

• Authors of this installation guide, offer no warranties, implied, stated, or expressed regarding the information found in this guide, including techniques, construction methods, drawings or materials identified in this instruction guide. This is due to the fact that the authors cannot be present to inspect installation thus assuring exact adherence to this guide and to applicable building codes and ASTM C1063. To the best of their knowledge the information written is correct and up to date as of its publication date.

#### FACTORY LOCATION

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## MANUFACTURER'S INSTALLATION INSTRUCTIONS

CAREFULLY READ ALL THE INSTALLATION INSTRUCTIONS BEFORE PROCEEDING WITH YOUR CENTURION STONE VENEER PROJECT

Good building practices are essential in stone work. Building codes vary from area to area and it is recommended you know and follow your local codes prior to starting your installation. The following construction details are options for stone veneer installations; they will not apply to all circumstances you may encounter. For additional information, refer to our national evaluation report NO. NER-543

#### TECHNICAL INFORMATION FLASHING FOR STONE VENEER INSTALLATION

To maintain the weather-resistance of the exterior wall on which the stone is installed, a means of drainage should be installed at all wall penetrations and terminations of the stone veneer. Flashing type and locations shall be in accordance with the building code.

Note: If you give water a way to pass down and out of your wall, it will! All waterproofing systems inherit the risk of failure. You can reduce and help eliminate this risk by proper flashing and weep hole placement. By flashing and placing weep screeds at the lowest points of a wall where water accumulates, they will help the water escape every time.

The following details are provided as ideas for solutions to architectural designs. They may require changes to meet your particular design requirements. Liability for the use of these or other construction details are the general contractor, installer and flashing contractor's responsibility.

Flashing should be installed by trained flashing personnel. If flashing contractors are not available flashing should be installed by the crews installing the windows, roofs, siding, etc.

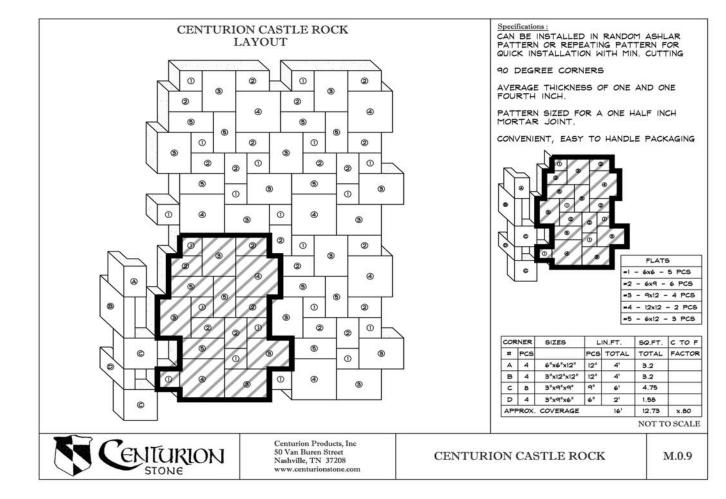
<u>Flashing: How it Affects the Total Job-</u> Flashing must be in place prior to the weather barrier installation. Though flashing is not the responsibility of the lathing contractor, it is very important that the contractor be aware that poor or nonexistent flashing could cause deterioration to the stone job. Water intrusion through an unsealed opening can admit large amounts of moisture into the wall cavity.

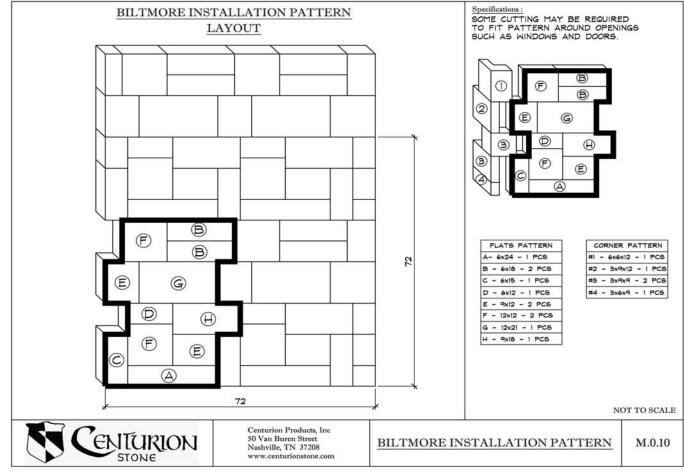
More than 95% of leaky stone walls involve flashing that was improperly installed around openings in exterior walls where the lath and scratch coat interface with other products. Codes state that openings in exterior walls must be flashed to make them weather tight, not only window and door openings, but any wall penetrations. Though flashing is usually not the responsibility of the lath/mason contractor, it is his/her responsibility to install a weather resistant barrier to divert intruding water down and out of the envelope. All flashings must be in place at windows, doors, roof lines, sill plates and all other outlets where moisture could enter the wall cavity. The mason must be familiar with local code requirements and the proper installation of lath. The lathing and flashing must meet codes.

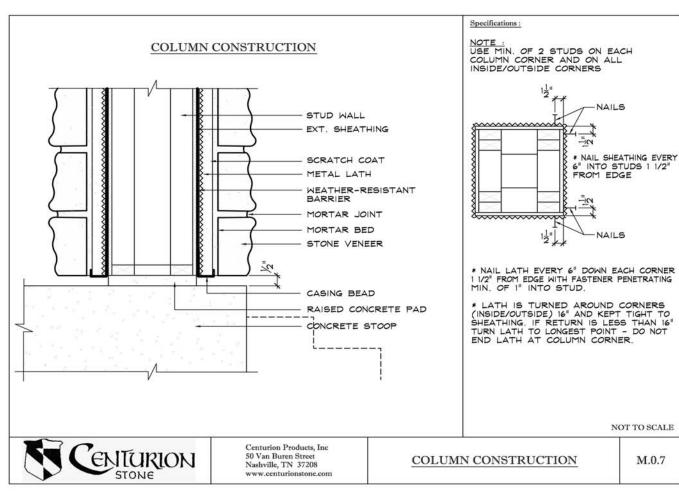
A quality framing, sheathing, flashing and lathing job will not guarantee a trouble free stone job, but will go a long way in improving the odds the job will be successful, durable and beautiful for generations to come.

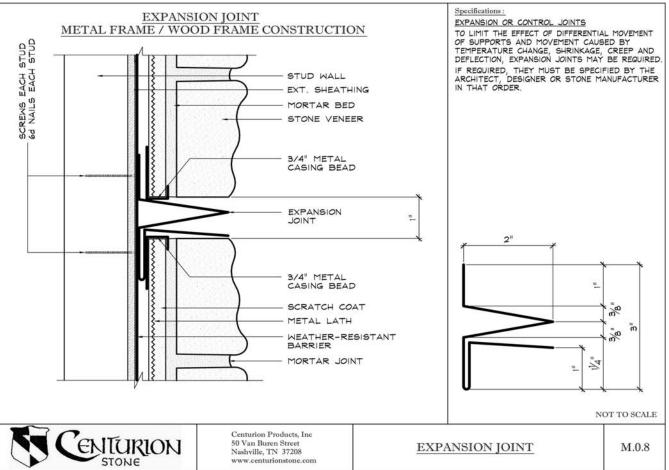
The lather should go over the entire job where the stone is to be installed and after inspecting that all is correct and in place proceed to the next step of installation.

