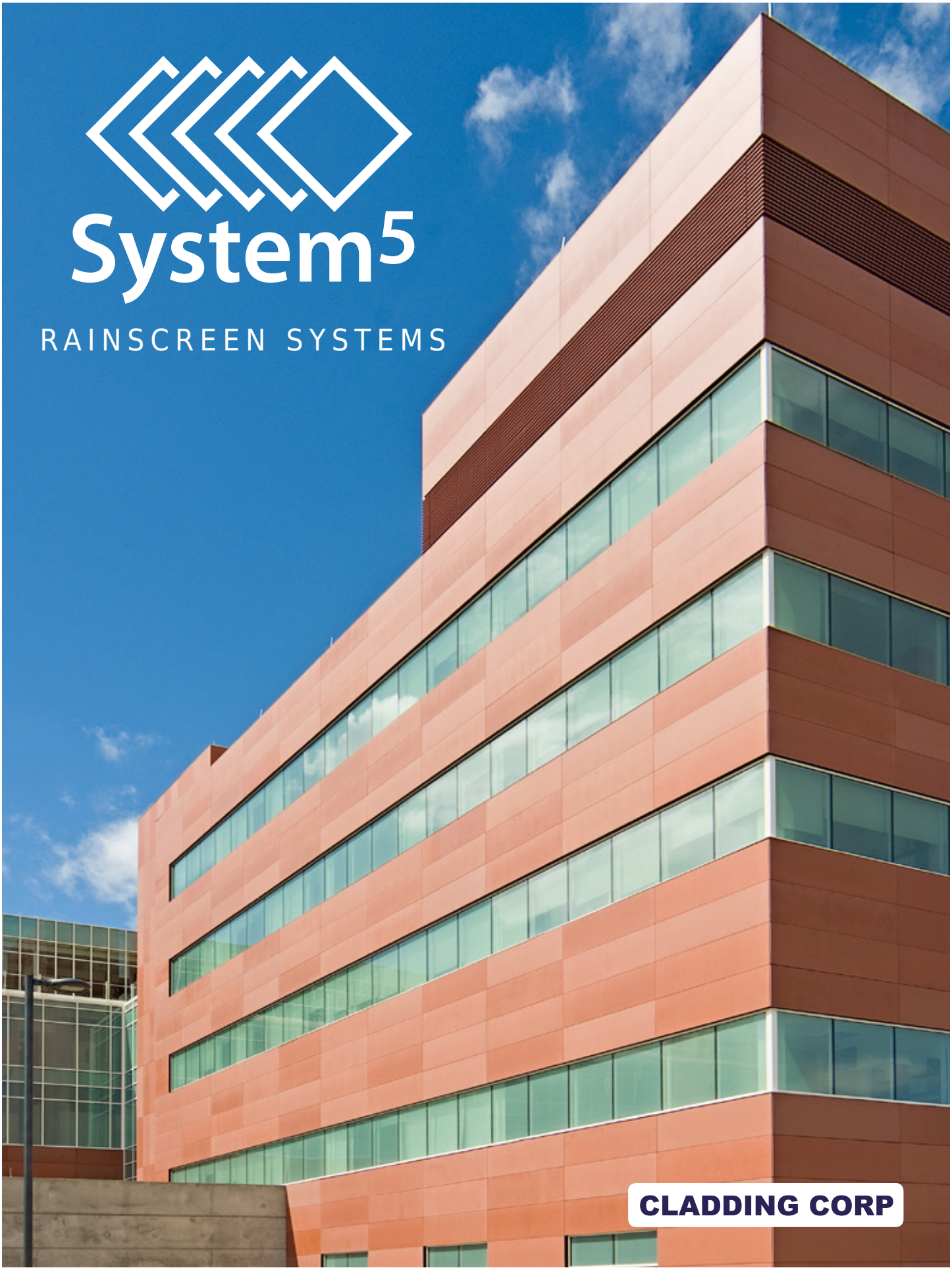

System5
RAINSCREEN SYSTEMS
CLADDING CORP

System^5

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.

