



# City of Milpitas

Building & Safety Department

DESIGN GUIDELINES

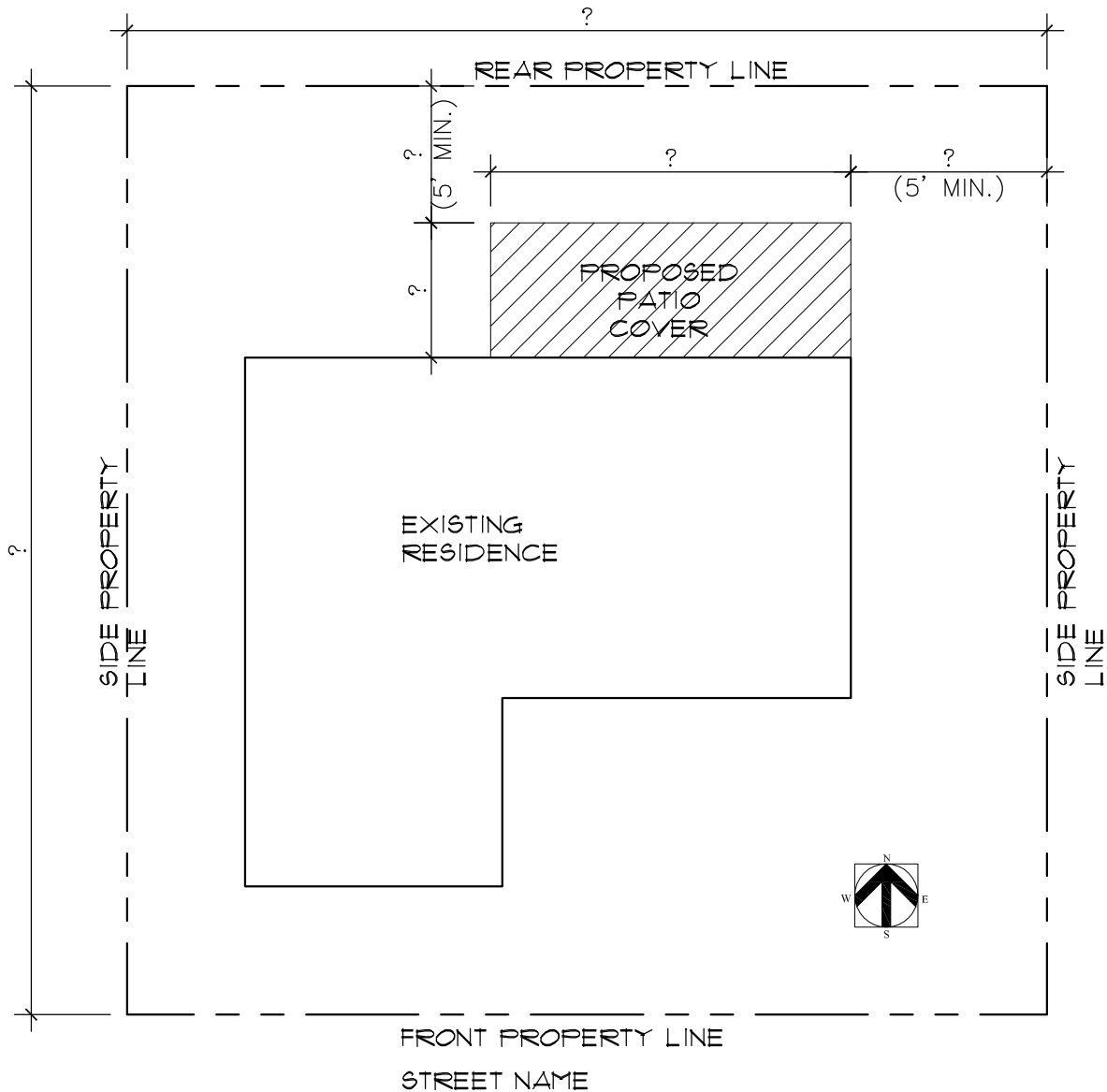
FOR

OPEN PATIO COVER



455 E. Calaveras Blvd.  
Milpitas, CA 95035  
408-586-3240  
[www.ci.milpitas.ca.gov](http://www.ci.milpitas.ca.gov)

REV. APRIL 2017



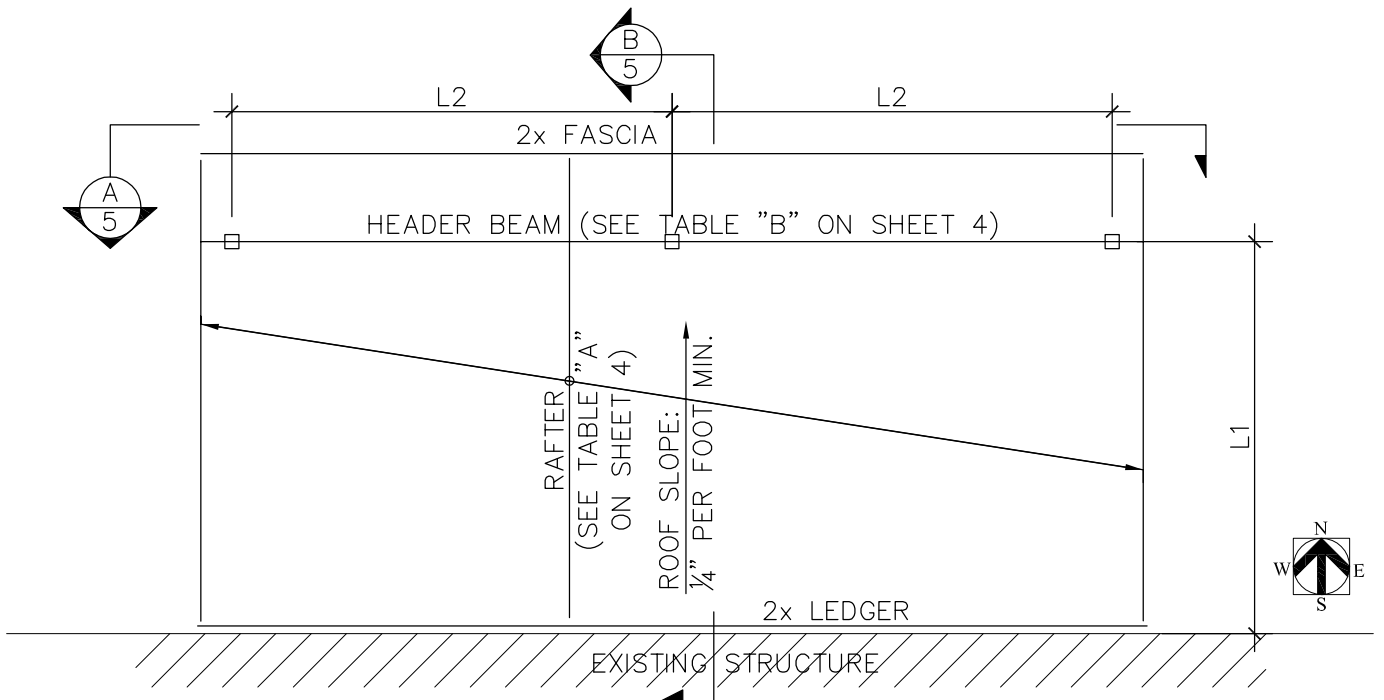
NOTE:

1. PROVIDE PROJECT INFORMATION SUCH AS THE SCOPE OF WORK; THE STREET ADDRESS AND THE NAME OF THE LEGAL OWNER OF THE PROPERTY; THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PERSON WHO PREPARED THE PLANS.
2. SHOW LOT DIMENSIONS AND PROPOSED PATIO COVER DIMENSIONS, AREA, AND DISTANCE TO THE PROPERTY LINES.
3. CHECK WITH THE PLANNING DIVISION (408-586-3279) FOR BUILDING SETBACK REQUIREMENTS. OPEN PATIO COVER IN THE REAR YARD IS LIMITED CUMULATIVELY TO A TOTAL AREA NOT EXCEEDING THIRTY PERCENT (30%) OF THE AREA OF THE REQUIRED REAR YARD. PROJECTION OF EAVES SHALL NOT BE CLOSER THAN THREE (3) FEET TO ANY SIDE OR REAR LOT LINE. HOWEVER, ENCLOSED PATIO COVER SHALL ADHERE TO THE SAME SETBACK AS THE MAIN DWELLING. (MMC XI-10-54.08)
4. CHECK WITH THE ENGINEERING DEPARTMENT (408-586-3300) FOR LOCATION OF ANY EASEMENTS.

REV.	DATE	BY:	SCALE: N.T.S.
1	2/24/10	BYC	DATE: AUG 2009
2	1/2011	BYC/OC	DRAWN BY: BYC
			REVIEWED BY: KI/LS/OC/BK/GA

**City of Milpitas**  
 Building & Safety Department  
**OPEN PATIO COVER**  
**SAMPLE PLOT PLAN**

SHEET  
**1**  
 OF 8 SHEETS

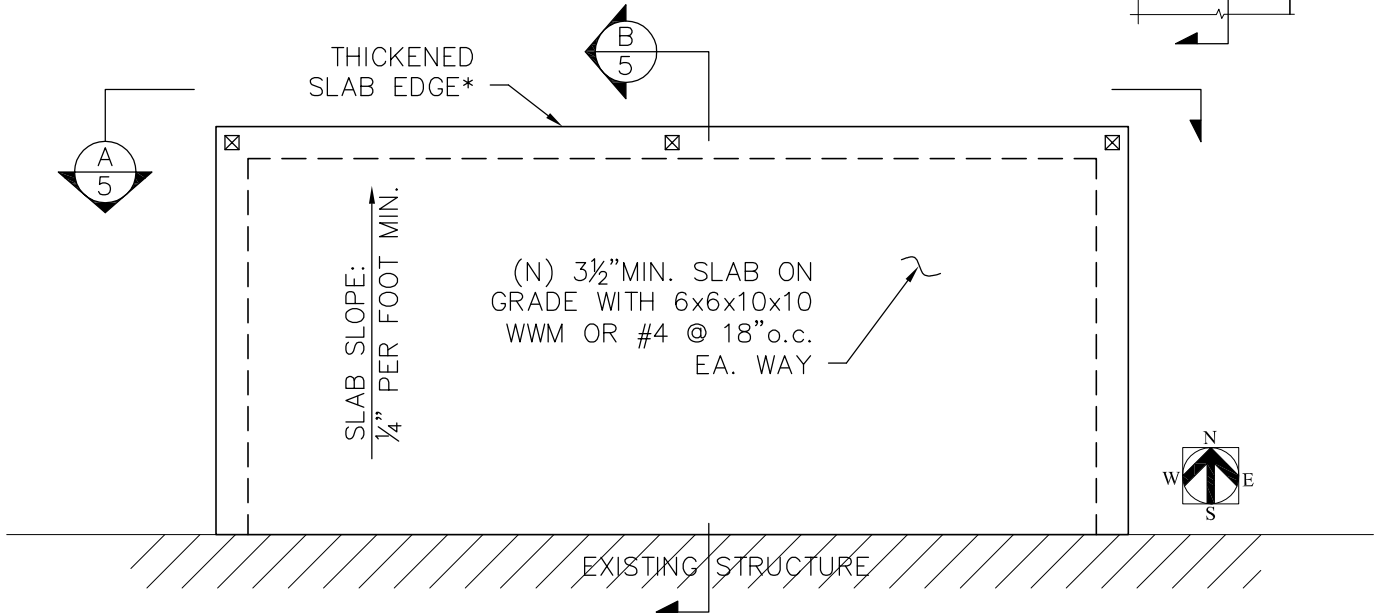
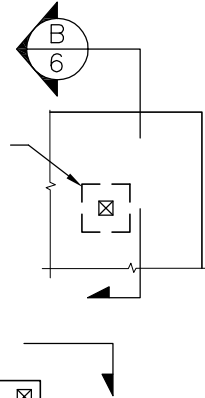


**B** ROOF FRAMING PLAN

SCALE: N.T.S.

