Flooring Warranty Services Inc.
119 Goliad St #204
Benbrook, TX 76126

940-391-4428
Service.Request@fws-inc.com

August 2, 2022

Mrs. Sherri Walker
2951 FM 2848
Valley View, TX 76272
614-563-1051
texasflavorlady@gmail.com

Mrs. Walker

You commissioned Flooring Warranty Services to inspect your floating resilient flooring for unusual marks, cleanability, and lifting/ separating end joints. The initial inspection was performed May, 9th 2022. Samples were collected and additional testing was performed at Professional Testing Laboratory in Dalton, GA. A follow up inspection and test cleaning was performed July 27th, 2022.

Problem Description:

The customer is concerned with the performance of the product wear layer and overall performance in comparison with the previous product. Specifically, small shiny spots or scuff marks and excessive soiling that does not come clean. Additionally, there are secondary concerns with lifting and/ or gapping end joints. The previous product was a loose lay LVT. These problems were observed shortly after installation and have continued to progress.

Installation, Maintenance and Type of Use:

This product was installed in November of 2021 on an ongrade slab in a floating configuration. The current product was selected to replace an existing loose lay LVT product. The replacement is part of an insurance claim for a flood incident that occurred in February of 2021. The installers removed the loose lay LVT, checked the slab for flatness using a 2x4, and installed the current floating floor. No underlayment or vapor barrier was placed between the slab and the floating flooring.

The customer mops several times a week using a microfiber mophead and plain water. The customer has used alternate solutions for mopping and spot treatment based on the dealer and manufacturer recommendations. Initially the customer used a solution of vinegar and water approximately 1/9 ratio. The customer was then directed by the dealer to use a solution of Pinesol, followed by a 1-to-4-part solution of water and vinegar for the shiny spots/ scuff marks.

The home sees regular use from 1-4 adults and 4 dogs. Entryways into the home did not have walk-off mats or rugs. The customer stated they used to have rugs at the garage entry which is the primary entrance for the customer.

Observations:

At the time of inspection, the floor had a hazy appearance throughout, including a small area cleaned by the customer prior to my arrival. The newly cleaned area showed was also hazy but was more uniform and has fewer signs of tracking or scuff marks. A small section was cleaned with the customer's cleaning solution of vinegar and water, then rinsed with water, then rubbed dry. Each time, an orange-brown substance transferred to the paper towels. Each additional treatment showed less

and less of the orange-brown substance transferred to the paper towels, but no wiping's came back with no substance transferred. The pH of the rinsed area showed at neutral 7.

The scuff marks were apparent from a standing position and could be seen most easily when light fell across them from the side. One side of the living room has several large windows that let in a lot of ambient light. The customer also demonstrated on an uninstalled board how, when rubbed with a fingernail, the spot would become glossier and stand out more.

The customers secondary concerns of lifting and gapping end joints were most apparent in the living room. Several planks were separating from the adjacent board and could be pressed down independently demonstrating that the locking mechanism was not properly attached. Additionally, there were signs of damage in the form of peaking corners, and ramped end joints. There were also two boards that had small, raised spots consistent with debris trapped beneath the plank transferring through the plank to the surface. These issues were not widespread and appeared to be affecting about 12 boards in the living room.

A prybar and steel probe were used to check for expansion space around the perimeter of the room. The expansion space varied slightly but averaged 3/8 inches throughout. No spots of inadequate expansion, pinch points or other issues that would lock the product in were observed. Three installed planks were removed for further examination. Two from a closet and one from beneath a couch. These were sent to an independent lab along with one of the loose lay planks from the original product for performance and comparison testing. The concrete subfloor could be seen when the installed samples were removed, and no underlayment or vapor barrier was observed.

Lab Testing:

Samples of the TruCor SPC rigid flooring and the Shaw Easy Street loose lay LVT were both subjected to the following tests:

- EN 16094 Micro-Scratch Resistance (A & B)
- ASTM F410 Standard Test Method for Wear Layer Thickness of Resilient Floor Coverings by Optical Measurement
- ASTM D4060 Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser

These tests were used to compare the two products for the "like kind" replacement of the customers original floor and to examine the performance of the wear layer on the current TruCor SPC floating floor.

The tests showed that the new product underperformed in comparison with the original product. This was most apparent in the ASTM D4060 Taber Abrasion test where the new flooring began to be affected at 6,000 cycles whereas the original product began to be affected at 11,000 cycles.

Additionally, the EN micro-scratch resistance test performed on the TruCor SPC flooring increased the gloss of the wear layer slightly. Increased gloss is sometimes an indication of a problem with the UV coating of the wear layer. However, the increase shown in this test is minor and inconclusive.

Test Cleaning:

A return visit was made to perform a larger test cleaning with a solution of Newline Industries- Neutral Clean and microfiber cloths. The cleaner was applied to a large area with a spray bottle and wiped up with a dry microfiber cloth. This improved the appearance of the cleaned area significantly. Prints and soiling were removed and the scuff marks were improved. Repeated cleaning and rubbing of the area with microfiber cloths eventually removed the scuff marks and gave the area a buffed appearance. When viewed from a standing position with ambient light falling across the area the cleaned area retained a hazy appearance but was uniform across the cleaned area. Dry rubbing the cleaned area with a white cloth still

resulted in transfer of an orange-brown substance to the white cloth after multiple cleanings. After dry rubbing the cleaned area. The newly rubbed area had an even more glossy appearance than the surrounding area that was cleaned several times. Each time the area was rubbed it would become more glossy.

Conclusion:

The customer's secondary concerns with lifting end joints and damaged corners are a result of improper installation of the affected planks. The damaged corners occur when an unusual stress is applied to the corner, such as dropping the plank or impact to the corner during shipping. When this occurs, the corner will lift or break off from the plank. Corners damaged prior to or during installation must be culled and/ or used for cut planks at the edges or walls where the damage can be cut away. The ramping at the end joint is the result of a broken locking mechanism. This occurs when planks are forced into place or deflection occurs along the joint resulting in a break along the locking mechanism. The gapped, separating, and moving planks are the result of improperly joined locking mechanisms. If undamaged, it may be possible to re-join the locking mechanism and stabilize the planks. The damaged planks can be replaced through individual plank replacement or by carefully unclicking the room to the spot of the damaged board, replacing it, and then re-installing the other planks.

The testing performed for the change in gloss levels and the onsite test cleaning of the product were inconclusive regarding the performance of the wear layer. There were indications that the UV coating may have not cured properly in that micro-scratch testing and dry rubbing after cleaning continued to increase the gloss of the planks and an unknown orange-brown substance continued to transfer to clean cloths. However, the increase in gloss levels during testing was not significant enough to confirm this was the case. Improved cleaning methods as described by the manufacturer and walk-off mats at entry points may improve the occurrence of scuff marks and will aid in keeping soil and other contaminants down. When using a microfiber mop, the cloth should be changed whenever it becomes saturated and replaced with a dry cloth to allow for wicking of the soil and cleaning solution. Manufacturer Care recommendations are attached below.

As to the overall performance of the current rigid core product when compared to the original loose lay LVT as a "like kind" replacement, testing clearly showed that the original loose lay LVT performed better in the Taber Abrasion testing by five thousand more revolutions and had a 5.4 mil thicker wear layer. This demonstrates that the replacement product is not a "like kind" replacement of the previous Loose Lay LVT. These are different products with different performance characteristics.

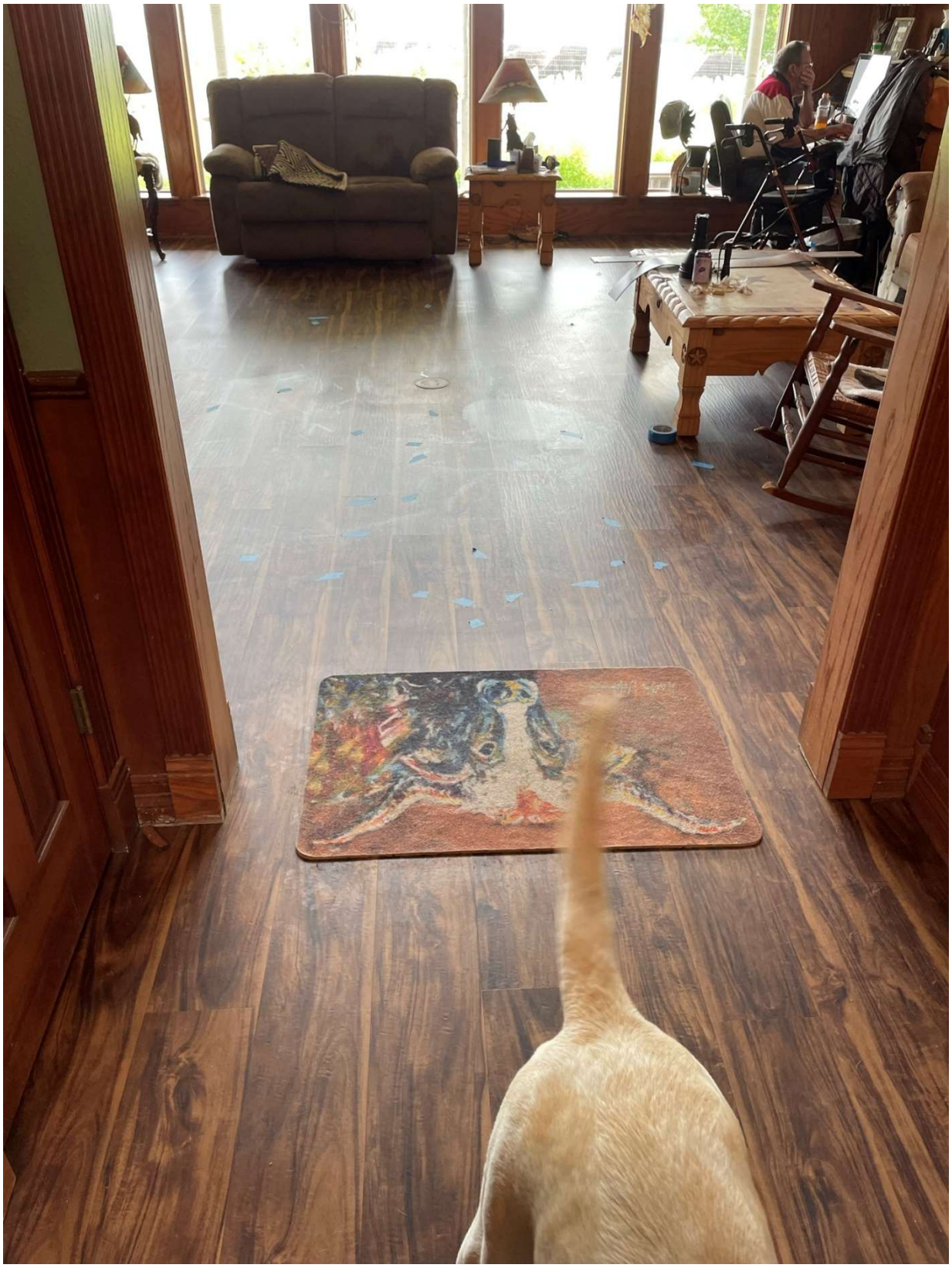
Tom Currin
Flooring Warranty Services Inc.
119 Goliad St. Suite 204
Benbrook, TX 76126

