**NOTES:**
1. Ledger Bolt shall be 3/8" dia. x 6" long with 1/4" dia. pre drilled holes. Bolts are to be placed staggered.
2. All metal hardware & screws to be galvanized or of otherwise approved corrosion resistance.
3. Maximum 5' joist span if 2nd floor is cantilevered at ledger.
4. Shear walls may not be modified unless structural calculations are submitted and approved by the Building Department.
5. Use of this Standard is limited to R-3 occupancies (Single Family Dwellings and Duplexes).

**TABLE “A”**
**DECK JOIST SPANS**
(DOUGLAS FIR #2 OR BETTER)

<table>
<thead>
<tr>
<th>SIZE</th>
<th>SPACING</th>
<th>SPAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x 6</td>
<td>12&quot; O.C.</td>
<td>10' - 6&quot;</td>
</tr>
<tr>
<td></td>
<td>16&quot; O.C.</td>
<td>9' - 0&quot;</td>
</tr>
<tr>
<td></td>
<td>24&quot; O.C.</td>
<td>7' - 0&quot;</td>
</tr>
<tr>
<td>2 x 8</td>
<td>12&quot; O.C.</td>
<td>14' - 0&quot;</td>
</tr>
<tr>
<td></td>
<td>16&quot; O.C.</td>
<td>12' - 0&quot;</td>
</tr>
<tr>
<td></td>
<td>24&quot; O.C.</td>
<td>9' - 6&quot;</td>
</tr>
<tr>
<td>2 x 10</td>
<td>16&quot; O.C.</td>
<td>15' - 0&quot;</td>
</tr>
<tr>
<td></td>
<td>24&quot; O.C.</td>
<td>12' - 0&quot;</td>
</tr>
<tr>
<td>2 x 12</td>
<td>24&quot; O.C.</td>
<td>14' - 0&quot;</td>
</tr>
<tr>
<td>4 x 6</td>
<td>12&quot; O.C.</td>
<td>14' - 6&quot;</td>
</tr>
<tr>
<td></td>
<td>16&quot; O.C.</td>
<td>13' - 6&quot;</td>
</tr>
<tr>
<td></td>
<td>24&quot; O.C.</td>
<td>11' - 6&quot;</td>
</tr>
<tr>
<td>4 x 8</td>
<td>24&quot; O.C.</td>
<td>15' - 0&quot;</td>
</tr>
<tr>
<td>4 x 10</td>
<td>32&quot; O.C.</td>
<td>15' - 0&quot;</td>
</tr>
</tbody>
</table>

**TABLE “B”**
**HEADER SIZING & SPANS**
(DOUGLAS FIR #2 OR BETTER)

<table>
<thead>
<tr>
<th>JOIST SPAN</th>
<th>SIZE</th>
<th>SPAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPTO 8’-0”</td>
<td>4 x 8</td>
<td>8’-0”</td>
</tr>
<tr>
<td></td>
<td>4 x 10</td>
<td>10’-0”</td>
</tr>
<tr>
<td></td>
<td>4 x 12</td>
<td>11’-6”</td>
</tr>
<tr>
<td></td>
<td>6 x 12</td>
<td>14’-0”</td>
</tr>
<tr>
<td>8’-1” - 10’-0”</td>
<td>4 x 8</td>
<td>7’-6”</td>
</tr>
<tr>
<td></td>
<td>4 x 10</td>
<td>9’-6”</td>
</tr>
<tr>
<td></td>
<td>4 x 12</td>
<td>11’-0”</td>
</tr>
<tr>
<td></td>
<td>6 x 12</td>
<td>13’-0”</td>
</tr>
<tr>
<td>10’-1” - 12’-0”</td>
<td>4 x 8</td>
<td>7’-0”</td>
</tr>
<tr>
<td></td>
<td>4 x 10</td>
<td>9’-0”</td>
</tr>
<tr>
<td></td>
<td>4 x 12</td>
<td>10’-0”</td>
</tr>
<tr>
<td></td>
<td>6 x 12</td>
<td>12’-0”</td>
</tr>
<tr>
<td>12’-1” - 15’-0”</td>
<td>4 x 8</td>
<td>6’-6”</td>
</tr>
<tr>
<td></td>
<td>4 x 10</td>
<td>8’-0”</td>
</tr>
<tr>
<td></td>
<td>4 x 12</td>
<td>9’-6”</td>
</tr>
<tr>
<td></td>
<td>6 x 12</td>
<td>11’-0”</td>
</tr>
</tbody>
</table>

**TABLE “C”**
**LEDGER BOLT SPACING**
(3/8 DIA. X 6” LAG BOLTS – SEE NOTE 1)

<table>
<thead>
<tr>
<th>DECK JOIST SPAN</th>
<th>SPACING</th>
</tr>
</thead>
<tbody>
<tr>
<td>8’-0” OR LESS</td>
<td>8” O.C.</td>
</tr>
<tr>
<td>8’-1” TO 10’-0”</td>
<td>6” O.C.</td>
</tr>
<tr>
<td>10’-1” TO 12’-0”</td>
<td>5-1/2” O.C.</td>
</tr>
<tr>
<td>12’-1” TO 14’-0”</td>
<td>4-1/2” O.C.</td>
</tr>
<tr>
<td>14’-1” TO 15’-0”</td>
<td>4” O.C.</td>
</tr>
</tbody>
</table>