System^5 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, System^5 focuses on all of the scientific principles 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.

MARK BUSSELL

Alice Tully Hall - New York, NY / *FX FOWLE*

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.

CLADDING CORP

THE 5 PRINCIPLES - SYSTEM[5]

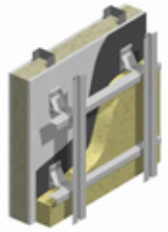
By selecting a Cladding Corp System[5] fully-engineered rainscreen solution, you can rest assured that each of *The 5 Principles* of a properly designed drained and back-ventilated rainscreen is adequately addressed per your project's unique criteria.

1. CLADDING MATERIAL SELECTION

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

2. OUTER MOISTURE CONTROL

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

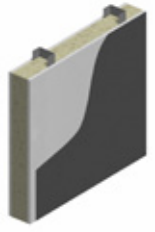


3. CLADDING CAVITY DESIGN

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

4. ENGINEERED SUBFRAMING

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



5. INNER MOISTURE CONTROL

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

KEVIN WALSH

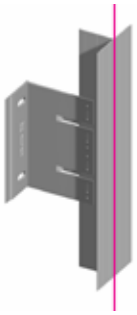
Hourglass Fieldhouse - San Diego, CA / *Carrier Johnson*

THE BASICS

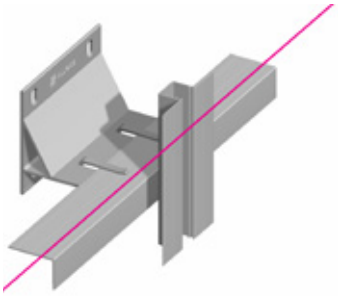
At the onset of every project you will need to define the design parameters, such as wall condition / type and project windloads. What type of wall construction is being used on the project? (In North America, stud/sheathing or block/tilt-up are the most common.)

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.

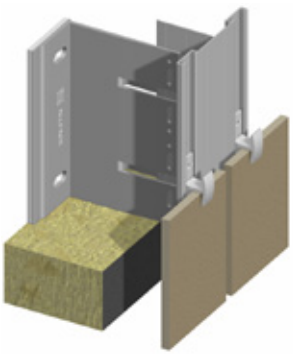
After these criteria are evaluated, the focus can now turn to which attachment system will best suit your project. Depending upon what type of wall construction is being used, you need to select a horizontal or vertical system. Next, do you prefer a visible or concealed mounting system? (As a rule of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



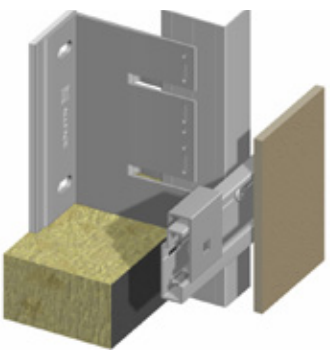
VERTICAL SYSTEMS
Are typically used for mounting on block/tilt-up or masonry walls. The primary profile is mounted vertically using an F1 bracket.



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



VISIBLE
These systems have some type of visual attachment point – either a clip, screw or rivet. The attachment point can be emphasized as a design element or minimized by matching the color or surface of the cladding material selected.



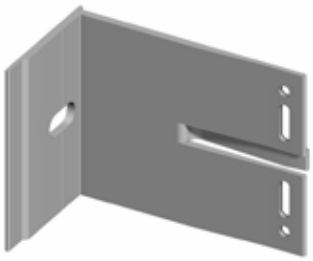
CONCEALED
Some cladding products are designed to conceal attachment points to the sub-framing system. Other materials are attached through undercut anchors, allowing flat panels to be drilled on the backside and attached using hanger clips.

