



City of Milpitas
Office of Building Safety
DESIGN GUIDELINE
FOR
UNCONDITIONED DETACHED
ACCESSORY STRUCTURES



455 E. Calaveras Blvd.
Milpitas, CA 95035
408-586-3240
www.milpitas.gov

FEBRUARY 2024

BASED ON
2022 CALIFORNIA CODES

FLOOD ZONE INFORMATION:

FLOOD ZONE: YES NO

IF YES, PROVIDE THE FOLLOWING INFORMATION AND
CONTACT ENGINEERING DEPARTMENT (408-586-3303) FOR
FLOOD ZONE REQUIREMENTS:

BASE FLOOD ELEVATION:

NON-SUBSTANTIAL IMPROVEMENT: YES NO

SUBSTANTIAL IMPROVEMENT: YES NO

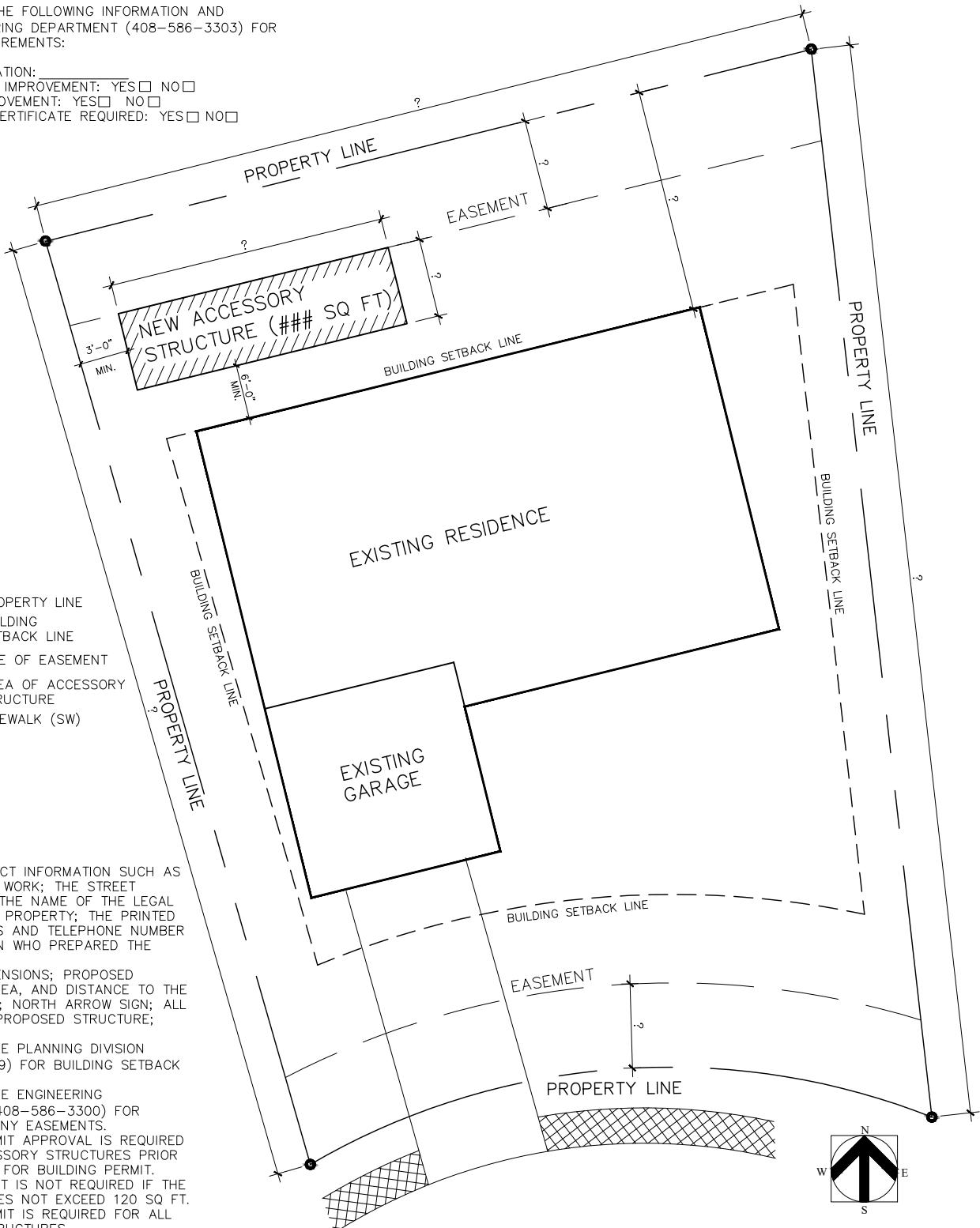
FEMA ELEVATION CERTIFICATE REQUIRED: YES NO