Weep Screed Installation- The application of a foundation weep screed should be considered part of the flashing and drainage system. The screed is installed after the flashing is in place. ASTM defines foundation weep screed as an accessory used to terminate Portland cement base stucco at the bottom of all framed exteriors walls. Flashing should be in place at the floor line, where the wall is supported by a floor or foundation and the foundation weep screed is applied over flashing. (REFER TO FLASHING ASTM C1063) Water that might make its way past the cementitious membrane hits the paper and flows to the bottom of the assembly to the weep screed. The screed facilitates the ability of this moisture to escape the system and drip away from the surface. (Centurion Detail J.0.1)









Casing Bead Installation. The next step is the installation of all casing beads, also known as plaster stops. The casing bead is used at all termination points, except at the bottom of the framed walls which receive a weep screed. If the casing bead is installed directly through sheathing, the issue of the continuous paper coverage must be considered. Complete coverage can be accomplished by applying paper strips to the sheathing wherever casing bead will be installed. These strips should also precede the installation of lath. Caution must be taken to see that no sheathing is left exposed to the wet stucco. After inspecting the casing bead installation, you now proceed to the next step of installing the weather barrier. Casing bead installation is normally on commercial installations and may not be required on single family homes see detail. (Centurion Detail E.0.3)

<u>Weather Resistant Barriers</u>- A cement scratch coat is a breathable water resistant system. This remains true if none of the system components compromise or impedes the movement of moisture vapor through the wall cavity. There are several weather barriers available in the market today. The most popular is the grade "D" building paper. When looking at these products one must choose from the following:

1. <u>FELT PAPER</u>: Felt is a rag material saturated with asphalt. Some designers specify the use of #15 or #30 felt paper as a water resistant backing. These papers are highly water resistant, and have very low vapor permeability. In colder climates moisture that is trapped in the wall cavity can lead to deterioration of the insulation, framing, and sheathing metals.

2.CLASS "D" BUILDING PAPER: The lath industry generally recommends the use of grade "D" building paper that meets federal specification UU-B-790A, which is water resistant, yet retains a high degree of vapor permeability. Class D paper is applied to lath at the factories throughout most of the United States and Canada. The perm rating on grade "D" paper offers 35 perms in a 24 hour period. In areas governed by the new international building code, two layers of grade "D" paper or equivalent are required over wood based sheathing.

If felt paper or class D building paper is chosen as the vapor barrier the paper is attached in ship lapped style, lapping the horizontal joints 2" on the top and 6" on the end joints.

Flashing and Weather Resistant Barrier (paper) Application Sequence—If the offset paper back lath is designed into the job the paper backing is offset 2" on top and left end of the lath. Proper installation of this lath starts by overlapping the top flange of the foundation weep screed with an 8 to 10 inch strip of building paper. Since the paper is recessed on the bottom right or left corner of the wall (depending on the paper lap on the lath) the uniform building code requires a 6" end lap and 2" on top edges. Paper must not be placed between metal lath sheets and flanges of accessories. This will prevent the lath sheets from bonding together.

While discussing building papers it is important to mention that all openings must be flashed with waterproof paper or specifically designed metal flashings. One alternative to metal flashing is the rubberized asphalt self-adhered flashings, preferably one that is self-sealing when penetrated with fasteners.

When paper-backed lath is applied correctly and flashed properly any incidental moisture that flows along the paper surface will exit the assembly as it should.

<u>Lath Installation & Precautions-</u>Attachment of lath depends on many factors, such as the type of construction, the substrate, type of lath and other factors. Proper installation includes staggering all joints and avoiding alignment that will create weaker joints. Do not lap sheets to save cuts. Lath ends must terminate on a framing member. If the framing member is missed it may cause a separation in the sheets and cracking could occur. Using small pieces may also cause cracking and should be avoided.

Inspect the total assembly to make sure all fasteners are in place, laps are level and true and accessories are properly installed, the job is ready to be plastered (scratch coated).

#### APPLYING CENTURION STONE

#### STARTING POINT

You may start your installation from the top down or bottom up. Working from the top down may help to avoid splashing or dripping mortar on previously applied stones. Care must be taken to avoid smearing the mortar. If this occurs it should be removed after mortar has dried to a crumbly state with a whisk broom.

<u>Preparing mortar</u> -Mix all ingredients thoroughly, to a firm moist consistency. If mortar is too wet, it will be messy to work with and weak in strength. If mortar is too dry, it will not provide a proper bond. (SEE Detail I.O.1 for mix designs)

<u>Mixing by Mechanical Mixer-</u> Machine mixing time should be 3 to 5 minutes after all materials are together. For the best results mix ¾ of the water and ½ of the sand with the cementitous materials. Mix briefly and add the remaining parts. Top mix off by adding remaining water needed to obtain the proper slump, mortar should have an oatmeal-like consistency.

<u>Mixing By Hand-</u>Dry mix all materials together in a container (mud box) by raking material from end to end. Add ¾ of required water and mix thoroughly for batch uniformity. Add remaining water needed. No mortar should be used beyond a two and a half hour period after mixing.

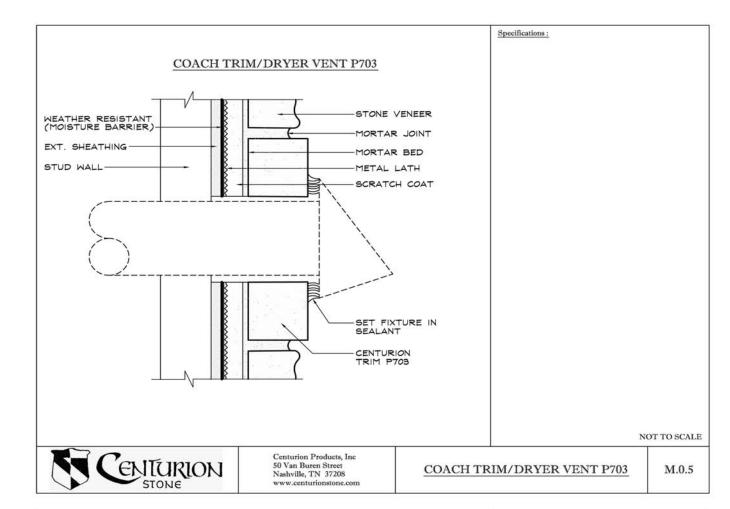
Note: On the jointless or drystack patterns, a concrete bonding agent should be added to the mix to ensure additional bonding and adhesion strengths. When installing a jointless or drystack pattern, color can be added to the mortar to compliment the base color of the stone. Tinting of mortar will greatly enhance the finished appearance.

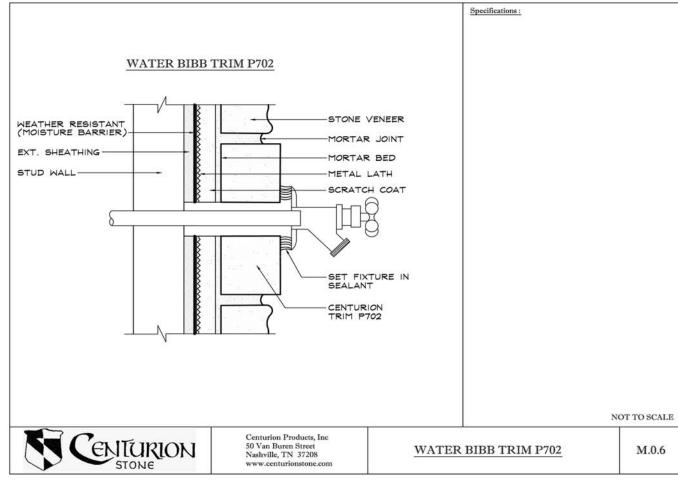
<u>Scratch Coat Installation</u>- The scratch coat is often confused with a 3 coat stucco system, the only comparison is the preparation of the wall. There are numerous mix designs used for the scratch coat and all may be good. The cement mixture is troweled over the lath using the hawk & trowel method to the desired thickness, making sure a full and level coat is applied around all lath accessory pieces. As material sets, a scoring tool is used to groove the surface to provide a key for the setting coat. After the scratch coat sets the stone veneer can be applied according to the manufactures installation instructions.

