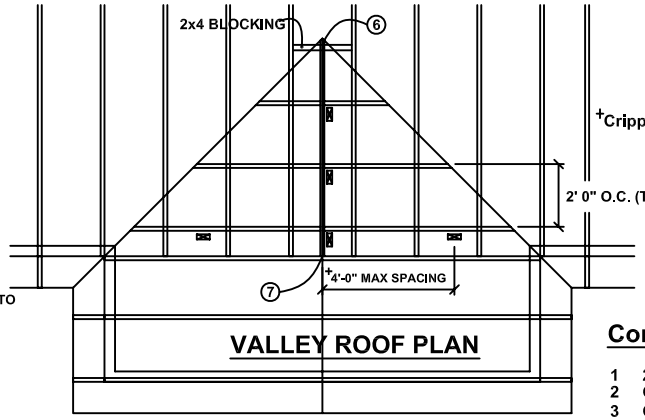
VALLEY FRAMING & BRACING DETAIL

Lumber Size and Grade Minumum Requirements

Ridge board...	2x6 (min) #2 Southern Pine or better,
Rafter spans 20'-0" or less...	(A)2x4 SP #2, SPF #1/#2, DF #2 or better (B)2x6 SP #2, SPF #1/#2, DF #2 or better
Purlins / Lateral bracing...	2x4 SPF #2, HF #2, DF #2 or better
Sleepers...	2x(width of rafter seat cut) SPF #3 or better 2 parallel 2x4 SPF #3
Cripples and blocking...	2x4 SPF #3 or better
Truss Below...	See design - Southern Pine material



VALLEY ROOF PLAN

TRUSS
TRUSS UNDER VALLEY FRAMING
VALLEY RAFTER OR RIDGE
+CRIPPLE

+Cripples 4'-0" o.c. for 20 psf (TL) and 10 psf (TD) (typ. shingle roof) MAX.

* Attachment can be made directly or through plywood sheathing by cutting a 2" x 4" notch in sheathing

Connection Requirement Notes

1	2x4 rafters to ridge	3 16d toe-nails
2	Cripple to ridge	3 16d face nails
3	Cripple to rafter	3 16d face nails (**)6 16d face-nails
4	Rafter to sleeper or blocking	5 16d toe-nails
	Rafter to two 2x4 sleepers	3 16d toe-nails each sleeper
5	Sleeper to truss	3 16d face nails each truss
	Two 2x4 sleepers to truss	2 16d face nails each sleeper & truss
6	Ridge board to roof block	3 16d toe-nails
7	Ridge board to truss	3 16d toe-nails
8	Purlin to truss (Typ)	3 16d nails
	Purlin to truss (If cripple is attached to purlin)	3 16d nails
9	Truss to blocking	3 16d end nails
10	Truss to cripple	3 16d face nails
11	Truss to cripple	3 16d face nails
12	Cripple to purlin	3 16d face nails
13	Collar Beam to Rafter	3 16d face nails
14	Collar Beam to Cripple	3 16d face nails

NOTE: 16d (0.162"x3.5") NAILS

GENERAL NOTES

Purlins required 2'-0" O.C. in absence of plywood sheathing. Trusses without sheathing applied must be evaluated accordingly.
Purlins should overlap sheathing one truss spacing minimum. In cases that this is impractical, overlap sheathing a minimum of 6", and nail upwards through sheathing into purlin with a minimum of 8-8d (0.131"x2.5") common wire nails.
The effects of not providing sheathing below a valley set on the membrane characteristics of the roof must be evaluated by the building designer.
This drawing applies to valleys with the following conditions:
- -Spans (distance between heels) 40'-0" or less
- -Maximum valley height: 14'-0"
- -Maximum wind speed: 120 mph
- -Maximum mean roof height: 30 feet
- -Maximum total loading: 61 psf
- -Meets FBC 2004/ASCE 7-2005 wind requirements
- -Exposure Category "B", I=1.0, Kzt=1.0
- -Enclosed Building

CRIPPLE, BRACING, & BLOCKING NOTES

-1x4 continuous lateral brace (CLB) min. is required for cripples 5'-0" to 10'-0" long nailed w/ 2 -10d (0.148"x3") nails. Or 1x4 "T" or scab brace nailed to flat edge of cripple with 8d (0.131"x2.5") nails at 8" o.c. "T" or scab must be 90% of cripple length. Cripples over 10'-0" long requre two CLB's or both faces w/ "T" or scab. Use stress graded lumber & box or common nails.
-Narrow edge of cripple can face ridge or rafter, as long as the proper number of nails are installed into ridge board
-Install blocking under rafter if sleepers are not used.
-Install blocking under cripples if cripples fall between lower truss top chords and lateral bracing is not used.
-Apply all nailing in accordance to NDS-2001 section 11. Nails are common wire nails unless noted otherwise.

ITW Building Components Group Inc.

Earth City, MO 63045

WARNING READ AND FOLLOW ALL NOTES ON THIS SHEET!
Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow BCSI (Building Component Safety Information, by TPI and WTCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural panels and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3 & B7. See this job's general notes page for more information.

IMPORTANT FURNISH COPY OF THIS DESIGN TO INSTALLATION CONTRACTOR.
ITW Building Components Group Inc. (ITWBCG) shall not be responsible for any deviation from this design, any failure to build the truss in conformance with TPI, or fabricating, handling, shipping, installing & bracing of trusses. ITWBCG connector plates are made of 20/18/16GA (W,H/S/K) ASTM A653 grade 37/40/80 (K/W/H,S) galv. steel. Apply plates to each face of truss, positioned as shown above and on Joint Details.
A seal on this drawing or cover page indicates acceptance and professional engineering responsibility solely for the truss component design shown. The suitability and use of this component for any building is the responsibility of the Building Designer per ANSI/TPI 1 Sec. 2.
ITW-BCG: www.itwbcg.com; TPI: www.tpinst.com; WTCA: www.sbcindustry.com; ICC: www.iccsafe.org

	(A)	(B)		(**)
TC LL	20	30	40	54
TC DL	10	20	7	7
BC DL	0	0	0	0
BC LL	0	0	0	0
TOT. LD.	30	50	47	61
DUR. FAC.	1.25/1.15			
SPACING	SEE ABOVE			

REF	VALLEY FRAMING
DATE	1/1/09
DRWG	VALCONVF0109