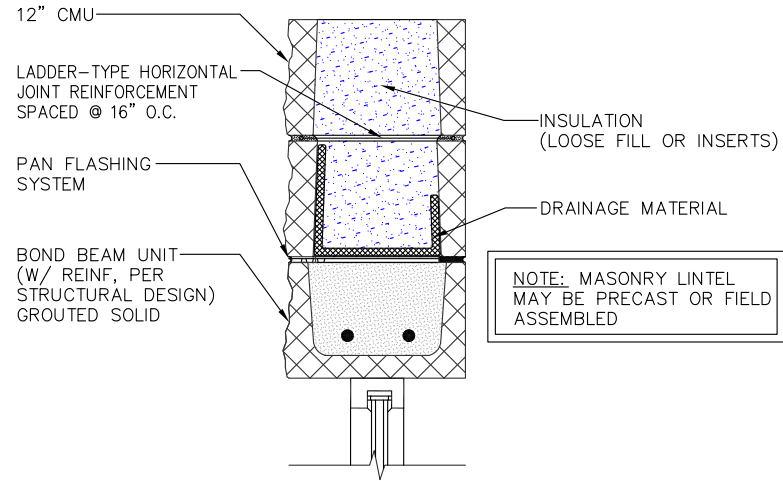
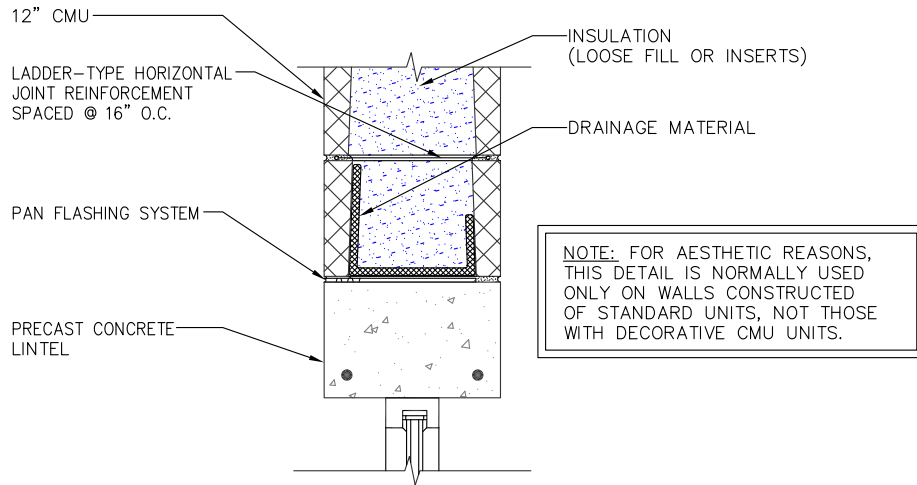


NOTES:

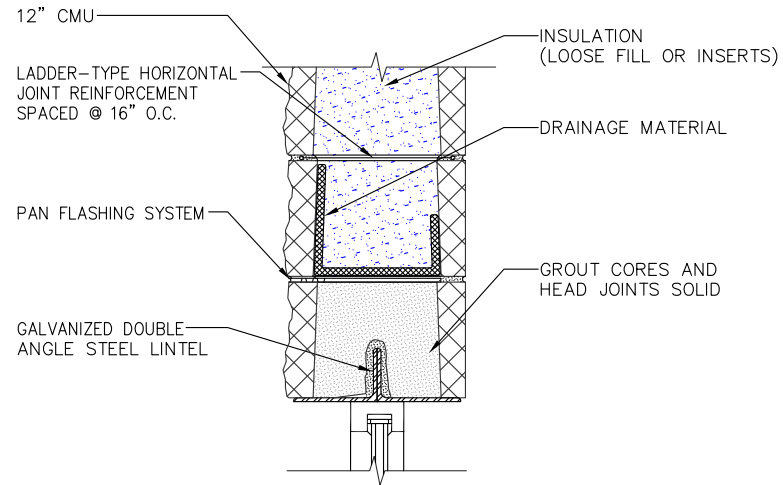
- 1) CONTINUE PAN FLASHING SYSTEM A MINIMUM OF ONE CELL BEYOND BOTH JAMB EDGES OF THE OPENING.
- 2) UNPROTECTED ALUMINUM DOOR AND WINDOW FRAMES CAN INTERACT WITH CEMENT-BASED MATERIALS AND INCUR DAMAGE. SEE PCA "MASONRY TODAY" VOLUME II, No. 1 FOR RECOMMENDATIONS.
(www.cement.org/masonry/cc_al_frames.asp)