Service.Request@fws-inc.com
940-391-4428

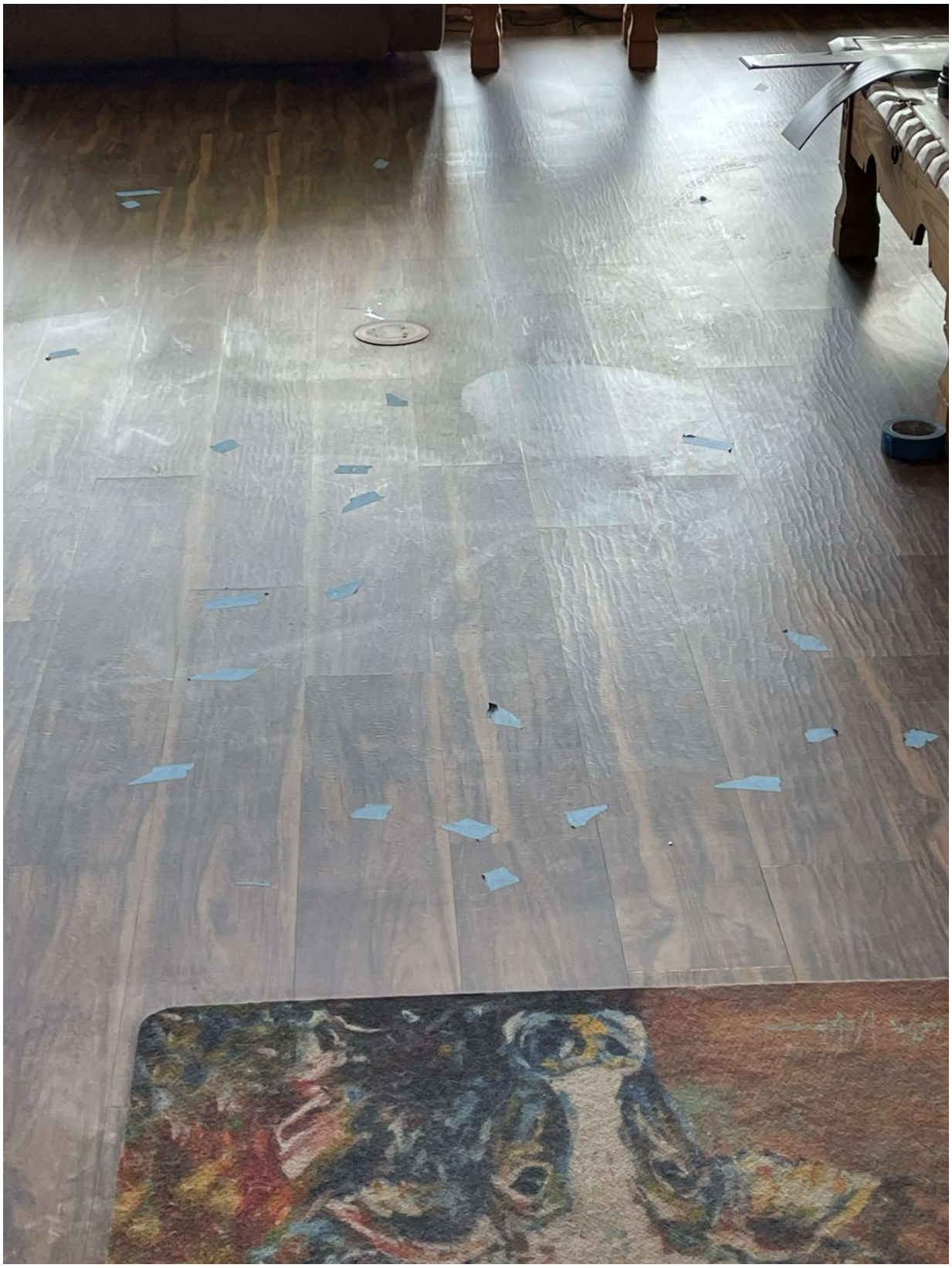
Pictures:

Scuff marks in wear layer- Made with customer’s fingernail for demonstration.