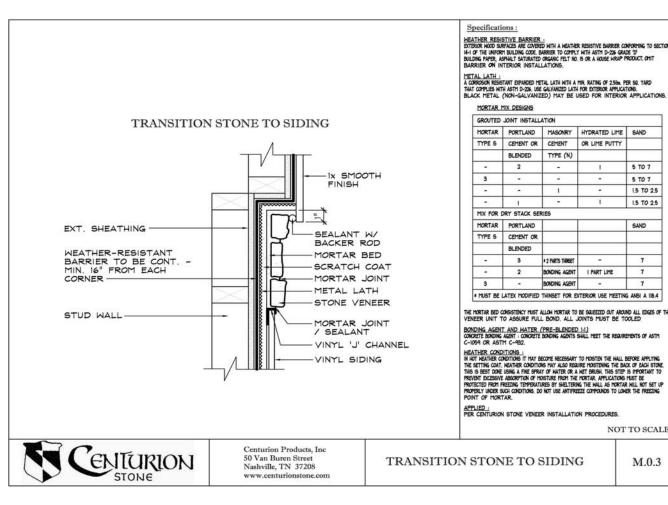
Some contractors use additives such as a calcium chloride to accelerate the scratch/setting coat mixes. These accelerators allow for shorter durations between the scratch coat and bedding coats and are generally used in colder climates. They save time but cause havoc on the galvanized coatings on lath and accessory pieces by accelerating corrosion. Tempering of the mix should also be avoided in very hot, dry, or windy conditions. Mix smaller batches which can be applied prior to the need for re-tempering. The additional water needed in tempering will reduce the strength of the bonding coat.

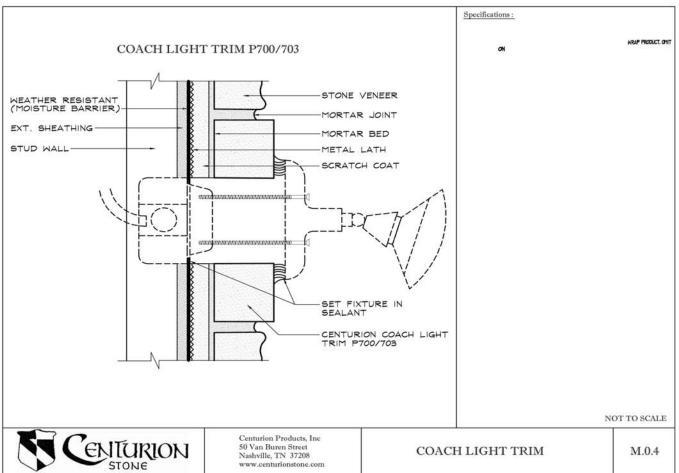
A bonding admixture may be added to the scratch/setting mixes, which greatly improves adhesion, cohesion, tensile, compressive and flexural strengths of cement setting materials. These additives pay for themselves in improved workability of the mix and improved bonding qualities.

Weather Conditions- In hot weather conditions it may become necessary to moisten the wall before applying the setting coat. Weather conditions may also require moistening the back of each stone. This is best done using a fine spray of water, or a wet brush. This step is important to prevent excessive absorption of moisture from the mortar. Application must be protected from freezing temperatures by sheltering the wall as mortar will not set up properly under such conditions. Do not use anti-freeze compounds to lower the freezing point of mortar. The ambient temperature must be 40°F (4°C) or higher at the time of veneer application.









#1 Setting Coat: Select mortar type to be used from mortar chart. Mix per instructions and apply in areas not to exceed 10 square feet or to areas that will not setup before stone is applied. Application method is the same as scratch coat. (DETAIL I.0.1)

#2 Setting the Stones: Completely cover the entire back surface of each stone. Press each stone into the mortar bed firmly. Apply pressure to the stone and wiggle the stone left and right to ensure a good bond. Using a margin trowel, strike off the excess mortar around the stone edges before placing the next piece. If stones back has dust, dirt or loose particles, brush off prior to applying mortar to stones back then proceed with application.

#3 Install Corners First: If installation requires corner pieces apply these first. Notice that the corners have a long and short leg. Alternate these in opposite directions as you apply them. (DETAIL M.0.1 & M.0.2)

#4 Installing Flats: After corner pieces, and window and door trim pieces are in place, install flats working toward center of wall. Cut and trim pieces as required to maintain joint consistency. Select and mix stones from different boxes throughout the installation to give a balance to shapes, sizes, color, thickness, and textures.

<u>Shaping Stones-</u> When trimming or cutting stones to fit you may use a mason's hammer, wide mouth nippers, or a mason's trowel edge. Straight cuts are best done using a small grinder or circular saw with a diamond or masonry saw blade. Cutting should be done out-side as dust will occur. Safety glasses and dust mask should always be worn when cutting a masonry product. To conceal cut or broken pieces cover the edges with mortar when grouting. Cut edges are installed so they are not visible. Broken stone or cut pieces are used in filling gaps between larger stones install the cut edges down when below eye level and up above eye level.

### **GROUT JOINTS**

Joints vary in width depending on pattern being installed or customer preference. Install stone with uniform size grout joints. Avoid long straight lines. When installing patterns that are coursed or laid in a horizontal style, special attention should be given in keeping the pattern level and plumb. It is of particular importance to stagger the joint lines both vertically and horizontally.

<u>Grout Joints-</u> After stone is in place grouting may be necessary depending on stone pattern. Grouting is done with a grout bag. Fill a bag half full with mortar and insert into joint area. Squeeze bag while moving bag down joint line until area is filled. Avoid smearing mortar on surface of stone. If accidental smears occur allow mortar to dry and brush off with a whisk broom. Never use a wet brush or wire brush to remove a mortar stain.

When the mortar joints become firm (normally 30-60 min.) or thumb print dry they should be pointed up with a jointing tool. Rake out excessive mortar to obtain desired depth. While raking mortar joints, compact and seal mortar around each piece of stone. To obtain a professional looking finish maintain proper and even joints. Brush away all smears and mortar spots within a few hours of finishing. Never allow mortar to set up over night, as it will cause staining that will be almost impossible to remove.

It may be necessary to do touch up grouting on dry stack patterns such as void areas between stone pieces, and around windows, doors, and openings to conceal cut or broken edges. (See Centurion Stone drystack installation sheet for more details.)

<u>Installing Hearth Stones-</u> Hearthstones are not recommended or warranted for exterior use, or on a surface subject to foot traffic. Hearths at floor level or raised hearths are normal use for hearth pieces. We recommend when used in these installations the mortar joint area be filled to the top of each hearth piece.

Place strips of mortar approximately ¾" thick and 3" wide where hearth pieces are to be placed. Place hearth stone on mortar bed and tap down to level and align. Place additional pieces and level to each other. If trimming is required, use same method as called for in the flats.

Do not cantilever a hearth piece out more than the stone below, usually 1 ½". Grout under the hearth piece to fill the void between the hearth pieces and the flats, this gives direct support to the hearth piece.

<u>Sealing</u> - Sealing of hearth pieces is not necessary, but sealing will assist in cleaning of smoke and soot stains should they occur around fireplace opening. Sealing stone at grade lines to prevent mud stains is an option some masons prefer. Some sealers may deepen the stones color. It is recommended the sealer be tested on several loose pieces of stone to make sure the end result is acceptable. Only a good quality masonry sealer should be used, such as a penetrating breathable type.

#### GOOD BUILDING PRACTICES

Cleaning may never be necessary, however: if needed use a solution of granulated soap or detergent and water with a bristle brush. Rinse immediately with fresh water.