3A MASONRY LINTEL (PREFERRED)
A-1

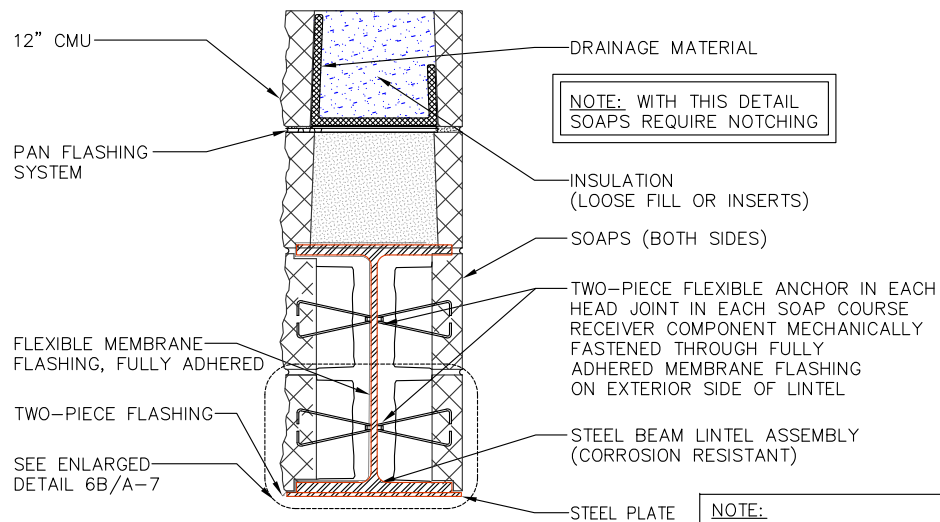


3C PRECAST CONCRETE LINTEL
A-1

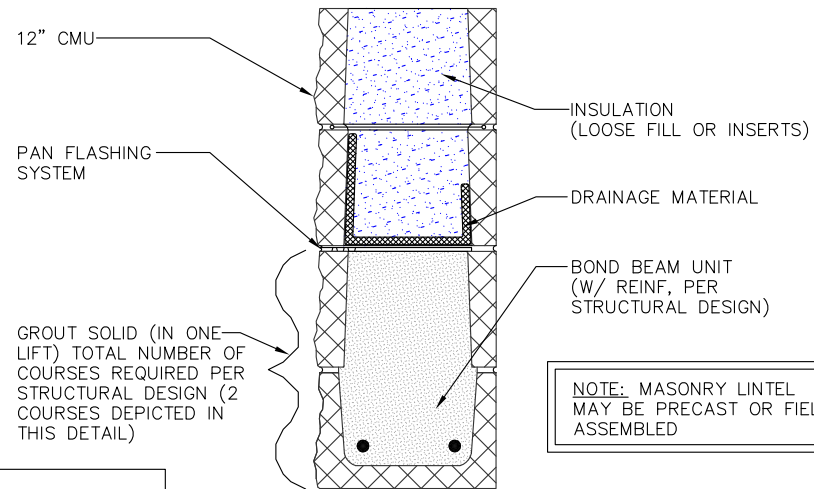


3B DOUBLE ANGLE STEEL LINTEL
A-1

SHORT SPAN LINTELS

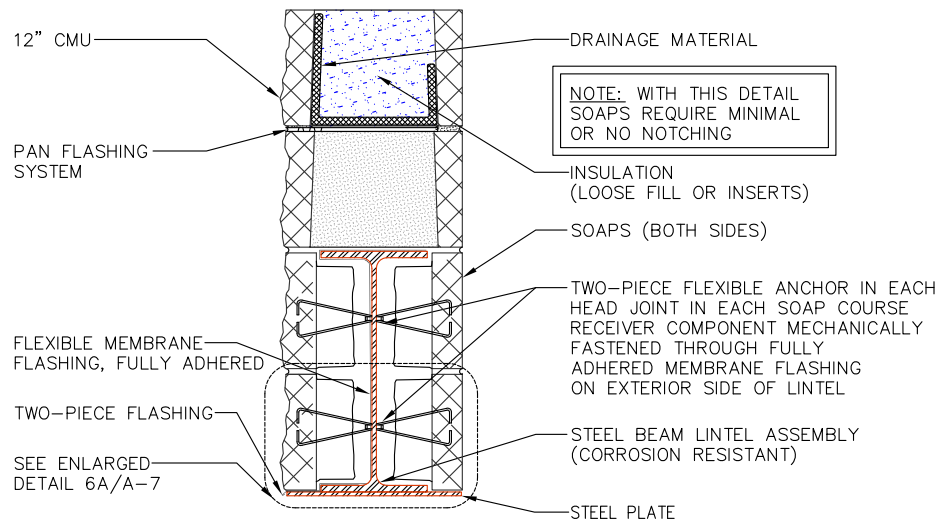


4D
A-1
WIDE FLANGE
16" STEEL LINTEL
(W16 SERIES)

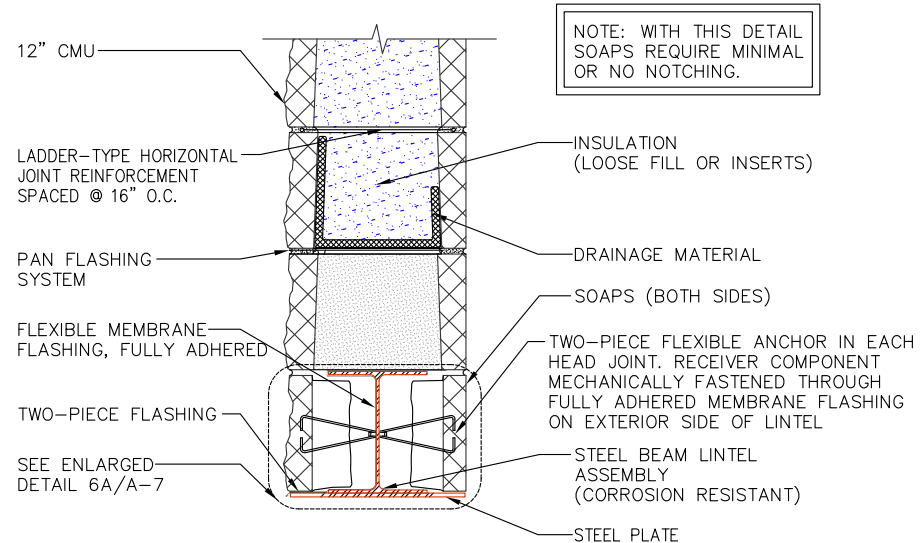


4A
A-1
MASONRY LINTEL (PREFERRED)
(W16 SERIES)

NOTE:
UNPROTECTED ALUMINUM DOOR AND
WINDOW FRAMES CAN INTERACT WITH
CEMENT-BASED MATERIALS AND INCUR
DAMAGE. SEE PCA "MASONRY TODAY"
VOLUME II, No. 1 FOR
RECOMMENDATIONS.
(www.cement.org/masonry/cc_al_frames.asp)

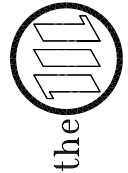


4C
A-1
NARROW FLANGE
16" STEEL LINTEL
(W16 SERIES)



4B
A-1
8" STEEL LINTEL
(W8 SERIES)