\*THICKENED SLAB EDGE OR ISOLATED FOOTING IS NOT REQUIRED WHEN THE COLUMN LOAD DOES NOT EXCEED 750 LB (i.e. ~38 SQ FT TRIB. AREA)

ISOLATED FOOTING\* IS REQUIRED WHEN POST IS NOT LOCATED AT THE THICKENED SLAB EDGE



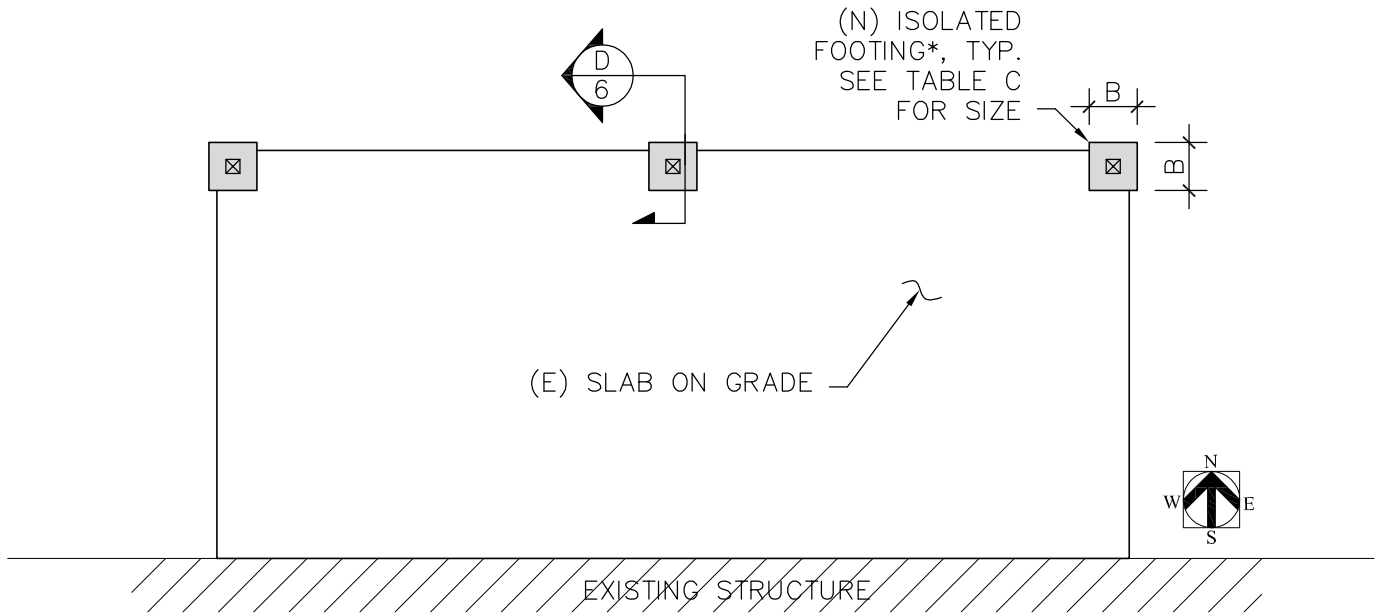
**A** FOUNDATION PLAN AT (N) PATIO SLAB

SCALE: N.T.S.

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1	2/24/10	BYC	DATE: AUG 2009
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**City of Milpitas**  
 Building & Safety Department  
 OPEN PATIO COVER  
 SAMPLE FOUNDATION AND FRAMING PLANS