#### DO NOT ATTEMPT THE FOLLOWING!

Cleaning with a wire brush "High pressure power washing" Using acid or acid containing products

#### These methods will give you undesirable results!

<u>Salts and De-icing Agents-</u> Since all masonry and concrete products are vulnerable to damage incurred by salts and other chemicals used to remove snow and ice, Centurion Stone is NOT warranted against damage from these products. DO NOT use these products on areas immediately adjacent to a Centurion Stone application.

<u>Pools and Fountains-</u>Centurion Stone is not recommended to be installed below the water line in swimming pools or water fountains where chlorine or other chemicals are used. Discoloring may occur from these chemicals

<u>Scuffing-Scuffing occurs</u> when pieces of product rub against one another. Scuffing occurs in all natural stone and occasionally in Centurion Stone. Usually this enhances the appearance of the stone wall. If scuff marks need to be removed, clean stone as mentioned in the cleaning section and most marks will disappear.

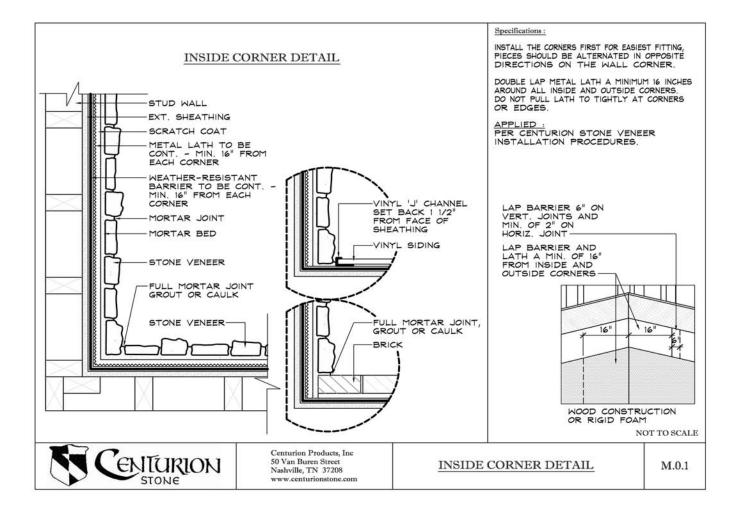
<u>Efflorescence</u> Efflorescence is a water-soluble salt in masonry walls or products. As water penetrates and dissolves these salts and evaporates a deposit is left on the masonry surface (usually white in color). It can occur on any masonry type surface (brick, stucco, concrete, natural stone, etc). It may even occur on Centurion Stone on rare occasions. To remove efflorescence you must allow the stone to dry thoroughly, and then scrub vigorously with a stiff brush with clean water and rinse thoroughly. For a more difficult problem, scrub with a solution of 1 part household vinegar to 5 parts water then rinse thoroughly.

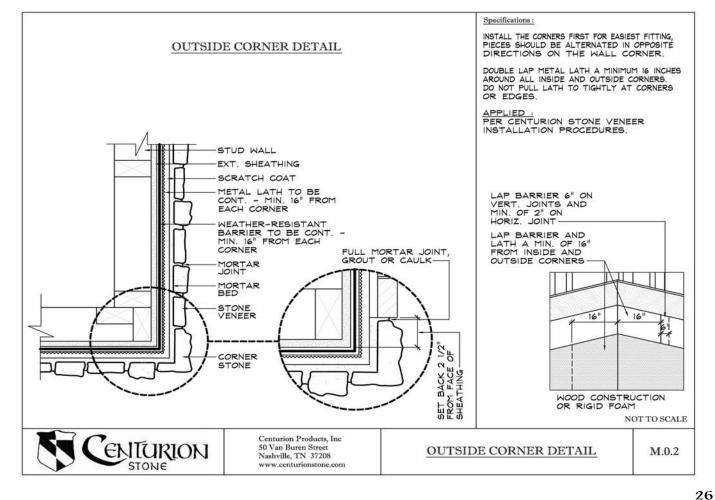
<u>Prepare Work Area - It</u> is recommended to lay out a reasonable amount of stone pieces so you can see how the pattern looks assembled. Determine the desired pattern by mixing stones from several boxes. Plan for a variety and contrast in your overall design by using the small pieces next to large pieces, thick next to thin, textured next to smooth. Mix colors from several boxes to ensure a good blend of color shades.

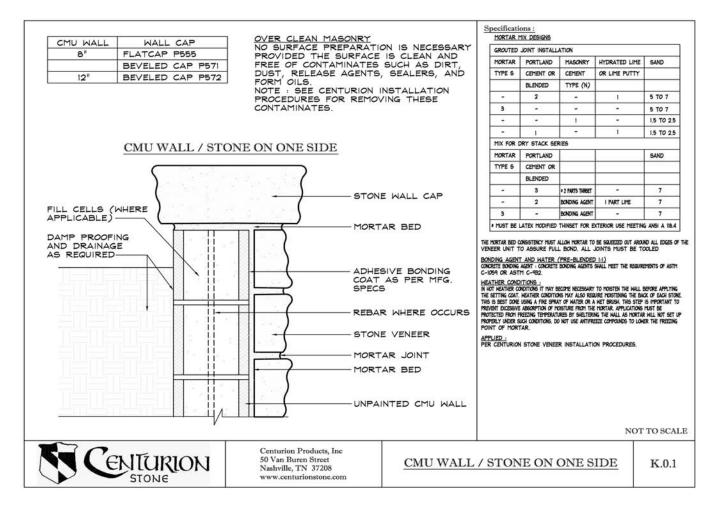
<u>Window Sill Installation</u> - Window sills are available in several styles from Centurion Stone. Choose the style that best accents your job. Install sills per drawing to eliminate moisture from entering structure. (DETAIL G.0.1 to G.0.4)

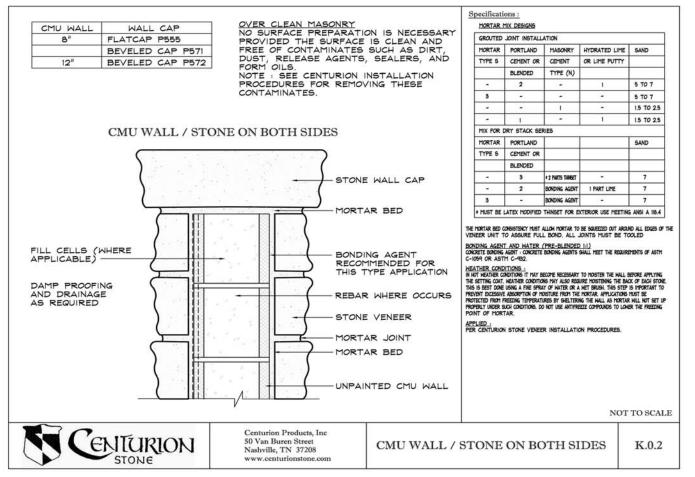
<u>Wainscot/Water Table Installation</u> - Watertable pieces are available from Centurion Stone. The pieces allow you to trim and seal the stone wall in a wainscot installation or to seal the top of a stone area that meets another siding product. Install sills per drawing to help eliminate moisture from entering wall. (DETAIL H.0.1 to H.0.6)

<u>Windows and Door Openings-</u> If job requires accessories (keystones, sills, etc.), install these first around the openings leaving a joint area between the stone and frame. Fill joint area with caulking or masonry and tool so water will shed away from the joint area. (DETAIL M.0.4 TO M.0.6)









<u>Capping Off Exterior Walls-</u> When stone is applied to exterior walls, or retaining walls or other surfaces where a cap is needed, it is recommended that Centurion Capstones or a poured-in-place concrete cap be used to provide adequate runoff protection. Centurion caps should extend 2" on each side of wall area. Centurion Stone corners are not recommended for capping walls. All retaining walls should be damp proofed at the fill side with weep holes and proper drainage prior to the stone being applied. (DETAIL K.0.1 TO K.0.2)

<u>Chimney Caps</u> All framed chimney chases must be capped with a one piece cap that extends 1" beyond the finished stones surface to eliminate water from entering the chase. (DETAIL A.0.1 to B.0.1)

<u>Exterior Applications-</u> On exterior applications the incorrect installation or absence of flashing, gutters, or downspouts may result in diversion of water runoff onto finished surfaces. Masonry and other building products may stain under these conditions and combined with severe freeze-thaw conditions may eventually cause surface damage. The application of Centurion Stone under these conditions is not recommended.