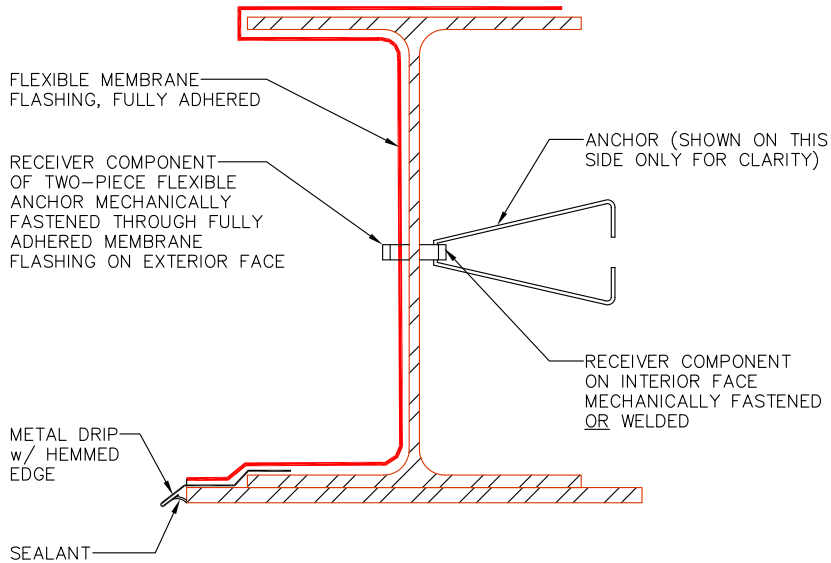
LONG SPAN LINTELS



IN CHARGE:	
DRAWN:	M.W.F.
APPROVED:	
DATE:	05/03/2011
TITLE:	LONG SPAN LINTEL DETAILS
SHEET:	A-5

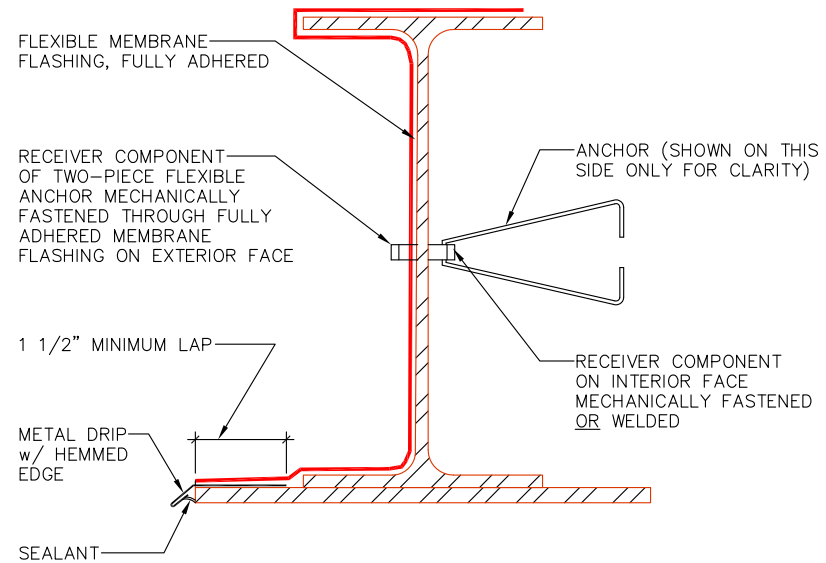
NOTE: THIS DETAIL PERTAINS TO STEEL LINTELS W/ FLANGE WIDTHS OF 5 1/4" TO 5 1/2". FOR NARROW FLANGE WIDTHS, SEE DETAIL 6A. FOR FLANGE WIDTHS GREATER THAN 5 1/2" THE METAL DRIP EDGE LIKELY WILL NEED TO BE OMITTED.

(CMU NOT SHOWN FOR CLARITY)

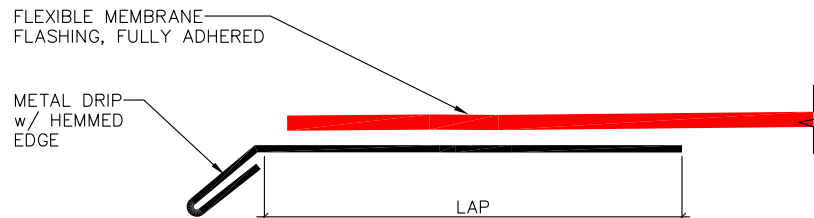


6B
A-5
ENLARGED FLASHING DETAIL AT WIDE FLANGE STEEL LINTELS

(CMU NOT SHOWN FOR CLARITY)



6A
A-5
ENLARGED FLASHING DETAIL AT NARROW FLANGE STEEL LINTELS



6C
A-5
ENLARGED TWO-PIECE FLASHING DETAIL

IN CHARGE:	
DRAWN:	M.W.F.
APPROVED:	
DATE:	05/03/2011
TITLE:	TWO-PIECE FLASHING DETAILS
SHEET:	A-7

NOTE: 8" BEARING IS SHOWN AND IS TYPICAL, BUT SHOULD BE INCREASED IF NECESSARY BASED ON STRUCTURAL BEARING CALCULATIONS

STEEL REINFORCEMENT
IN SOLID GROUTED CELLS

CONTROL JOINT (BACKER ROD
AND SEALANT)

