Deck Evaluation Checklist

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Report Date:_____ Reported By:_____ Square footage:_____

Project Name/Client: _____ Year Deck was Built:_____ Original Value:_____

I. Stairs

A. Not Applicable ☐

B. Are there any visible signs of cracks, decay or over-notching? ☐ No ☐ Yes

1. If yes, where?_____

C. Stairway width:_____ *(Hint: Residential deck stairway width shall not be < 36")*

D. Riser Height:_____ E. Tread Depth:_____

Hint: The greatest riser height or tread depth within a flight of stairs shall not exceed ⅜"

1. Is something restricting the passage of a 4" sphere between the risers? ☐ Yes ☐ No

F. Are there guards and/or handrails on the stairway? ☐ Yes ☐ No

1a. Is the handrail height 34"-38"? ☐ Yes ☐ No 1b. Guard height (if separate)? _____

2. Is the handrail graspable? ☐ Yes ☐ No

3. Is the opening between the balusters less than 4⅜"? ☐ No ☐ Yes

4. If a separate handrail, does the handrail return to a post or safety terminal? ☐ Yes ☐ No

5. Is there a method to safely support the required load (applied in any direction) and the deflection on the guardrail? ☐ Yes ☐ No *If no, needs attention*

Describe: (e.g.; hardware, post connected to the footings and stringer, etc.)

_____

G. Stringer: ☐ Solid ☐ Notched

Hint: Solid stringers are permitted to have a total run of 13'-3" between landings or supports.

Hint: Notched stringers are limited to 6' between supports (based on AWC DCA6).

1. Span between the stringers?_____

2. Total rise of the stairs?_____ Total run of the stairs?_____

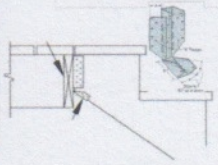
Hint: Stairs are permitted to have a total vertical rise of 12' between landings.

3. What is supporting/connecting the stringer to the deck?

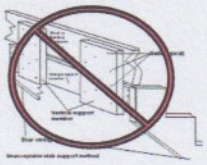
Hint: If "Other" is checked, evaluation by a design professional is recommended as the connection detail from stair stringers to the deck structure is a critical structural connection.

☐ Hardware

☐ Hardware (stringer flush)



☐ Blocking



☐ Nails, only

☐ Other

4. If the stringers are notched, does the triangular opening formed by the riser, tread & bottom rail of the guard permit the passage of a 6" sphere? ☐ No ☐ Yes

H. Is there a means of artificial illumination for the stairs? ☐ Yes ☐ No

I. Are there any visible signs of red rust on the hardware (fasteners or connectors)? ☐ No ☐ Yes

If yes, where?_____

J. If connectors are used, are all the holes filled? ☐ Yes ☐ No If no, where?_____

K. Stair landing min. 36" in direction of travel? ☐ Yes ☐ No Type _____

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II. Footings/Deck Supports and Posts/Columns

A. Footing/Deck Support-type? ☐ Unable to Determine ☐ Pier, only ☐ Pad or Spread

☐ No footing/Improper footing ☐ Other (describe):_____

1. Size: _____ *Hint: Must be at least a 12"x12" or equivalent.*
2. Depth/Thickness:_____ ☐ Unable to Determine
3. Is it at least 12" below undisturbed ground ☐ Yes ☐ No ☐ Unable to determine

B. Post size? ☐ 4x4 ☐ 6x6 ☐ 8x8 ☐ Other (e.g. metal):_____

C. Post Height? _____

Hint: Maximum post height is determined by the tributary load the post will carry.
See AWC DCA6 (6x6) or IRC-2018, Table R507.4 for post height maximums.

D. Any visible signs of decay, cracks or post corrosion (if metal)? ☐ No ☐ Yes:_____

Hint: Decay or corrosion may appear just below the surface to ground interface.
Cracks and decay may appear at the corner of the top of a notched post.

E. What is connecting the post to the footing?

☐ Post base hardware ☐ Unable to determine ☐ Nothing

Hint: Look for hardware that connects to the footing to help resist the deck from moving and has a 1" standoff base plate to help prevent decay at the post end.

F. What is connecting the post to the beam?

☐ Post cap hardware ☐ Notched ☐ Other:_____

Hint: Notching a 4x4 post for a double 2x is not permitted.
Notching a 6x6 post to let-in a triple 2x is not permitted.

1. Has a post-to-beam connector been bent or improperly modified? ☐ No ☐ Yes

Hint: Bending steel in the field may cause fractures at the bend line.
Fractured steel will not carry the load and must be replaced.