<u>Cold and Foul Weather-</u> Prior to your mortar setting up, protect your finished work from possible rainstorms or the threat of freezing during installations and curing. Use a plastic cover weighted down to protect wall areas. Mortar will not setup and cure properly under these conditions.

CONTACT YOUR LOCAL CENTURION STONE DEALER FOR OTHER INFORMATION THAT MAY BE NEEDED ON A PARTICULAR JOB INSTALLATION.

## CALCULATING REQUIRED FOOTAGE

Determine the stone required by measuring the area to be covered

STEP I: MEASURE and multiply the length of the wall by the height of each wall to be covered. This will give you the gross area square footage of flats.

STEP 2: MEASURE and calculate the total square footage of all openings (windows, doors, etc.). Deduct this footage from the gross footage amount. This is your net square feet requirement for flats. Add 2% back for trimming and shaping stones.

STEP 3: If outside corners are required, measure the total linear feet of corners needed. When figuring corners to flats, a good rule to remember is a linear foot of corners averages approximately \(^3\)4 of a foot of flat coverage. Subtract this footage from your flat footage, and this gives you the net feet of flats.

#### Placing Your Stone Order

- Order your net square feet of flats.
- Order you net linear feet of corners.
- Order any accessories needed by the piece (Hearthstones, Keystones, Window Trim, etc.)

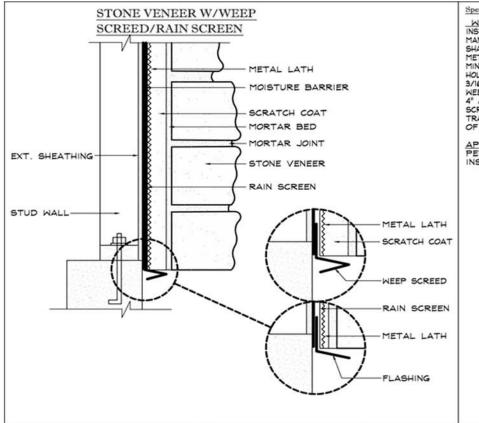
You may wish to order extra stone and component pieces to allow for trimming and cutting. Extra stone may be required for special laying patterns outside the recommended 3/4" mortar joint that most patterns are designed with.

Example: Tighter or zero mortar joints



# STONE DETAIL





Specifications:

Specifications:

WEEP SCREED
INSTALL FOUNDATION WEEP SCREED PER
MANUFACTURE'S INSTRUCTIONS, WEEP SCREED
SHALL BE A MINIMUM NO. 26 GUAGE GALV.
METAL CORROSION RESISTANT SCREED WITH A
MINIMUM VERTICAL ATTACHMENT OF 3 1/2",
HOLES IN SCREED SHOULD BE A MINIMUM OF
3/16" SPACED ON MAXIMUM 33" CENTERS,
WEEP SCREED SHALL BE PLACED A MINIMUM OF
4" ABOVE EARTH OR 2" ABOVE PAVED AREA,
SCREED SHOULD BE THE TYPE THAT ALLOWS
TRAPPED WATER TO DRAIN TO THE EXTERIOR
OF THE BUILDING. OF THE BUILDING.

APPLIED : PER CENTURION STONE VENEER INSTALLATION PROCEDURES.

CENTURION .

EXT. SHEATHING

STUD WALL-

STONE VENEER / GRADE LINE

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METAL LATH

SCRATCH COAT

MORTAR BED

MORTAR JOINT

STONE VENEER

WEATHER RESISTANT (MOISTURE BARRIER)

GRADE LINE -

STONE VENEER W/WEEP SCREED/RAIN SCREEN

J.0.1

NOT TO SCALE

STONE VENEER MAY BE APPLIED TO OR BELOW GRADE PROVIDIN IT MEETS LOCAL BUILDING CODE REQUIREMENTS. IN AREAS WHERE GROUND HEAVING OCCURS, IT IS NOT RECOMMENDED.

MEATHER RESISTIVE BARRIER:
ENTEROR NOOD SURVICES ARE COMPRED WITH A MEATHER RESISTIVE BARRIER CONFORMING TO SECTION
H-1-OF THE UNDERFORD BUILDING CORE SHARRER TO COMPRY WITH ASTIT D-256 GAUGE TO
BUILDING PAPER, ASPAULT SATIRATED DESIMEN, FEET NO. 15 OR A HOUSE WRAP PRODUCT. CHIT
BARRIER ON INTERIOR INSTALLALITOMS.

METAL LATH:

A CORROBOR RESISTANT DPANDED METAL LATH WITH A HIN. RATING OF 25%, FER SO, YARD

THAT COPPUS WITH ASTIN D-226, USE GALVANIZED LATH FOR EXTERIOR APPLICATIONS,
BLACK METAL (NON-GALVANIZED) MAY BE USED FOR INTERIOR APPLICATIONS. MORTAR MIX DESIGNS

MORTAR	PORTLAND	MASONRY	HYDRATED LIME	SAND
TYPE S	CEMENT OR	CEMENT	OR LIME PUTTY	
	BLENDED	TYPE (N)		
	2	-	1	5 TO 7
3			-	5 TO 7
•		1		1,5 TO 2.5
1.0	1		3	1.5 TO 2.5
MIX FOR I	ORY STACK SE	RIES		
MORTAR	PORTLAND			SAND
TYPE S	CEMENT OR			
	BLENDED			
	3	2 PARTS THISET	-	7
(*)	2	BONDING AGENT	I PART LIME	7
3	19-11	BONDING AGENT	-	7

WEATHER CONDITIONS :
IN HOT MEATHER CONDITIONS IT MAY BECOME NECESSARY TO MOISTEN THE WALL BEFORE APPLYING IN HOT MEATHER CONDITIONS IT HAY BECOME NECESSARY TO MOSTEM THE WILL BEFORE APPLYING THE SETTING GOAL MEATHER CONDITIONS HAY ALSO REQUIRE MOSTEMING THE MOST BEAUTHOUSE HAVE OF BEAUTH THIS BEST DOES USING A PINE SPRAY OF WATER OR A HET BRUSH. THIS STEP IS PROVING THE PROPRIET DECESSARY BEASOFTRION OF MOSTBURE FROM THE MOSTEM, APPLICATIONS HATS BE PROTECTED FROM FREEZING TO PEPRATURES ST SHELTENIG THE WILL AS MORTAR WILL NOT SET UP PROPRIET MORE GOAL CONDITIONS. DO NOT USE ANTIFREEZIC COPPOSINGS TO LOWER THE FREEZING POINT OF MOSTERY MORE GOAL CONDITIONS.

APPLIED :
PER CENTURION STONE VENEER INSTALLATION PROCEDURES. NOT TO SCALE



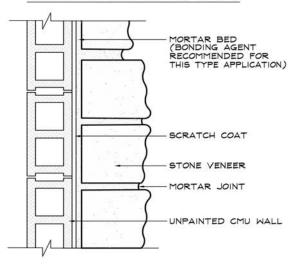
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STONE VENEER / GRADE LINE

J.0.2

OVER CLEAN MASONRY NO SURFACE PREPARATION IS NECESSARY PROVIDED THE SURFACE IS CLEAN AND FREE OF CONTAMINATES SUCH AS DIRT, DUST, RELEASE AGENTS, SEALERS, AND FORM OILS. NOTE : SEE CENTURION INSTALLATION PROCEDURES FOR REMOVING THESE CONTAMINATES.