PLAN LEGEND

	PROPERTY LINE
	BUILDING SETBACK LINE
	LINE OF EASEMENT
	AREA OF ACCESSORY STRUCTURE
	SIDEWALK (SW)

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 PRINTED NAME, ADDRESS AND TELEPHONE NUMBER OF THE PERSON WHO PREPARED THE PLANS.
2. SHOW LOT DIMENSIONS; PROPOSED STRUCTURE, AREA, AND DISTANCE TO THE PROPERTY LINE; NORTH ARROW SIGN; ALL EXISTING AND PROPOSED STRUCTURE; PAVED AREAS.
3. CHECK WITH THE PLANNING DIVISION (408-586-3279) FOR BUILDING SETBACK REQUIREMENTS.
4. CHECK WITH THE ENGINEERING DEPARTMENT (408-586-3300) FOR LOCATION OF ANY EASEMENTS.
5. PLANNING PERMIT APPROVAL IS REQUIRED FOR ALL ACCESSORY STRUCTURES PRIOR TO SUBMITTING FOR BUILDING PERMIT.
6. BUILDING PERMIT IS NOT REQUIRED IF THE STRUCTURE DOES NOT EXCEED 120 SQ FT. PLANNING PERMIT IS REQUIRED FOR ALL ACCESSORY STRUCTURES.



SCALE: _____

VER	DATE	BY
1	FEB 2024	JL

City of Milpitas
Office of Building Safety
DETACHED ACCESSORY STRUCTURE
SAMPLE PLOT PLAN

**SHEET
1
OF 6 SHEETS**

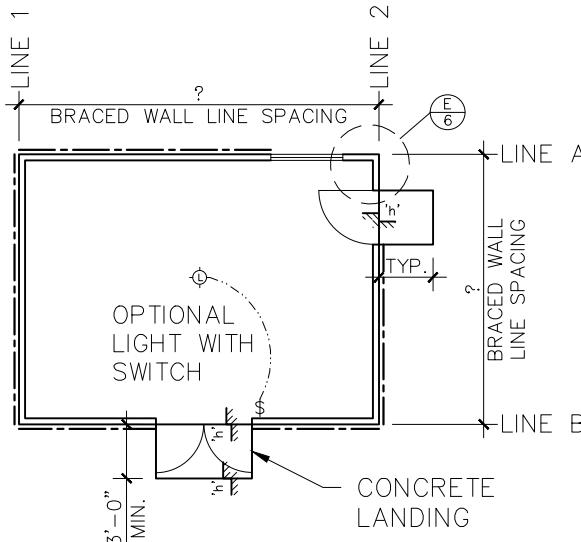
LEGEND

2x4 STUD WALL

WINDOW

**DISCLAIMER:**

THESE DESIGN GUIDELINES ARE ONLY APPLICABLE TO SINGLE STORY ACCESSORY STRUCTURES OF MAX. 20'x20' NOT IN HILLSIDE AREA USING CONVENTIONAL FRAMING CONSTRUCTION BASED ON 2022 CALIFORNIA RESIDENTIAL CODE. THE INFORMATION PROVIDED IN THESE DESIGN GUIDELINES CARRIES NO IMPLIED OR INFERRED GUARANTEE AGAINST FAILURE OR DEFECTS. BY USING THESE DESIGN GUIDELINES, 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.