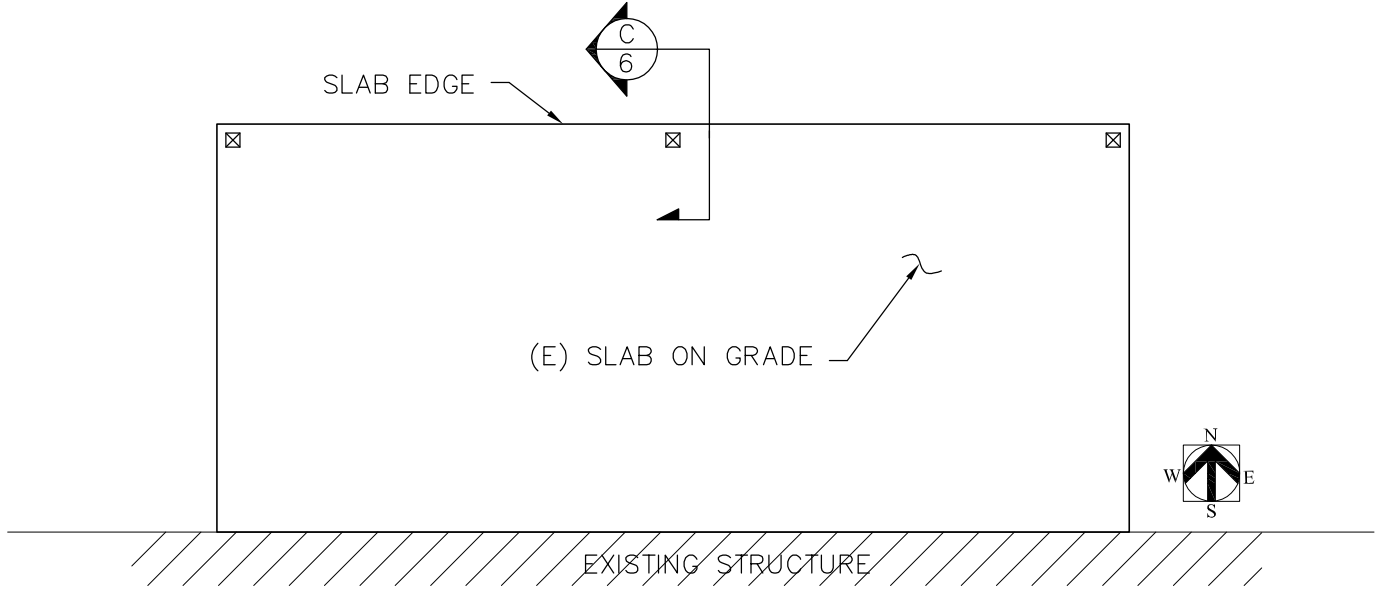
SHEET  
**2**  
 OF 8 SHEETS



\* (N) FOOTING REQUIRED WHEN ANY ONE OF THE CONDITIONS IN DET. A OCCUR

**B** FOUNDATION PLAN AT (E) PATIO SLAB  
CASE 2: (N) FOOTING REQUIRED SCALE: N.T.S.

- CONDITIONS FOR USING (E) SLAB FOR COLUMN SUPPORT:
1. MIN. 3½" SLAB THK.
  2. SLAB IN GOOD CONDITIONS
  3. COLUMN LOAD DOES NOT EXCEED 750 LB (~38 SQ FT TRIB. AREA)



**A** FOUNDATION PLAN AT (E) PATIO SLAB  
CASE 1: NO FOOTING REQUIRED SCALE: N.T.S.

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OPEN PATIO COVER  
SAMPLE FOUNDATION PLAN AT (E) SLAB

NOTES:

TABLE "A"		
RAFTER SPANS "L1" (DOUGLAS FIR LARCH #2 OR BETTER)		
SIZE	SPACING	SPAN
2x4	12" o.c.	10'-0"
	16" o.c.	8'-9"
	24" o.c.	7'-0"
	32" o.c.*	6'-3"*
2x6	12" o.c.	15'-9"
	16" o.c.	13'-9"
	24" o.c.	11'-3"
	32" o.c.*	9'-6"*
2x8	12" o.c.	20'-0"
	16" o.c.	18'-3"
	24" o.c.	14'-9"
	32" o.c.*	12'-9"*
2x10	12" o.c.	20'-0"
	16" o.c.	20'-0"
	24" o.c.	19'-0"
	32" o.c.*	16'-3"*
2-2x4 OR 4x4	24" o.c.	10'-0"
	32" o.c.*	8'-9"*
	48" o.c.*	7'-0"*
2-2x6 OR 4x6	24" o.c.	15'-9"
	32" o.c.*	13'-9"*
	48" o.c.*	11'-3"*
2-2x8 OR 4x8	24" o.c.	20'-0"
	32" o.c.*	18'-3"*
	48" o.c.*	14'-9"*

\* SPACING AND SPAN DENOTED BY ASTERISKS ARE FOR LATTICE TYPE PATIO COVER ONLY.

- LAG SCREWS MUST FULLY ENGAGE A WOOD STUD OR RIM JOIST AND BE PROVIDED WITH APPROPRIATE WASHERS.
- THESE TABLES ARE APPLICABLE TO OPEN PATIO COVER ONLY, NOT FOR ENCLOSED PATIO ENCLOSURE.
- PATIO COVER IN HILLSIDE AREAS SHALL BE DESIGNED BY CALIFORNIA LICENSED ARCHITECT OR ENGINEER FOR A 3-SECOND GUST MINIMUM NOMINAL DESIGN WIND SPEED (V<sub>asd</sub>) OF 95 MPH AND EXPOSURE C
- ALL WEATHER EXPOSED WOOD MEMBERS SHALL BE NATURALLY DURABLE OR PRESSURE TREATED.
- ALL FASTENERS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT DIP GALVANIZED OR STAINLESS STEEL.
- WOOD POSTS, RAFTERS AND BEAMS SHALL BE DOUGLAS FIR LARCH NO. 2 OR BETTER.
- CONCRETE COMPRESSIVE STRENGTH SHALL BE 2500psi MIN. AND REINFORCEMENT YIELD STRENGTH SHALL BE 40ksi MIN.
- ALL METAL CONNECTORS AND HARDWARE SHALL MEET AN APPROVED STANDARD FOR ITS INTENDED USE AND BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- THIS GUIDELINE IS FOR MAX. COLUMN LOAD NOT TO EXCEED 750 POUNDS.
- THE INFORMATION PROVIDED IN THIS DESIGN GUIDE CARRIES NO IMPLIED OR INFERRED GUARANTEE AGAINST FAILURE OR DEFECTS. BY USING THIS DESIGN GUIDE, THE CONTRACTOR/OWNER ACCEPTS THE FULL RESPONSIBILITY OF RISK. ALTERNATE DESIGN MAY BE USED WHEN PROVIDED WITH WET STAMPED AND SIGNED STRUCTURAL CALCULATIONS & DETAILS BY A CALIFORNIA LICENSED ENGINEER OR ARCHITECT.

