

## REQUIREMENTS FOR DECK SPACING WITH 40 PSF LIVE LOAD AND 10 PSF DEAD LOAD

### Joist Span (maximum distance between ledger & beam or between beams) Assuming SPF#2

| Joist size | Joist Spacing 16" O.C. | Joist Spacing 24" O. C. |
|------------|------------------------|-------------------------|
| 2 x 8's    | 12'-3"                 | 10'-3"                  |
| 2 x 10's   | <b>15'-5"</b>          | 12'-7"                  |
| 2 x 12's   | 17'-10"                | 14'-7"                  |

### ALLOWABLE BEAM SPAN BETWEEN POST

| Beam Size              | 4'       | 5'    | 6'   | 7'   | 8'   | 9'   | 10'   | 11'  | 12'   | 13'  | 14'   | 15'  | 16'  |
|------------------------|----------|-------|------|------|------|------|-------|------|-------|------|-------|------|------|
| <b>Double 2 x 8's</b>  | 14-10    | 13-10 | 11-9 | 11-0 | 10-3 | 9-6  | 9-0   | 8-9  | 8-4   | 8-0  | 7-9   | 7-6  | 7-3  |
| <b>Double 2 x 10's</b> | <b>X</b> | X     | 14-0 | 13-0 | 12-3 | 11-6 | 10-11 | 10-5 | 10-0  | 9-7  | 9-3   | 8-11 | 8-8  |
| <b>Double 2x12's</b>   | <b>X</b> | X     | 16-6 | 15-4 | 14-3 | 13-6 | 12-10 | 12-3 | 11-10 | 11-4 | 10-10 | 10-5 | 10-1 |

## International Residential Code 2009 Requirements

|  |                         |
|--|-------------------------|
| Footing depth is 36" minimum x 12" minimum diameter  | Tables R301.2(1) & R403 |
| Treated post to rest on 6" minimum thick concrete base   | R403.1 .1               |
| Treated post alternate to rest on 8" minimum treated plate over 6" crush stone.  | Figure R403.1(2)        |
| Treated post minimum size is 4" x 4" minimum (consider 6"x 6" when over 48" high)  | R407.3                  |
| Beams & joist (use table's above for treated material only)  | R502                    |
| Cantilever maximum overhang as per:  | Table R502.3.3(2)       |
| Bolting ledger board to house as per:  | Table R502.2.2.1        |
| Deck attachment for lateral loads is required  | R502.2.2.3              |
| Flashing at ledger board to wall or floor assembly   | R703.8 (Item #5)        |
| Deck surface to top of exterior door threshold is 7/8" maximum   | R311.4.3 (exception)    |
| Landing - 36" in direction of travel required at doors if more than 2 treads to deck surface.  | R311.4.3                |
| Stair width must be not less than 36"  | R311.5.1                |
| Stair riser no greater than 7 3/4" and tread less than 10"   | R311.5.3.1 & 2          |
| Stair risers to be closed with no greater than 4" opening  | R311.5.3.3              |
| Handrail required on one side of steps when more than 4 or more risers   | R311.5.6                |
| Handrail height shall not be less than 34" & not more than 38"   | R311.5.6.1              |
| Handrail grip size to be 1 1/2" minimum and 2" maximum in width and if greater than 6 1/2" perimeter, provide graspable finger recess along it's length. | R311.5.6.3              |
| Guardrails required if deck surface is greater than 30" above grade  | R312.1                  |
| Guardrails shall not be less than 36" above deck surface   | R312.1                  |
| Guardrail opening limitation is less than 4" maximum   | R312.2                  |
| Guardrail opening at stairs shall not allow a sphere 4 3/8" to pass through.   | R312.2 (Exception)      |
| Guardrail openings at step triangle is less than a 6" sphere maximum   | R312.2 (Exception)      |
| Guardrails required on open sides of stairs when rise is more than 30" above floor or grade.   | R312.2                  |
| Guardrails at stairs shall not be less than 34" measured vertically from nosings.  | R312.1                  |

**Note: Handrails and guardrails are not the same and serve separate functions.**