**FLOOR PLAN****LEGEND**

BRACED WALL PANEL MIN 4'-0"

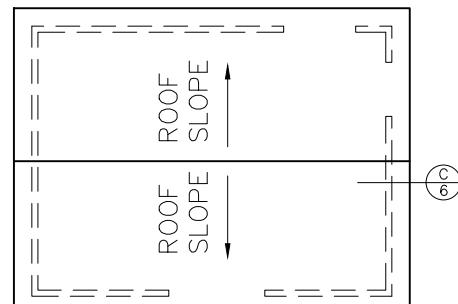
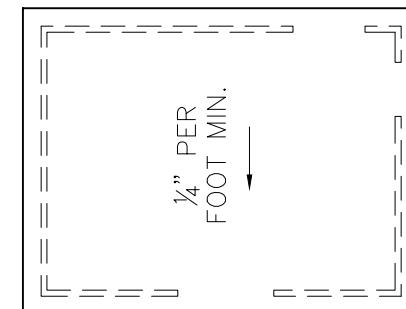
(3/8" PLYWOOD WITH 8d @ 6"o.c E.N. & 12"o.c. F.N.) BLOCK AT PANEL EDGES.

TABLE A

BRACED WALL LINE SPACING	MIN TOTAL PANEL LENGTH
16'	4'
20'	5'

"h" - DOOR THRESHOLD OR STEP HEIGHT, MAX 7 3/4" TYP.
MAX 1 1/2" WHERE EGRESS DOOR SWINGS OVER LANDING

SCALE: N.T.S.

**GABLE END****FLAT ROOF****ROOF PLAN - OPTIONS**

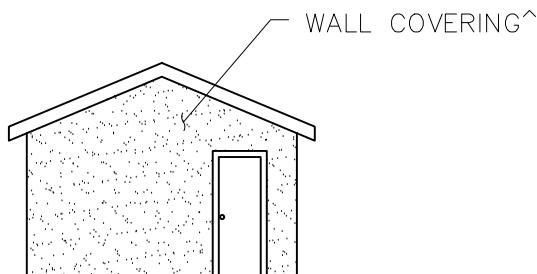
SCALE: N.T.S.

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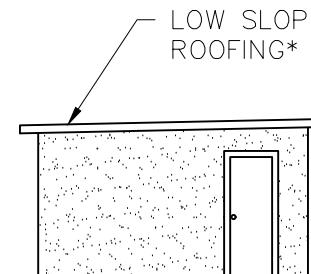
City of Milpitas
Office of Building Safety
DETACHED ACCESSORY STRUCTURE
SAMPLE FLOOR PLAN AND ROOF PLAN

SHEET
2
OF 6 SHEETS

[^] WALL COVERING CAN BE 3-COAT STUCCO OR WOOD SIDING.



GABLE END



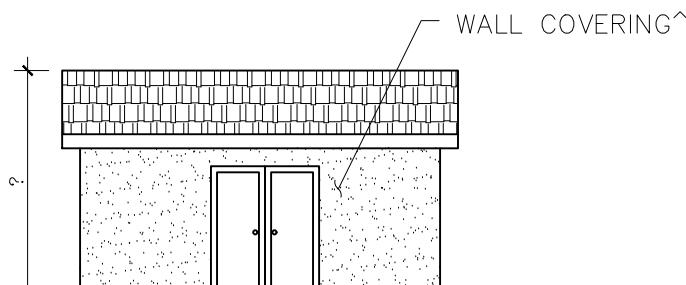
FLAT ROOF

A SAMPLE FRONT ELEVATION

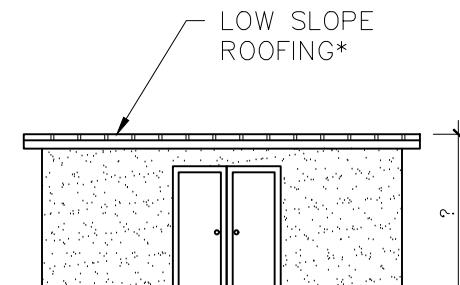
SCALE: N.T.S.

* ROOFING MATERIAL SHALL BE MINIMUM CLASS C (E.G. COMPOSITE SHINGLE AND CLAY TILE).

LOW SLOPE ROOFING (BELOW 2:12) SHALL BE BUILT-UP ROOF OR STANDING-SEAM METAL ROOF PANELS.