#### STONE OVER CLEAN CMU WALLS



GROUTED	JOINT INSTALL	ATION		
MORTAR	PORTLAND	MASONRY	HYDRATED LIME	SAND
TYPE S	CEMENT OR	CEMENT	OR LIME PUTTY	
	BLENDED	TYPE (N)		
*	2	147	11	5 TO 7
3	101	50	-	5 TO 7
-	USE	1	(15)	1.5 TO 2.5
-	1	1.50	1	1.5 TO 2.5
MIX FOR I	DRY STACK SE	RIES		7
MORTAR	PORTLAND			SAND
TYPE S	CEMENT OR			
	BLENDED			
	3	# 2 PARTS THREET	323	7
-	2	BONDING AGENT	1 PART LIME	7
3	(194)	BONDING AGENT	-	7

THE MORTAR BED CONSISTENCY MUST ALLON MORTAR TO BE SQUEZZED OUT AROUND ALL EDGES OF THE VENEER UNIT TO ASSURE FULL BOND, ALL JOINTS MUST BE TOOLED

MEATHER CONDITIONS :

IN HOT MEATHER CONDITIONS IT HAY BECOME NECESSARY TO MOSTEN THE MALL BEFORE APPLYING. THE SETTING CALL MEATHER CONDITIONS HAY ALSO REQUIRE MOSTENING. THE BLOCK OF EACH STONE. THIS SEES TO DRE USING, A FIRE SPRAY OF MATERS OR A MET BRUSH. THIS STEP IS PROVIATION TO REPORT DECESSARY MEROSPITH OF MOSTRIGE READ THE METATRA APPLICATIONS HAT BE PROTECTED FROM PREZENS TEPERATIONS BY SHELTENING THE MALL AS MORTLAR HILL NOT SET UP PROTECTED WINDS SALIC CONDITIONS, DO NOT USE ANTIFEREZ COPPOSIONS TO LONER THE FREZING POINT OF MORTLAR.

APPLIED :
PER CENTURION STONE VENEER INSTALLATION PROCEDURES.

NOT TO SCALE



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STONE OVER CLEAN CMU WALLS

MORTAR MIX DESIGNS

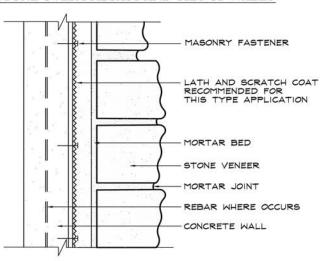
Specifications:

1.0.7

OVER CLEAN MASONRY NO SURFACE PREPARATION IS NECESSARY PROVIDED THE SURFACE IS CLEAN AND FREE OF CONTAMINATES SUCH AS DIRT, DUST, RELEASE AGENTS, SEALERS, AND FORM OILS.

NOTE: EVEN AFTER CLEANING OR SANDBLASTING, RELEASE AGENTS, SEALERS, OILS AND ANTI-BONDING MATERIALS ARE OFTEN NOT DETECTABLE.
IT IS HIGHLY RECOMMENDED TO
FOLLOW SPECIFICATIONS FOR LATH
AND SCRATCH COAT PROCEDURES.

#### STONE OVER PRECAST AND TILT UP WALLS



Specifications: SEE LATH APPLICATION INSTRUCTIONS

MORTAR	PORTLAND	MASONRY	HYDRATED LIME	SAND
TYPE S	CEMENT OR	CEMENT	OR LIME PUTTY	
	BLENDED	TYPE (N)		
	2	-	1	5 TO 7
3	- 14	-	-	5 TO 7
		T.	2	1,5 TO 2,5
1.F.	1		1	1.5 TO 2.5
MIX FOR I	ORY STACK SE	RIES		
MORTAR	PORTLAND			SAND
TYPE S	CEMENT OR			
	BLENDED			
	3	2 PARTS THINSET	-	7
121	2	BONDING AGENT	I PART LIME	7
3		BONDING AGENT	-	7

THE MORTAR BED CONSISTENCY MUST ALLOW MORTAR TO BE SQUEZED OUT AROUND ALL EDGES OF THE VENEER UNIT TO ASSURE FULL BOND. ALL JOINTS MUST BE TOOLED

BONDING AGENT AND MATER (PRE-BLENDED 1:1)
CONCRETE BONDING AGENT : CONCRETE BONDING AGENTS SHALL MEET THE REQUIREMENTS OF ASTM

MEATHER CONDITIONS:

IN HOT MEATHER CONDITIONS IT HAY BECOME NECESSARY TO MOISTEN THE MALL BEFORE APPLYING, THE SETTING CAIL MEATHER CONDITIONS HAY ALSO REQUIRE MOISTENING THE BACK OF BOLI STONE. THIS IS BEST DONE USING A RIME SPRAY OF MATER OR A MET BOUST, THIS STEP IS PROVIANT TO PREVENT DUCESSAY ABSORPTION OF MOISTINGER PRICH THE MORRIA, PEPULATIONS HUST BE PROTECTED PRICH REZERMA TEMPERATURES BY SHELTERING THE MALL AS MOKINEA MILL NOT SET UP PROTECTED PRICH PREZERMA CONTINUES. DO NOT USE ANTIFREZZE COMPOUNDS TO LAMER THE PREZEMA POINT OF MORTAR.

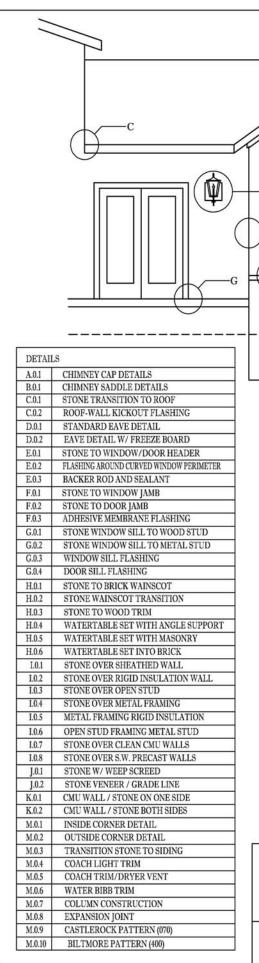
APPLIED : PER CENTURION STONE VENEER INSTALLATION PROCEDURES.

NOT TO SCALE

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STONE OVER PRECAST AND TILT UP WALLS