TERRY WIECKERT

Sempra Energy Trading Company - Stamford, CT / *Roger Ferris + Partners, LLC*

F1 WALL BRACKET

The F1 Wall Bracket is most commonly used for vertical fixing on concrete walls.

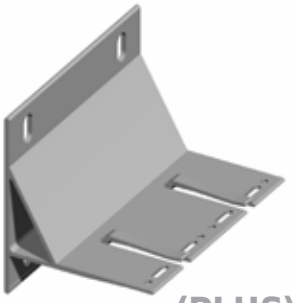


(PLUS)

F1 WALL BRACKET	BRACKET DEPTH	DEGREE OF ADJUSTABILITY
F1.35	35mm / 1.38”	37-75mm / 1.46” – 2.95”
F1.50	50mm / 1.97”	52-90mm / 2.05” – 3.54”
F1.80	80mm / 3.15”	82-120mm / 3.23” – 4.72”
F1.115	115mm / 4.53”	117-155mm / 4.61” – 6.10”
F1.150	150mm / 5.91”	152-190mm / 5.98” – 7.48”
F1.185	185mm / 7.28”	187-225mm / 7.36” – 8.86”
F1.220	220mm / 8.66”	222-260mm / 8.74” – 10.24”
F1.255	255mm / 10.04”	257-295mm / 10.12” – 11.61”

F2 WALL BRACKET

The F2 Wall Bracket is most commonly used for horizontal fixing on steel stud or certain concrete construction.

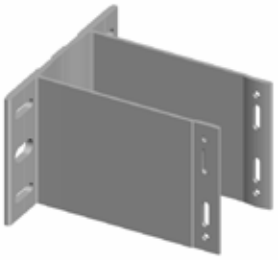


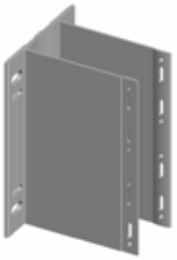
(PLUS)

F2 WALL BRACKET	BRACKET DEPTH	DEGREE OF ADJUSTABILITY
F2.35	35mm / 1.38”	62-100mm / 2.44” – 3.94”
F2.50	50mm / 1.97”	52-90mm / 2.05” – 3.54”
F2.80	80mm / 3.15”	82-120mm / 3.23” – 4.72”
F2.115	115mm / 4.53”	117-155mm / 4.61” – 6.10”
F2.150	150mm / 5.91”	152-190mm / 5.98” – 7.48”
F2.185	185mm / 7.28”	187-225mm / 7.36” – 8.86”
F2.220	220mm / 8.66”	222-260mm / 8.74” – 10.24”
F2.225	255mm / 10.04”	257-295mm / 10.12” – 11.61”
F2.290	290mm / 11.42”	292-330mm / 11.50” – 12.99”

F3 WALL BRACKET

The F3 wall bracket is used with vertical beams designed to span from floor slab to floor slab.





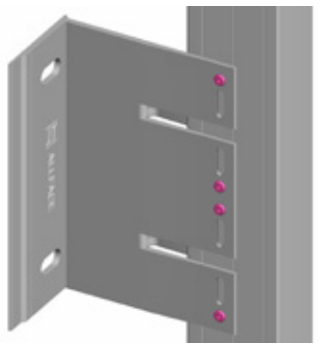
(PLUS)

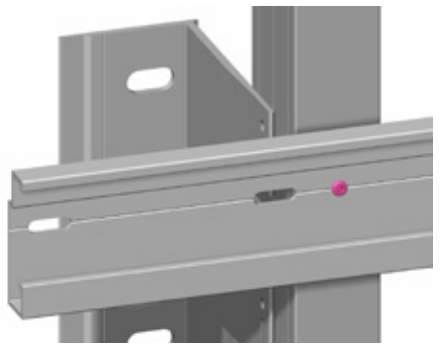
F3 WALL BRACKET	BRACKET DEPTH	DEGREE OF ADJUSTABILITY
F3.80	80mm / 3.15”	60mm / 2.36”
F3.135	135mm / 5.31”	60mm / 2.36”

The “building-block” for all of our engineered systems is the wall bracket. Its orientation determines the layout of the cladding substructure.

