

820 WILLOW STREET MANKATO, MN 56001 507-508-0684

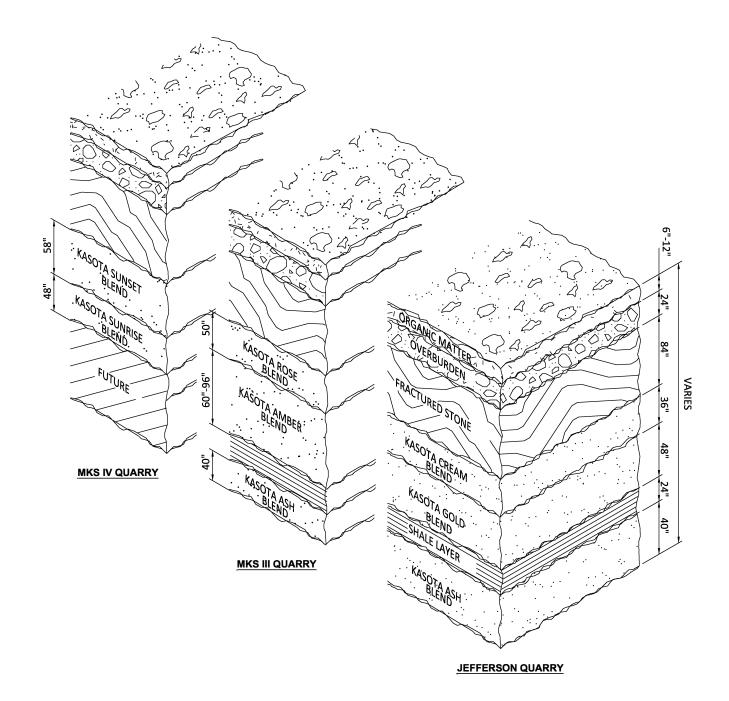
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	02-04

THE DETAILS FOUND IN THIS SUPPLEMENT ARE FOR THE USE IN DEVELOPING DESIGN DRAWINGS AND ARE NOT INTENDED FOR WORKING DRAWINGS. IT IS SUGGESTED THAT A PROFESSIONAL ENGINEER REVIEW AND APPROVE ALL ANCHORING SYSTEMS PRIOR TO INSTALLATION



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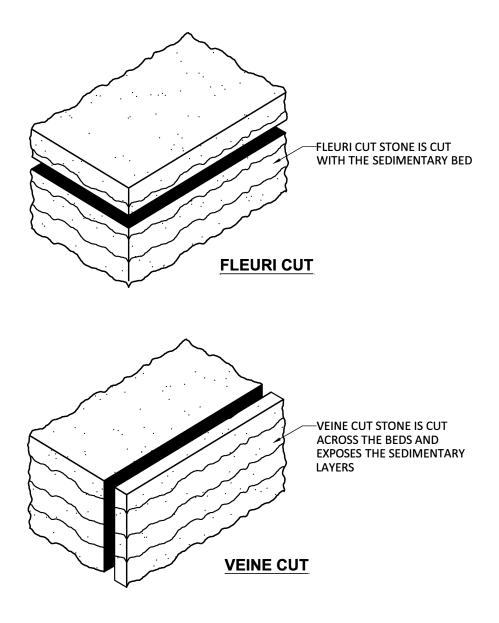
# QUARRY LEDGES

CURRENT LEDGE HEIGHT MAY VARY PER QUARRY LOCATIONS AND STONE COLOR

\*CONTACT OFFICES FOR CURRENT QUARRY CONDITIONS



**TYPICAL QUARRY LEDGES** 





**Split face:** Produced by sawing top and bottom beds to a desired height, then splitting the slab with a hydraulic press.

\*Refer to sheets 4, 8-11 for further information

**Dressed Split face:** A splitface product that, after using a hydraulic press to create a natural break, is then hand pitched back to horizontal bed depths.

\*Refer to sheet 5 for further information

**Rock face:** Similar look to Splitface but created without a press. The face is hand pitched to the bed depth line, producing a bold and somewhat rounded (pillowed) shape with rough cleft-like textured appearance. Chisel marks are evident.

\*Refer to sheet 6 for further information

<u>Natural Strata\*:</u> This finish represents a blocks natural face as quarried. Typically the top face, a slab can vary in thickness up to 5".

\*Contact MKS offices for current limitations

**Sawn:** A smooth texture with marks produced from the saw blade teeth with varying results such as:

Wire Sawn / Gang Sawn: Fine saw marks in a straight line pattern Block Sawn: Fine saw marks in a criss crossing pattern

\*Refer to sheet 12 for Sawn Ashlar products

- **<u>24 Grit Sawn</u>**: A smooth texture using a 24-grit grinding block. This finish minimuzes the saw marks created by the Sawn Finishes above.
- **Machine Smooth:** A smooth finish using a 60-grit grinding block producing a dull, non-reflective appearance with fine swirl marks on the face.
- **Honed:** A very fine smooth non-reflective finish produced with 120 grit sanding blocks and no visible machine marks.
- **Polished\*:** The finest and smoothest finish available produced using incremental sanding blocks until a final wetsand of 3000 grit. This finish has a slightly reflective surface.

\* Not recommended for exterior use.

- <u>**Tapestry:**</u> A sandblasted finish to a smooth surface, producing a softer textured look. This finish exposes the natural variations in the stone.
- **Bush Hammer:** Created by special tooling a grid of conical points at the end of a large metal slug. With repeated impact of these points, a flat but rough, pockmarked texture is created.

**\*\***Contact offices for custom finishes or to match existing conditions



#### SPLIT FACE

SPLIT FACE STONE IS PRODUCED BY SAWING TOP AND BOTTOM BEDS TO A DESIRED HEIGHT (+/- $\frac{1}{26}$ "), THEN PLACING THE SLAB IN A HYDRAULIC PRESS. THE HYDRAULIC PRESS HAS UPPER AND LOWER TEETH MOUNTED IN A STRAIGHT ROW ON JAWS ONE ABOVE THE OTHER. AS PRESSURE IS APPLIED, THE STONE WILL SEPERATE FROM THE SLAB AT IT'S WEAKEST POINTS THUS PRODUCING A NATURALLY ROUGH SURFACE. THE BREAK PRODUCES A SLIGHT CONCAVE OR CONVEX SHAPE.

STANDARD SPLIT FACE: SPLIT FRONT & BACK, SAWN TOP, BOTTOM AND MOST ENDS LENGTH RANGE: 6" TO 40" MAXIMUM HEIGHTS: UP TO NOMINAL 12" HEIGHT: +/- 1/8" WIDTH: +/- 1" TOLERANCES: CUT-TO-LENGTH SPLIT FACE: SPLIT FRONT & BACK, SAWN TOP, BOTTOM AND ENDS CUT-TO-LENGTH: (40" MAXIMUM) HEIGHTS: UP TO NOMINAL 12" HEIGHT: +/- 1/8" WIDTH: +/- 1" TOLERANCES: LENGTH: +/- 1/8" SAWN BACK SPLIT FACE: SPLIT FRONT, SAWN TOP, BOTTOM, BACK AND MOST ENDS LENGTH RANGE: 6" TO 40" MAXIMUM HEIGHTS: UP TO NOMINAL 12" HEIGHT: +/- 1/8" WIDTH: +/- 1/2" TOLERANCES: OVER-SIZED SPLIT FACE: SPLIT FRONT, SAWN TOP, BOTTOM, BACK AND MOST ENDS PERSPECTIVE LENGTH RANGE: 6" TO 40" MAXIMUM HEIGHTS: UP TO NOMINAL 24" HEIGHT: +/- 1/8" TOLERANCES: WIDTH: +/- 1" VARIES SPLIT FRONT, SAWN TOP, OVER-SIZED/CUT-TO-LENGTH SPLIT FACE: 3<del>5</del>" ± BOTTOM, BACK AND ENDS CUT-TO-LENGTH: 40" MAXIMUM HEIGHTS: UP TO NOMINAL 24" HEIGHT: +/- 1/8" WIDTH: +/- 1" TOLERANCES: LENGTH: +/- 1/8" AS SPECIFIED ±<sup>1/</sup>



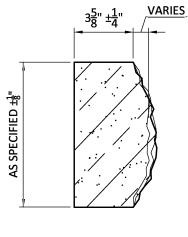


# DRESSED SPLIT FACE

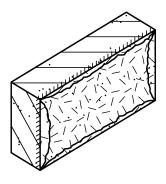
SIMILAR TO SAWN BACK/CUT-TO-LENGTH SPLIT FACE, PIECES ARE MECHANICALLY SPLIT SLIGHTLY WIDER THAN REQUIRED BED DEPTH. AFTER THE MECHANICAL SPLIT THE PIECES ARE HAND DRESSED ON ALL EDGES TO SPECIFIED THICKNESS THUS PRODUCING A ROUGH CONVEX SURFACE WITH SHARP CORNERS AND A SLIGHT RUSTICATION AT THE EDGES WHERE THE CHISEL IS USED.

\*CHISEL MARKS MAY BE EVIDENT ON THE FACE OF THIS PRODUCT

TOLERANCES: HEIGHT: +/- 1/8" WIDTH: +/- 1/4" AT BED DEPTH



SECTION



PERSPECTIVE



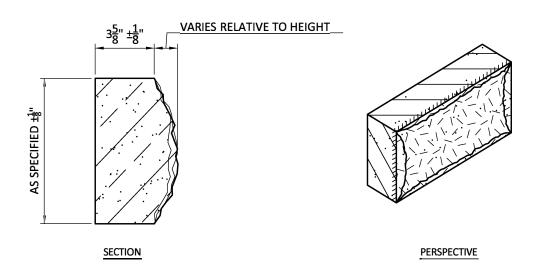
DESCRIPTION OF DRESSED SPLIT FACE

# ROCK FACE

ROCK FACE FINISH IS PRODUCED BY CUTTING THE PIECES OVERSIZED WITH A FACING ALLOWANCE FOR EXPOSED FINISHED SURFACE (FACING ALLOWANCE VARIES WITH THE HEIGHT OF STONE). THE ROCK FACE FINISH IS PRODUCED BY HAND WITH A HAMMER AND CHISEL OR PITCHING TOOL; RESULTING IN A BOLD APPEARANCE OF ROUGH CONVEX BLOCK SURFACES WITH SHARP CORNERS AND A SLIGHT RUSTICATION AT THE EDGES WHERE THE CHISEL IS USED.

\*CHISEL MARKS MAY BE EVIDENT ON THE FACE OF THIS PRODUCT

TOLERANCES: HEIGHT:  $+/-\frac{1}{8}$ " WIDTH:  $+/-\frac{1}{8}$ " AT BED DEPTH LENGTH:  $+/-\frac{1}{8}$ "

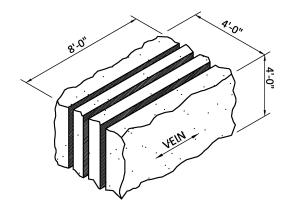




**DESCRIPTION OF ROCK FACE** 

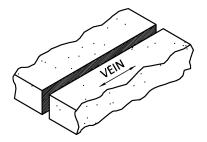
#### **KASOTA RUBBLE**

KASOTA RUBBLE IS PRODUCED BY SPLITTING A DOUBLE BED DEPTH SLAB (8") TO THE COURSE HEIGHT, THEN ROTATING THE PIECE 90° AND SPLITTING TO BED DEPTH (4".) THE RESULT IS AN IRREGULAR SHAPED PIECE BROKEN ON THREE TO FIVE SIDES WITH A SAWN BACK. COURSE HEIGHTS ARE A MIXTURE OF 20% 2"-5", 50% 5"-8", AND 30% 8"-11". LENGTHS ARE RANDOM FROM 6" TO 30".

