

Deck Inspection Report



Date: 12/4/2020

Property Address: [REDACTED]

For: [REDACTED]

Report #20201204-01

Contractor: Timeless Sunsets Decks and Patios

Larry Wedige

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The deck at [REDACTED] was inspected on December 4, 2020 at 12:00 noon. The owner requested the inspection to identify deficiencies in the newly built deck. Standards referenced are in the 2018 International Residential Code. The following was observed:

1. Record of the required building permit was not found at the City of San Antonio Development Services website.
2. One post was observed to have no footing supporting it. The presence of adequate footings under the rest of the posts to support the tributary loads could not be verified as they are buried. Footings must be designed to support the tributary load. (C1, 2) (P1)
3. The floor framing/post connections do not provide a continuous load path. Framing is required to bear on top of the posts. (D1) (C3) (P2, 3)
4. Several overspan floor joists were observed. 2x6 pine joists are limited to a 7'7" span maximum. (C4)
5. Some floor joists are cantilevered at the pool edge. The cantilever exceeds the maximum 1'6" allowed. (C5) (O1)
6. The floor framing is covered with 3/4" plywood. The maximum spacing of support allowed is 24". Some spacing up to 48" was observed.
7. The plywood used is required to be pressure treated to UC-4B. No labeling verifying this was located. (A1)
8. The plywood used has a bond classification of Exposure 1, but should be Exterior. Plywood with an Exterior bond classification is suitable for repeated wetting and redrying or long-term exposure to weather or other conditions of similar severity. Plywood with an Exposure 1 bond classification is suitable for uses not permanently exposed to the weather and is intended to resist the effects of moisture on structural performance as may occur due to construction delays or other conditions of similar

severity. (O2)

9. Some of the plywood used has the grain running parallel with the framing. This does not provide adequate support. (P4)
10. Some floor framing is supported by the rim joist/ledger. These rim joists/ledgers are not fastened to the pool and are functioning as beams and appear to be overspan at some areas. (C6) (P5) (O3)
11. The 2x6 treated framing is rated at UC-3A. Framing in contact with soil needs to be pressure treated to UC-4A. (A1)
12. The 2x6 treated decking is rated at UC-3A. This decking is required to be pressure treated to UC-3B due to the plywood inhibiting proper drainage. (A1)
13. Many joints/ends of the decking are not over the structural framing.
14. Some decking at the pool coping is not supported. (P6)
15. Some uplifting of the decking was observed indicating inadequate support. (P7)
16. Required treatment of all cuts and holes in the treated lumber and plywood could not be verified. (C7, 8)
17. Joists need to bear 1-1/2" on support. Joist hangers are not present to provide this support. (C9) (P8)

(A[#]) American Wood Protection Association

(C[#]) 2018 International Residential Code

(D[#]) American Wood Council's Design for Code Acceptance (DCA6)

(P[#]) Inspector's photos

(O[#]) Owner's photos

It is recommended that the entire deck structure be removed and reframed properly. Existing footings should be uncovered to determine adequacy. A plan should be obtained showing all support and framing to conform to the 2018 International Residential Code and the American Wood Council's Design for Code Acceptance (DCA6) - Prescriptive Residential Wood Deck Construction Guide. A building permit should be secured from the City of San Antonio Development Services. Regular inspections should be made during the reconstruction process to ensure the deck is built as per the plan and the code.



Larry Wedige

Texas Professional Inspector License #6060
NADRA Certified Deck Inspector

TABLE R507.3.1 MINIMUM FOOTING SIZE FOR DECKS

C1

LIVE OR GROUND SNOW LOAD ^b (psf)	TRIBUTARY AREA (sq. ft.)	LOAD BEARING VALUE OF SOILS ^{a, c, d} (psf)		
		1500 ^e	Side of a square footing (inches)	Diameter of a round footing (inches)
40	20	12	14	6
	40	14	16	6
	60	17	19	6
	80	20	22	7
	100	22	25	8
	120	24	27	9
	140	26	29	10
	160	28	31	11
50	20	12	14	6
	40	15	17	6
	60	19	21	6
	80	21	24	8
	100	24	27	9
	120	26	30	10
	140	28	32	11
	160	30	34	12