TERRY WIECKERT

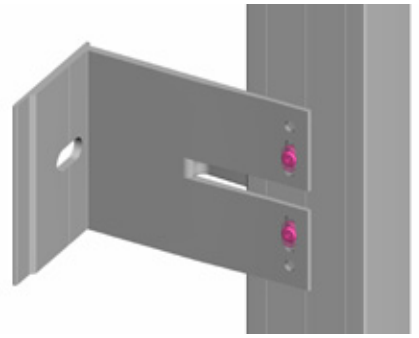
Three Crescent Drive - Philadelphia, PA / *EM Architecture, LLC*

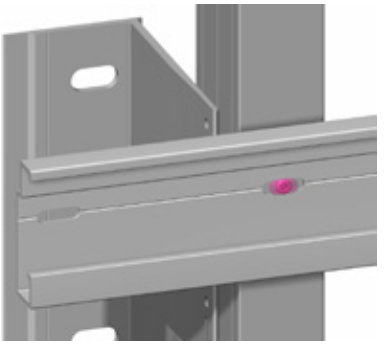




FIXED POINT

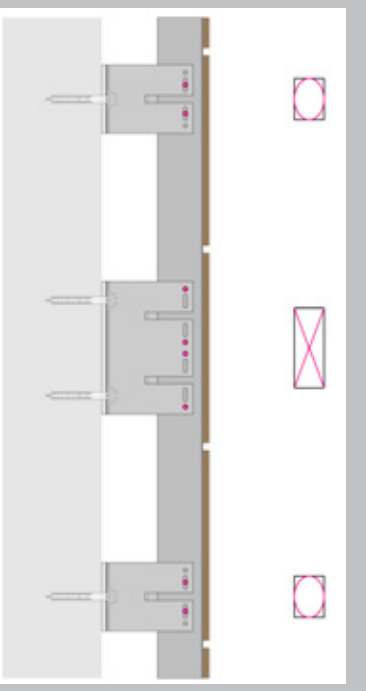
The wall bracket fixed point carries the dead weight and wind loads to the load-bearing wall. The connection between the wall bracket and profile is therefore implemented immovably in the “round holes.”





SLIDING POINT

In contrast, the connection between a wall bracket sliding point and the profile is designed to be a sliding connection in elongated holes. As a result, the aluminum profile is not impeded in the event of thermal linear expansion or contraction. For a sliding point, only wind pressure loads are carried to the load-bearing wall.



THERMAL LINEAR EXPANSION

A critical feature of our systems is that all wall brackets have elongated holes allowing for thermal expansion of the aluminum profiles. The length of the profiles is determined by the storey-height or panel separation.

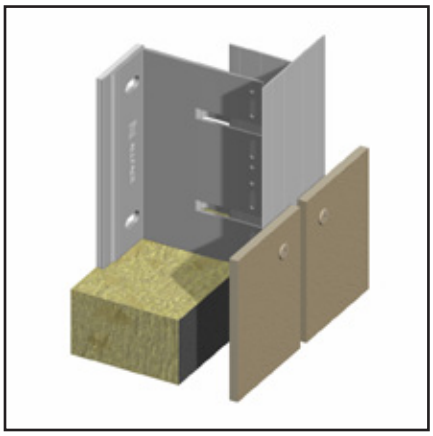
SYSTEM SUMMARY

This chart is a summary of some of the most typical systems available and are sorted based upon the type of rainscreen product used, the type of back-up wall condition and the desired attachment approach.

The most common to the North American Market are highlighted in this brochure. For further assistance in system selection please consult your local Cladding Corp Agent.