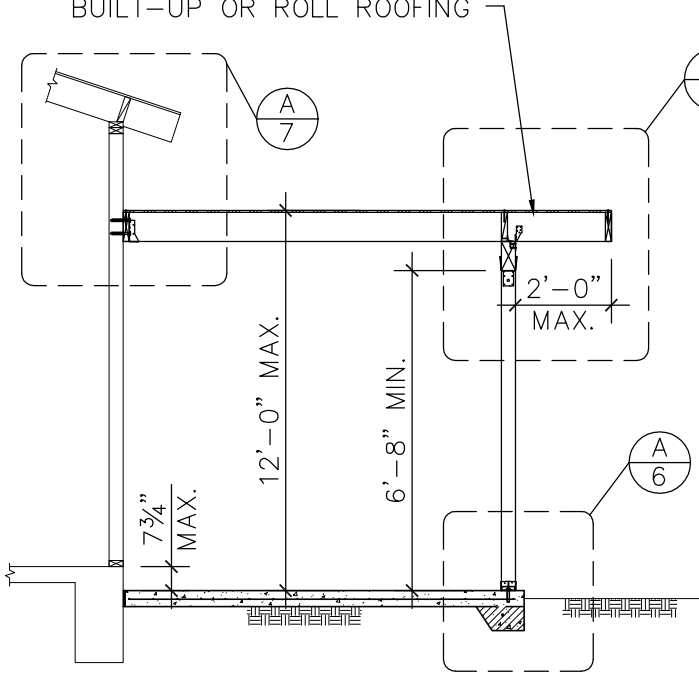
RAFTER SPAN	TABLE "B"		TABLE "C"	TABLE "D"	TABLE "E"
	HEADER SIZE & SPANS "L2" (DOUGLAS FIR LARCH #2 OR BETTER)		FOOTING SIZE	THRU' BOLTS	LEDGER LAG SCREW
	SPAN	SIZE			
UP TO 12'-0"	9'-3"	2-2x6 OR 4X6	12"SQ. x 12"DP.	(2)-1/2"φ @ 1 1/2" o.c.	(1)-1/2"φ x 6 1/2" LONG @ 16" o.c. STAGG.
	12'-0"	2-2x8 OR 4X8	13"SQ. x 12"DP.	(2)-5/8"φ @ 2 1/2" o.c.	
	15'-6"	2-2x10 OR 4X10	14"SQ. x 12"DP.	(2)-5/8"φ @ 3 1/2" o.c.	
	18'-0"	2-2x12 OR 4X12	15"SQ. x 12"DP.	(2)-3/4"φ @ 4 1/2" o.c.	
12'-1" TO 20'-0"	7'-0"	2-2x6 OR 4X6	14"SQ. x 12"DP.	(2)-1/2"φ @ 1 1/2" o.c.	(2)-3/8"φ x 4 1/2" LONG @ 16" o.c.
	9'-3"	2-2x8 OR 4X8	15"SQ. x 12"DP.	(2)-5/8"φ @ 2 1/2" o.c.	
	12'-0"	2-2x10 OR 4X10	16"SQ. x 12"DP.	(3)-1/2"φ @ 2 1/2" o.c.	
	14'-6"	2-2x12 OR 4X12	18"SQ. x 12"DP.	(3)-5/8"φ @ 3" o.c.	

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2	4/2017	OC	REVIEWED BY: KI/LS/OC/BK/GA

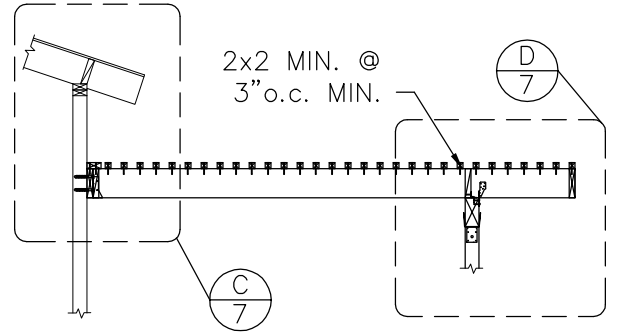
**City of Milpitas**  
 Building & Safety Department  
**OPEN PATIO COVER**  
**SAMPLE SPAN TABLE**

SHEET  
**4**  
 OF 8 SHEETS

1/2" PLYWOOD WITH 8d @ 6" o.c.  
E.N. & @ 12" o.c. F.N. WITH  
BUILT-UP OR ROLL ROOFING



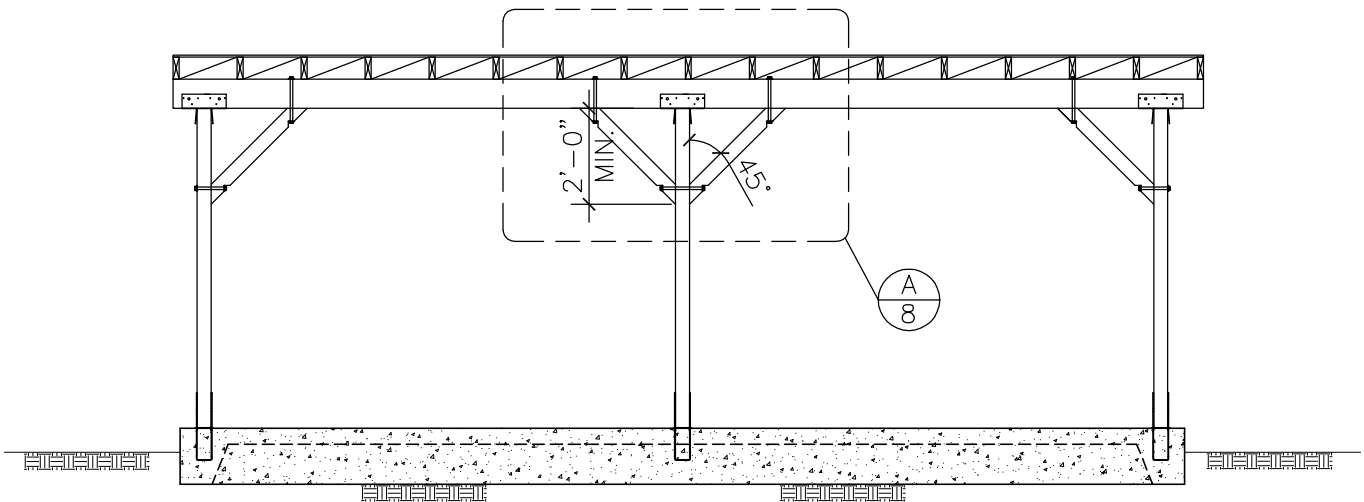
SOLID COVER OPTION



LATTICE COVER OPTION

B PATIO COVER SECTION

SCALE: 1/4"=1'-0"