GABLE END



FLAT ROOF

B SAMPLE SIDE ELEVATION

SCALE: N.T.S.

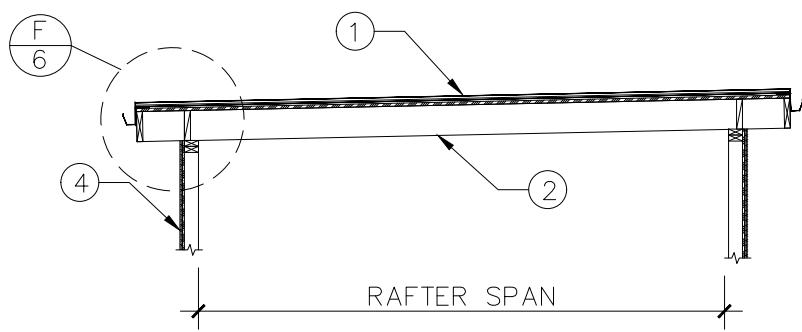
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City of Milpitas
Office of Building Safety
DETACHED ACCESSORY STRUCTURE
SAMPLE ELEVATIONS

SHEET
3
OF 6 SHEETS

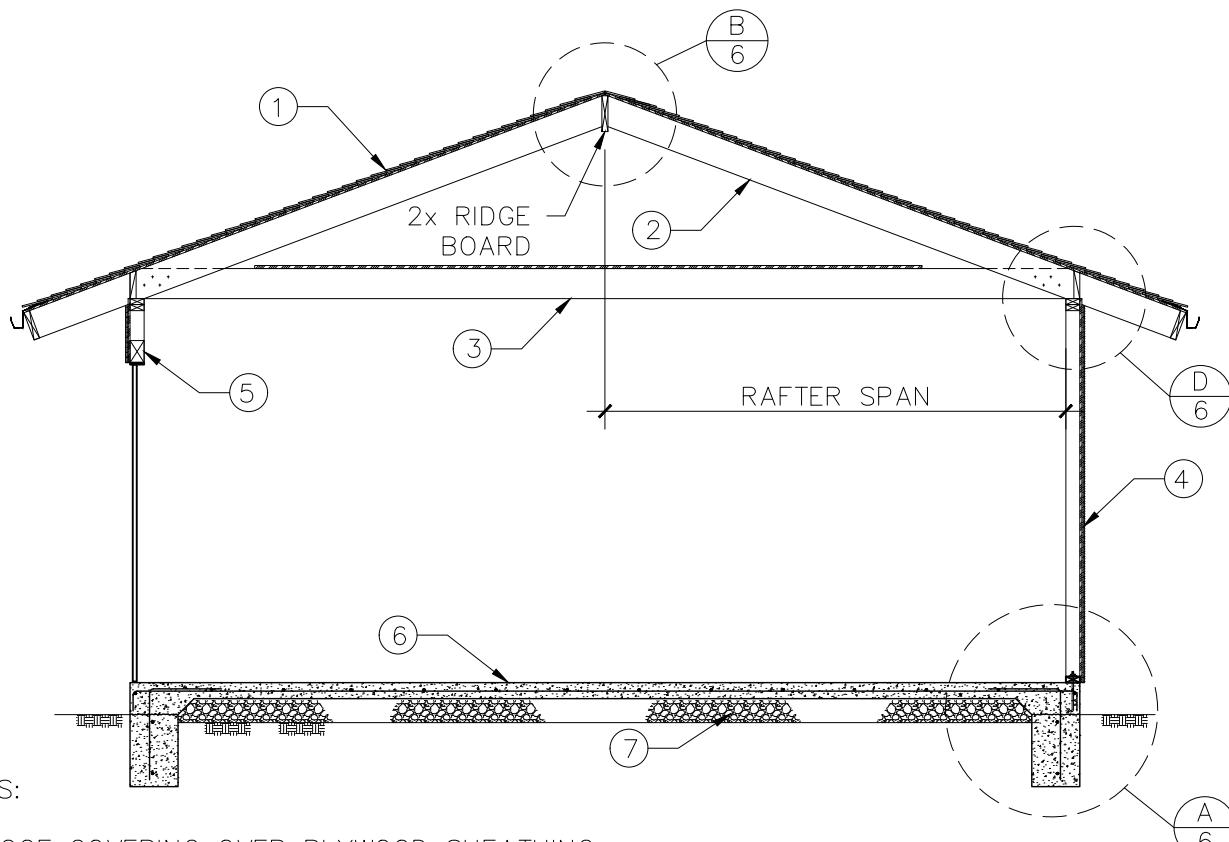
DISCLAIMER:

ALL DETAILS PRESENTED IN THIS DESIGN GUIDELINE ARE SAMPLE DETAILS ONLY AND MAY NOT BE APPLICABLE TO ALL PROJECTS. OTHER ALTERNATIVE DETAILS APPLICABLE TO THE PROJECT CONDITIONS MAY BE USED OR REQUIRED. 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.



(2) SAMPLE BUILDING SECTION
(FLAT ROOF)

SCALE: N.T.S.



NOTES:

1. ROOF COVERING OVER PLYWOOD SHEATHING
2. ROOF RAFTERS PER TABLE A ON SHEET 5
3. CEILING JOIST WITH OPTIONAL PLYWOOD SHEATHING FOR STORAGE PER TABLE B ON SHEET 5
4. WALL COVERING OVER PLYWOOD SHEATHING
5. HEADER OVER DOOR OR WINDOW OPENING PER TABLE F ON SHEET 5
6. 4" THICK CONCRETE SLAB-ON-GRADE
7. 4" THICK (101.6mm) BASE OF 1/2" OR LARGER CLEAN AGGREGATE

(1) SAMPLE BUILDING SECTION

SCALE: N.T.S.

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City of Milpitas
Office of Building Safety
DETACHED ACCESSORY STRUCTURE
SAMPLE BUILDING SECTIONS

SHEET
4
OF 6 SHEETS

TABLE A – ROOF RAFTERS (RR) SPAN TABLE

RAFTER SPACING	SPECIES AND GRADE	MAXIMUM RAFTER SPANS									
		SHINGLE/METAL ROOFING, DL=10 PSF					SLATE/TILE ROOFING, DL=20 PSF				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
16"	D.F. S.S.	10'-5"	16'-4"	20'-0"	—	—	10'-5"	16'-3"	20'-0"	—	—
	D.F. #1	10'-0"	15'-4"	19'-5"	20'-0"	—	9'-1"	13'-3"	16'-10"	20'-0"	—
	D.F. #2	9'-10"	14'-7"	18'-5"	20'-0"	20'-0"	8'-7"	12'-7"	16'-0"	19'-6"	20'-0"
	D.F. #3	7'-7"	11'-1"	14'-1"	17'-2"	19'-11"	6'-5"	9'-5"	11'-11"	14'-6"	16'-10"
24"	D.F. S.S.	9'-1"	14'-4"	18'-10"	20'-0"	—	9'-1"	13'-3"	16'-10"	20'-0"	—
	D.F. #1	8'-7"	12'-6"	15'-10"	19'-5"	20'-0"	7'-5"	10'-10"	13'-9"	16'-9"	19'-6"
	D.F. #2	8'-2"	11'-11"	15'-1"	18'-5"	20'-0"	7'-0"	10'-4"	13'-0"	15'-11"	18'-6"
	D.F. #3	6'-2"	9'-1"	11'-6"	14'-1"	16'-3"	5'-4"	7'-10"	10'-0"	12'-2"	14'-1"

NOTE: THIS TABLE IS ONLY APPLICABLE TO RAFTERS WITHOUT CEILING ATTACHED TO RAFTERS.