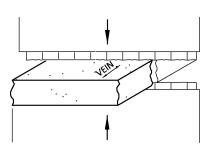


1. BLOCK IS CUT INTO 8" SLABS

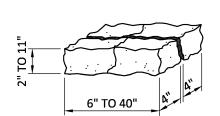
WIDE)



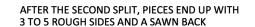
- 2. 8" SLABS ARE THEN CUT INTO STRIPS 24" TO 40" WIDE
- 3. THE STRIPS ARE THEN MECHANICALLY SPLIT USING A HYDRAULIC PRESS INTO LENGTHS OF 2" TO 11" (RESULTING IN PIECES 8" HIGH X 24"-40" LONG X 2"-11"



SAWN BACK-

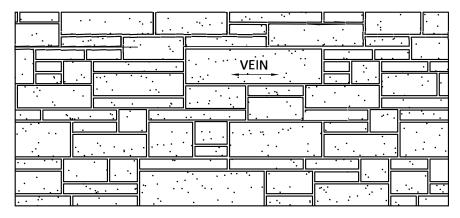


4. PIECES ARE THEN ROTATED 90° AND MECHANICALLY SPLIT AT 4" BED DEPTH.



NOMINAL 4"





## **REGULAR MIX SAWN ASHLAR**

HEIGHT MIX: 15% - 2<sup>1</sup>/8" 50% - 4<sup>7</sup>/8" 35% - 7<sup>1</sup>/2"

#### LENGTHS AS NOTED BELOW

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#### **COURSED SAWN ASHLAR**

HEIGHTS AS REQUIRED UP TO NOMINAL 12" LENGTHS AS NOTED BELOW

# SAWN ASHLAR

SAWN ASHLAR IS A SMOOTH PRODUCT SIMILAR TO SPLIT FACE. VEINE FACE WITH A SAWN FINISH FRONT, BACK, TOP, BOTTOM AND MAJORITY OF ENDS. FABRICATED IN LENGTHS OF 25% 6"-24", 50% 24"-30", AND 25% 30"-36". MAXIMUM HEIGHT OF NOMINAL 12".

# NOTES:

- 1. PATTERN SHOWN IS FOR INFORMATION ONLY, FINAL SETTING PATTERN DETERMINED ON SITE BY SETTER
- 2. FIELD TRIMMING, PREPARATION FOR ANGLE CHECKS, ANCHOR HOLES AND FINISHED ENDS DONE ON SITE BY SETTER
- 3. SAWN ASHLAR PRODUCTS WILL NOT BE SHOWN ON SHOP DRAWINGS
- 4. SAWN ASHLAR PRODUCTS ARE INSTALLED USING MASONRY TIES AND TECHNIQUES ASSOCIATED WITH TRADITIONAL BRICK LAYING



FL. ELEV. þ RELIEF ANGLE EVERY 20'-0" TO 25' FL. ELEV.  $\checkmark$ · · · 4

# **REGULAR MIX**

HEIGHTS: 15% - 2'S 50% - 5'S 35% - 8'S

#### NOTES:

- PATTERN SHOWN IS FOR INFORMATION ONLY, FINAL SETTING PATTERN 1. DETERMINED ON SITE BY SETTER
- LENGTHS ARE RANDOMLY PRODUCED (6" TO 40" MAXIMUM)
  CUT-TO-FIT & FINAL DRESSING DONE ON SITE BY SETTER
- 4. RANDOM SPLIT FACE WILL NOT BE SHOWN ON SHOP DRAWINGS



REGULAR MIX SPLIT FACE PATTERN

# CHURCH MIX

**HEIGHTS:** 15% - 2'S 40% - 5'S 35% - 8'S 10% - 10'S

#### NOTES:

- PATTERN SHOWN IS FOR INFORMATION ONLY, FINAL SETTING PATTERN 1. DETERMINED ON SITE BY SETTER
- 2. LENGTHS ARE RANDOMLY PRODUCED (6" TO 40" MAXIMUM)
- CUT-TO-FIT & FINAL DRESSING DONE ON SITE BY SETTER
  RANDOM SPLIT FACE WILL NOT BE SHOWN ON SHOP DRAWINGS



CHURCH MIX SPLIT FACE PATTERN

#### PREMIUM MIX

HEIGHTS: 40% - 2'S 60% - 5'S

#### NOTES:

- 1. PATTERN SHOWN IS FOR INFORMATION ONLY, FINAL SETTING PATTERN DETERMINED ON SITE BY SETTER
- 2. LENGTHS ARE RANDOMLY PRODUCED (6" TO 40" MAXIMUM)
- 3. CUT-TO-FIT & FINAL DRESSING DONE ON SITE BY SETTER
- 4. RANDOM SPLIT FACE WILL NOT BE SHOWN ON SHOP DRAWINGS



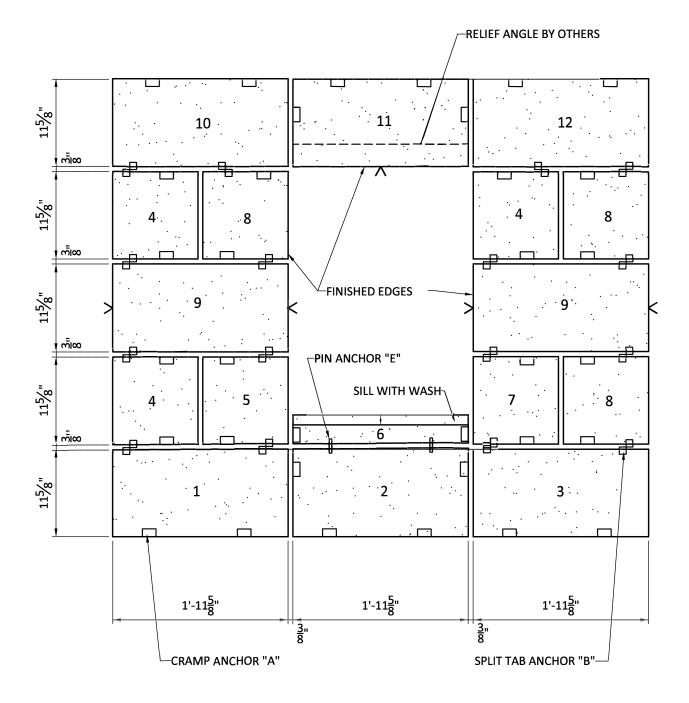
# ELITE MIX

HEIGHTS: 10% - 1'S 35% - 2'S 35% - 4'S 20% - 5'S

#### NOTES:

- PATTERN SHOWN IS FOR INFORMATION ONLY, FINAL SETTING PATTERN 1. DETERMINED ON SITE BY SETTER
- 2. LENGTHS ARE RANDOMLY PRODUCED (6" TO 40" MAXIMUM)
- CUT-TO-FIT & FINAL DRESSING DONE ON SITE BY SETTER
  RANDOM SPLIT FACE WILL NOT BE SHOWN ON SHOP DRAWINGS





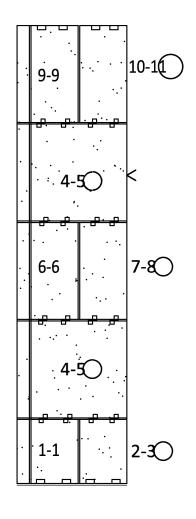
# PIECE NUMBERING

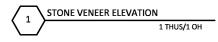
STANDARD PIECE NUMBERING STARTS IN THE BOTTOM LEFT COURSE, STARTING WITH PIECE # 1 AND MOVING TO THE RIGHT. EACH PIECE RECEIVES IT'S OWN INDIVIDUAL NUMBER, **UNLESS** THE PIECE IS AN EXACT DUPLICATE OF A PREVIOUS PIECE (IN THIS CASE, THE PIECE WILL RECEIVE THE SAME NUMBER AS THE ORIGINAL PIECE.) ONCE THE BOTTOM COURSE HAS BEEN COMPLETED, NUMBERING CONTINUES ON THE NEXT COURSE, AGAIN FROM LEFT TO RIGHT. PIECE NUMBERING PICKS UP NUMBERICALLY FROM THE PREVIOUS COURSE, AND SO ON, UNTIL ALL PIECES HAVE BEEN NUMBERED

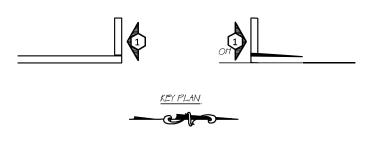


#### **OPPOSITE HAND PIECE NUMBERING**

AN OPPOSITE HAND ELEVATION IS A MIRROR IMAGE OF AN ELEVATION. IF AN IDENTICAL PIECE CAN BE USED IN EACH ELEVATION WITHOUT TURNING IT UPSIDE DOWN, IT CAN RECEIVE THE SAME PIECE NUMBER (I.E. PIECES 1, 6 & 9 IN THE FIGURE SHOWN.) HOWEVER, IF A CORRESPONDING PIECE IN THE OPPOSITE HAND ELEVATION HAS A CONDITION THAT WOULD REQUIRE ROTATING THE PIECE IN ANY WAY, THE PIECE WOULD RECEIVE A NEW NUMBER. THE NUMBER IS THEN CIRCLED WHICH INDICATES THE PIECE IS DESIGNED FOR THE OPPOSITE HAND ELEVATION (I.E. PIECES 2, 3, 5, 7, 8, 10 & 11.)

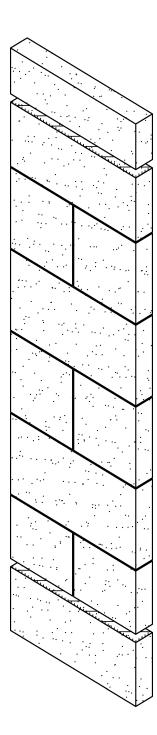








OPPOSITE HAND PIECE NUMBERING



- 1. FOUNDATION WALL PER ARCHITECTURAL PLANS AND SPECIFICATIONS.
- 2. FULL BEARING SUPPORT AT BASE OF STONE VENEER WALL.

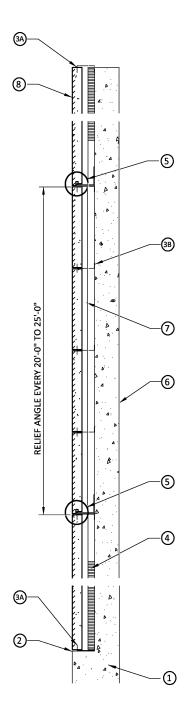
#### 3. ANCHORAGE:

ANCHORS ARE DESIGNED TO HOLD STONE IN PLACE. BUT WILL NOT SUPPORT THE WEIGHT.

- A. STAINLESS STEEL CRAMP ANCHOR B. STAINLESS STEEL SPLIT TAB ANCHOR
- B. STAINLESS STEEL SPLIT TAB ANCHOR WITH 90° BEND AT OPPOSITE END FROM TABS TO SECURE TO BACK-UP.

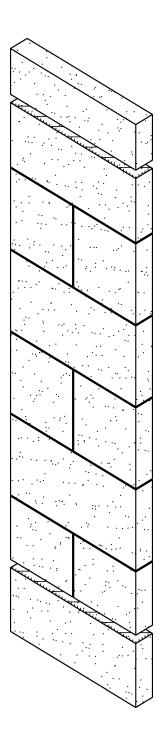
(REFER TO ANCHORAGE SECTION FOR ADDITIONAL INFORMATION)

- 4. INSULATION BY OTHERS AND PER ARCHITECTURAL DRAWINGS.
- 5. **CONTINUOUS RELIEF ANGLE:** DESIGNED TO SUPPORT THE WEIGHT OF THE STONE. MUST BE VERTICALLY SPACED NO MORE THAN 25'-0" O.C. AND RUN CONTINUOUS ON A HORIZONTAL JOINT. THE VERTICAL LEG TO BE SECURELY FASTENED TO THE BUILDING STRUCTURE, PER THE ENGINEER OF RECORD'S (EOR) RECOMMENDATIONS.
- 6. POURED CONCRETE / C.M.U. BACK-UP SYSTEM PER ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS.
- 7. **1" MINIMUM AIRSPACE** BETWEEN THE BACK OF STONE AND BUILDING COMPONENTS. THIS SPACE MUST BE KEPT FREE OF ANY MATERIALS OR DEBRIS (EXCEPT FOR STONE ANCHORING AND SUPPORT) TO ALLOW FOR THE FACE OF STONE TO BE SET PLUMB.
- 8. STONE VENEER: COLOR AND FINISH PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.





STANDARD STONE VENEER WALL WITH CONCRETE / C.M.U. BACK-UP



1. FULL SUPPORT FOUNDATION WALL PER ARCHITECTURAL PLANS AND SPECIFICATIONS.

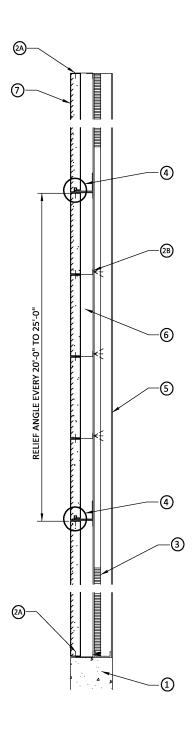
#### 2. ANCHORAGE:

ANCHORS ARE DESIGNED TO HOLD STONE IN PLACE. BUT WILL NOT SUPPORT THE WEIGHT.

- A. STAINLESS STEEL CRAMP ANCHOR
- B. STAINLESS STEEL SPLIT TAB ANCHOR WITH 90° BEND AT OPPOSITE END
- FROM TABS TO SECURE TO BACK-UP.