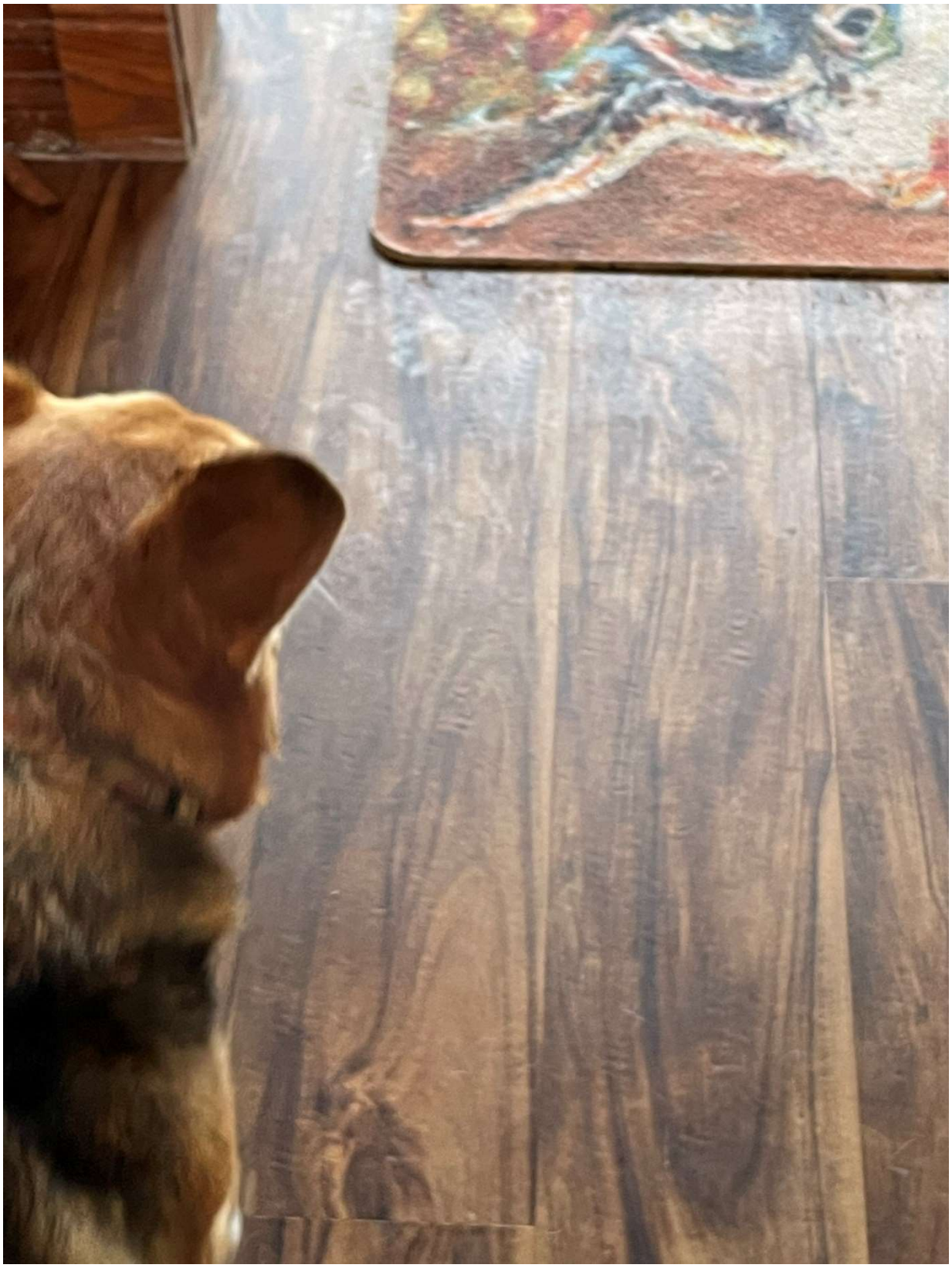
Scff Marks



View from front entry to living room



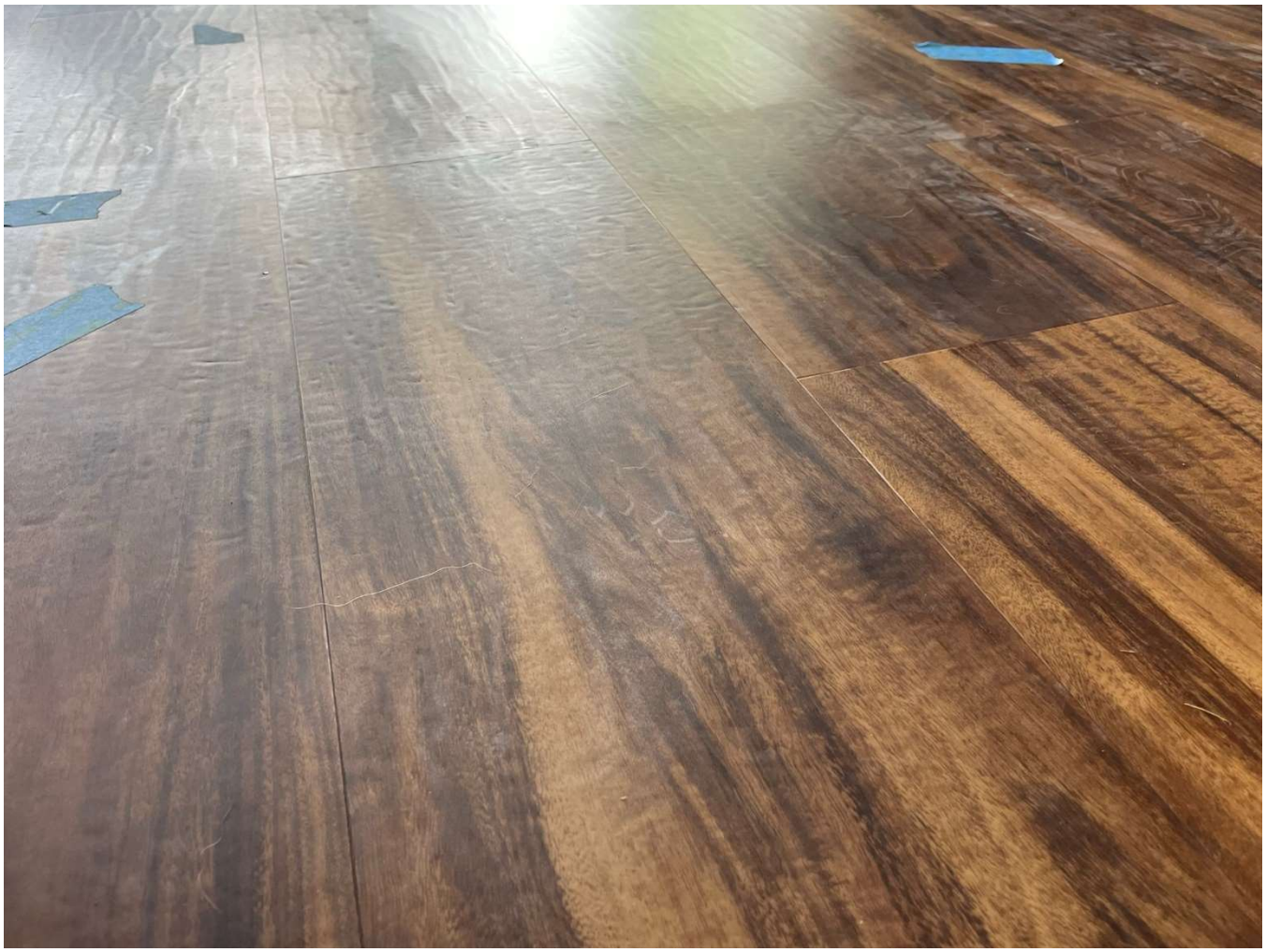
Haze on product after cleaning, Small spot shows test cleaning by customer.