GROUT SOLID (IN ONE
LIFT) TOTAL NUMBER OF
COURSES REQUIRED PER
STRUCTURAL DESIGN (3
COURSES DEPICTED IN
THIS DETAIL)

LINTEL STEEL
REINFORCEMENT

MASONRY LINTEL
(MAY BE PRE-CAST
OR FIELD ASSEMBLED)

SLIP PLANE
(BACKER ROD & SEALANT)

GROUT SOLID UNDER
LINTEL BEARING AS REQUIRED

OPENING

ELEVATION VIEW

NOTE: EVEN FOR FIELD ASSEMBLED MASONRY LINTELS, DO NOT OVERLAP/INTERLOCK THE LINTEL REINFORCING WITH THE WALL REINFORCING.

PREFORMED CONTROL
JOINT GASKET (SEE
SHEET A-9)

BACKER ROD AND SEALANT
ON BED JOINT ON ALL
THREE EXPOSED FACES

#15 FELT (BOND BREAKER)

JAMB OPENING
FACE

ISOMETRIC VIEW

SLIP PLANE/CONTROL JOINT
@ LONG SPAN MASONRY LINTELS
(SPANS OF APPROXIMATELY 12' UP TO 20')

9

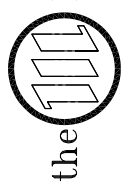
A-10

DAILEY ENGINEERING, INC.
8485 STEPHENSON ROAD
ONSTED, MI 48865

PH. # (517) 467-9000
FAX # (517) 467-9010



the Masonry Institute of Michigan, Inc.



GENERIC WALL DESIGN - 12" SINGLE WYTHE CMU

IN CHARGE:

DRAWN: M.W.F.

APPROVED:

DATE: 05/03/2011

TITLE:

SLIP PLANE/
CONTROL JOINT
@ MASONRY LINTELS

SHEET:

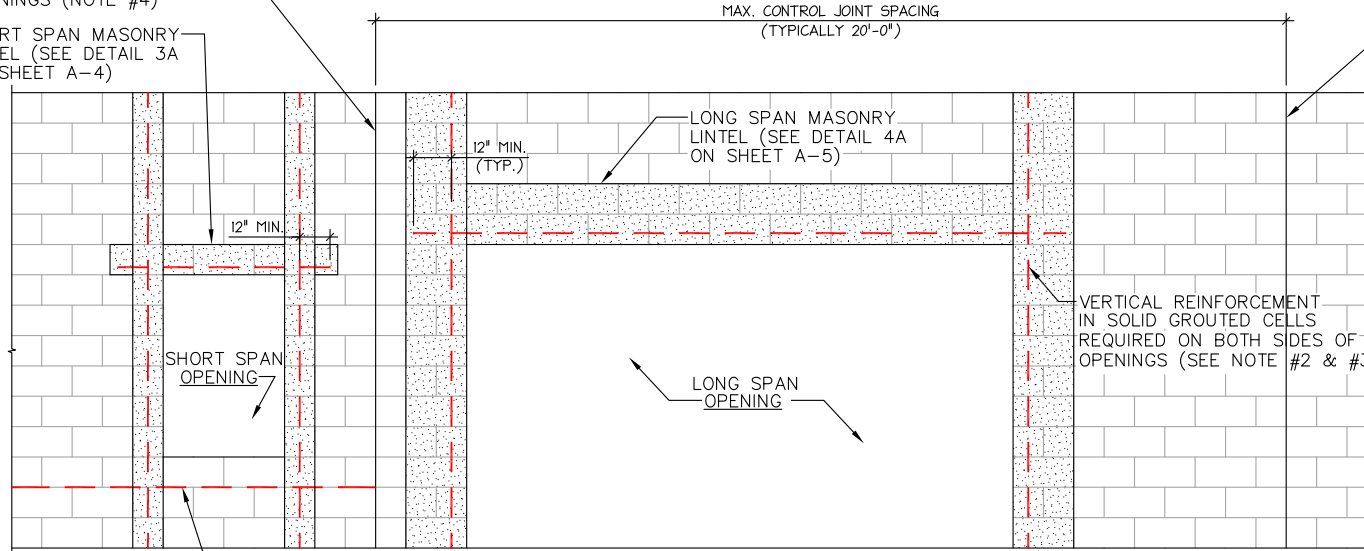
A-10

CONTROL JOINT (LOCATED AWAY FROM EDGE OF WALL OPENINGS (NOTE #4))