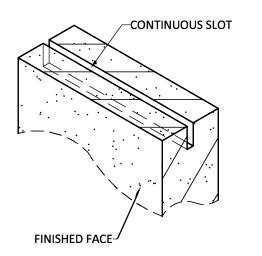
(REFER TO ANCHORAGE SECTION FOR ADDITIONAL INFORMATION)

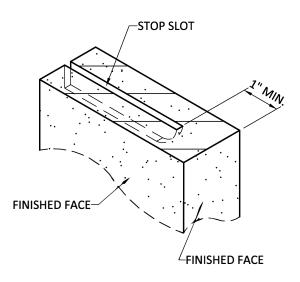
- 3. INSULATION BY OTHERS AND PER ARCHITECTURAL DRAWINGS.
- 4. **CONTINUOUS RELIEF ANGLE:** DESIGNED TO SUPPORT THE WEIGHT OF THE STONE. MUST BE VERTICALLY SPACED NO MORE THAN 25'-0" O.C. AND RUN CONTINUOUS ON A HORIZONTAL JOINT. THE VERTICAL LEG TO BE SECURELY FASTENED TO THE BUILDING STRUCTURE, PER THE ENGINEER OF RECORD'S (EOR) RECOMMENDATIONS.
- 5. STEEL STUD BACK-UP WALL SYSTEM PER ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS AND STUD MANUFACTURER'S REQUIREMENTS.
- 6. **1" MINIMUM AIRSPACE** BETWEEN THE BACK OF STONE AND BUILDING COMPONENTS. THIS SPACE MUST BE KEPT FREE OF ANY MATERIALS OR DEBRIS (EXCEPT FOR STONE ANCHORING AND SUPPORT) TO ALLOW FOR THE FACE OF STONE TO BE SET PLUMB.
- 7. STONE VENEER: COLOR AND FINISH PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.





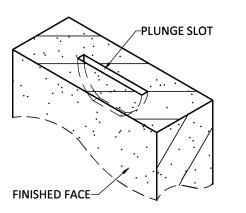
STANDARD STONE VENEER WALL WITH STEEL STUD BACK-UP

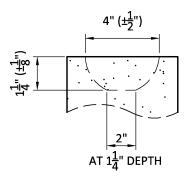




CONTINUOUS ANCHOR SLOT



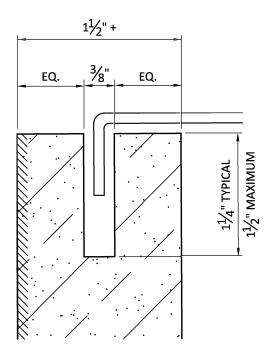


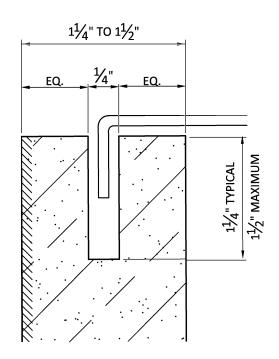


PLUNGE ANCHOR SLOT



STANDARD ANCHOR SLOT TYPES



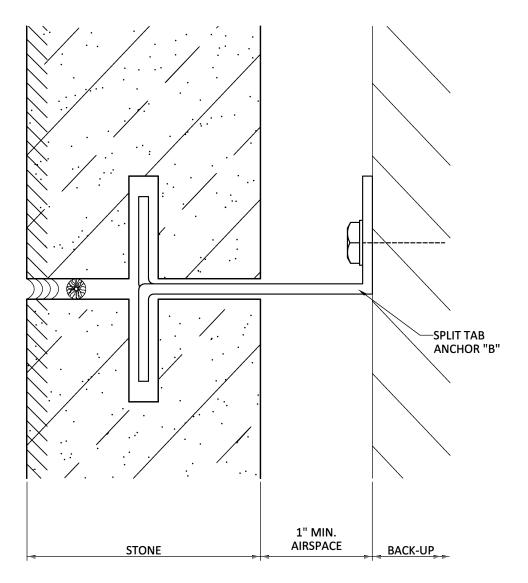


# ANCHOR SLOTTING

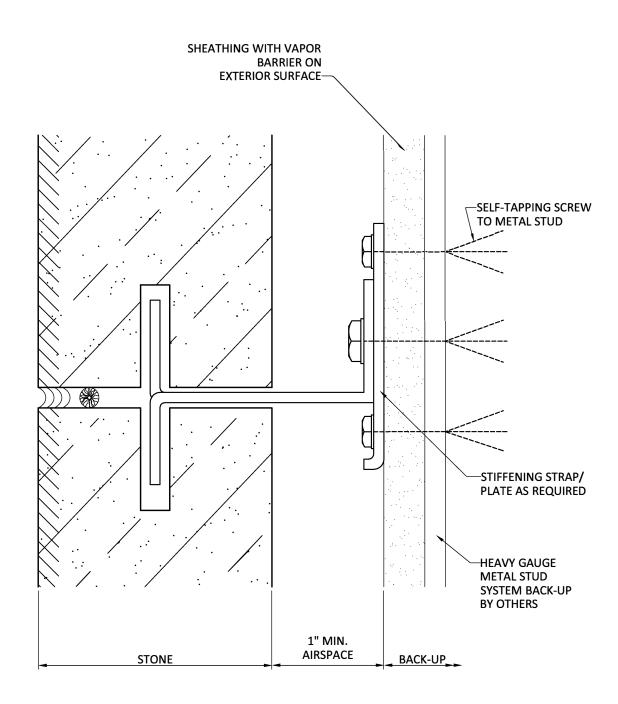
SLOTTING RECOMMENDATIONS ARE BASED ON STONE THICKNESS AND APPLICATION. STONE GREATER THAN  $1\frac{1}{2}$ " THICK ARE DETAILED WITH A  $\frac{3}{8}$ " KERF, STONE BETWEEN  $1\frac{1}{4}$ " AND  $1\frac{1}{2}$ " THICK ARE DETAILED WITH A  $\frac{1}{4}$ " KERF AND STONE LESS THAN  $1\frac{1}{4}$ " THICK ARE DETAILED WITH PLUNGE SLOTS AND/OR PIN HOLES.