C2

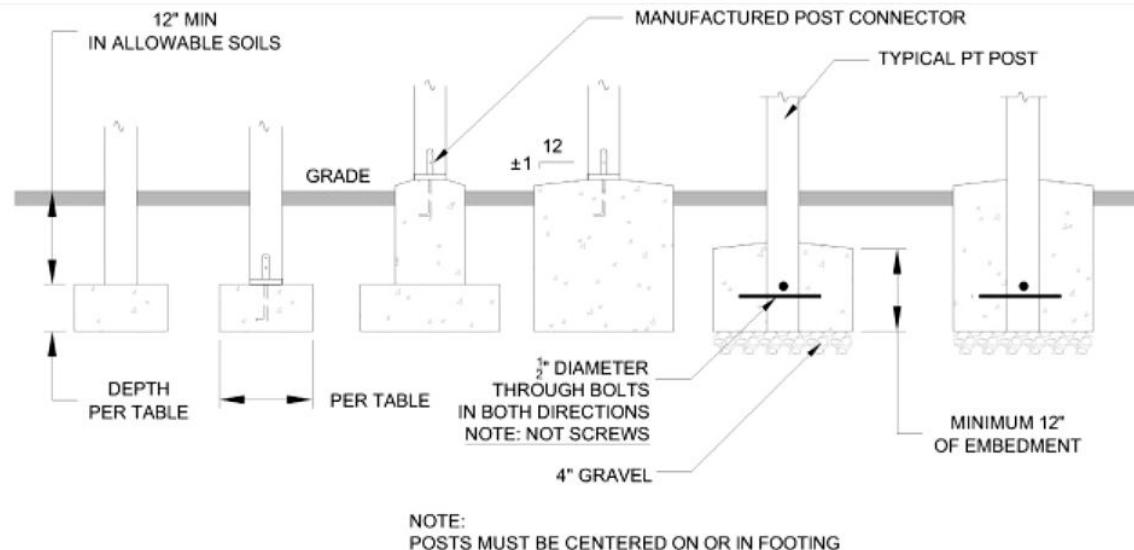


FIGURE R507.3 DECK POSTS TO DECK FOOTING CONNECTION

C3

R507.5.1 Deck beam bearing.

The ends of beams shall have not less than $1\frac{1}{2}$ inches (38 mm) of bearing on wood or metal and not less than 3 inches (76 mm) of bearing on concrete or masonry for the entire width of the beam. Where multiple-span beams bear on intermediate posts, each ply must have full bearing on the post in accordance with Figures R507.5.1(1) and R507.5.1(2).

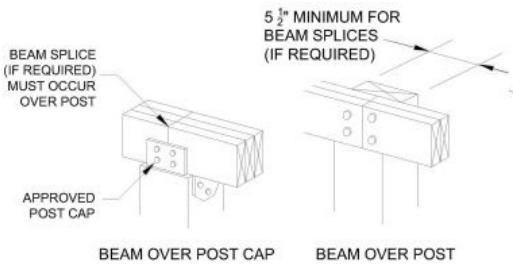


FIGURE R507.5.1(1)DECK BEAM TO DECK POST

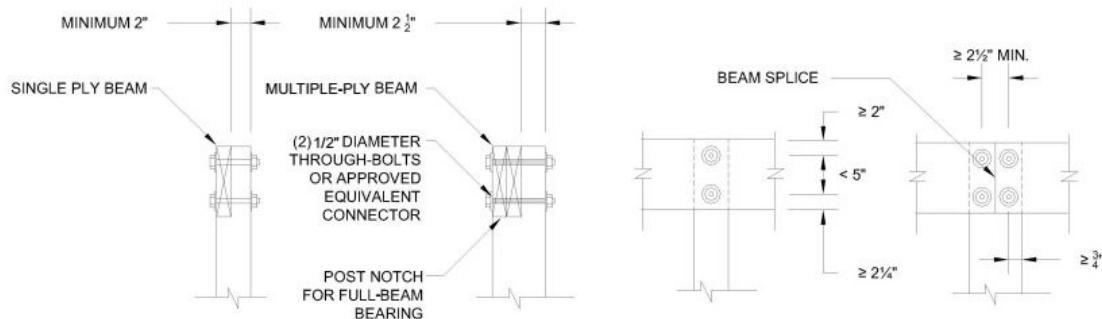


FIGURE R507.5.1(2)NOTCHED POST-TO-BEAM CONNECTION

TABLE R507.6 DECK JOIST SPANS FOR COMMON LUMBER SPECIES (ft. - in.)