1.0.8

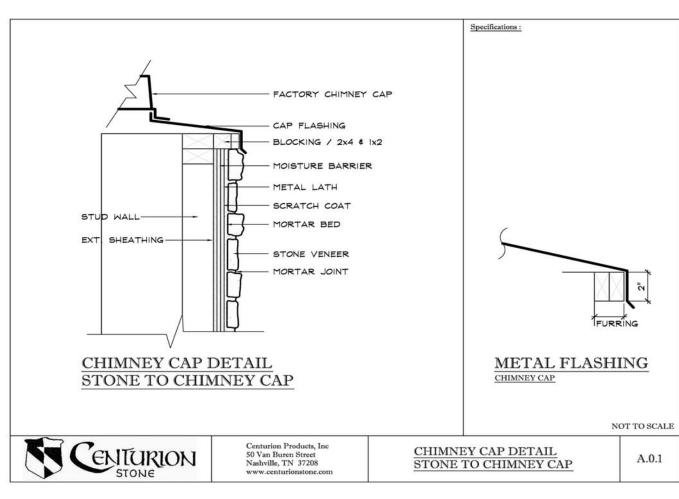


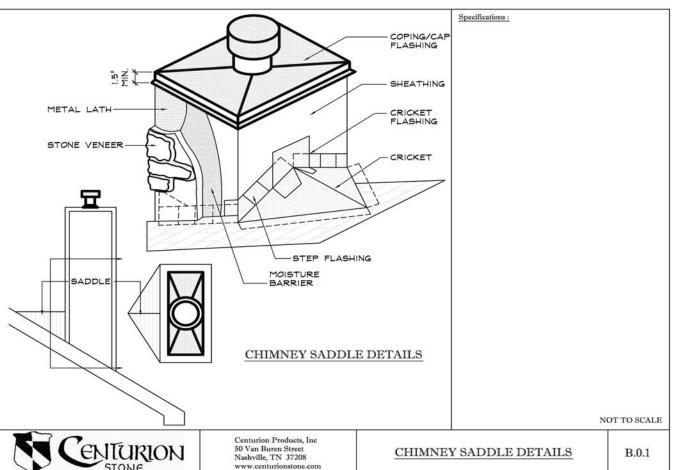
<u>BUILDING CODES</u> CODE REQUIREMENTS VARY FROM AREA TO AREA. CHECK CODES IN YOUR AREA ON SPECIAL REQUIREMENTS THAT MAY AFFECT YOUR INSTALLATION. NOTE: THE FOLLOWING DIAGRAMS ARE IDEAS FOR FLASHING AND TERMINATING STONE VENEER. THEY MAY NOT APPLY TO ALL DESIGNS AND MAY REQUIRE CHANGES TO MEET LOCAL CODES OR A PARTICULAR DESIGN REQUIREMENT. CENTURION ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR THE USE OF THESE DETAILS. Centurion Products. Inc. 50 Van Buren Street Nashville, TN 37208

www.centurionstone.com

DETAIL DRAWINGS

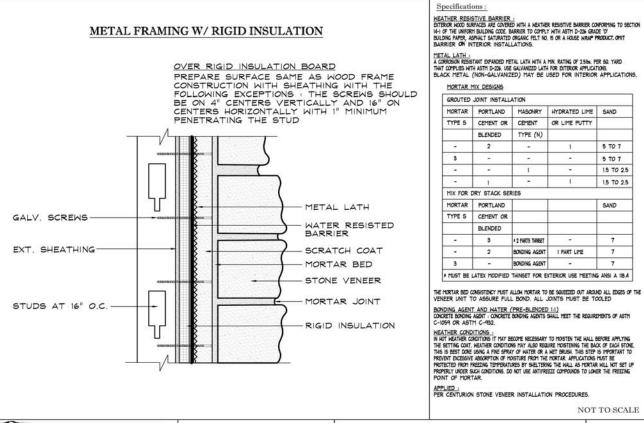
GRADE





# Specifications: METAL FRAMING W/ RIGID INSULATION OVER RIGID INSULATION BOARD PREPARE SURFACE SAME AS WOOD FRAME CONSTRUCTION WITH SHEATHING WITH THE FOLLOWING EXCEPTIONS: THE SCREWS SHOULD BE ON 4" CENTERS VERTICALLY AND 16" ON CENTERS HORIZONTALLY WITH 1" MINIMUM PENETRATING THE STUD 3 METAL LATH GALV. SCREWS-WATER RESISTED EXT. SHEATHING SCRATCH COAT MORTAR BED STONE VENEER MORTAR JOINT STUDS AT 16" O.C. RIGID INSULATION Centurion Products, Inc 50 Van Buren Street

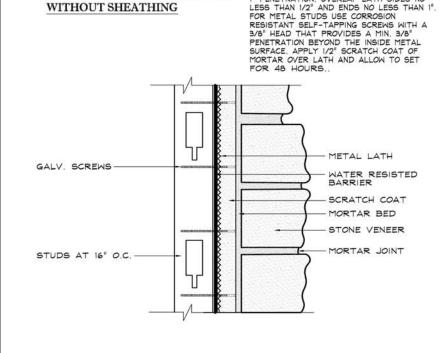
Nashville, TN 37208 www.centur



OVER OPEN STUDS
APPLY PAPER BACKED GALVANIZED 3.41bs.

3/8" RIB EXPANDED METAL LATH TO THE STUDS USING GALVANIZED SCREWS EVERY 6"

VERTICALLY ON STUD CENTERS WITH A MIN. 1" PENETRATION. OVERLAP LATH SIDES NO



Specifications:

METAL FRAMING W/ RIGID INSULATION

MEATHER RESISTIVE BARRIER: DITTEN HOUSE RESISTIVE BARRIER COMPORTING TO SECTION HIGH THE RESISTIVE BARRIER COMPORTING TO SECTION HIGH OF THE MEMORY BULLDING CODE SARRIER TO COMPLY WITH ASTID 1-20% GRADE TO BULLDING PAPER, ASPAUL SATIRATED ORGANIC FELT NO. 5 OR A HOUSE MEMOR PRODUCT, OHIT BARRIER ON INTERPOR INSTALLALITONS.

METAL LATH :

A CORROBON RESISTANT EXPANDED METAL LATH WITH A MN. RATING OF 2516. PER 50, YARD

THAT COPPLES WITH ASTIM D-226. USE GALVANIZED LATH FOR EXTENCE APPLICATIONS.

BLACK METAL (NON-GALVANIZED) MAY BE USED FOR INTERIOR APPLICATIONS.

#### MORTAR MIX DESIGNS

MORTAR	PORTLAND	MASONRY	HYDRATED LIME	SAND
TYPE S	CEMENT OR	CEMENT	OR LIME PUTTY	
	BLENDED	TYPE (N)		
-	2	0.00	10	5 TO 7
3	2	100		5 TO 7
-		1	- 5	1.5 TO 2.5
<b>?</b> €1.	1	950	1.	1,5 TO 2,5
MIX FOR I	ORY STACK SE	RIES		
MORTAR	PORTLAND			SAND
TYPE S	CEMENT OR			
	BLENDED			
9	3	2 PARTS THINSET	2.2	7
	2	BONDING AGENT	1 PART LIME	7
3		BONDING AGENT	(e)	7

THE MORTAR BED CONSISTENCY MUST ALLOW MORTAR TO BE SQUEEZED OUT AROUND ALL EDGES OF THE VENEER UNIT TO ASSURE FULL BOND. ALL JOINTS MUST BE TOOLED

BONDING AGENT AND WATER (PRE-BLENDED 1-1)
CONCRETE BONDING AGENT : CONCRETE BONDING AGENTS SHALL MEET THE REQUIREMENTS OF ASTM

MEATHER CONDITIONS.

IN HOT MEATHER CONDITIONS IT MAY BECOME NECESSARY TO MOSTEN THE MALL BEFORE APPLYING THE SETTING ALL MEATHER CONDITIONS HAY ALSO REQUIRE MOSTENING THE BLOCK OF EACH STOKE. THIS IS BEST DOKE USING A FIRE SPRAY OF MATER OR A MET BURSH. THIS STOP IS IMPORTANT TO PREVIOTE DECESSIVE MEASUREMENT OF MATERIAL PROLITORODE HIST BE PROTECTED PROT PREZENT DETERMINES BY SHELTENING THE WALL AS MORTHAR HALL NOT SET UP PROTECTED FROM PREZENT DETERMINES BY SHELTENING THE WALL AS MORTHAR HALL NOT SET UP PROMETLY UNDER SICKI CONDITIONS, DO NOT USE ANTIFEZZE COMPONIOS TO LONGE THE PREZENT POINT OF MORTHAR.

APPLIED :
PER CENTURION STONE VENEER INSTALLATION PROCEDURES.