ANCHOR SLOT RECOMMENDATIONS

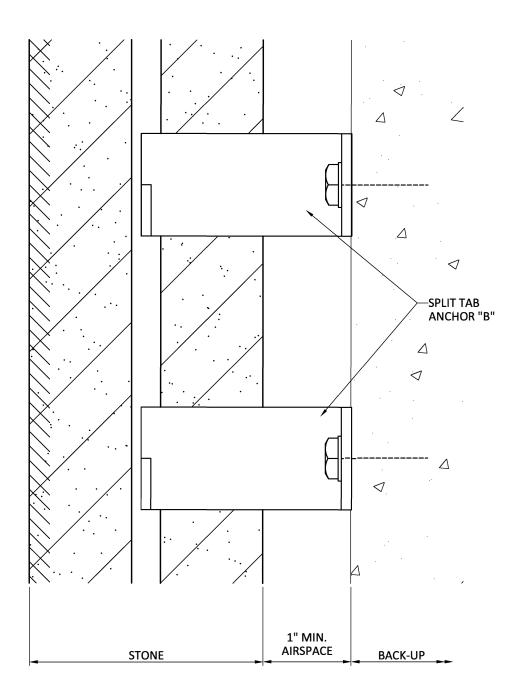




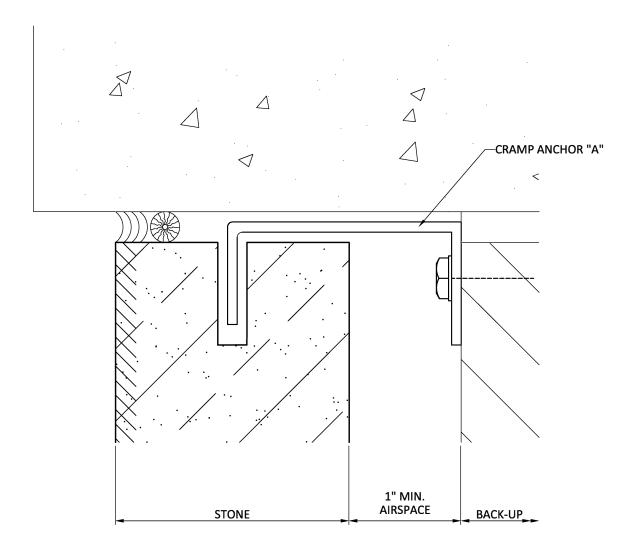




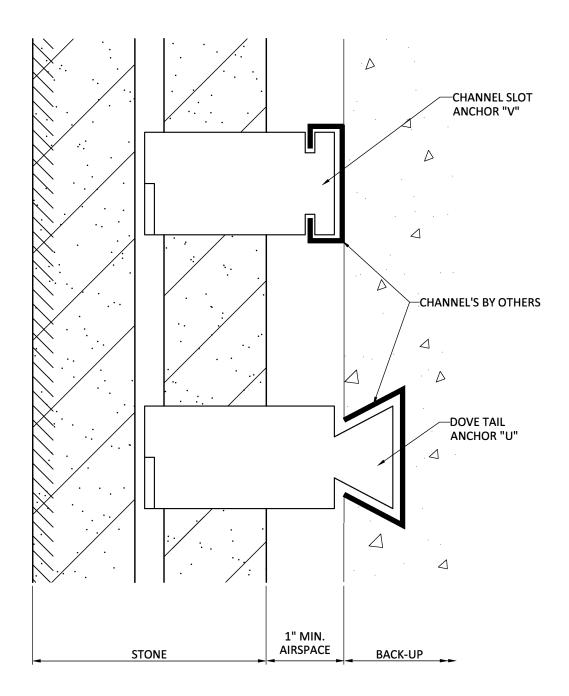
TYPICAL SECTION AT SPLIT TAB ANCHOR WITH METAL STUD WALL BACK-UP



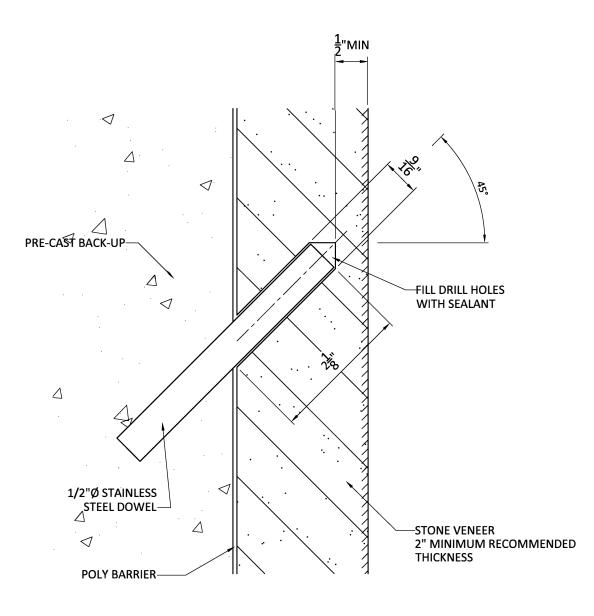






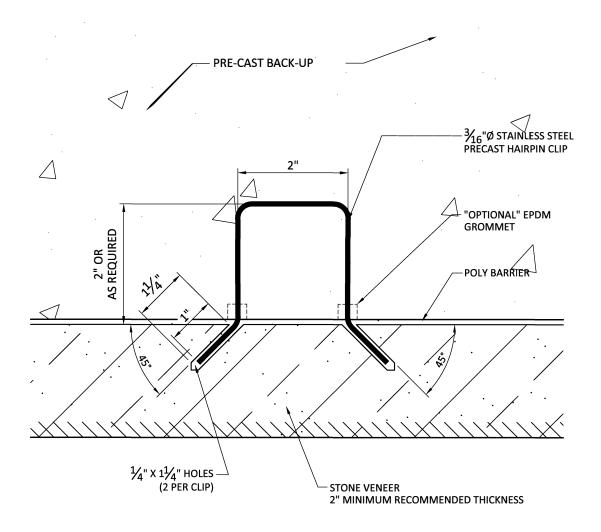








RECOMMENDED PRECAST ANCHORING DOWEL ANCHOR

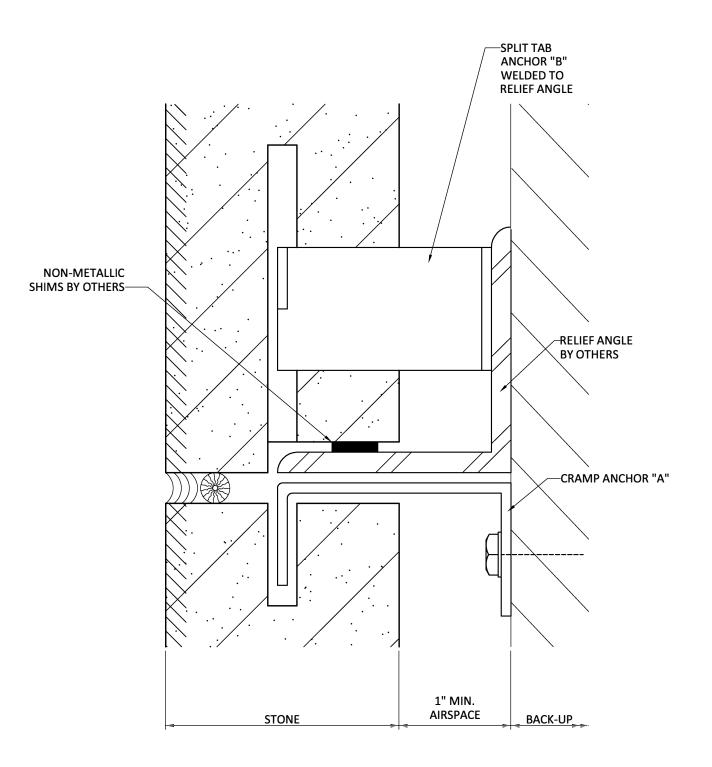




ALTERNATE PRECAST ANCHORING HAIRPIN WIRE ANCHOR

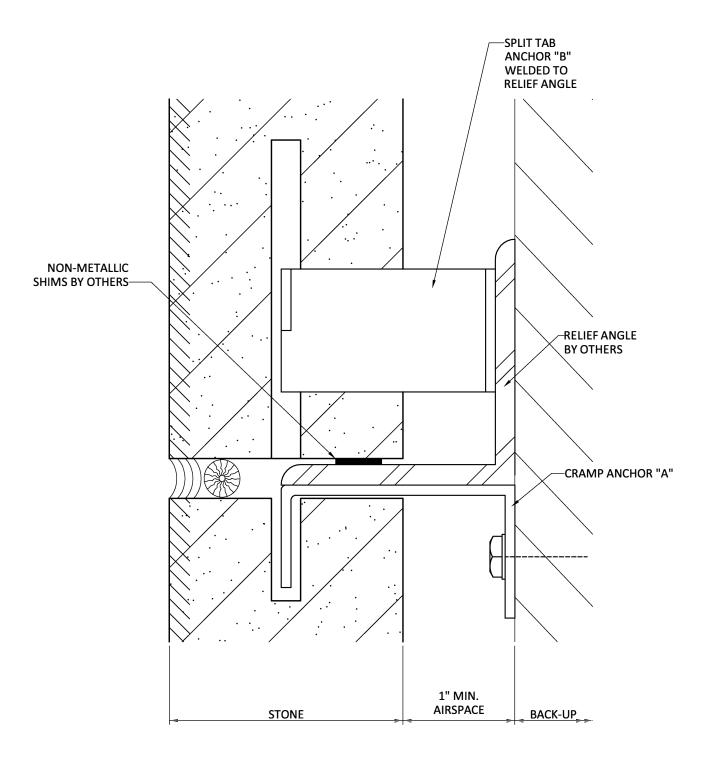


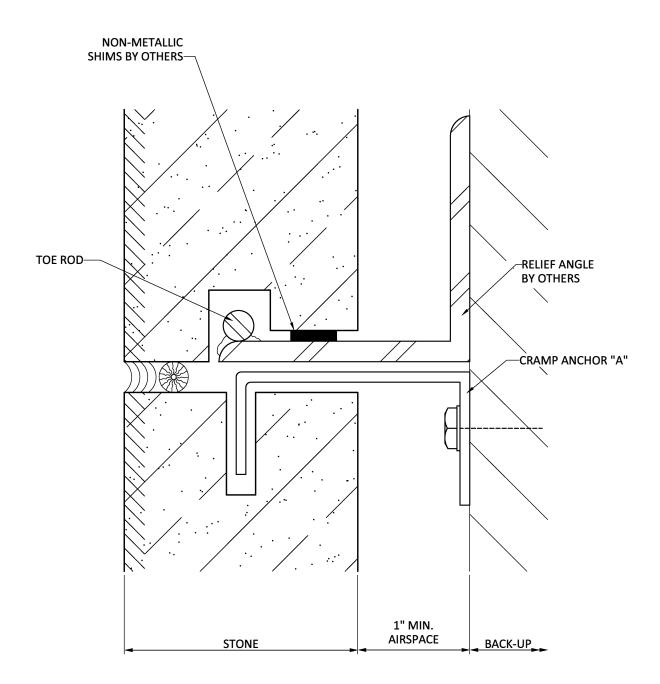
RECOMMENDED DETAIL AT RELIEF ANGLE





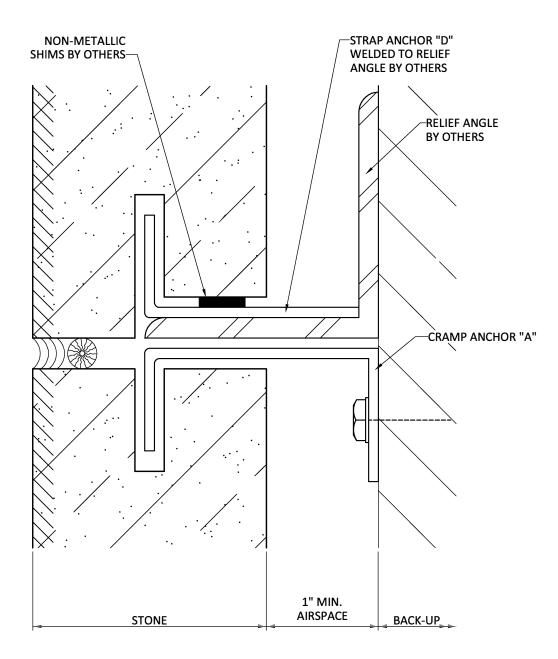
RECOMMENDED DETAIL AT RELIEF ANGLE





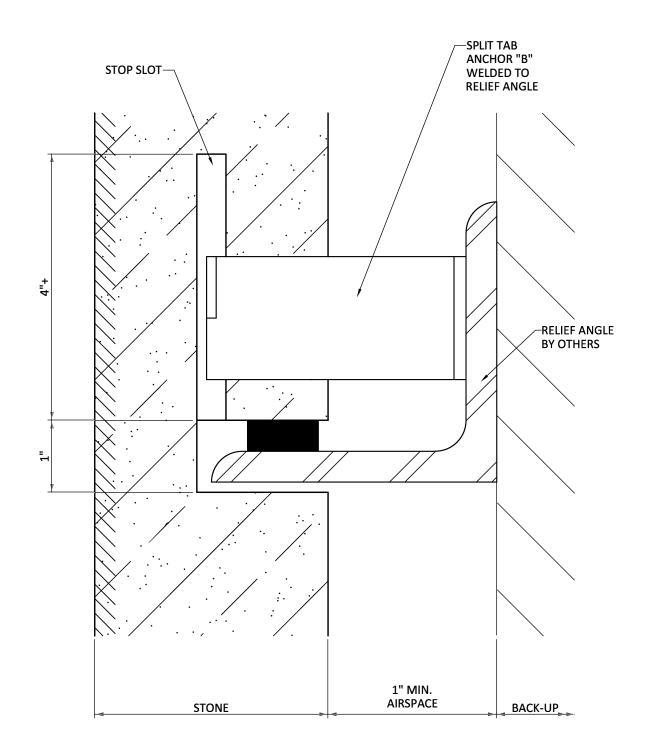


ALTERNATE DETAIL AT RELIEF ANGLE





ALTERNATE DETAIL AT RELIEF ANGLE

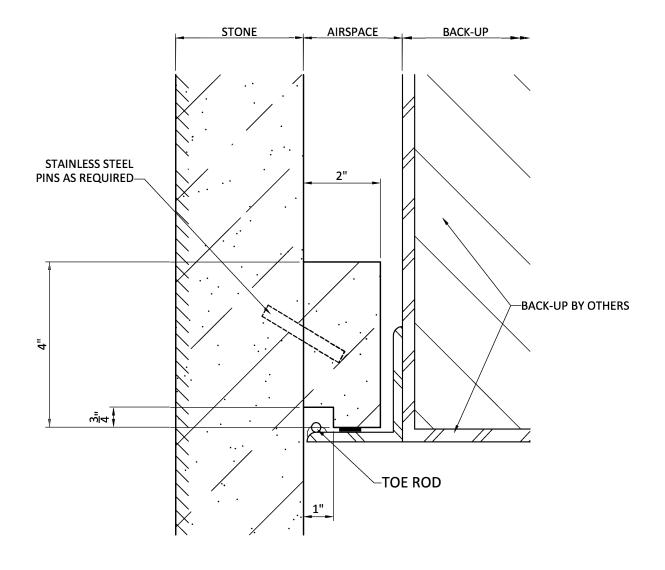




RECOMMENDED DETAIL AT BACK CHECK RELIEF ANGLE

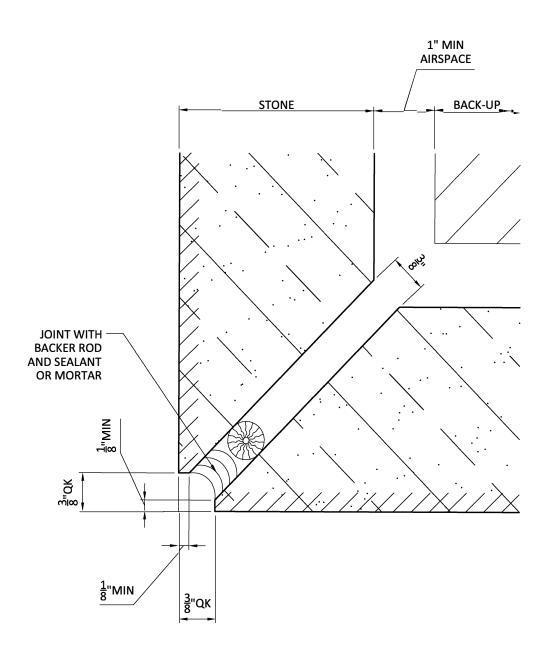
# THIS DETAIL NOT USED







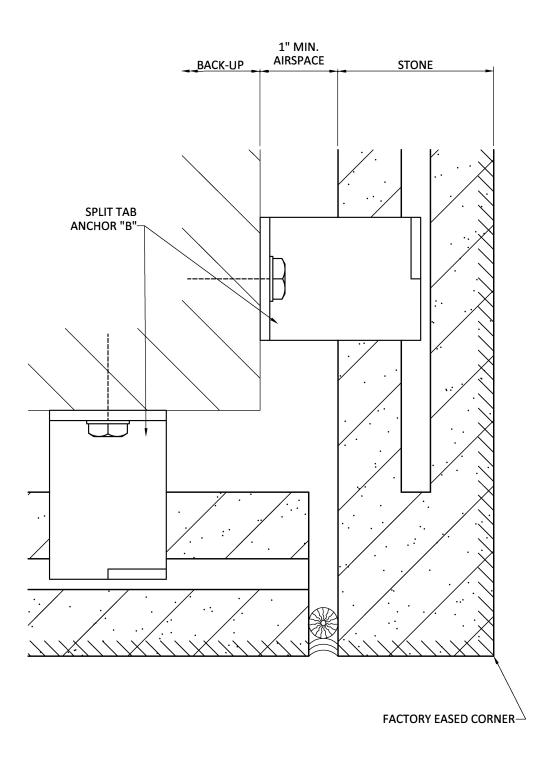
STANDARD DETAIL AT EPOXIED KEEPER



# NOTES:

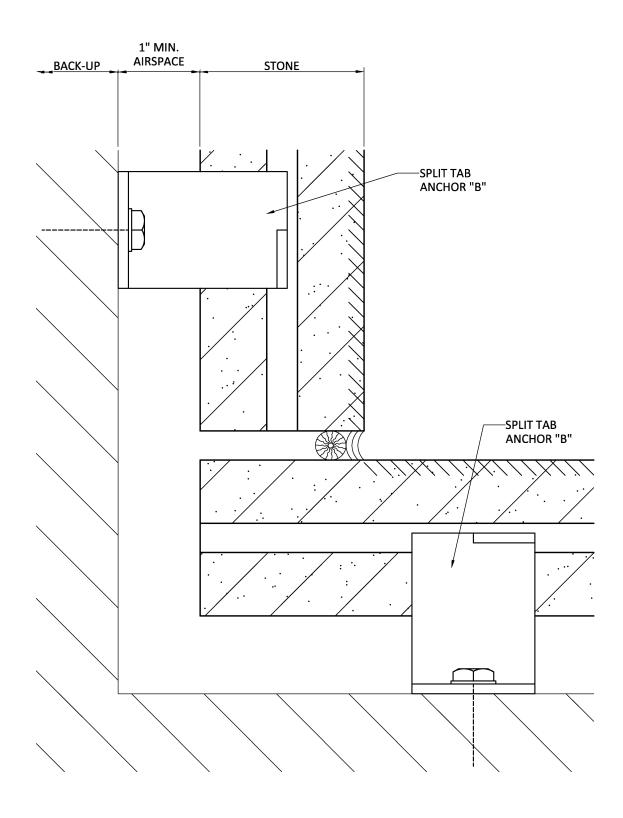
- 1. THE ABOVE DETAIL REPRESENTS A STANDARD  $\frac{3}{8}$ " QUIRK MITER, VARIATION IN JOINT SIZE WILL AFFECT DIMENSIONS ACCORDINGLY
- 2. THE FLAT EDGE OF A QUIRK MITER MUST BE A MINIMUM OF  $\frac{1}{8}$ "