Prints visible near walkoff mat

Scuff Marks

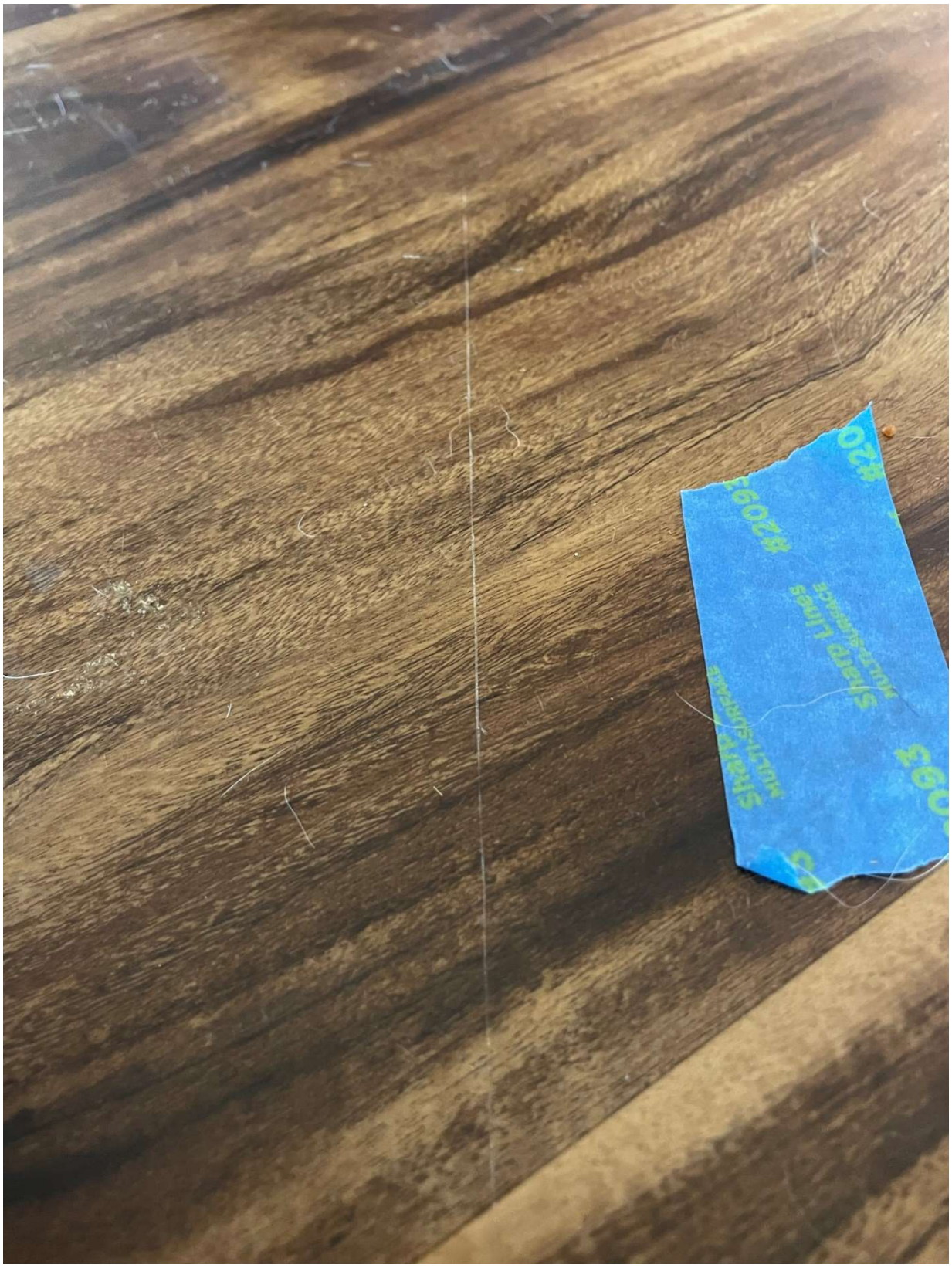
Scuff Marks



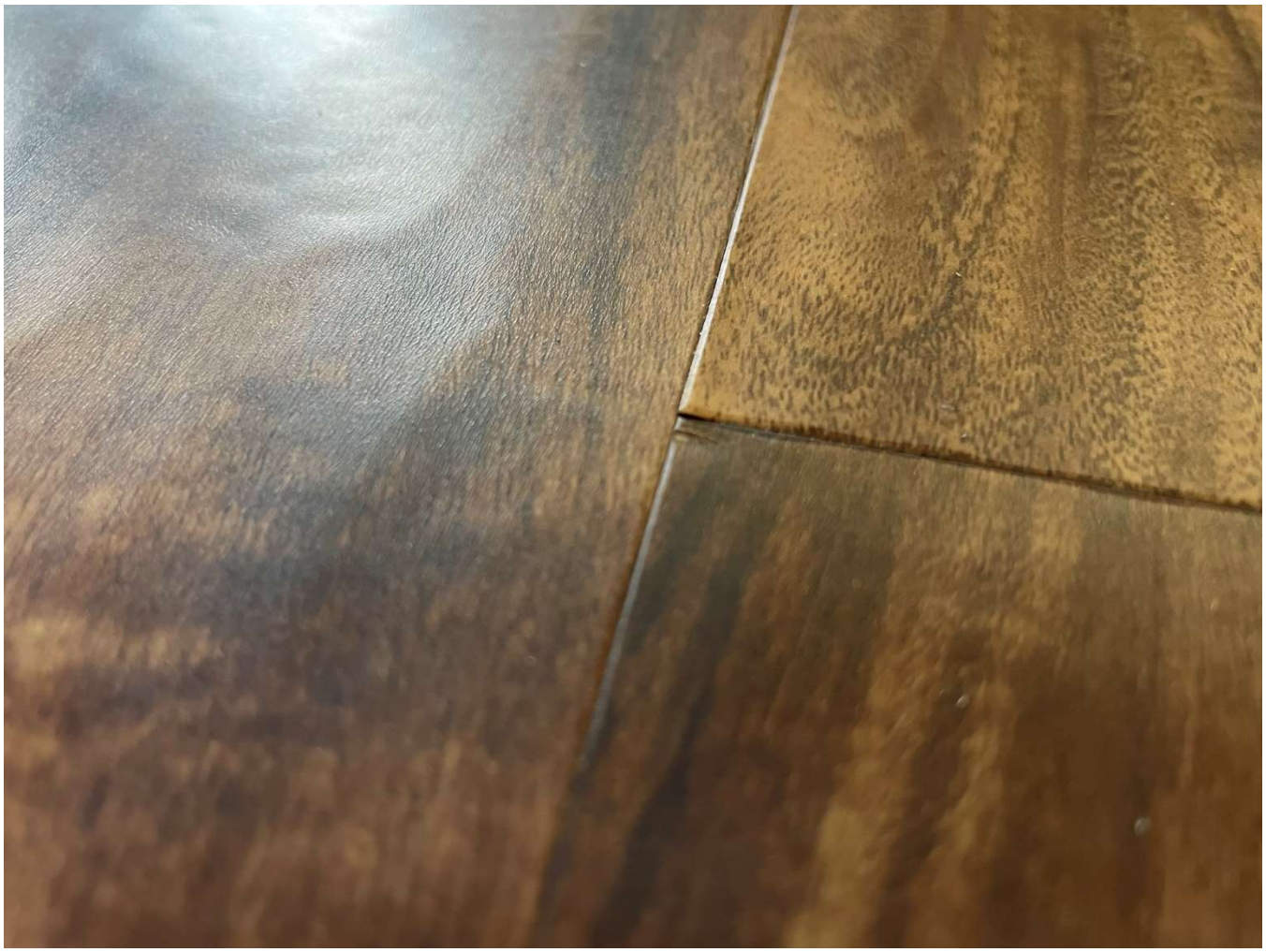
Scuff Marks- cleaned area

Paw Prints

Disengaged end joint- deflection



Scratch in wear layer

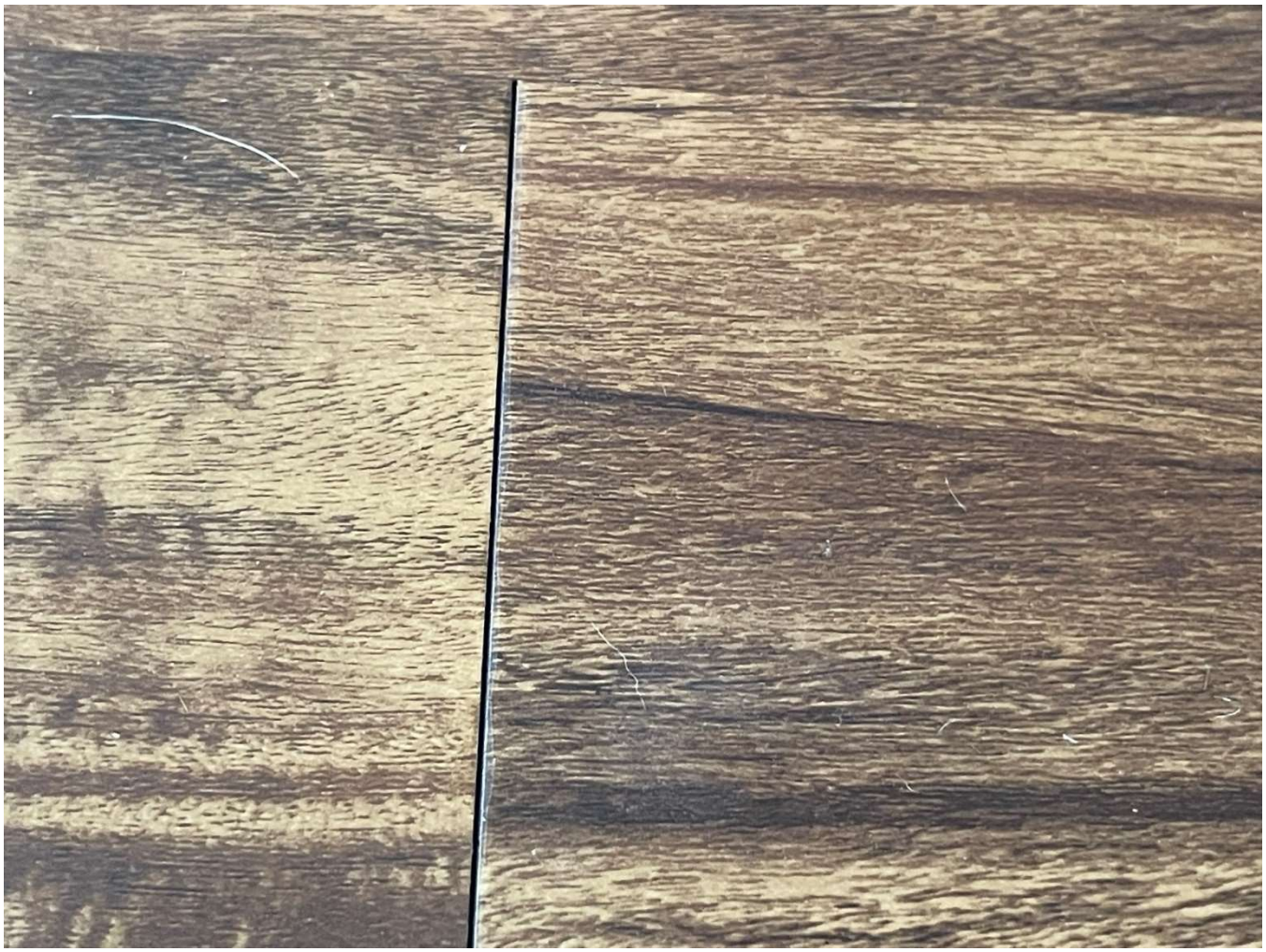


Damaged corner

Disengaged end joint

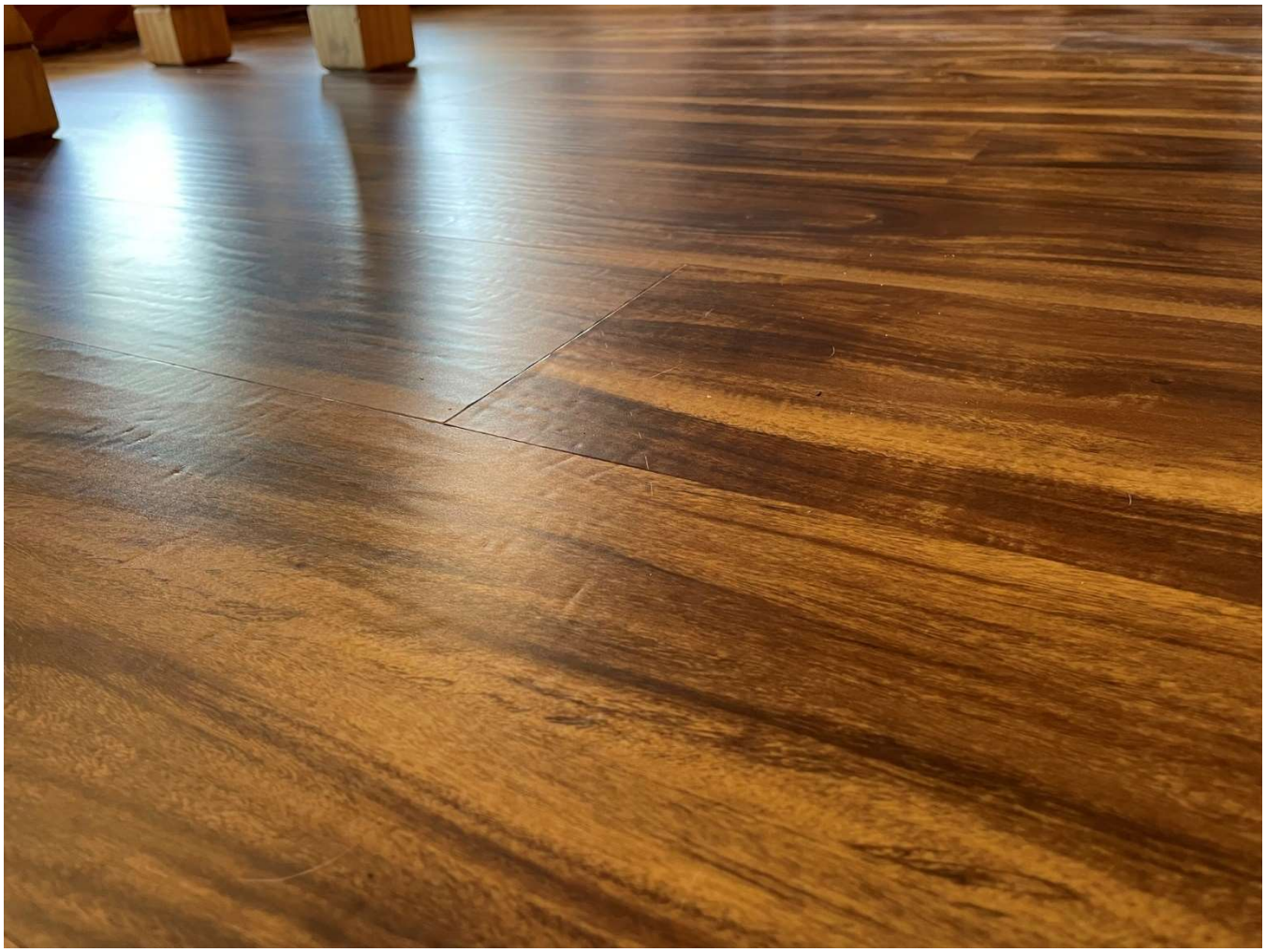
Disengaged end joint- deflection at joint

Close up of disengaged end joint



Gap at end joint

Gap at end joint



Ramp at end joint- broken locking mechanism

Metal furniture glides/ debris

Damaged corner

Telegraphing spots- possibly from debris trapped beneath flooring

Customer’s microfiber mop cloth.