C4

SPECIES ^a	SIZE	ALLOWABLE JOIST SPAN ^b		
		SPACING OF DECK JOISTS (inches)		
		12	16	24
Southern pine	2 x 6	9-11	9-0	7-7
	2 x 8	13-1	11-10	9-8
	2 x 10	16-2	14-0	11-5
	2 x 12	18-0	16-6	13-6

C5

TABLE R507.6 DECK JOIST SPANS FOR COMMON LUMBER SPECIES (ft. - in.)

SPECIES ^a	SIZE	MAXIMUM CANTILEVER ^{c, f}		
		SPACING OF DECK JOISTS WITH CANTILEVERS ^c (inches)		
		12	16	24
Southern pine	2 x 6	1-3	1-4	1-6
	2 x 8	2-1	2-3	2-5
	2 x 10	3-4	3-6	2-10
	2 x 12	4-6	4-2	3-4

TABLE R507.5 DECK BEAM SPAN LENGTHS^{a, b, g}(feet - inches)

C6

SPECIES ^c	SIZE ^d	DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet)						
		6	8	10	12	14	16	18
Southern pine	1 - 2 x 6	4-11	4-0	3-7	3-3	3-0	2-10	2-8
	1 - 2 x 8	5-11	5-1	4-7	4-2	2-10	3-7	3-5
	1 - 2 x 10	7-0	6-0	5-5	4-11	4-7	4-3	4-0
	1 - 2 x 12	8-3	7-1	6-4	5-10	5-5	5-0	4-9
	2 - 2 x 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2 - 2 x 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2 - 2 x 10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2 - 2 x 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3 - 2 x 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3 - 2 x 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3 - 2 x 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3 - 2 x 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10

C7

R317.1.1 Field treatment.

Field-cut ends, notches and drilled holes of preservative-treated wood shall be treated in the field in accordance with AWPA M4.

STANDARD FOR THE CARE OF PRESERVATIVE-TREATED WOOD PRODUCTS**6. Field Treatment:**

6.1 General. All cuts, holes and injuries such as abrasions or holes from removal of nails and spikes which may penetrate the treated zone shall be field treated. An AWPA accepted preservative system, determined appropriate in accordance with Section 7 of this Standard, shall be used for field treatment. Field treatment preservatives shall be applied in accordance with the product label. The application method shall coat any surface that is exposed by damage or field fabrication while not using excess preservative. Any excess preservative not absorbed by the wood product shall be cleaned from the surface prior to the use of the product. Bored holes for connectors or bolts may be treated by pumping coal-tar roofing cement meeting ASTMD5643 into holes using a grease gun or similar device. Careful attention should be given to materials placed into aquatic environments. These materials shall not be used unless the field treated surface is clean, dry and free of excess preservative.

7. Preservatives:

7.1 General. The appropriateness of the preservative system for field treatment shall be determined by the type of preservative originally used to protect the product and the availability of a field treatment preservative. Because many preservative systems are not packaged and labeled for use by the general public, a system different from the original treatment may need to be utilized for field treatment. Users shall carefully read and follow the instructions and precautions listed on the product label when using these materials. The preservatives designated in sections 7.1.1, and 7.1.2 are accepted and available for field treatment.

7.1.1 Copper naphthenate. Copper naphthenate preservatives containing a minimum of 2.0% copper metal are recommended for material originally treated with copper naphthenate, pentachlorophenol, creosote, creosote solution or waterborne preservatives. Use of copper naphthenate preservatives with a minimum of 1.0% copper metal is appropriate in those regions of the country where the higher concentration material is not readily available.

7.1.2 Inorganic boron. Inorganic boron preservatives are limited to use in applications not in contact with the ground and continuously protected from liquid water. They may be used for field treatment of material originally treated with any waterborne treatment as long as this condition is met. (Solutions shall have a minimum concentration of 1.5% (B₂O₃ basis).

R507.6.1 Deck joist bearing.