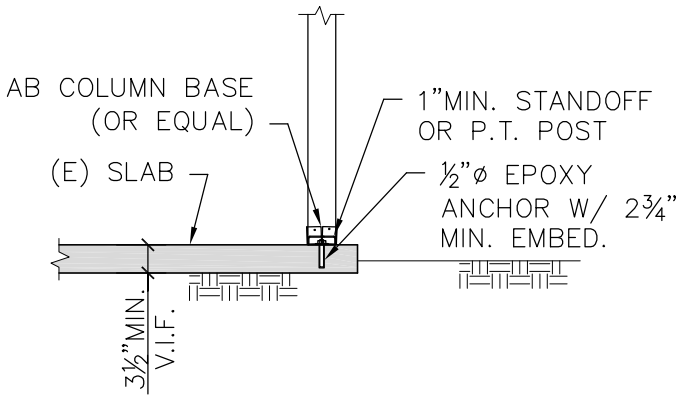
A PATIO COVER ELEVATION

SCALE: 1/4"=1'-0"

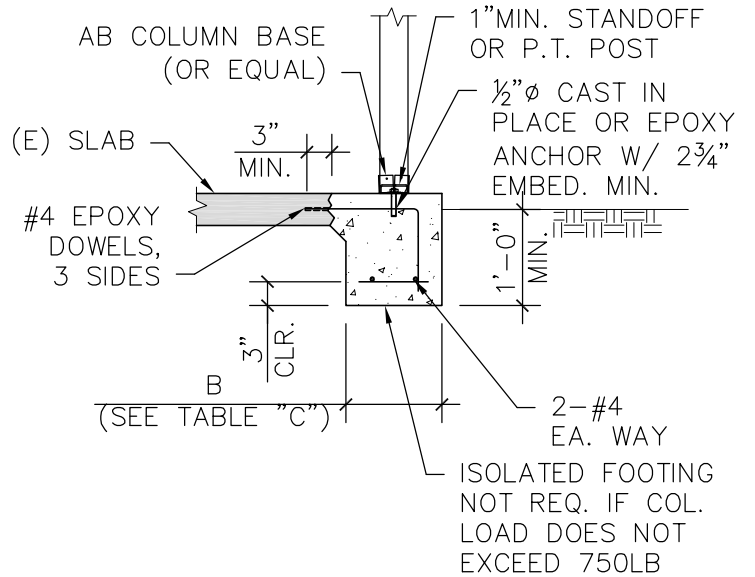
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2	1/20/11	BYC/OC	DRAWN BY: BYC
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 Building & Safety Department  
**OPEN PATIO COVER**  
**SAMPLE SECTIONS AND ELEVATION**

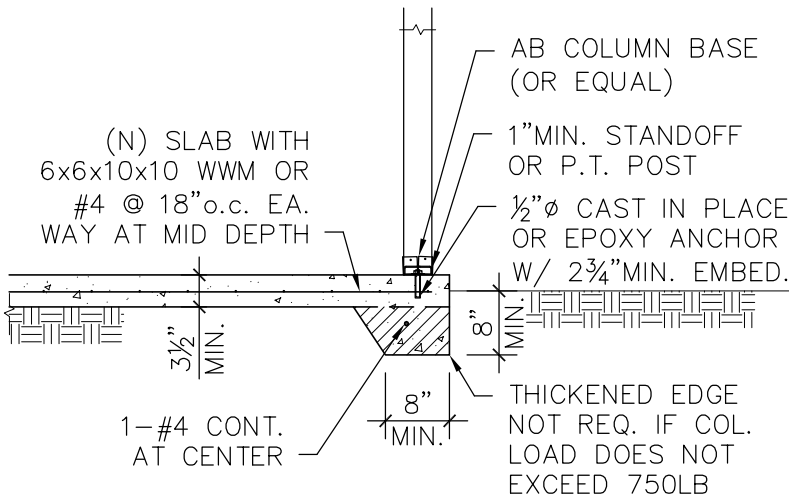
SHEET  
**5**  
 OF 8 SHEETS



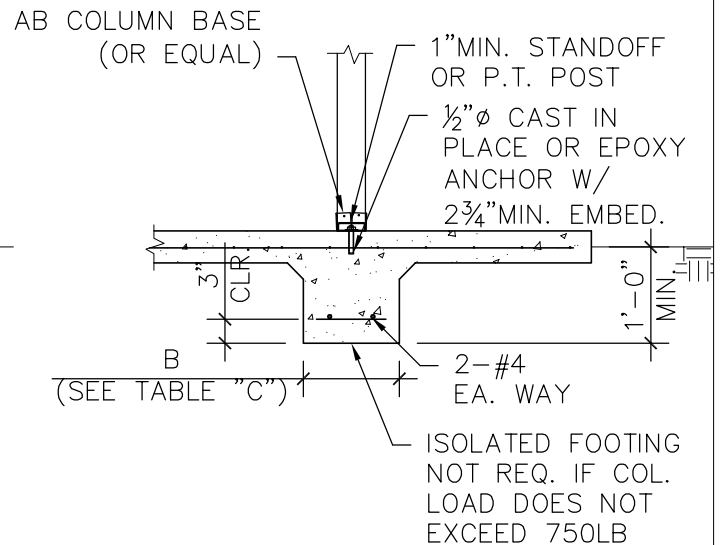
C (N) POST TO (E) SLAB DETAIL  
SCALE: 1/2" = 1'-0"



D (N) ISOLATED FOOTING AT (E) SLAB DETAIL  
SCALE: 1/2" = 1'-0"