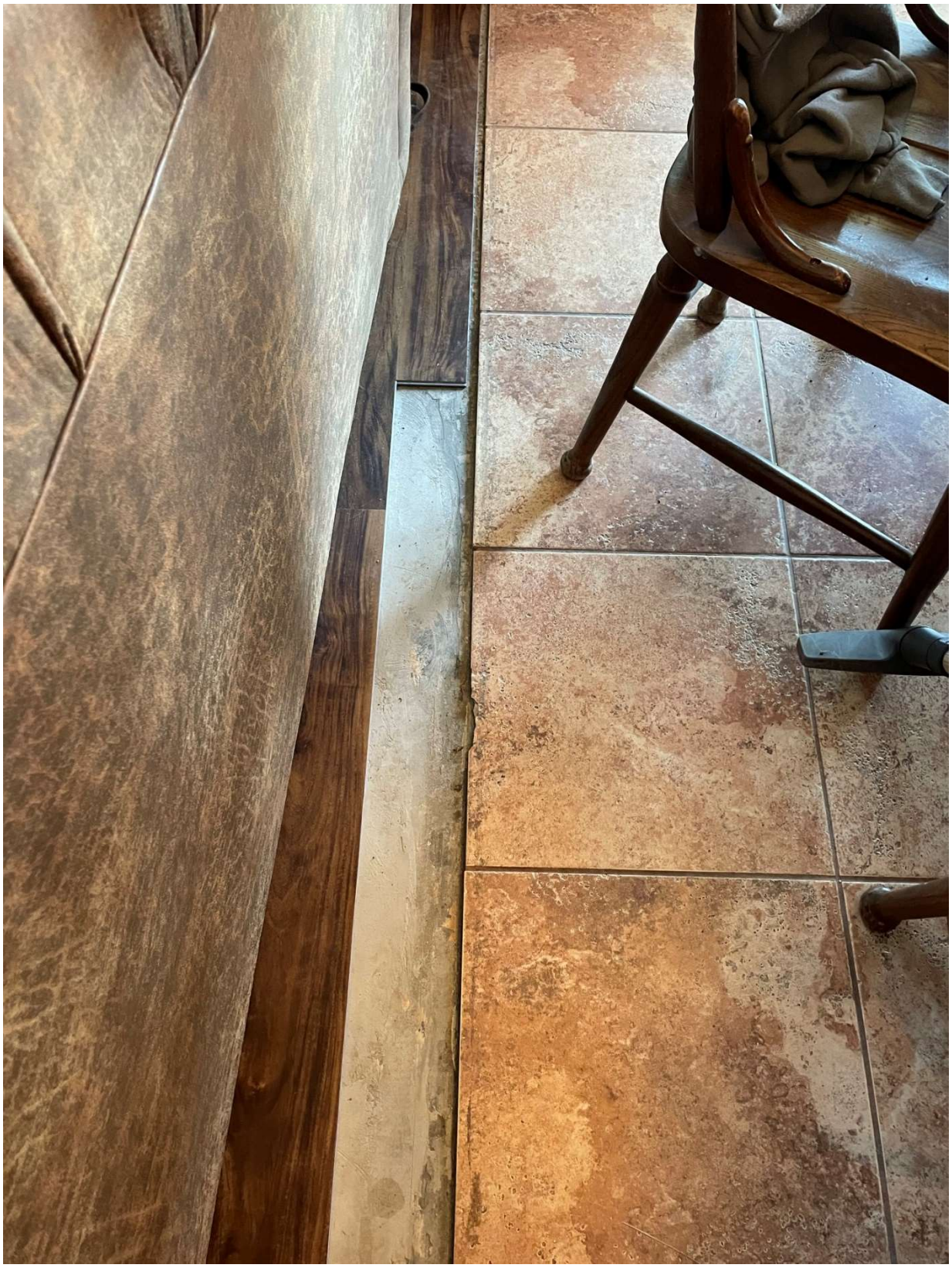
Test clean with customer’s solution

Soil transfer

Soil transfer- various stages

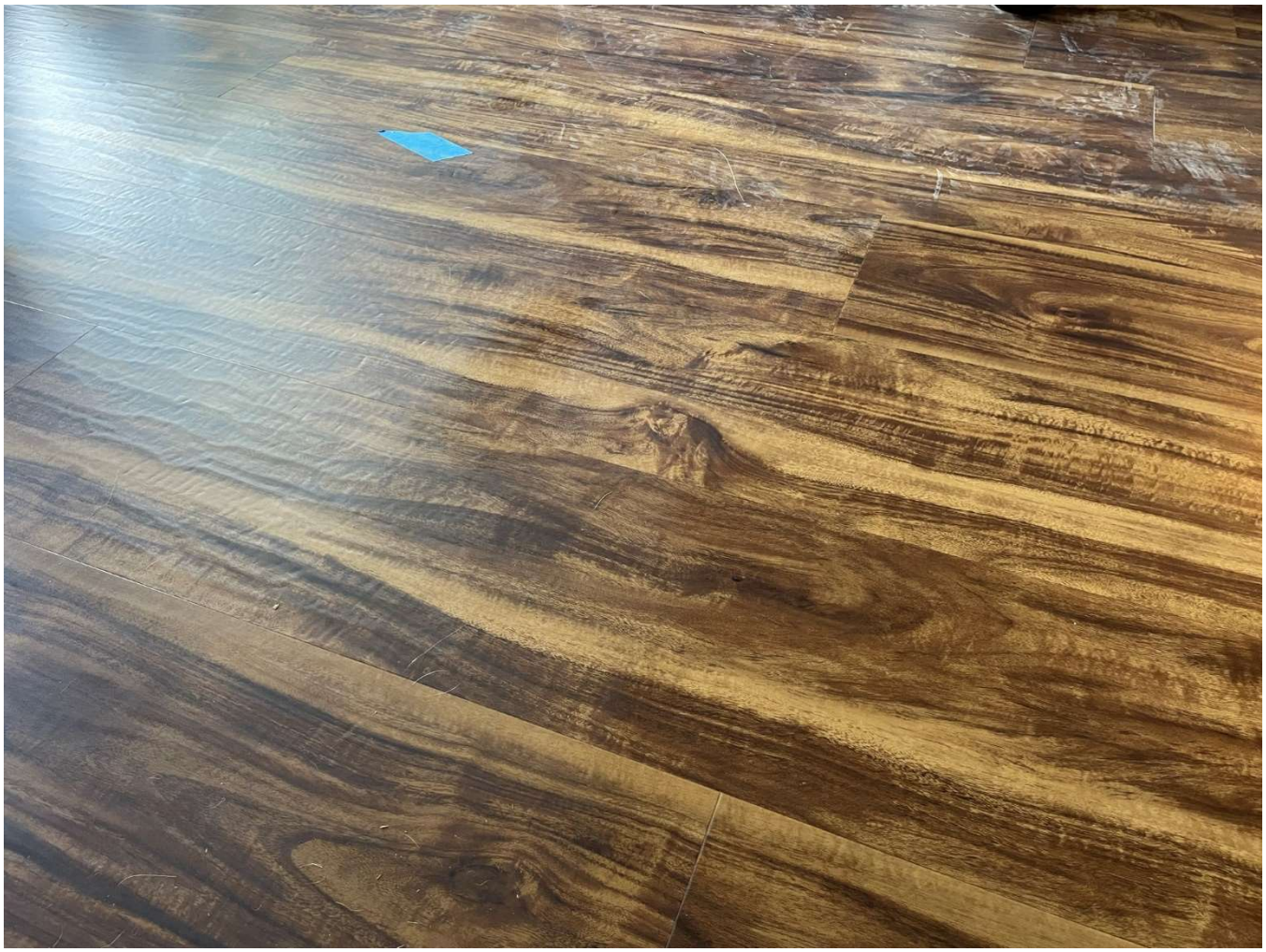
Soil transfer- various stages

Prints/ scuff marks



Sample removed from under couch.