TABLE B – CEILING JOIST (CJ) SPAN TABLE

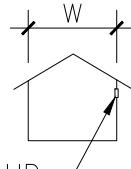
CEILING JOIST SPACING	SPECIES AND GRADE	MAXIMUM CEILING JOIST SPANS			
		2x4	2x6	2x8	2x10
16"	D.F. S.S.	9'-6"	14'-11"	19'-7"	20'-0"
	D.F. #1	9'-1"	13'-9"	17'-5"	20'-0"
	D.F. #2	8'-11"	13'-0"	16'-6"	20'-0"
	D.F. #3	6'-10"	9'-11"	12'-7"	15'-5"
24"	D.F. S.S.	8'-3"	13'-0"	17'-2"	20'-0"
	D.F. #1	7'-8"	11'-2"	14'-2"	17'-4"
	D.F. #2	7'-3"	10'-8"	13'-6"	16'-5"
	D.F. #3	5'-7"	8'-1"	10'-3"	12'-7"

NOTE: THIS TABLE IS APPLICABLE TO UNINHABITABLE ATTICS WITH STORAGE

TABLE C – RAFTER TIE CONNECTIONS

RAFTER SLOPE	RAFTER SPACING	ROOF SPAN	
		12'	20'
		NO. OF 16d COMMON NAILS PER CONNECTION	
3:12	16"	5	8
	24"	7	11
4:12	16"	4	6
	24"	5	8
5:12	16"	3	5
	24"	4	7

TABLE D – HEADER (HD) SPAN TABLE FOR EXTERIOR BEARING WALL

HEADERS SUPPORTING	HEADER SIZE*	MAXIMUM BUILDING WIDTH (W)			
		12'-0"		20'-0"	
		SPAN	NJ	SPAN	NJ
 ROOF & CEILING	2-2x4	4'-0"	1	3'-1"	1
	2-2x6	6'-0"	1	4'-7"	1
	2-2x8	7'-7"	1	5'-9"	1
	2-2x10	9'-0"	1	6'-10"	2
	2-2x12	10'-7"	2	8'-1"	2
	3-2x8	9'-5"	1	7'-3"	1
	3-2x10	11'-3"	1	8'-7"	1
	3-2x12	13'-2"	1	10'-1"	2

NJ = NUMBER OF JACK STUDS REQUIRED TO SUPPORT EACH END

TABLE E – EQUIVALENT SECTION PROPERTIES

SIZE	2x	3x	4x	6x
2-2x4	2x6	3x6	4x4	—
2-2x6	2x10	3x8	4x6	—
2-2x8	2x12	3x10	4x8	6x6
2-2x10	—	3x12	4x10	6x8
2-2x12	3-2x10	2-3x10	4x12	6x10
3-2x8	2-2x10	3x12	4x10	6x8
3-2x10	2-2x12	2-3x10	4x12	6x10
3-2x12	—	2-3x12	2-4x10	6x12