The ends of joists shall have not less than 1 $\frac{1}{2}$ inches (38 mm) of bearing on wood or metal and not less than 3 inches (76 mm) of bearing on concrete or masonry over its entire width. Joists bearing on top of a multiple-ply beam or ledger shall be fastened in accordance with Table R602.3(1). Joists bearing on top of a single-ply beam or ledger shall be attached by a mechanical connector. Joist framing into the side of a beam or ledger board shall be supported by approved joist hangers.

Figure 8A. Post-to-Beam Attachment Requirements.

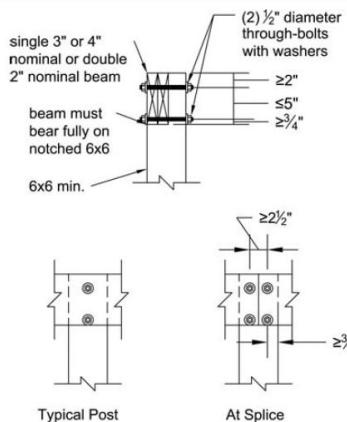
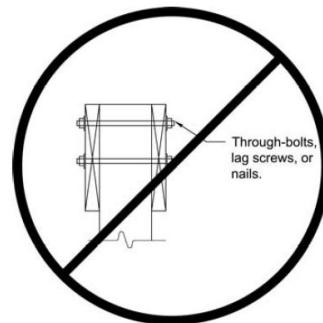


Figure 9. Prohibited Post-to-Beam Attachment Condition.



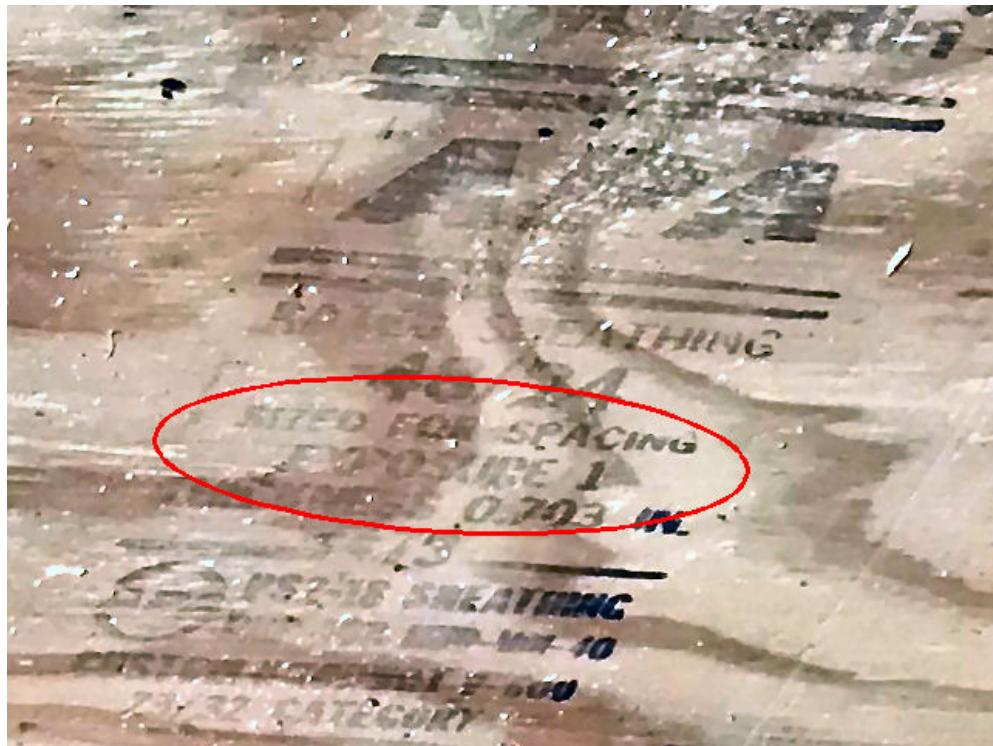
A1

Use Category	Brief Description
UC1	Interior Dry
UC2	Interior Damp
UC3A	Exterior Above Ground, Coated with Rapid Water Runoff
UC3B	Exterior Above Ground, Uncoated or Poor Water Runoff
UC4A	Ground Contact, General Use
UC4B	Ground Contact, Heavy Duty
UC4C	Ground Contact, Extreme Duty
UC5A	Marine Use, Northern Waters (Salt or Brackish Water)
UC5B	Marine Use, Central Waters (Salt or Brackish Water)
UC5C	Marine Use, Southern Waters (Salt or Brackish Water)
UCFA	Interior Above Ground Fire Protection
UCFB	Exterior Above Ground Fire Protection