PRODUCT TYPE	BACKUP WALL CONDITION	ATTACHMENT APPROACH	SYSTEM TYPE
Flat Panel	Concrete	Visible Rivet	F1.10 System
Flat Panel	Stud	Visible Rivet	F2.10 System
Flat Panel	Stud/Concrete	Visible Rivet	F2.11 System
Flat Panel	Stud/Concrete	Lap-Siding	F2.14 System
Flat Panel	Stud/Concrete	Concealed	F1.40 System
Terracotta	Stud/Concrete	Concealed Clip	F2.22 System
Terracotta	Stud/Concrete	Concealed Rail	F1.55 System
Porcelain Panel	Concrete	Visible Clip	F1.20 System
Porcelain Panel	Stud	Visible Clip	F2.20 System
Porcelain Panel	Stud/Concrete	Concealed	F1.40 System

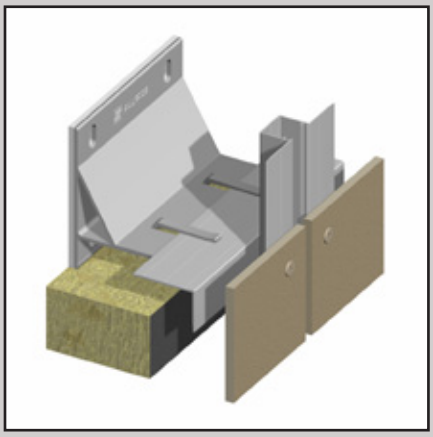
F1.10 VISIBLE RIVET



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.

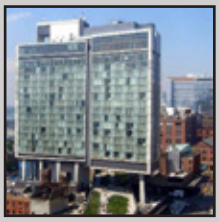
FIBER CEMENT / HPL

F2.10 VISIBLE RIVET

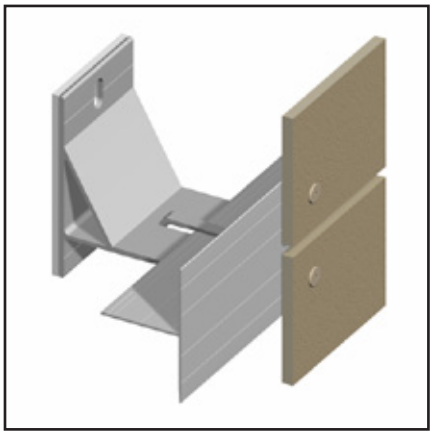


Attachment method with rivets. For use with flat panel products such as fiber cement, HPL or fiber concrete panels. Ideal for stud back-up walls with panels in landscape orientation. Rivet attachment guarantees high pull-out values and ease of installation.

FIBER CEMENT / HPL



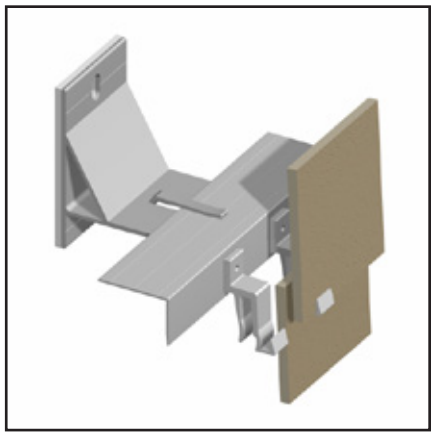
F2.11 VISIBLE RIVET



Attachment method with rivets. For use with flat panel products such as fiber cement, HPL or fiber concrete panels. Can be used for concrete or stud back-up walls when minimum cavity space is desirable. Rivet attachment guarantees high pull-out values and ease of installation.