City of Milpitas

Office of Building Safety

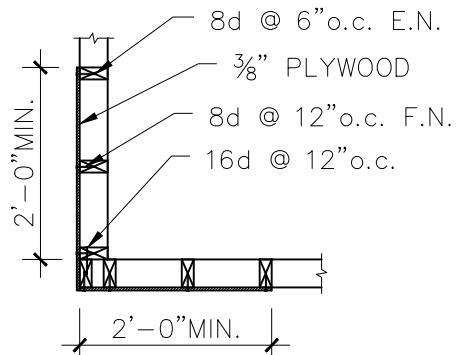
DETACHED ACCESSORY STRUCTURE
FRAMING SPAN TABLES

SHEET

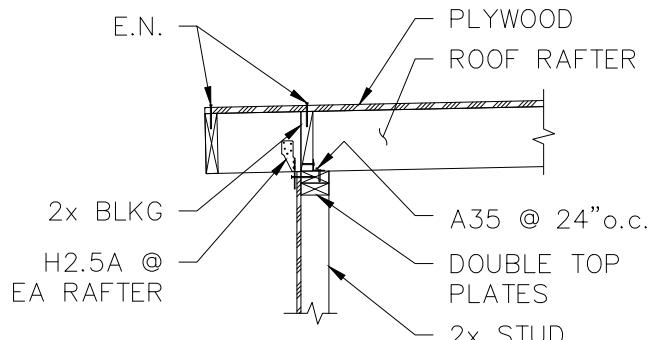
5

OF 6 SHEETS

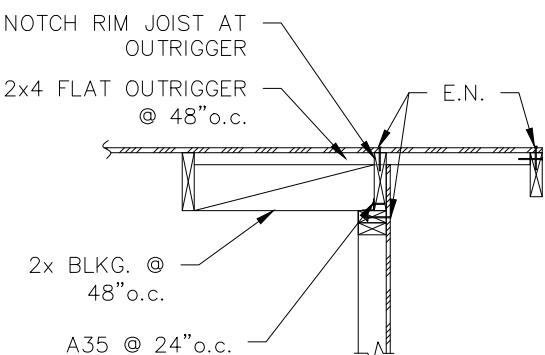
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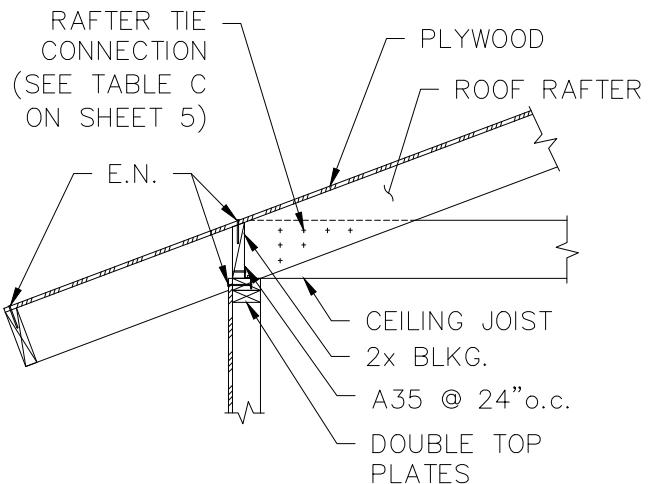
(E) BRACED WALL CORNER DETAIL
SCALE: N.T.S.



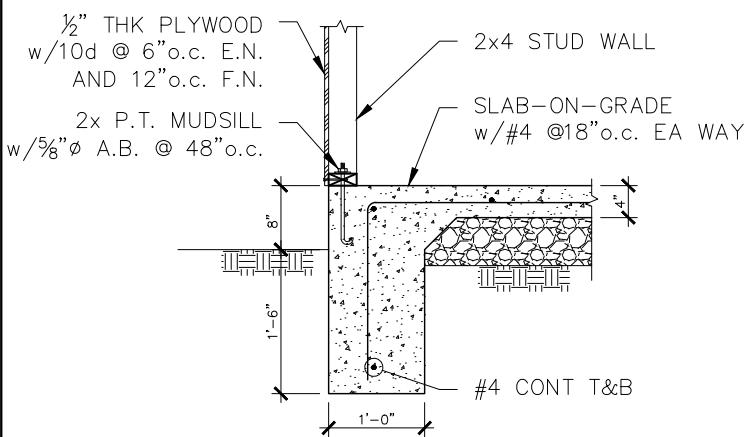
(F) OUTRIGGER DETAIL
(RAFTER PARALLEL TO WALL)
SCALE: N.T.S.



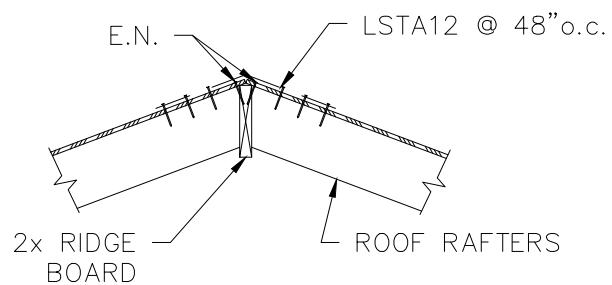
(C) OUTRIGGER DETAIL
(RAFTER PARALLEL TO WALL)
SCALE: N.T.S.



(D) Rafter to Wall Framing Detail
SCALE: N.T.S.



(A) EXTERIOR FOOTING DETAIL
SCALE: N.T.S.



(B) ROOF RIDGE DETAIL
SCALE: N.T.S.

* SEE "RESIDENTIAL CONCRETE FOUNDATION" HANDOUT FOR FOOTING DESIGN REQUIREMENTS.

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DETACHED ACCESSORY STRUCTURE
SAMPLE FRAMING DETAILS

SHEET
6
OF 6 SHEETS