O1



02



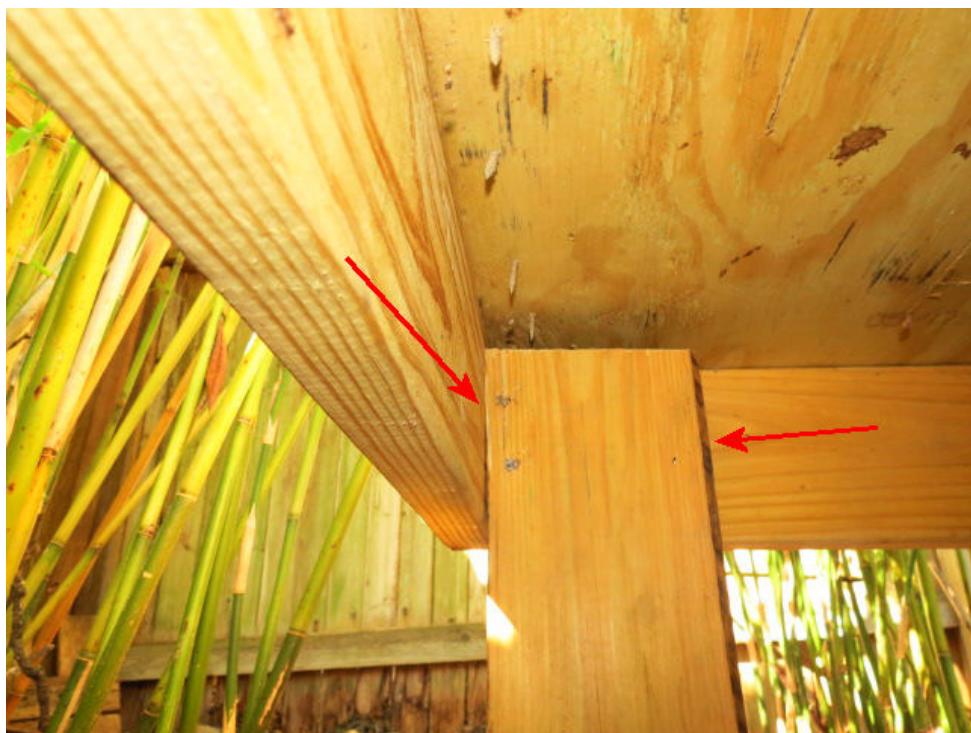
03



P1



P2



P3