FIBER CEMENT / HPL

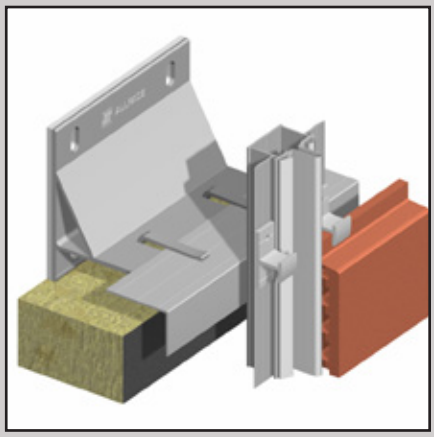
F2.14 LAP-SIDING



Semi-concealed fixing for lap-siding applications. Unique clip system devised for fixing fibercement or HPL 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.

FIBER CEMENT / HPL

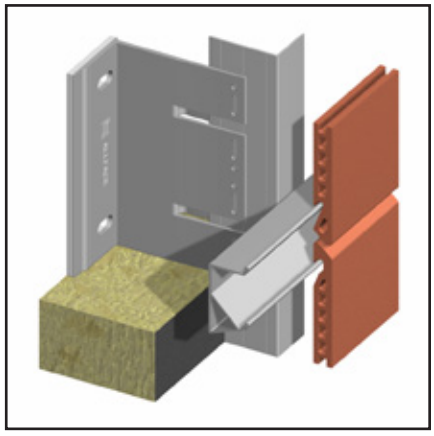
F2.22 CONCEALED CLIP



Concealed clip fixing for double-skin terracotta tiles. Designed for double-skin terracotta 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 construction.

TERRACOTTA

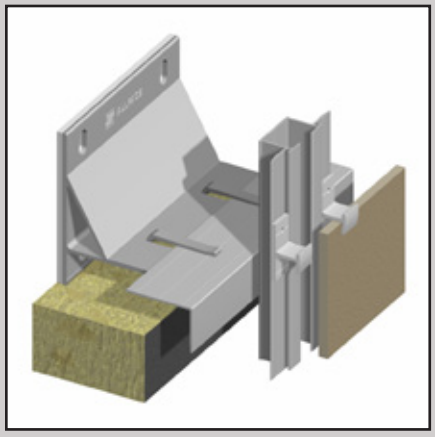
F1.55 HORIZONTAL RAIL



Hung in place system for double-skin terracotta tiles. Simple and versatile horizontal rail system for thin, fluted terracotta tile formats that allows maximum flexibility in design and vertical joint spacing. Tiles are hung into place on the horizontal profile rails – for use with either stud or concrete construction.

TERRACOTTA

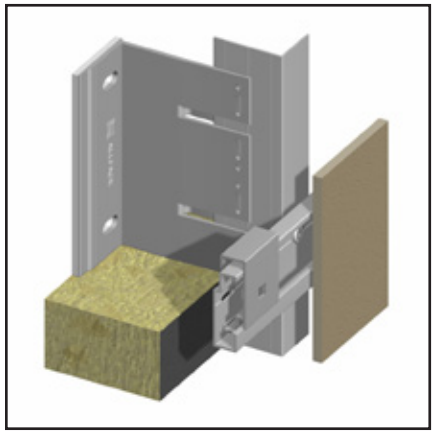
F2.20 VISIBLE CLIP



Attachment method with visible clips. Cost-effective visible clip attachment system used for anchoring porcelain 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.

PORCELAIN / NAT. STONE

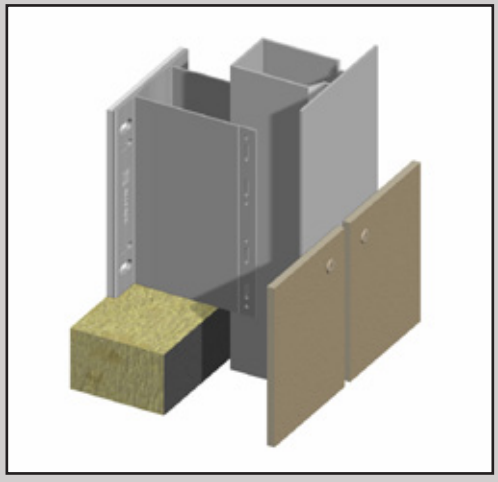
F1.40 CONCEALED



Attachment method with undercut anchors. Primary approach for concealed fastening using undercut anchors for fiber cement, porcelain ceramic, HPL, natural stone 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.

