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 INFLICT DAMAGE. SEE PCA "MASONRY TODAY" VOLUME II, NO. 1 FOR RECOMMENDATIONS.
(www.cement.org/masonry/cc_al_frames.asp)

12" CMU
LADDER-TYPE HORIZONTAL JOINT REINFORCEMENT SPACED @ 16" O.C.
PAN FLASHING SYSTEM
BOND BEAM UNIT (W/ REINF. PER STRUCTURAL DESIGN) GROUTED SOLID
INSULATION (LOOSE FILL OR INSERTS)
DRAINAGE MATERIAL
NOTE: MASONRY LINTEL MAY BE PRECAST OR FIELD ASSEMBLED

3A MASONRY LINTEL (PREFERRED)
A-1

12" CMU
LADDER-TYPE HORIZONTAL JOINT REINFORCEMENT SPACED @ 16" O.C.
PAN FLASHING SYSTEM
PRECAST CONCRETE LINTEL
INSULATION (LOOSE FILL OR INSERTS)
DRAINAGE MATERIAL
NOTE: FOR AESTHETIC REASONS, THIS DETAIL IS NORMALLY USED ONLY ON WALLS CONSTRUCTED OF STANDARD UNITS, NOT THOSE WITH DECORATIVE CMU UNITS.

3C PRECAST CONCRETE LINTEL
A-1
SHORT SPAN LINTELS

12" CMU
LADDER-TYPE HORIZONTAL JOINT REINFORCEMENT SPACED @ 16" O.C.
PAN FLASHING SYSTEM
GALVANIZED DOUBLE ANGLE STEEL LINTEL
INSULATION (LOOSE FILL OR INSERTS)
DRAINAGE MATERIAL
GROUT CORES AND HEAD JOINTS SOLID

3B DOUBLE ANGLE STEEL LINTEL
A-1
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)

ELEVATION VIEW

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

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

ISOMETRIC VIEW

SLIP PLANE/CONTROL JOINT @ LONG SPAN MASONRY LINTELS

A-10 (SPANS OF APPROXIMATELY 12' UP TO 20')

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

#15 FELT (BOND BREAKER)

JAMB OPENING FACE

PREFORMED CONTROL JOINT GASKET (SEE SHEET A-9)
CONTROL JOINT (LOCATED) AWAY FROM EDGE OF WALL OPENINGS (NOTE #4)
SHORT SPAN MASONRY LINTEL (SEE DETAIL 3A ON SHEET A-9)

MAX. CONTROL JOINT SPACING (TYPICALLY 20'-3")
CONTROL JOINT (LOCATED AWAY FROM EDGE OF WALL OPENINGS (NOTE #4)

ELEVATION VIEW
REINFORCED MASONRY OPENINGS & ASSOCIATED CONTROL JOINT DESIGN
(SPANS UP TO APPROXIMATELY 12")

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

SHORT SPAN OPENING

LONG SPAN MASONRY LINTEL (SEE DETAIL 4A ON SHEET A-9)

LONG SPAN OPENING

SHORT SPAN OPENING

LONG SPAN MASONRY LINTEL (SEE DETAIL 4A ON SHEET A-9)

ISOMETRIC VIEW

CMU's AND FLASHING NOT SHOWN FOR CLARITY

NOTES:

1) TRADITIONALLY, CONTROL JOINTS HAVE TYPICALLY BEEN LOCATED AT OR VERY CLOSE TO THE SIDES OF OPENINGS. HOWEVER IT IS THE MM'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.