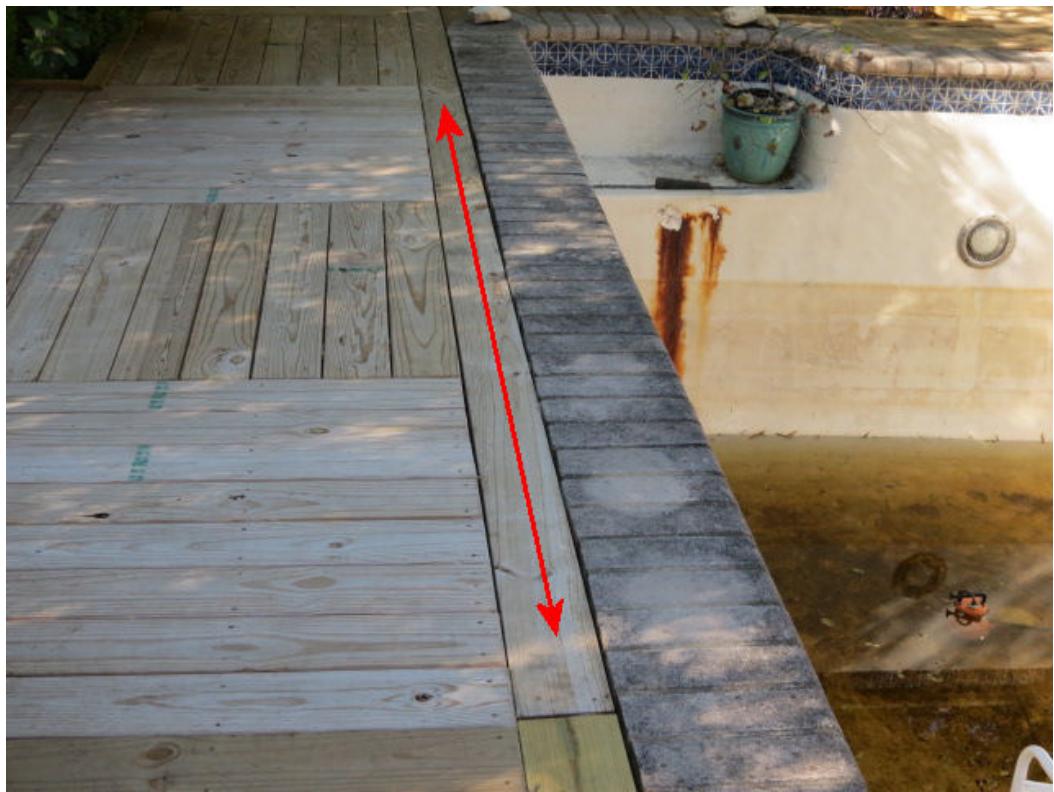
P4



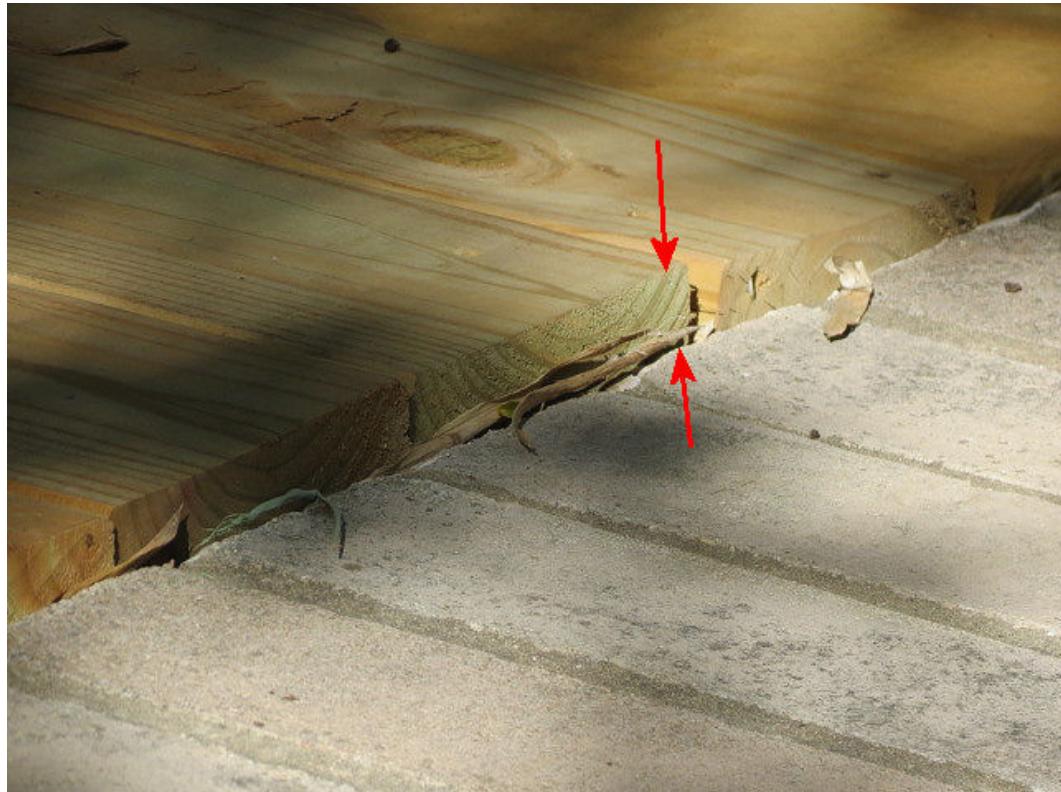
P5



P6



P7



P8