NOTES:
1. Ledger Bolts shall be 3/8” dia. x 6” long with 1/4” dia. pre drilled holes. Bolts are to be placed staggered.
2. All metal hardware & screws to be galvanized or of otherwise approved corrosion resistance.
3. Maximum 5’ joist span if 2nd floor is cantilevered at ledger.
4. Shear walls may not be modified unless structural calculations are submitted and approved by the Building Department.
5. Use of this Standard is limited to R-3 occupancies (Single Family Dwellings and Duplexes).

**DISCLAIMER:**
Alternate deck designs may be possible when provided with an engineered analysis. Use of this conventional standard design is at the user’s risk and carries no implied or inferred guarantee against failure or defects.

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**Western Riverside County Code Uniformity Program**

**City of Grand Terrace**
**Building and Safety**

**BALCONY/DECK STANDARD**

(909) 824-6621
22975 Barton Road
Grand Terrace, CA 92313

FAX (909) 824-6624

05/01/2018
DECK STD 2016.PDF
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NOTE: This deck connection detail is based on the assumption that a minimum 1-1/2" thick wood member is adequately installed at all edges of the floor diaphragm. If any other material is used, such as TJI joists, a special engineered design will be required. It is the owner’s responsibility to verify the presence of the appropriate rim joist.
ALL OPENINGS IN GUARDRAIL TO BE SUCH THAT A 4" SPHERE CANNOT PASS THROUGH.

OPTION #1

(2) ½" Dia. Machine bolts @ each post

SEEN DETAIL

OPTION #2

(2) #8 x 3" Deck screws @ ea. 4x4

(1) #8 x 3" Deck screw @ ea. 2x2

(2) #8 x 3" Deck screws @ ea. 2x2

(2) ½” Dia. Machine bolts w/ nuts & washers @ each 4x4

Post cap with machine bolts per manufacturer’s specifications

24” MAX OVERHANG

RAILING SECTION VIEWS

GUARDRAIL PERPENDICULAR TO JOISTS

2x6

2x6

42” MIN

Boundary nailing @ 6” O.C. (See notes below for nail sizes)

(2) ½” Dia. Machine bolts w/ nuts & washers @ each post

Simpson “A35” or equal @ ea. block

Floor Joists

Note: Decks options are as follows:

1. 5/8” tongue and groove jointed plywood secured with 8d nails. All edge nailing at 6” O.C. Must be covered with an approved weather resistive material walking surface, and sloped for drainage.

2. 2x6” decking secured w/ (2) 16d nails (or approved deck screws) @ ea. joist.
Optional exterior stairway

1. The tolerance between the largest and smallest tread depth or between the largest and smallest riser height shall not exceed $3/8"$ in the stairway. Δ

2. Stairway width 36" min – 48" max.

3. Treads must have approved slip resistant surface.

4. Alternate stairway designs may be acceptable pending building department approval.

5. Lighting level at all stair treads to be a minimum of 1 foot-candle. Δ

Handrail details

- Other shapes may be acceptable if they provide an equivalent gripping surface.

- 1-1/4" min. 2" max.

- 1-1/2" min. 2" max.

- Footing: 18" wide X 12" deep X stair width.

- 1/2" dia anchor bolt.

Handrail/Guardrail to continue to deck

- 4X12 Stringer @ ea. end of treads

- 4X12 Treads (minimum tread depth = 11")

- 2X8 Solid Risers

- (Closed risers required when tread is more than 30" above grade)

- 7-3/4" max

- 4" min

- 4' min

- 7-3/4" max

- Simpson A35 or equal

- Approved Angle Bracket w/ lag bolts per manufacturer specs

- 1/2" air gap between concrete and wood.

- (2) #4 rebar

- 4X12 Treads

- 4X4 Post

- 2X2 Rail

- 4X12 Stringer

- 4X12 Treads

- Handrail/Guardrail to be adequately supported and returned to guardrail (see handrail details below).

- Handrail/Guardrail to continue to guard (see handrail details below).

- Handrail/Guardrail to continue to deck

- Handrail/Guardrail to continue to grade

- Handrail/Guardrail to continue to deck

- Handrail/Guardrail to continue to grade

- Handrail/Guardrail to continue to deck

- Handrail/Guardrail to continue to grade

Notes:
- The tolerance between the largest and smallest tread depth or between the largest and smallest riser height shall not exceed $3/8"$ in the stairway.
- Stairway width 36" min – 48" max.
- Treads must have approved slip resistant surface.
- Alternate stairway designs may be acceptable pending building department approval.
- Lighting level at all stair treads to be a minimum of 1 foot-candle.