NOT TO SCALE



CENTURION

METAL FRAME CONSTRUCTION

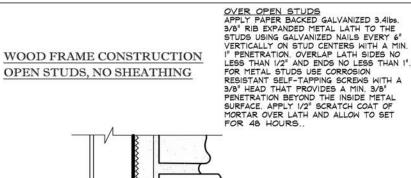
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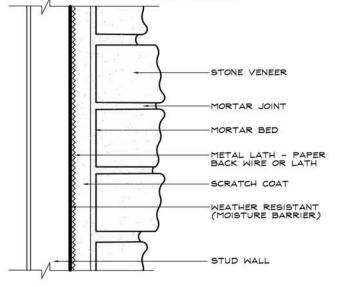
OPEN STUD FRAMING METAL STUD

1.0.6

22

1.0.5





Specifications:

HEATHER RESISTIVE BARRIER I

DITEROR MOD SURFACES HE CONTRED WITH A HEATHER RESISTIVE BARRIER CONTORTING TO SECTION

HI OF THE WINNERS BILLIANS COS BARRIER TO COMPLY HITH ASTIT D-256 CRADE TO

BULDING PAPER, ASPHALT SATURATED ORGANIC FELT NO. 5 OR A HOUSE NEWP PRODUCT ONIT

BARRIER ON INTERIOR INSTALLATIONS.

METAL LATH:

A CORROBOR RESISTANT EPHADED METAL LATH WITH A HIN, RATING OF 25%, FER SQ. YARD
THAT COPPUS WITH ASTIN D-256, USE GALVANIZED LATH FOR EXTEROR APPLICATIONS.
BLACK METAL (NON-GALVANIZED) MAY BE USED FOR INTERIOR APPLICATIONS.

GROUTED	JOINT INSTALL	ATION		
MORTAR	PORTLAND	MASONRY	HYDRATED LIME	SAND
TYPE S	CEMENT OR	CEMENT	OR LIME PUTTY	
	BLENDED	TYPE (N)		
72	2	-	1	5 TO 7
3	-		-	5 TO 7
•		t t		1.5 TO 2.5
	1		1	1.5 TO 2.5
MIX FOR I	ORY STACK SE	RIES		
MORTAR	PORTLAND			SAND
TYPE S	CEMENT OR			
	BLENDED			
•	3	# 2 PARTS THINSET		7
i#1	2	BONDING AGENT	I PART LIME	7
3	-	BONDING AGENT	-	7

THE HORTAR BED CONSISTENCY MUST ALLON MORTAR TO BE SQUEEZED OUT AROUND ALL EDGES OF T VENEER UNIT TO ASSURE FULL BOND. ALL JOINTS MUST BE TOOLED

BONDING AGENT AND WATER (PRE-BLENDED 1:1) CONCRETE BONDING AGENT : CONCRETE BONDING AGENT : CONCRETE BONDING AGENTS SHALL MEET THE REQUIREMENTS OF ASTM

MEATHER CONDITIONS:

IN NOT HEATHER CONDITIONS IT HAY BECOME RECESSARY TO HOISTEN THE MALL BEFORE APPLYING THE SETTING CAIR. REALINER CONDITIONS HAY ALSO REQUIRE MOSTENING THE BLOCK OF DIGHT STOKE. THIS IS BEST DONE USING A RISE SPRAY OF HATEN OR A HET BRUSH. THIS STEP IS PROTECTED RECEIVED DECESSARY ABOSENION OF HOUSING REPORT HE HOTTER, REPORTED RECH BESIDED. HIST DE RECEIVED ROCH PREZENT TEPPRATURES BY SHELTERING THE MALL AS YOUTRA MALL NOT SET UP PROFERLY UNDER SUCI CONDITIONS, DO NOT USE ANTIFREZE COPPORADS TO LANGE THE FREZZING POINT OF MORTAR.

APPLIED : PER CENTURION STONE VENEER INSTALLATION PROCEDURES.



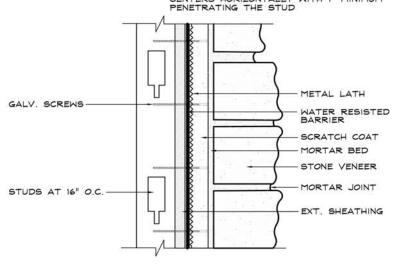
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STONE OVER OPEN STUD

1.0.3



OVER RIGID INSULATION BOARD PREPARE SURFACE SAME AS WOOD FRAME CONSTRUCTION WITH SHEATHING WITH THE FOLLOWING EXCEPTIONS : THE SCREWS SHOULD BE ON 4" CENTERS VERTICALLY AND 16" ON CENTERS HORIZONTALLY WITH I" MINIMUM PENETRATING THE STUD



#### Specifications:

MEATHER RESISTIVE BARRIER :
ETTEROR MOD SURVICES ARE COVERED WITH A HEATHER RESISTIVE BURRIER CONFORMING TO SECTION
HI-LO THE MINOR BUILDING CODE BURRIER TO COPIL'S WITH ASTIT D-26 GAUGE TO
BUILDING PAPER, AGNALT SATURATED CREAMER (ET IN D. 5 OR A HOUSE WARP PRODUCT ORIT
BARRIER ON INTERPOR INSTALLATIONS.

METAL LATH...

A CRESSION RESITANT DEPARTED HETAL LATH WITH A HN. RATING OF 25th, PER SO, YARD
THAT COPPLES WITH ASTIN D-22S, USE GALVANZED LATH FOR DITEXCE APPLICATIONS.
BLACK METAL (NON-GALVANIZED) MAY BE USED FOR INTERIOR APPLICATIONS.

#### MORTAR MIX DESIGNS

MORTAR	PORTLAND	MASONRY	HYDRATED LIME	SAND
TYPE S	CEMENT OR	CEMENT	OR LIME PUTTY	
	BLENDED	TYPE (N)		
	2	5-1	1:	5 TO 7
3	. 4	128	2	5 TO 7
-	3	1		1.5 TO 2.5
(*S	12	-	T	1.5 TO 2.5
MIX FOR I	ORY STACK SE	RIES	7.	2
MORTAR	PORTLAND			SAND
TYPE S	CEMENT OR			
	BLENDED			
	3	2 PARTS THINSET	*	7
-	2	BONDING AGENT	I PART LIME	7
3		BONDING AGENT	-	7

THE MORTAR BED CONSISTENCY MUST ALLOW MORTAR TO BE SQUEEZED OUT AROUND ALL EDGES OF THE VENEER UNIT TO ASSURE FULL BOND, ALL JOINTS MUST BE TOOLED

BONDING AGENT AND WATER (PRE-BLENDED I:I)
CONCRETE BONDING AGENT : CONCRETE BONDING AGENTS SHALL MEET THE REQUIREMENTS OF ASTM

MEATHER CONDITIONS...
IN HOT NEATHER CONDITIONS IT HAY BECOME NECESSARY TO MOSTEN THE MALL BEFORE APPLYING.
THE SETTING CAN HATHER CONDITIONS HAY ALSO REQUIRE MOSTENING THE BLOCK OF EACH STONE.
THIS IS BEST DONE LISING A THIS SPRAY OF HATER OR A HAT BRISHT THIS STEP IS PROPRIENT TO MENDRE FROM THE METRIC APPLICATION HATE OF PROPIETION FROM PREZENT OF METRIC REPORT APPLICATIONS HATE OF PROPIETIES HAVE APPLICATION HATE OF PROPIETIES HORSE STOPPEN OF METRIC THE MALL AS MORTAR HILL NOT SET UP PROPIETLY MORE SHOULD RETIRE THE MALL AS MORTAR HILL NOT SET UP PROPIETLY MORE SHOULD RETIRE THE MALL AS MORTAR HILL NOT SET UP PROPIETLY MORE SHOULD RETIRE THE METRIC MORTAR.

POINT OF MORTAR.

APPLIED :
PER CENTURION STONE VENEER INSTALLATION PROCEDURES.

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STONE OVER METAL FRAMING

I.0.4

NOT TO SCALE