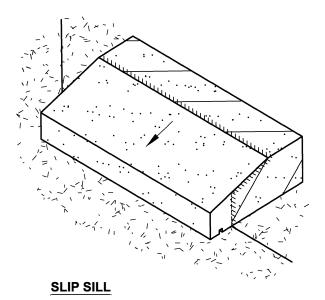


**BUTT END CORNER DETAIL** 

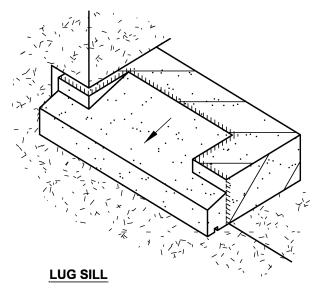




**INSIDE CORNER DETAIL** 



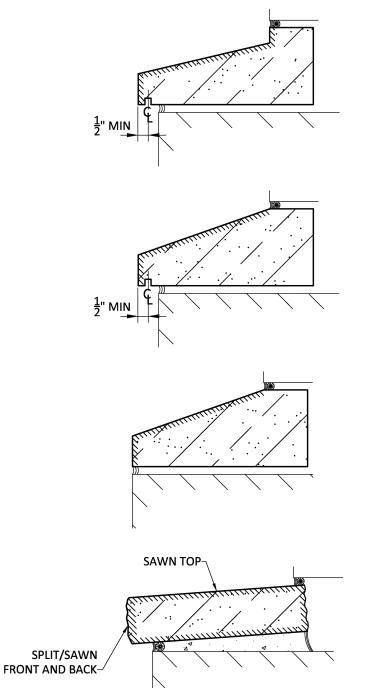
A SILL DESIGNED TO SLIP DIRECTLY BELOW THE WINDOW (WITHIN THE OPENING)



A SILL DESIGNED TO BE INCORPORATED INTO THE WALL ASSEMBLY WITH THE USE OF HORIZONTAL LUG SEATS



STANDARD SILL TYPES



# **RAISED WINDOW SEAT SILL**

THIS SILL CAN BE EITHER A SLIP SILL OR A LUG SILL WITH THE WINDOW SEAT RAISED

# FLAT SEAT SILL / WATERTABLE

PROVIDES A FLAT HORIZONTAL SEAT FOR THE WINDOW

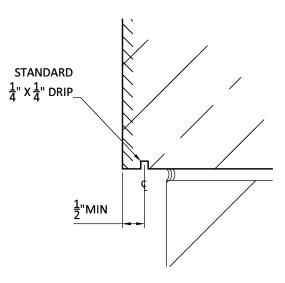
# FLUSH SILL / WATERTABLE

A SILL THAT IS FLUSH WITH THE FACE OF THE WALL



A RECTANGULAR SILL SET IN A SLOPED MORTAR BED TO CREATE A WASH



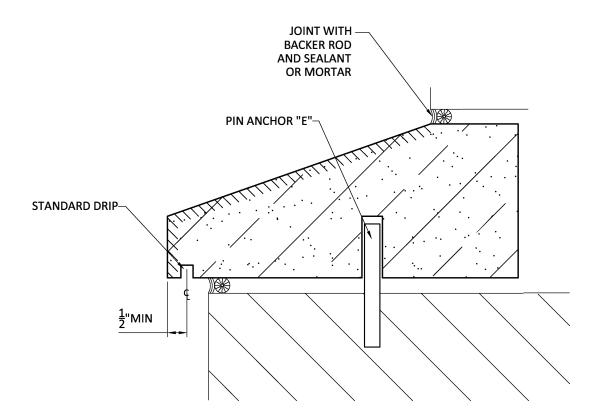


# DRIP SLOTTING

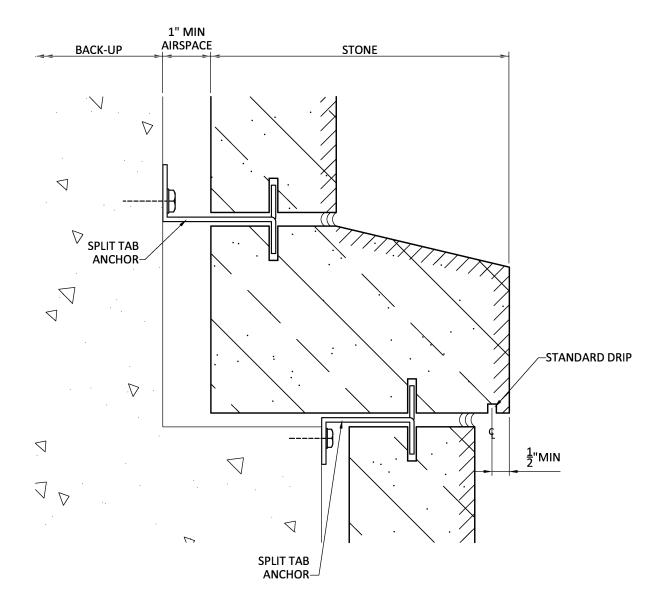
DRIP SLOTS ARE RECOMMENDED ON ANY EXTERIOR APPLICATION WHERE STONE OVERHANGS ANOTHER MATERIAL. A STANDARD MKS DRIP SLOT IS  $\frac{1}{4}$ " X  $\frac{1}{4}$ " AND IS A MINIMUM OF  $\frac{1}{2}$ " FROM THE FACE OF STONE.



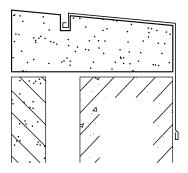
STANDARD DRIP SLOT



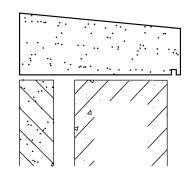




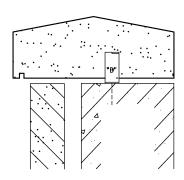




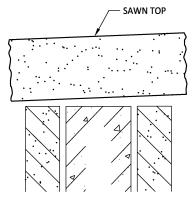
SINGLE WASH COPING WITH FLASHING REGLET. FLUSH ON BOTH SIDES.



SINGLE WASH COPING WITH DRIP ON THE INSIDE.



DOUBLE WASH COPING WITH DRIP ON THE OUTSIDE.



SPLITFACE COPING WITH OVERHANG ON BOTH SIDES. SLOPED SETTING BED.

#### **COPING NOTES:**

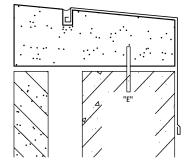
MKS IS A CUSTOM FABRICATOR AND CAN PROVIDE COPINGS IN A VARIETY OF SIZES AND SHAPES.

ANCHOR SLOTS OR HOLES AND/OR REGLETS MAY BE CUT IN ANY SURFACE ALONG WITH RECOMMENDED DRIPS AT

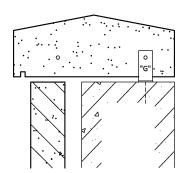
OVERHANGS (STANDARD  $\frac{1}{4}$ " X  $\frac{1}{4}$ ".)

PROPER FLASHING AND SEALANT AT JOINTS ARE ESSENTIAL TO PREVENT MOISTURE PENETRATION, DETAILING PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. SEAL FLASHING AT ANY LOCATIONS A DOWEL OR ANCHOR WILL PEIRCE THE FLASHING.

MOST COMMON METHOD OF ANCHORAGE FOR COPING ARE PIN ANCHORS "E, G, 10" AND STRAP ANCHORS "A, B, C." A HORIZONTAL ALIGNMENT DOWEL IS USED OCCASIONALLY TO HELP PREVENT SHIFTING DURING BUILDING EXPANSION AND CONTRACTION.



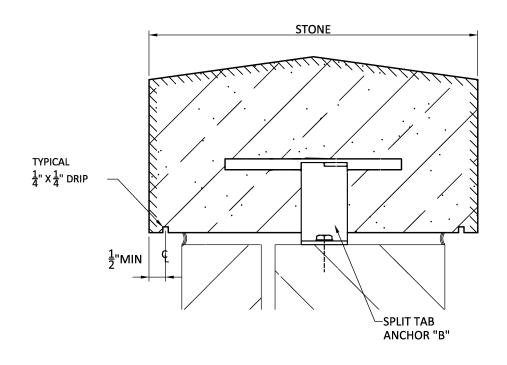
COPING WITH PIN ("E")

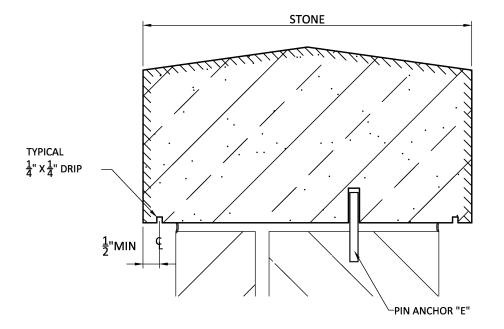


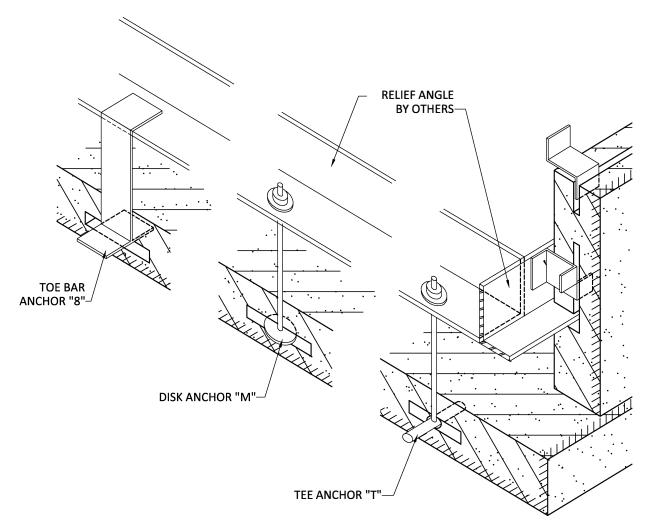
COPING WITH PIN STRAP ("G") & HORIZONTAL ALIGNMENT DOWEL.











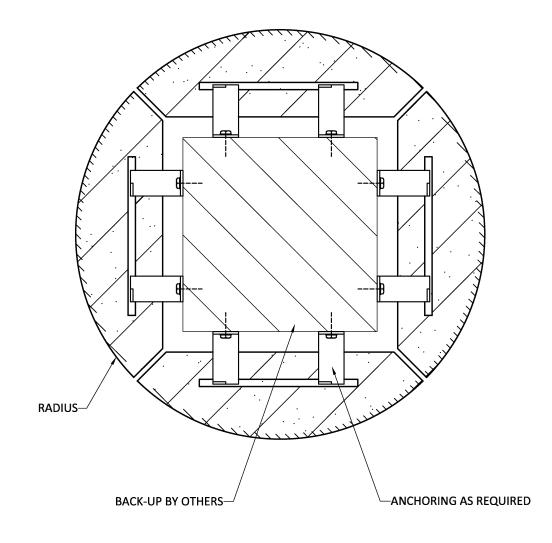
#### **SOFFIT / CEILING NOTES:**

MKS RECOMMENDS THAT ALL CEILING AND SOFFIT CONDITIONS BE REVIEWED BY A LICENSED ENGINEER.