PORCELAIN / NAT. STONE
FIBER CEMENT / HPL

F3 BRACKET SERIES



SLAB TO SLAB SOLUTION - All of our systems listed above can be modified using our patented F3 Wall Brackets for applications where attachment must be achieved from floor slab to floor slab.

MINIMIZE ATTACHMENT POINTS - The F3 Bracket, when spanning slab to slab, allows for minimized attachment points across the facade. This helps to reduce installation cost, minimizes thermal bridging, and minimizes penetration points along the air / water barrier.

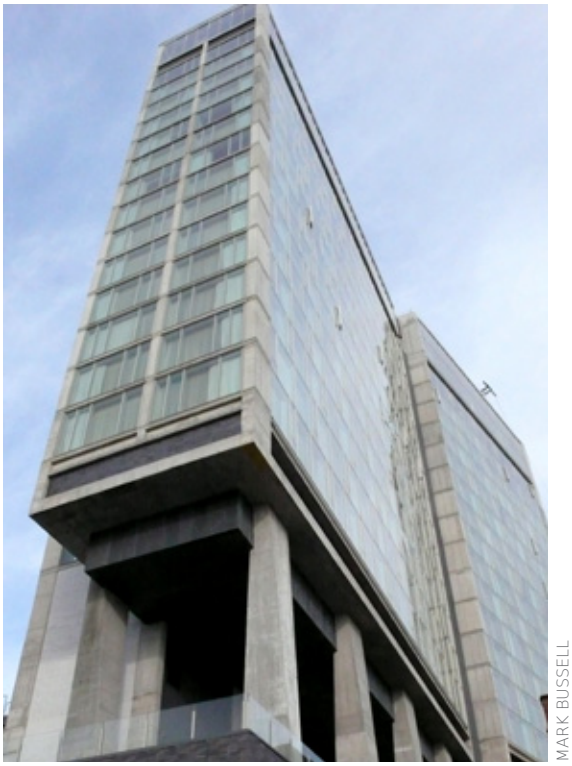
IDEAL FOR RETROFIT APPLICATIONS - For existing structures that require a system option that minimizes the amount of attachment points to the existing substrate, the F3 Bracket Series offers unique spanning possibilities that are ideal for reclad or retrofit applications.

CLADDING CORP SUPPORT

With the System[5] 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 fibercement, HPL, metal, terracotta, porcelain stone, 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.



MARK BUSSELL

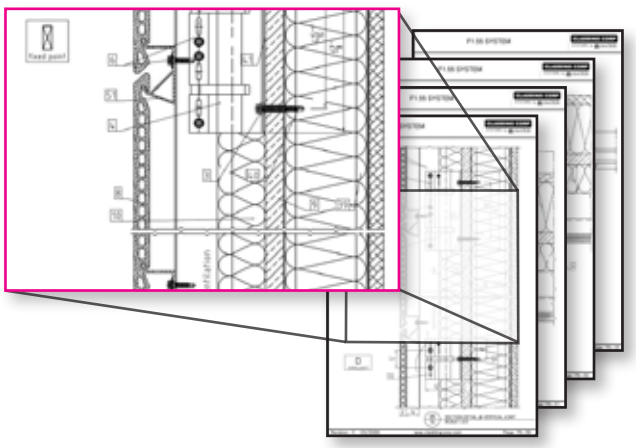
The Standard Hotel - New York, NY / *Polshek Partnership Architects*

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.