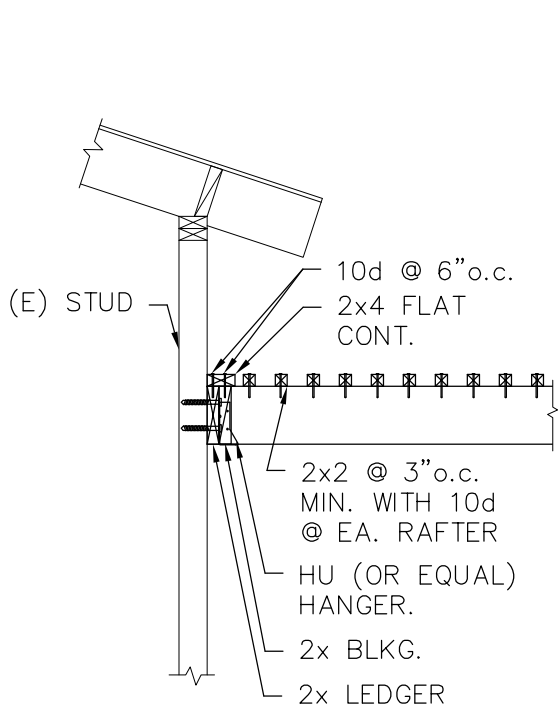
A (N) PATIO SLAB THICKENED EDGE DETAIL  
SCALE: 1/2" = 1'-0"



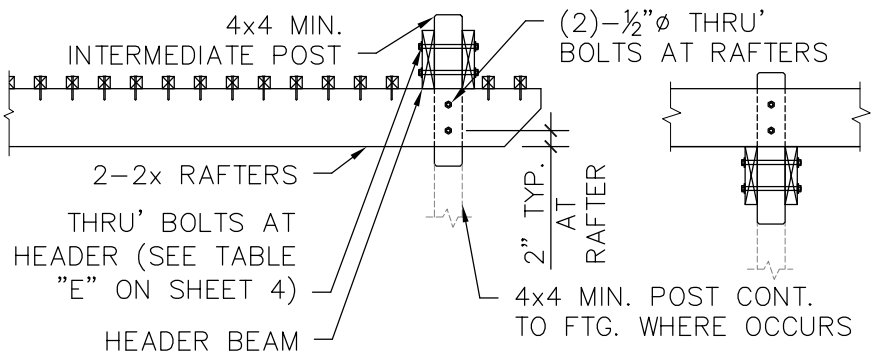
B (N) ISOLATED FOOTING IN (N) PATIO SLAB  
SCALE: 1/2" = 1'-0"

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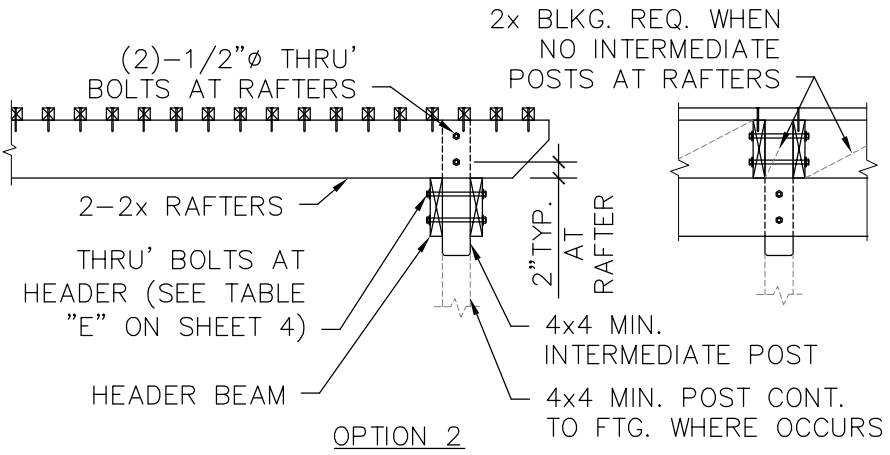
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 OPEN PATIO COVER  
 SAMPLE DETAILS



NOTE:  
SEE DET. A/7 FOR  
DETAILS NOT SHOWN.

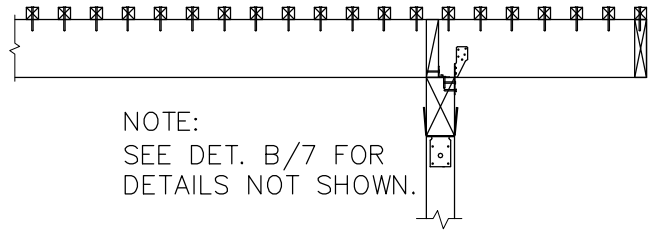


OPTION 3 - INVERTED HEADER



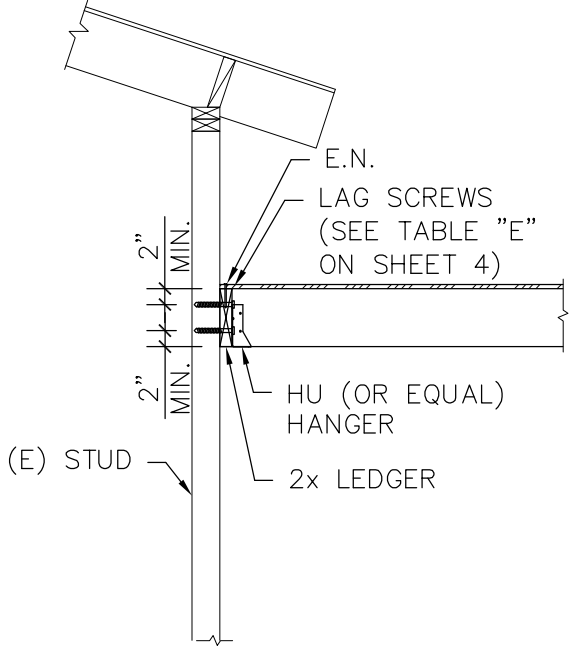
OPTION 2

C LEDGER DETAIL (LATTICE COVER) SCALE: 1/2" = 1'-0"