SHORT SPAN MASONRY LINTEL (SEE DETAIL 3A ON SHEET A-4)

MAX. CONTROL JOINT SPACING (TYPICALLY 20'-0")

CONTROL JOINT (LOCATED AWAY FROM EDGE OF WALL OPENINGS (NOTE #4))



LADDER JOINT REINFORCEMENT IN MORTAR JOINT BELOW SILL FROM CONTROL JOINT TO CONTROL JOINT

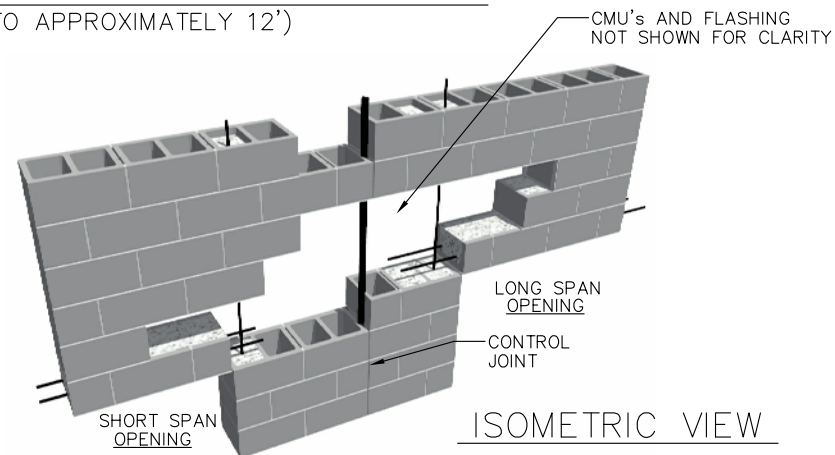
ELEVATION VIEW

11
A-12

REINFORCED MASONRY OPENINGS & ASSOCIATED CONTROL JOINT DESIGN (SPANS UP TO APPROXIMATELY 12')

NOTES:

- 1) TRADITIONALLY, CONTROL JOINTS HAVE TYPICALLY BEEN LOCATED AT OR VERY CLOSE TO THE SIDES OF OPENINGS. HOWEVER IT IS THE MIM'S PREFERENCE FOR CONTROL JOINTS TO BE LOCATED AWAY FROM THE EDGE OF OPENINGS AND TO ADD REINFORCEMENT AROUND THE OPENINGS.
- 2) FOR BEST PERFORMANCE, THE VERTICAL REINFORCEMENT SHOULD BE PREFERABLY PLACED IN THE CELL IMMEDIATELY ADJACENT TO THE OPENING. HOWEVER IF THIS CELL IS CONGESTED, THE VERTICAL REINFORCEMENT MAY BE PLACED IN THE 2nd. CELL FROM THE OPENING.
- 3) ON LONG SPAN OPENINGS IT IS RECOMMENDED TO GROUT BOTH THE 1st. AND 2nd. CELLS FROM THE OPENING TO PROVIDE ADDITIONAL RESISTANCE FOR ATTACHING THE DOOR OR WINDOW FRAME.
- 4) FOR CONTROL JOINT DETAILS SEE SHEET A-9.



ISOMETRIC VIEW

DAILY ENGINEERING, INC.
8485 STEPHENSON ROAD
ONSTED, MI 48865
PH. # (517) 467-9000
FAX # (517) 467-9010



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GENERIC WALL DESIGN - 12" SINGLE WYTHE CMU

IN CHARGE:	
DRAWN:	M.W.F.
APPROVED:	
DATE:	05/03/2011
TITLE:	REINFORCED MASONRY OPENING & ASSOCIATED CONTROL JOINT DESIGN
SHEET:	A-12