2. Are the beams alongside the post? ☐ No ☐ Yes

If yes, is the beam attached with a metal connector to provide bearing? ☐ Yes ☐ No

Hint: The beams alongside the post attached by bolts, lag screws or nails are prohibited by AWC DCA 6 and does not provide proper bearing for a beam.

G. Is diagonal bracing provided on the posts and beams? ☐ Yes ☐ No

Hint: Required by AWC DCA 6 at the corner posts that are greater than 2' in height.

1. If the deck is not attached to the building, what method is used for lateral support?

Describe:_____

H. Are there any visible signs of red rust on the hardware (fasteners or connectors)? ☐ No ☐ Yes

If yes, where?_____

I. If connectors are used, are all the holes filled with the proper fasteners? ☐ Yes ☐ No

If no, where?_____

Hint: Slotted and Phillips head screws have never been appropriate for connectors.

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III. Beams and Joists

A. Are multiple lumber members fastened together to act as a single unit? ☐ Yes ☐ No

Spacing:_____ Fastener type (nails, bolts, screws):_____

Hint: If bolts are used, there should be washers between the bolt head and nuts and the wood. Drilled holes should be no larger than 1/16" over the size of the bolt.

B. Are all beam splices occurring over a support with at least 1½" of bearing? ☐ Yes ☐ No

If no, describe location;_____ *(Needs attention)*

C. Are there connections where the joist bears on top of the beam? ☐ Yes ☐ No

Type of connection:_____

D. Joist: Size:_____ Spacing:_____ Span:_____

E. What is providing the minimum 1½" of bearing under the joists?

☐ Joist Hangers ☐ Ledger strips ☐ Nothing *(Needs attention)*

Hint: Ledger strips must be nailed directly underneath the joist with 3 or 4 nails (depending on the standard), concentrically placed right under the joist. (2015/2018 IRC-not permitted)

1. Have any of the joist hangers been bent or modified? ☐ No ☐ Yes

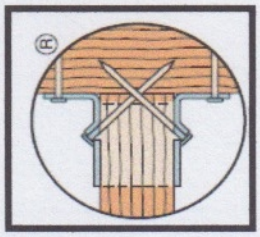
Hint: Bending steel in the field may cause fractures at the bend line. Fractured steel will not carry the load and must be replaced.

2. Does the hanger have "double-shear" fastening? See Figure B. ☐ Yes ☐ No

a. If the hanger has "double-shear" fastening, was the correct (full length) fastener used for the joist-to-header fastener? ☐ Yes ☐ No (Needs attention)

Hint: Full length nail = 0.148 x 3" or 0.162 x 3½" HDG or 316 stainless steel ring shank nail or equivalent "approved" structural screws

Incorrect:
Short 1½ or 1¼"



Correct:
Full Length Nail

F. What is providing lateral support for the deck diaphragm?

☐ Lateral load hardware ☐ Freestanding deck (blocking, bracing, etc.)

☐ Nothing ☐ Unknown/Unable to Determine *(Needs additional analysis)*

Hint: Nails in joist hangers and ledger strips are subject to withdraw from the lateral forces and do not perform well in withdraw. Therefore, the lateral forces must be addressed by some other means.

G. Are there any visible signs of red rust on the hardware (fasteners/connectors)? ☐ No ☐ Yes

If yes, where?_____

H. If connectors are used, are all the holes filled with the proper fasteners? ☐ Yes ☐ No

If no, where?_____

Hint: Slotted and Phillips head screws have never been appropriate for connectors.

I. Is there any decay of the wood? ☐ No ☐ Yes ☐ Cannot Determine

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IV. Ledger

A. Not applicable: Free Standing Deck/Non-Ledger Attached ☐

B. Not acceptable: Ledger attached to Stucco, Brick or Masonry veneer, or over Siding (Circle one)

C. Ledger attached to;

☐ Unable to Determine

a. Cannot gain access to the rim joist area due to attached ceiling (or other obstacles).
b. Deck ledger is attached to structural sheathing only (typically 15/32" OSB of plywood covering a floor truss), to the web of an I-joist only, or to a cantilever.

Note: If a or b, it is not possible to evaluate the deck ledger connection. A design professional is recommended to evaluate the deck ledger connection that is known to be critical to deck safety.

☐ Wood Rim Joist - Type;_____

Fastener type; □ Lag Screws □ Machine Bolts □ Other_____

Fastener diameter: _____

Fastener spacing:_____ Staggered: □ Yes □ No

Hint: Nails, alone and carriage bolts are not acceptable. Check if seen → □

Hint: Washers are required under the head and nuts of all bolts.