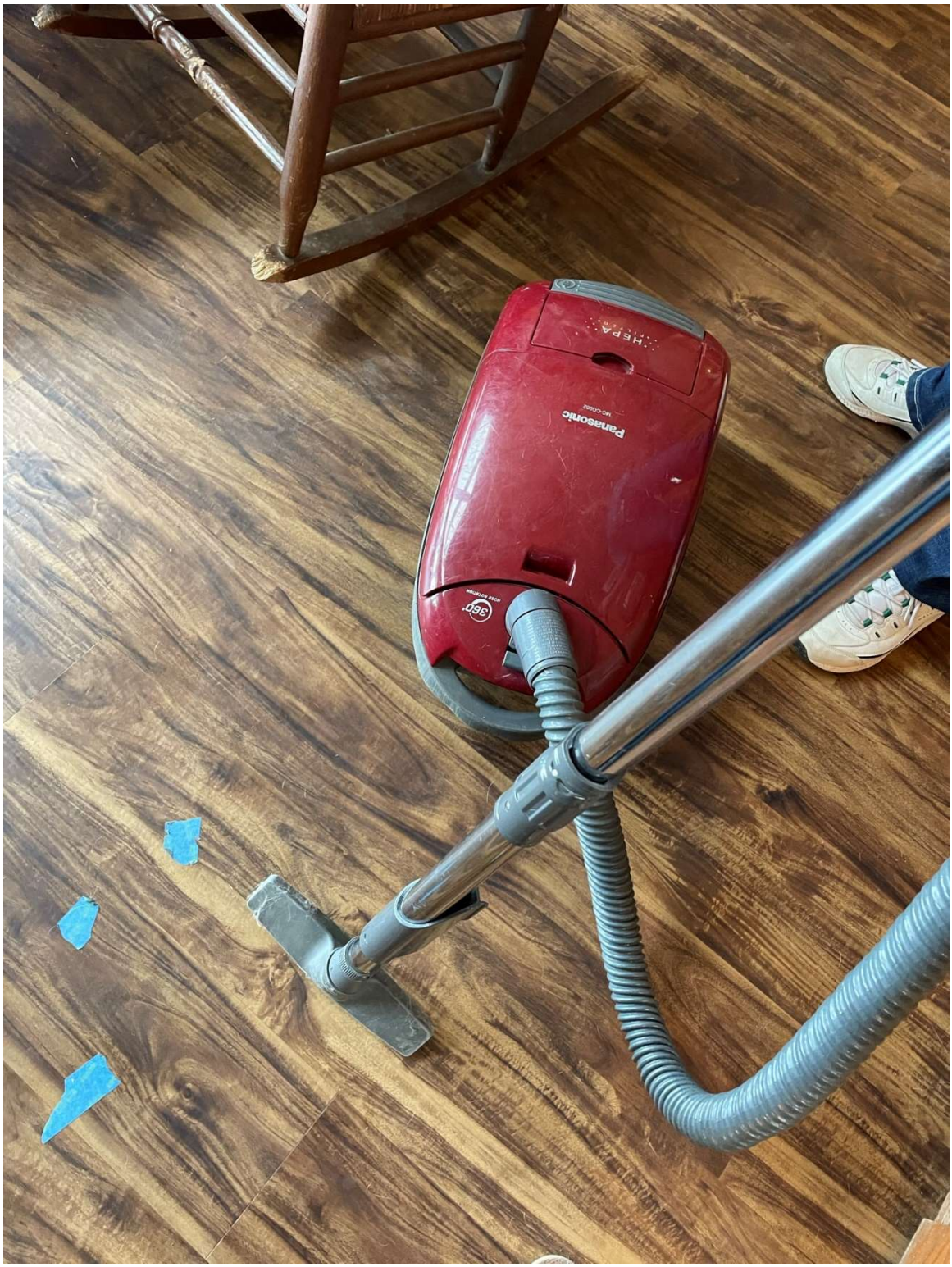
Disengaged end joint



Larger cleaned area- haze still present

Prints/ Scuff marks

Moisture content reading



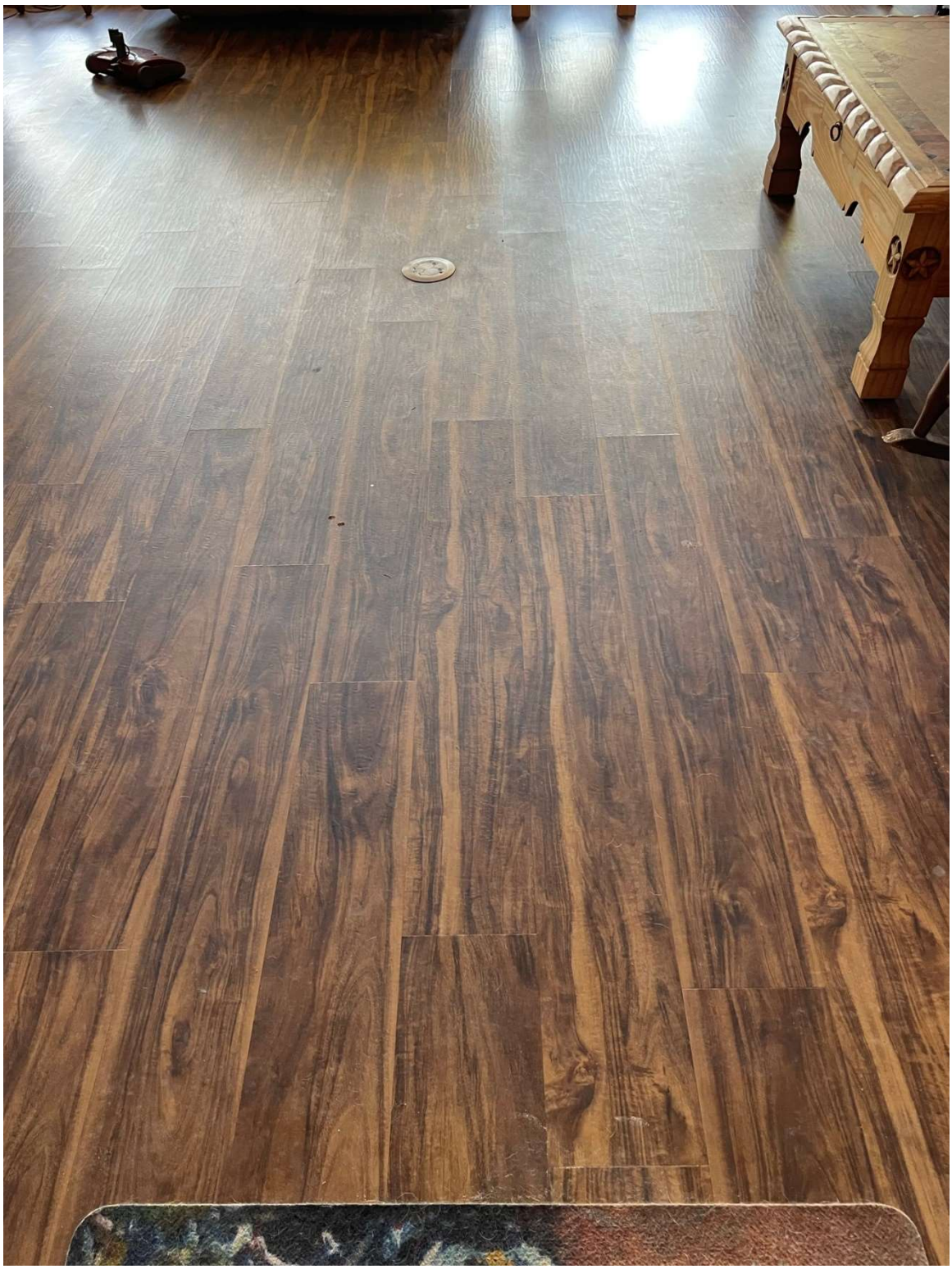
Customers Vacuum


RH
069#
56.0
%
PIN/SCAN
READ
RH/T
SET
HOLD
Ligno
VersaTec
Lignomat USA, Portland OR