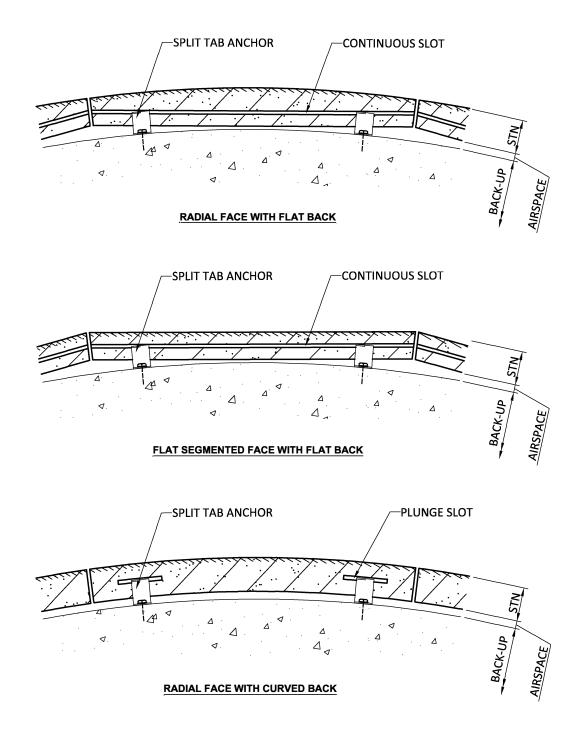
ABOVE ANCHORING METHODS ARE FOR REFERENCE ONLY, ALL SOFFIT AND CEILING CONDITIONS ARE UNIQUE. PLEASE CONTACT MKS OFFICES FOR MORE JOB SPECIFIC DETAILING.



TYPICAL SOFFIT AND CEILING ANCHORING

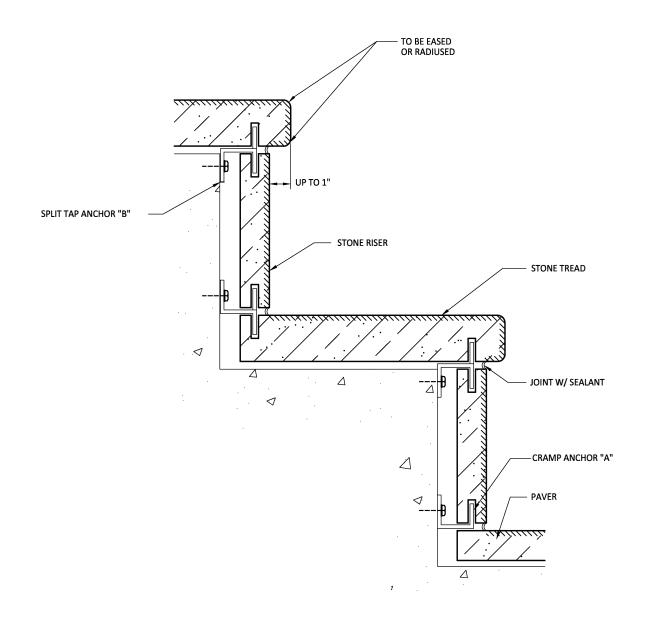






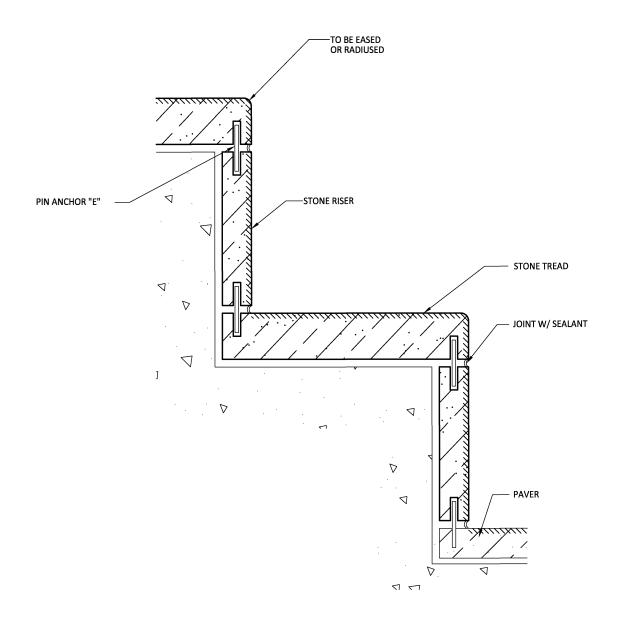


TYPICAL DETAILS AT RADIAL FACED STONE



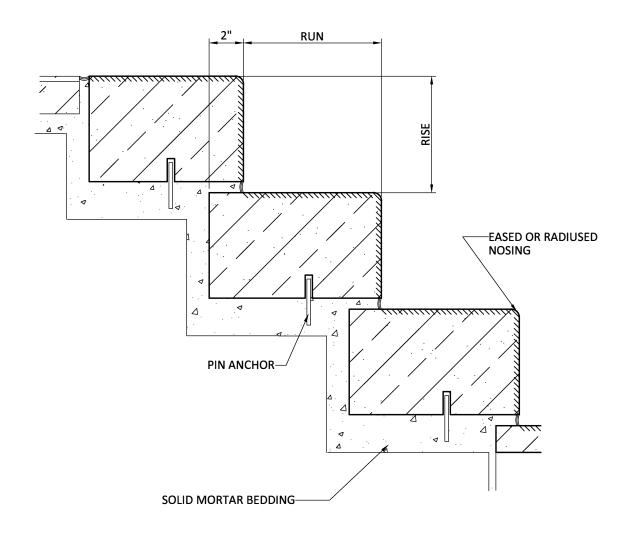


**RECOMMENDED STAIR DETAILING** 



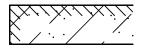


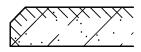
ALTERNATE STAIR DETAILING

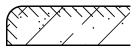




ALTERNATE STAIR DETAILING





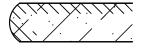


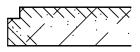
STRAIGHT EDGE

BEVEL OR CHAMFER

RADIUS



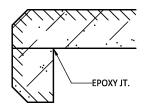


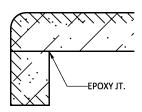


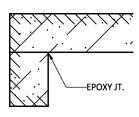
BULLNOSE

PENCIL/PALLADIO

RABBIT







BEVEL WITH APRON

RADIUS EDGE WITH APRON

BUTT EDGE WITH APRON



SCOTIA

DEMI BULLNOSE

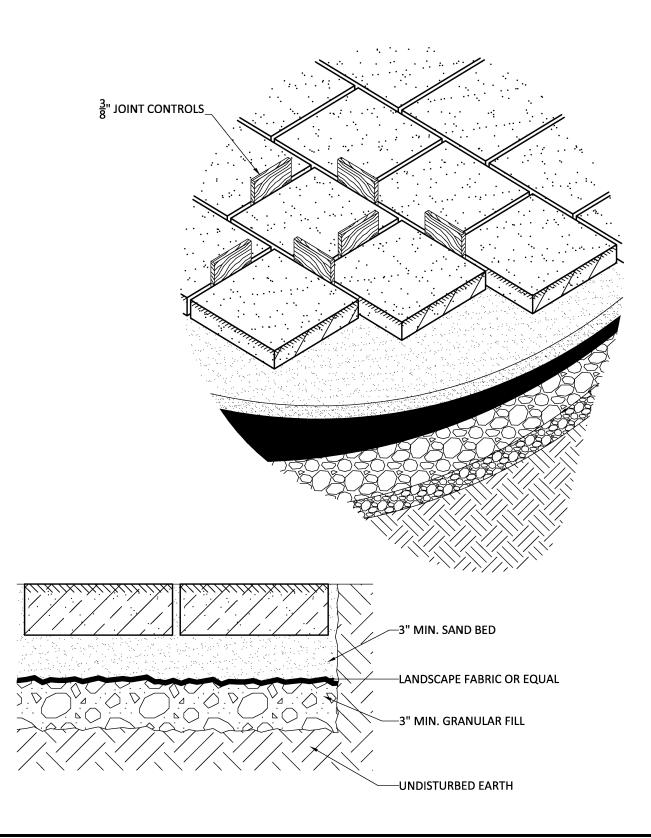
# COUNTERTOPS

ALL MATERIAL USED FOR COUNTERTOPS SUPPLIED WITH ALL GEODES FILLED.

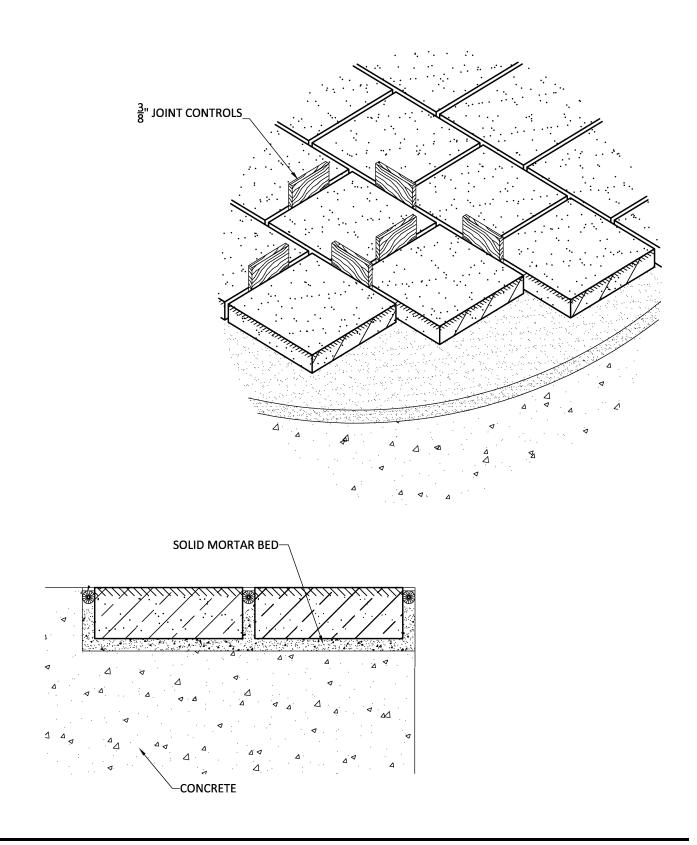
MKS RECOMMENDS FINISHING WITH AN APPROPRIATE SEALER TO PREVENT STAINING OR DISCOLORATION FROM COMMON HOUSEHOLD PRODUCTS.

MINIMUM THICKNESS FOR COUNTEROPS IS  $\frac{7}{8}$ "

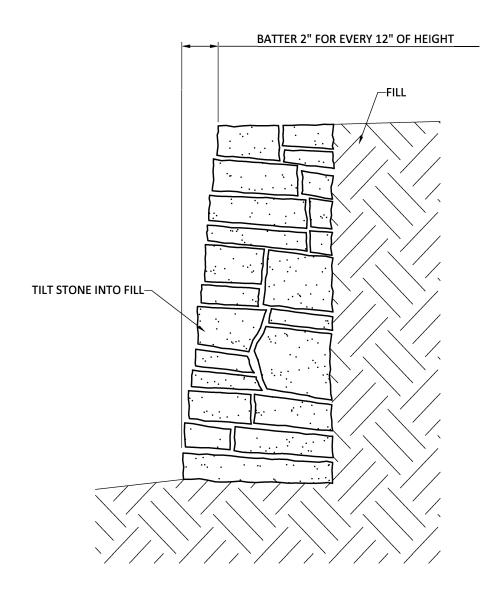














DRY STACKED RETAINING WALL

MILANO: MILANO IS A SAWN SMOOTH THIN STONE VENEER, APPROXIMATELY 1" THICK. CORNERS CAN EITHER BE MITERED IN THE FIELD OR SET AS FINISHED BUTT ENDS.

LENGTH RANGE: 8" TO 40" IN 4" INCREMENTS HEIGHTS: AVAILABLE AT  $4\frac{7}{8}$ ",  $7\frac{1}{2}$ ", and  $10\frac{1}{8}$ " with a tolerance of +/ $\frac{1}{8}$ "

FABRICATED AND CRATED BY COLOR AND HEIGHT

**BOLZANO:** BOLZANO IS A ROUGH FACED THIN STONE VENEER. THE FACE IS MECHANICALLY SPLIT, THE TOP AND BOTTOM IS SAWN. L-SHAPED CORNERS ARE AVAILABLE.\*

LENGTH RANGE: 8" TO 40" HEIGHTS: AVAILABLE AT  $4\frac{7}{8}$ ",  $7\frac{1}{2}$ ", and  $10\frac{1}{8}$ " with a tolerance of +/ $\frac{1}{8}$ "

FABRICATED AND CRATED BY COLOR AND HEIGHT

**CASSIGLIO:** CASSIGLIO IS A RUSTIC RUBBLE THIN STONE VENEER. THE FACE AND ALL SIDES ARE NATURAL OR MECHANICALLY SPLIT FINISH. L-SHAPED CORNERS ARE AVAILABLE.\*

LENGTH RANGE: 8" TO 40" HEIGHT RANGE: 6" TO 12"

FABRICATED AND CRATED WITH A NATURAL QUARRY MIX OF COLOR

VERONA: VERONA IS A LINEAR RUSTIC THIN STONE VENEER. THE FACE, BOTTOM AND MOST ENDS ARE MECHANICALLY SPLIT. L-SHAPED CORNERS ARE AVAILABLE.\*

LENGTH RANGE: 8" TO 40" HEIGHTS: AVAILABLE AT  $4\frac{7}{8}$ ",  $7\frac{1}{2}$ ", AND  $10\frac{1}{8}$ "

FABRICATED AND CRATED BY COLOR AND HEIGHT

**PARMA:** PARMA IS A ROUGH FACED THIN STONE VENEER. PARMA IS TYPICALLY USED TO APPEAR AS DRY STACK. THE FACE IS MECHANICALLY SPLIT, THE TOP, BOTTOM AND MOST ENDS ARE SAWN. CORNERS CAN BE MITERED IN THE FIELD OR SET AS FINISHED BUTT ENDS.