☐ Concrete

☐ CMU (Concrete Masonry Unit-e.g. block) *(Needs additional analysis)*

Fastener type; □ Unable to Determine □ Other_____

Fastener spacing:_____ Staggered: □ Yes □ No

Hint: Concrete & Masonry screws are not acceptable for permanent, exterior applications
Exception: 304 or 316 stainless steel concrete screws

1. Are there any visible signs of red rust on the fasteners? ☐ No ☐ Yes

If yes, where?_____

D. Is flashing installed above the ledger and behind the exterior cladding, shingle fashion, and installed in such a manner as to prevent entry of water into the building?

☐ Yes ☐ No ☐ No flashing can be seen

1. Is there any decay behind the ledger? ☐ No ☐ Yes ☐ Cannot identify

Notes;

_____

_____

_____

_____

_____

_____

_____

_____

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V. Deck Boards/Deck Surface

A. What type of decking? See below. Describe type and condition. ☐ Unable to Determine

☐ Wood: Hardwood: ☐ Softwood: ☐ Species:_____

☐ Wood Plastic Composite Capped: ☐ Uncapped: ☐

Notes:_____

☐ PVC ☐ Type:_____

☐ Other-type:_____

Notes:_____

Deck Board Color:_____

B. Is there any visible sign of decay, deterioration or cracking? ☐ No ☐ Yes

If yes, describe:_____

C. Fastener type? ☐ Nails_____ ☐ Screws_____ ☐ Hidden Fasteners

1. If hidden fasteners are used, what lateral support has been provided?

☐ Cross Bracing ☐ Angled Bracing ☐ Blocking ☐ Other:_____

2. Are any nails or screws exposed or breaking? ☐ No ☐ Yes-explain_____

D. Are there any visible signs of red rust on the fasteners? ☐ No ☐ Yes

If yes, where?_____

VI. Handrail Assemblies and Guards

Hint: A guard is required when the walking surface is more than 30 inches above grade.

Hint: Measurement is taken up to 36" away from the deck or walking surface.

A. What is the guard height? ☐ 36" ☐ 42" ☐ Other:_____

Hint: Must not be less than 36" for most residential (except CA) and 42" for most commercial guards.

a. Does the deck guardrail have a handrail? □ Yes □ No

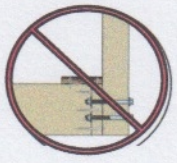
B. What is the connection between the top rail of the guard and the post?

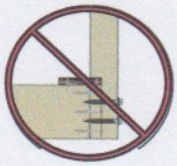
☐ Nails:_____ ☐ Screws:_____ ☐ Unable to Determine ☐ No Posts

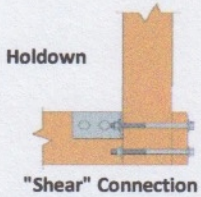
Hint: Posts and proper fasteners are needed to transfer the load into the deck framing.

C. Is there a "shear" connection between the posts and the frame of the deck? ☐ Yes ☐ No

☐ Bolts, only ☐ Lag Screws, only ☐ Holdown ☐ Other:_____







"Shear" Connection

Describe:

Hint: Maximum deflection for a guardrail system at a 36" height = 2 ¼" or h/12

Hint: Bolts or lag screws, only, failed to meet the load and deflection criteria.

Hint: Notched posts failed to meet the load and deflection standards.

D. Is the opening between the balusters less than 4"? ☐ Yes ☐ No

E. Is there any visible sign of decay, deterioration or cracking? ☐ No ☐ Yes

F. Are there any visible signs of corrosion or rust in the hardware? ☐ No ☐ Yes

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VII. Miscellaneous

Additional Comments: (e.g. Special Features such as a Hot Tub, Condition of Deck Lighting, Trim Appearance, etc.)

A. Does the deck have any floor lighting or other lighting? ☐ No ☐ Yes

Notes:_____

B. Does the deck have a hot tub? ☐ No ☐ Yes

C. Does the deck have a bump-out or some area for a grill or area to barbeque? ☐ No ☐ Yes

D. Does the deck have any under-deck finishing? ☐ No ☐ Yes

Notes:

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North American Deck and Railing Association

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Deck Evaluation Form: http://www.nadra.org

Deck Safety: http://www.nadra.org/consumers/deck_safety_month.html

Deck For A Soldier: http://www.nadra.org/consumers/D4S/Welcome.html

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