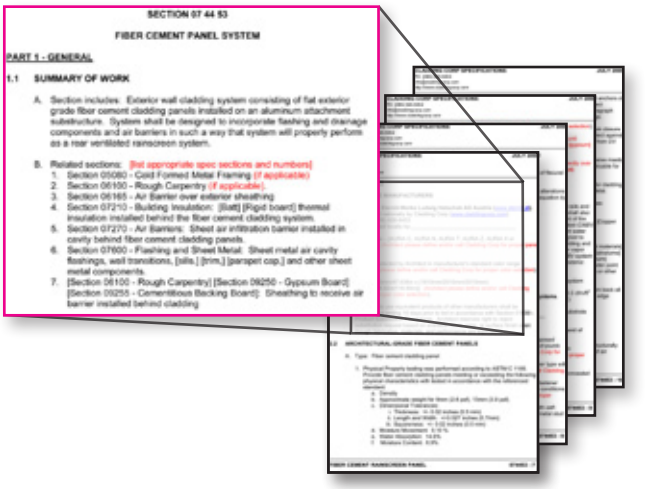
DETAILING

For every System, complete sets of typical details are available in both print and downloadable 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.



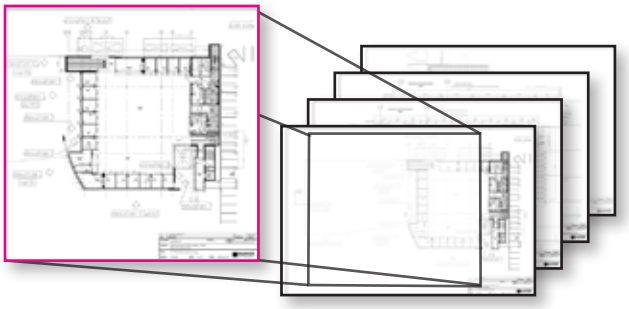
SPECIFICATIONS

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.



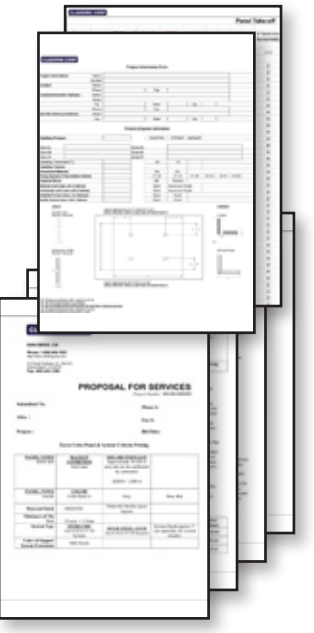
BUDGETING

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.



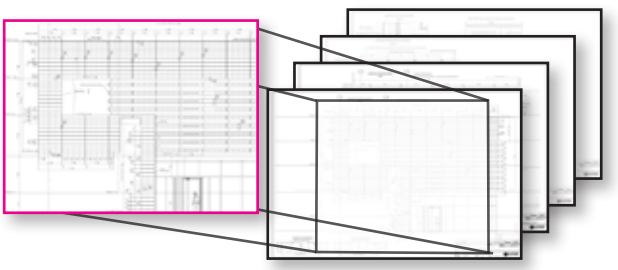
BIDDING

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 systems package.



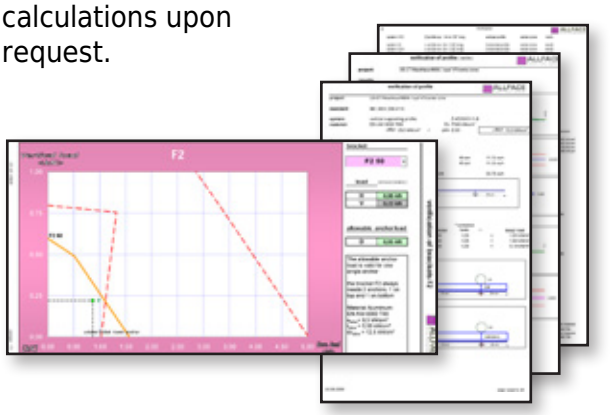
SHOP DRAWINGS

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.

TERRY WIECKERT

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