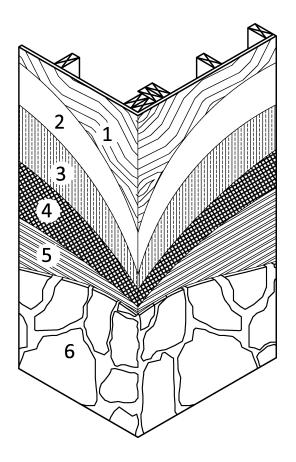
LENGTH RANGE: 8" TO 40" HEIGHT RANGE: 2" - 5"

FABRICATED AND CRATED BY COLOR AND HEIGHT

\*L-SHAPED CORNERS AVAILABLE WITH A MATCHING FINISH. ONE FACE 8"-12" LONG AND THE ADJACENT FACE 35/2"-12" LONG. L-SHAPED CORNERS GIVE AN APPEARANCE OF A LARGER SOLID CORNER PIECE.



LOMBARDIA THIN STONE PRODUCT DESCRIPTIONS

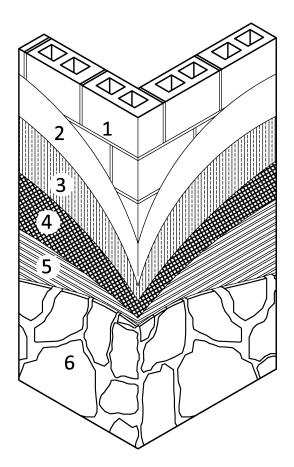


# FRAMED EXTERIOR WALL:

- 1. COVER EXTERIOR SHEATING (1) WITH A WEATHER RESISTANT VAPOR BARRIER (2), OVERLAPPING A MINIMUM OF 4 INCHES AT JOINTS.
- 2. INSTALL WATER-VENTING MESH (3) PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
- 3. INSTALL EXPANDED METAL LATH (4), AGAIN OVERLAPPING A MINIMUM OF 4 INCHES AND FASTEN WITH GALVANIZED NAILS OR SCREWS AT 6" O.C. VERTICAL AND 16" O.C. HORIZONTAL.
- 4. APPLY A  $\frac{1}{2}$  HICK SCRATCH COAT (5) COMPLETELY COVERING THE METAL LATH, THEN USING A METAL SCRAPER OR SMALL SCRAP OF LATH, LIGHTLY RAKE HORIZONTAL GROOVES INTO THE SCRATCH COAT.
- 5. LET SCRATCH COAT CURE COMPLETELY.
- 6. LOMBARDIA THIN STONE (6) MAY NOW BE APPLIED USING THE FOLLOWING STEPS:
  - A. COVER THE BACK OF EACH STONE WITH AT LEAST  $\frac{1}{2}$ " OF MORTAR
  - B. PRESS STONE FIRMLY INTO PLACE, MAKING EXTRA MORTAR TO OOZE OUT\*.
    - \*THIS EXTRA MORTAR MAY BE USED TO CREATE YOUR GROUT JOINTS, IF EXTRA IS NOT USED FOR JOINTS, THE JOINTS CAN BE FILLED WITH GROUT AFTER THE STONE IS INSTALLED USING A GROUT BACK AND/OR A TUCK POINTING TOOL
- 7. LET STONE SET FOR A LEAST 48 HOURS, THEN CLEAN IN IT'S ENTIRETY WITH A MILD DETERGENT AND A SOFT BRISTLED BRUSH.



RECOMMENDED INSTALLATION FRAMED EXTERIOR WALL LOMBARDIA THIN STONE VENEER

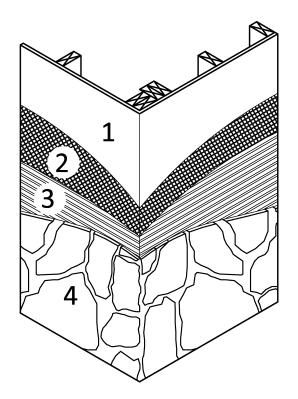


# EXTERIOR CONCRETE / C.M.U. WALL:

- 1. COVER EXTERIOR CONCRETE / C.M.U. (1) WITH A WEATHER RESISTANT VAPOR BARRIER (2), OVERLAPPING A MINIMUM OF 4 INCHES AT JOINTS.
- 2. INSTALL WATER-VENTING MESH (3) PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
- 3. INSTALL EXPANDED METAL LATH (4), AGAIN OVERLAPPING A MINIMUM OF 4 INCHES AND FASTEN WITH GALVANIZED NAILS OR SCREWS AT 6" O.C. VERTICAL AND 16" O.C. HORIZONTAL.
- 4. APPLY A  $\frac{1}{2}$   $\frac{3}{4}$  THICK SCRATCH COAT (5) COMPLETELY COVERING THE METAL LATH, THEN USING A METAL SCRAPER OR SMALL SCRAP OF LATH, LIGHTLY RAKE HORIZONTAL GROOVES INTO THE SCRATCH COAT.
- 5. LET SCRATCH COAT CURE COMPLETELY.
- 6. LOMBARDIA THIN STONE (6) MAY NOW BE APPLIED USING THE FOLLOWING STEPS:
  - A. COVER THE BACK OF EACH STONE WITH AT LEAST  $\frac{1}{2}$ " OF MORTAR
  - B. PRESS STONE FIRMLY INTO PLACE, MAKING EXTRA MORTAR TO OOZE OUT\*.
    - \*THIS EXTRA MORTAR MAY BE USED TO CREATE YOUR GROUT JOINTS, IF EXTRA IS NOT USED FOR JOINTS, THE JOINTS CAN BE FILLED WITH GROUT AFTER THE STONE IS INSTALLED USING A GROUT BACK AND/OR A TUCK POINTING TOOL
- 7. LET STONE SET FOR A LEAST 48 HOURS, THEN CLEAN IN IT'S ENTIRETY WITH A MILD DETERGENT AND A SOFT BRISTLED BRUSH.



RECOMMENDED INSTALLATION EXTERIOR CONCRETE/C.M.U. WALL LOMBARDIA THIN STONE VENEER

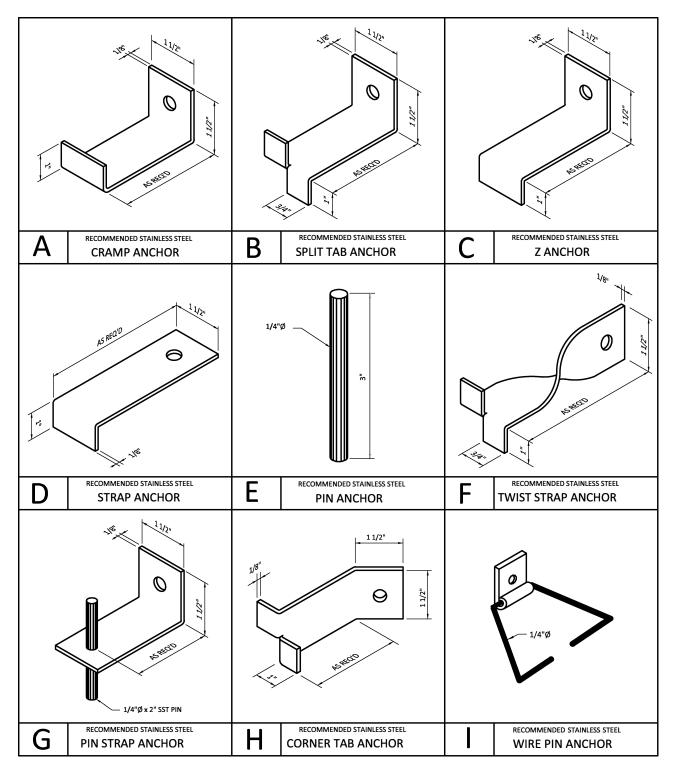


# FRAMED INTERIOR WALL:

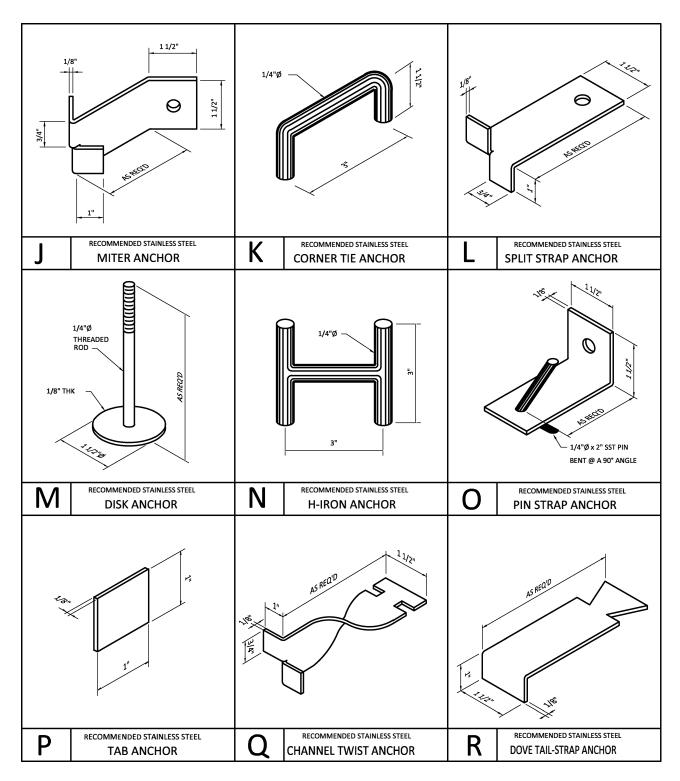
- 1. A WALL BOARD (1) IS NEEDED FOR THE BASE OF THE APPLICATION SURFACE. (I.E. GYPSUM BOARD, CONCRETE BOARD OR PLYWOOD).
- 2. INSTALL EXPANDED METAL LATH (2), OVERLAPPING A MINIMUM OF 4 INCHES AND FASTEN WITH GALVANIZED NAILS OR SCREWS AT 6" O.C. VERTICAL AND 16" O.C. HORIZONTAL. IF USING A CONCRETE BOARD, MOST BUILDING CODES DO NOT REQUIRE THAT METAL LATH OR A SCRATCH COAT BE USED, IF THIS IS THE CASE SKIP THE NEXT TWO STEPS.
- 4. APPLY A  $\frac{1}{2}$   $\frac{3}{4}$  THICK SCRATCH COAT (3) COMPLETELY COVERING THE METAL LATH, THEN USING A METAL SCRAPER OR SMALL SCRAP OF LATH, LIGHTLY RAKE HORIZONTAL GROOVES INTO THE SCRATCH COAT.
- 5. LET SCRATCH COAT CURE COMPLETELY.
- 6. LOMBARDIA THIN STONE (4) MAY NOW BE APPLIED USING THE FOLLOWING STEPS:
  - A. COVER THE BACK OF EACH STONE WITH AT LEAST  $\frac{1}{2}$ " OF MORTAR
  - B. PRESS STONE FIRMLY INTO PLACE, MAKING EXTRA MORTAR TO OOZE OUT\*.
    - \*THIS EXTRA MORTAR MAY BE USED TO CREATE YOUR GROUT JOINTS, IF EXTRA IS NOT USED FOR JOINTS, THE JOINTS CAN BE FILLED WITH GROUT AFTER THE STONE IS INSTALLED USING A GROUT BACK AND/OR A TUCK POINTING TOOL
- 7. LET STONE SET FOR A LEAST 48 HOURS, THEN CLEAN IN IT'S ENTIRETY WITH A MILD DETERGENT AND A SOFT BRISTLED BRUSH.