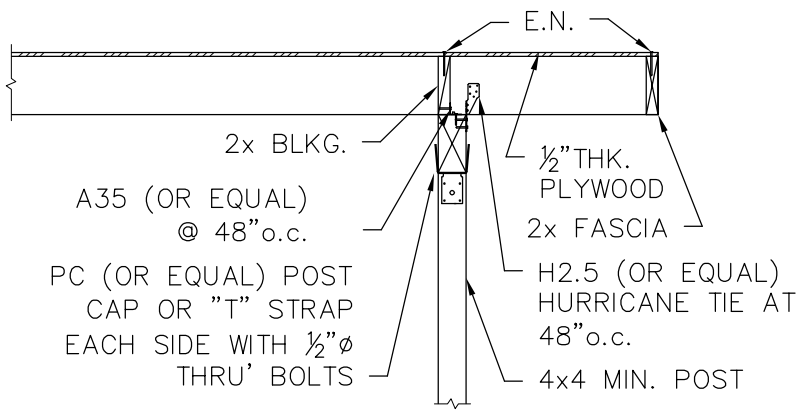
NOTE:  
SEE DET. B/7 FOR  
DETAILS NOT SHOWN.

OPTION 1



A LEDGER DETAIL (SOLID COVER) SCALE: 1/2" = 1'-0"

D BEAM DETAIL (LATTICE COVER) SCALE: 1/2" = 1'-0"



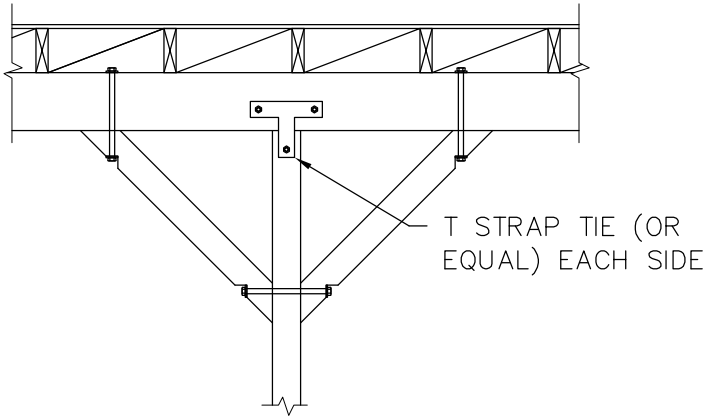
B BEAM DETAIL (SOLID COVER) SCALE: 1/2" = 1'-0"

REV.	DATE	BY:	SCALE: AS NOTED
1	2/24/10	BYC	DATE: AUG 2009
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			REVIEWED BY: KI/LS/OC/BK/GA

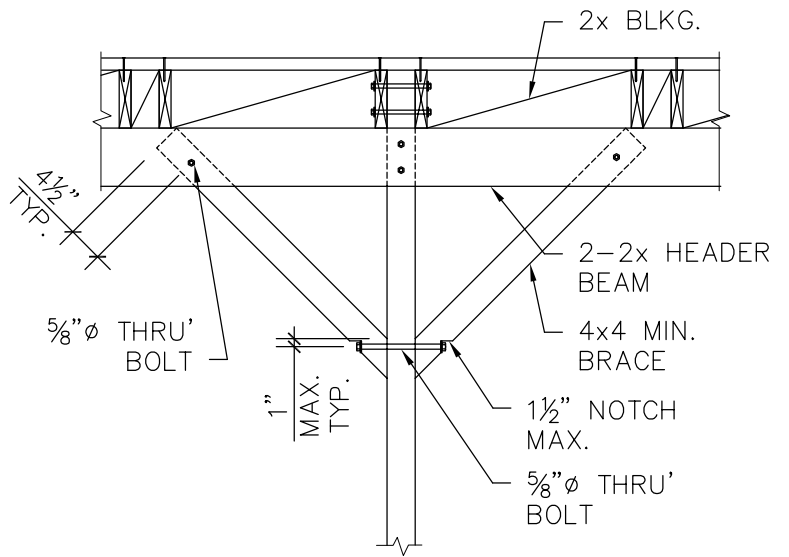
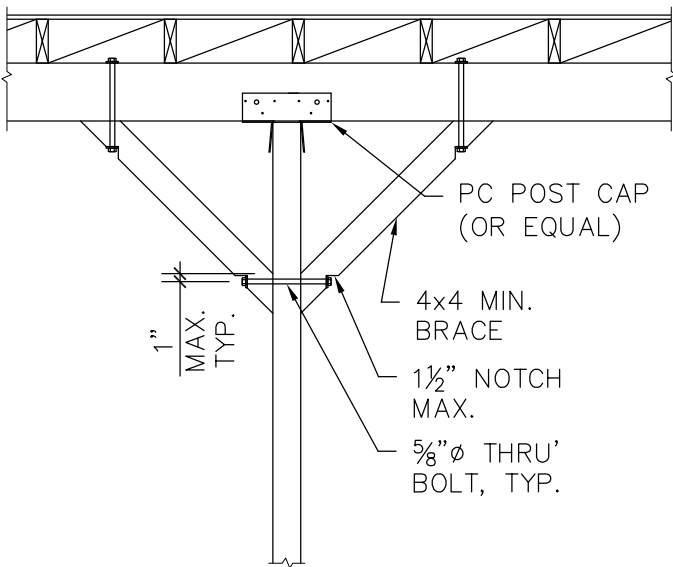
**City of Milpitas**  
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OPEN PATIO COVER  
SAMPLE DETAILS

SHEET  
**7**  
OF 8 SHEETS





T STRAP TIE OPTION



ALTERNATIVE OPTION

A BRACE DETAIL

SCALE: 1/2" = 1'-0"

REV.	DATE	BY:	SCALE: AS NOTED
1	2/24/10	BYC	DATE: AUG 2009
2	1/2011	BYC/OC	DRAWN BY: BYC
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 SAMPLE DETAILS

SHEET  
**8**  
 OF 8 SHEETS