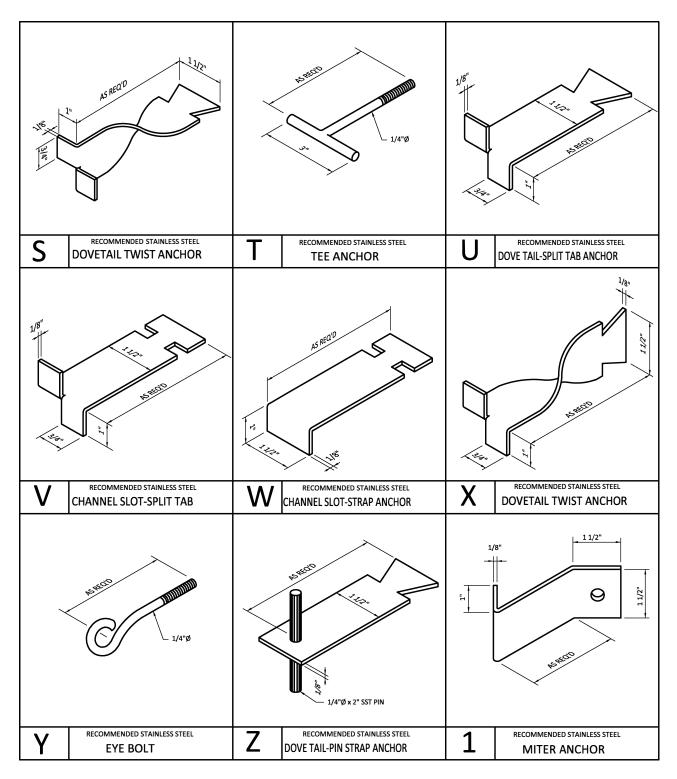
RECOMMENDED INSTALLATION FRAMED INTERIOR WALL LOMBARDIA THIN STONE VENEER



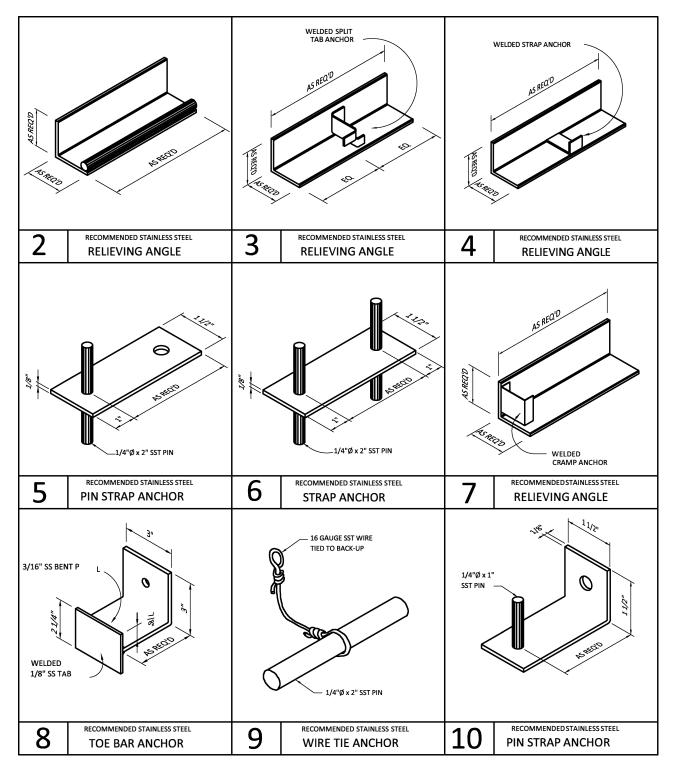




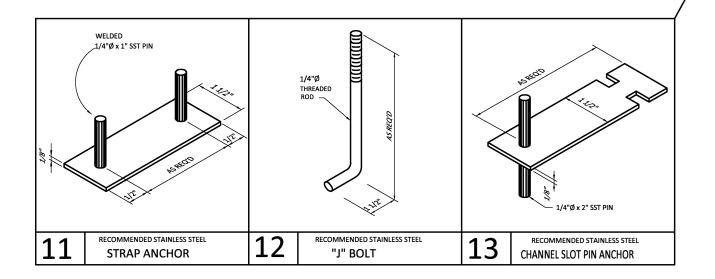












THE MAIN PURPOSE OF STONE ANCHORS IS TO HOLD THE STONE IN PLACE; IT IS RECOMMENDED THAT ALL ANCHORING AND BACK-UP SYSTEMS BY REVIEWED BY AN LICENSED ENGINEER.



**ANCHOR LIBRARY** 

INTERIOR APPLIC	ATION		
COLOR	WIDTH	LENGTH	HEIGHT
KASOTA GOLD	2"	4'-0"	3'-0"
BLEND	11⁄4"	2'-0"	2'-0"
KASOTA AMBER	2"	4'-0"	3'-0"
BLEND	11⁄4"	2'-0"	2'-0"
KASOTA ASH	2"	4'-0"	2'-0"
BLEND	11⁄4"	2'-0"	2'-0"
	2"	3'-0"	2'-0"
KASOTA CREAM BLEND	1 <sup>1</sup> /4"	2'-0"	2'-0"
		1	
KASOTA ROSE	2"	2'-6"	2'-0"
BLEND	11⁄4"	2'-0"	2'-0"
	2" 1'-0"		1'-0"
KASOTA SUNSET BLEND	11⁄4"	1'-0"	1'-0"
	2"	2'-0"	2'-0"
KASOTA SUNRISE BLEND	 1¼"	2'-0"	1'-0"

EXTERIOR APPLIC	ATION		
COLOR	WIDTH	LENGTH	HEIGHT
KASOTA GOLD	3"	4'-0"	3'-0"
BLEND	2 <sup>1</sup> /2"	4'-0"	3'-0"
	2"	4'-0"	3'-0"
	1½"	2'-0"	2'-6"
KASOTA AMBER	3"	4'-0"	3'-0"
BLEND	2 <sup>1</sup> /2"	4'-0"	3'-0"
	2"	4'-0"	3'-0"
		3'-0"	2'-6"
'		1	1
KASOTA ASH	3"	4'-0"	3'-0"
BLEND	2 <sup>1</sup> /2"	4'-0"	3'-0"
	2"	4'-0"	2'-0"
	11/2"	2'-0"	2'-0"
KASOTA CREAM BLEND	3"	3'-0"	2'-0"
	2 <sup>1</sup> /2"	3'-0"	2'-0"
	2"	3'-0"	2'-0"
	1½"	2'-0"	2'-0"
	3"	2'-6"	2'-0"
KASOTA ROSE BLEND	2 <sup>1</sup> /2"	2-6 2'-6"	2 -0
	<u>272</u> 2"		
		2'-6" 2'-0"	2'-0" 2'-0"
	-12	2-0	2-0
	3"	1'-0"	1'-0"
KASOTA SUNSET BLEND	2 <sup>1</sup> /2"	1'-0"	1'-0"
	2"	1'-0"	1'-0"
	1 <sup>1</sup> ⁄2"	1'-0"	1'-0"
		21 01	21.0"
KASOTA SUNRISE BLEND	3" 2 <sup>1</sup> /2"	2'-0"	2'-0"
		2'-0"	2'-0"
	2" 1 <sup>1</sup> ⁄2"	2'-0" 2'-0"	2'-0" 1'-0"
	-12	2-0	

# HONG LONG

# NOTES:

\*SIZES SHOWN MAY VARY WITH CURRENT QUARRY CONDITIONS

\*CONTACT MKS OFFICES FOR SIZES OR THICKNESSES OTHER THAN SHOWN



VENEER SIZE LIMITATIONS CUT: FLEURI

INTERIOR APPLICATION				
COLOR	WIDTH	LENGTH	HEIGHT	
KASOTA GOLD BLEND	2"	3'-0"	2'-3"	
	1 <sup>1</sup> ⁄4"	2'-0"	2'-0"	
KASOTA AMBER	2"	4'-0"	3'-0"	
BLEND	1 <sup>1</sup> ⁄4"	3'-6"	3'-0"	
		4.00		
KASOTA ASH BLEND	2"	4'-0"	2'-0"	
BLEND	1 <sup>1</sup> ⁄4"	3'-0"	2'-0"	
KASOTA CREAM	2"	3'-0"	2'-0"	
BLEND	1 <sup>1</sup> ⁄4"	2'-0"	2'-0"	
	2"	2'-0"	2'-0"	
KASOTA ROSE BLEND	_			
DLEIND	11⁄4"	2'-0"	2'-0"	
	2"	1'-0"	1'-0"	
KASOTA SUNSET BLEND	_			
	11⁄4"	1'-0"	1'-0"	
	2"	2'-0"	2'-0"	
KASOTA SUNRISE BLEND	1 <sup>1</sup> ⁄4"	2'-0"	1'-6"	

EXTERIOR APPLIC	ATION		
COLOR	WIDTH	LENGTH	HEIGHT
KASOTA GOLD	3"	4'-0"	2'-3"
BLEND	2 <sup>1</sup> /2"	3'-0"	2'-3"
	2"	3'-0"	2'-3"
	1½"	2'-0"	2'-0"
	3"	4'-0"	3'-0"
KASOTA AMBER BLEND	2 <sup>1</sup> /2"	4 -0 4'-0"	3'-0"
	<u>- 272</u> 2"	4'-0"	3'-0"
-		3'-6"	3'-0"
	• 2	1	ıJ
KASOTA ASH	3"	4'-0"	2'-0"
BLEND	2 <mark>1/</mark> 2"	4'-0"	2'-0"
	2"	4'-0"	2'-0"
	11/2"	3'-0"	2'-0"
	3"	3'-0"	2'-0"
KASOTA CREAM BLEND	2 <sup>1</sup> /2"	3'-0"	2 -0 2'-0"
	<u>272</u> 2"	3'-0"	2'-0"
-	1 <sup>1</sup> //"	2'-0"	2'-0"
	-72		
KASOTA ROSE	3"	2'-0"	2'-0"
BLEND	2 <sup>1</sup> /2"	2'-0"	2'-0"
	2"	2'-0"	2'-0"
	1½"	2'-0"	2'-0"
	3"	1'-0"	1'-0"
KASOTA SUNSET BLEND	2 <sup>1</sup> ⁄2"	1'-0"	1'-0"
	272	1'-0"	1'-0"
	1 <sup>1</sup> //"	1'-0"	1'-0"
	· L	I	I
KASOTA SUNRISE BLEND	3"	2'-0"	2'-0"
KASUTA SUINKISE BLEND	2 <mark>1/</mark> 2"	2'-0"	2'-0"
	2"	2'-0"	2'-0"
	1½"	2'-0"	2'-0"

# HOIH

LONG

20

# NOTES:

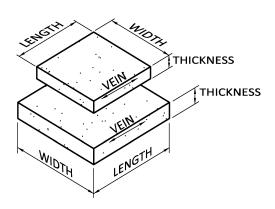
\*SIZES SHOWN MAY VARY WITH CURRENT QUARRY CONDITIONS

\*CONTACT MKS OFFICES FOR SIZES OR THICKNESSES OTHER THAN SHOWN



VENEER SIZE LIMITATIONS CUT: VEINE

INTERIOR APPLICA	ATION			EXTERIOR APPLICA	ATION		
COLOR	THICK	LENGTH	HEIGHT	COLOR	THICK	LENGTH	HEIG
KASOTA GOLD	11⁄2"	2'-0"	2'-0"	KASOTA GOLD	(NA)	(NA)	(NA
BLEND	1"	1'-0"	1'-0"	BLEND			
KASOTA AMBER	11/2"	2'-0"	2'-0"	KASOTA AMBER	2"+	2'-6"	2'-6
BLEND	1"	1'-0"	1'-0"	BLEND			
KASOTA ASH	1 <sup>1</sup> /2"	2'-0"	2'-0"	KASOTA ASH	2"+	2'-6"	2'-6
BLEND	1"	1'-0"	1'-0"	BLEND			
KASOTA CREAM	11/2"	2'-0"	2'-0"	KASOTA CREAM	2"+	2'-6"	2'-6
BLEND	1"	1'-0"	1'-0"	BLEND			
KASOTA ROSE	11/2"	2'-0"	2'-0"	KASOTA ROSE	2"+	2'-6"	2'-6
BLEND	1"	1'-0"	1'-0"	BLEND			
	1 <sup>1</sup> /2"	1'-0"	1'-0"		2"+	1'-0"	1'-0
KASOTA SUNSET BLEND	1"	1'-0"	1'-0"	KASOTA SUNSET BLEND			
	11/2"	1'-0"	2'-0"		2"+	1'-0"	2'-0
KASOTA SUNRISE BLEND	17 <u>2</u> 1"	1-0	2 -0	KASOTA SUNRISE BLEND	2 +	1-0	2-0



# NOTES:

\*SIZES SHOWN MAY VARY WITH CURRENT QUARRY CONDITIONS

\*CONTACT MKS OFFICES FOR SIZES OR THICKNESSES OTHER THAN SHOWN



PAVER SIZE LIMITATIONS CUT: FLEURI