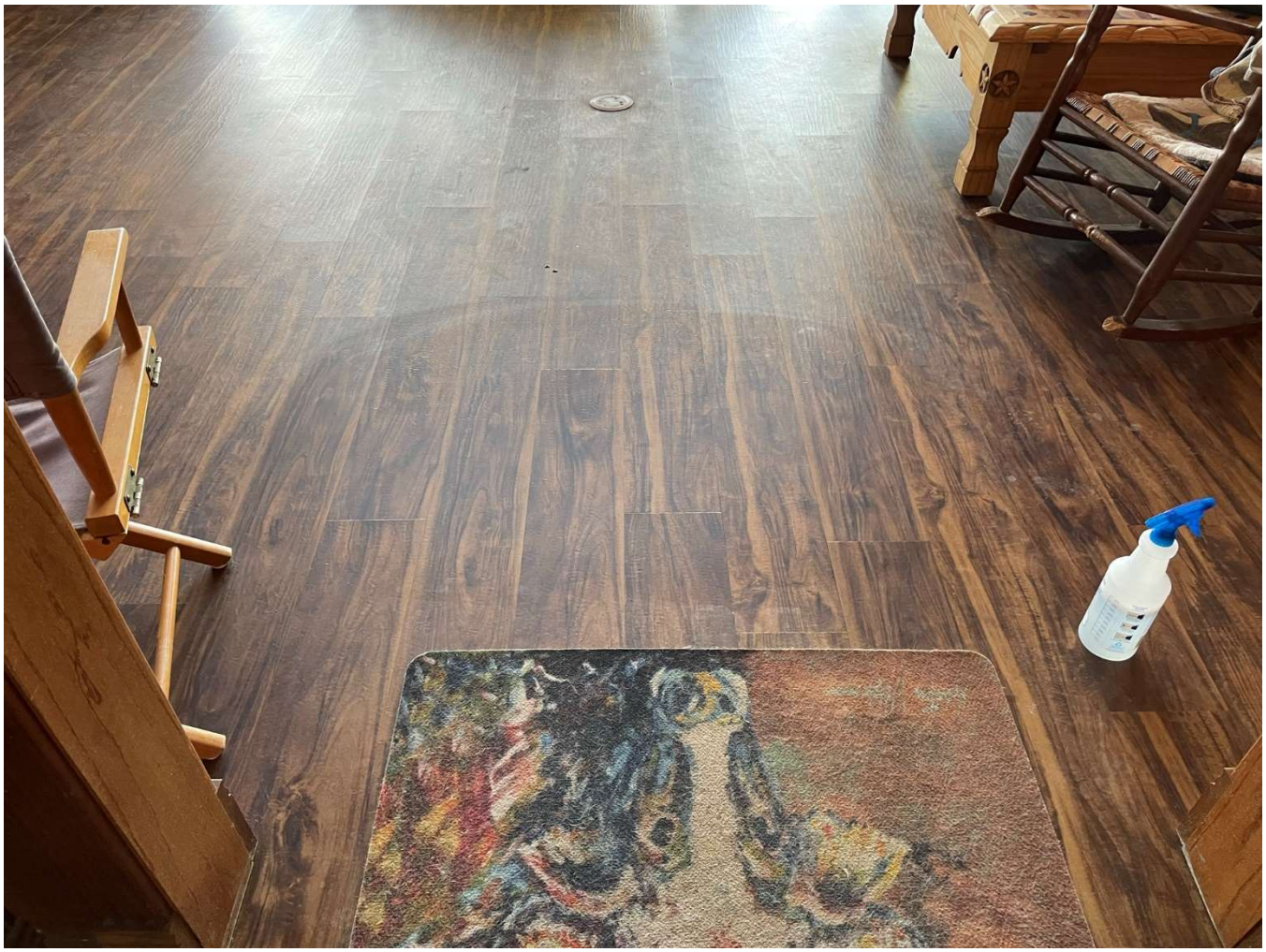
RH in home

Temperature in home

Photos from Follow-up Test Cleaning:



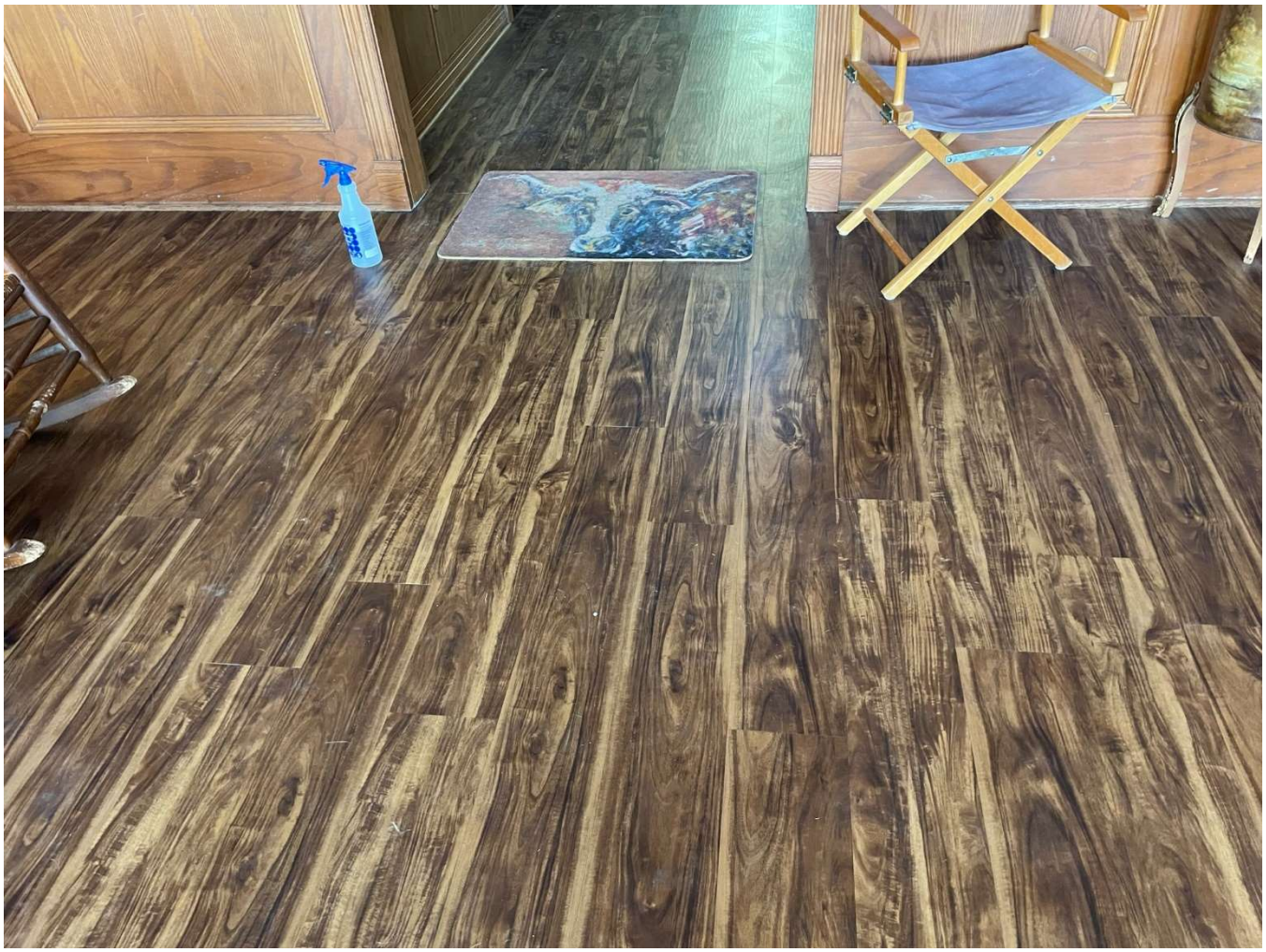
Before cleaning



After Initial Cleaning

After Second Cleaning

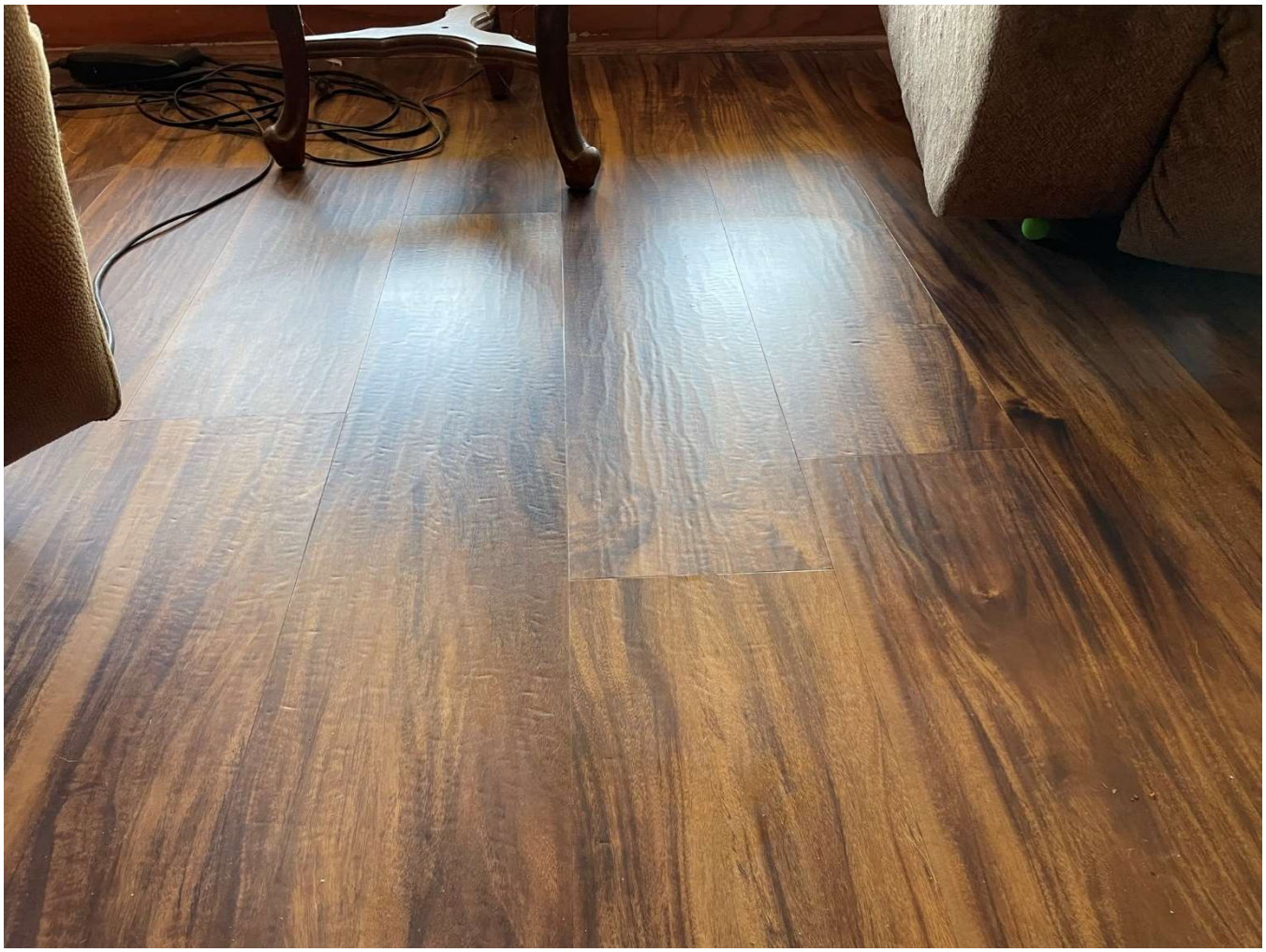
Test cleaning - viewed from side angle



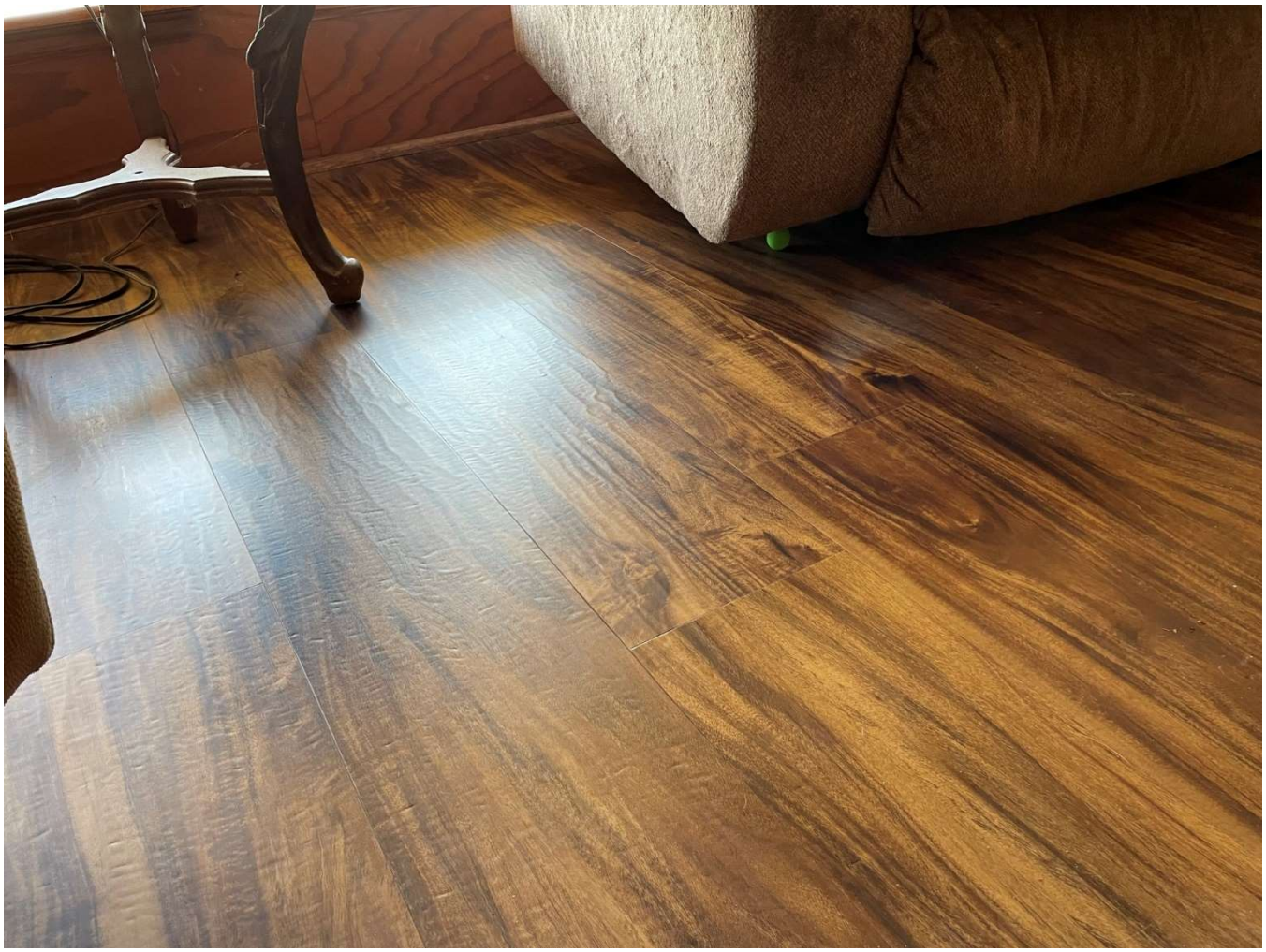
Test cleaning - viewed from opposing angle

Test cleaning – viewed from opposing side angle

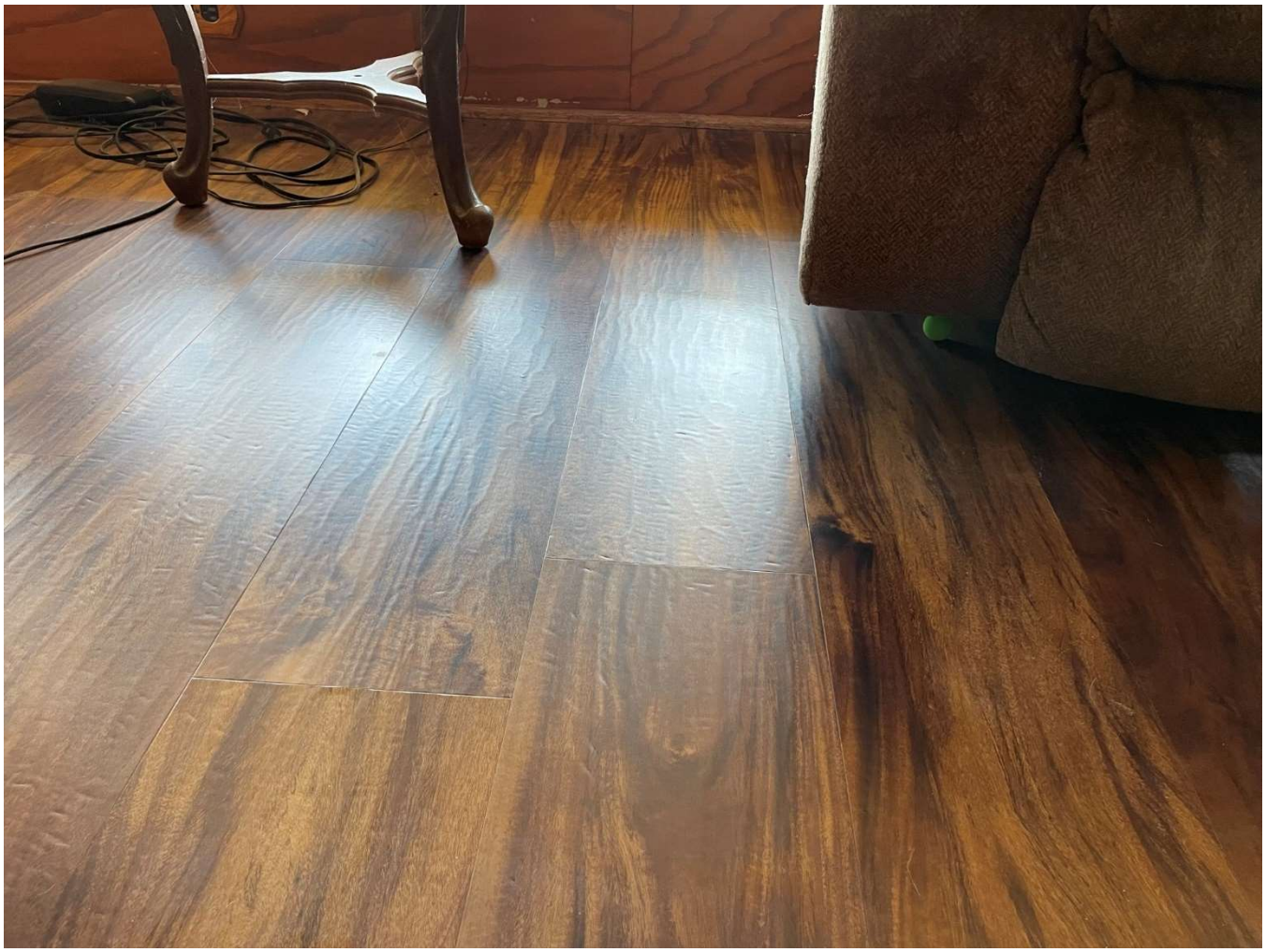
Scuff marks before cleaning



Scuff marks after cleaning



Scuff marks after cleaning



Scuff marks after cleaning

Orange-brown substance still transferring after several cleanings

Orange-brown substance still transferring after several cleanings

TruCor Care and Maintenance Guidelines:

ROUTINE CARE & MAINTENANCE

- Sweep, dust mop or vacuum daily. Do not use vacuums with any type of beater bar assembly.

- Lightly damp mop with a pH neutral cleaner. Remove excess soil by carefully scrubbing with a soft nylon brush or magic eraser sponge and a pH neutral

cleaner.

- Remove scuffs using a pH neutral cleaner and a soft nylon brush or magic eraser sponge.

- Heavily soiled floors may require an occasional deep cleaning using a pH neutral cleaner and a low-speed buffer not exceeding 175 RPM. Fit the buffer with

a red or white scrubbing pad and work the solution over the floor. Remove the dirty residue by damp mopping with clear water.

- Remove standing water, pet urine and other liquids promptly.

PREVENTIVE CARE

- Use non-staining walk-off mats at all outside entrances. Mats should have a non-staining back. Rubber backed mats are not

recommended. Clean the mats regularly.

- Use flat glides at least 2" in diameter under furniture legs to prevent indentations and scratches.

- Use broad surface non-staining casters at least 2" in diameter on rolling furniture.

- When moving heavy furniture, appliances or fixtures, use protective pads designed for use over hard surface flooring.

- Do not use vinegar, polishes, waxes, oil soaps, abrasive cleaners, harsh detergents, “mop and shine” products or solvents.

- Do not expose to direct sunlight for prolonged periods. Protect the floor from direct sunlight by employing shades, blinds or window film.

- Do not use steam cleaners.

- Do not flood floor or subject to standing liquids, including pet urine.

- Use chair mats at desks or work stations for prevent damage from casters.

- Avoid the use of metal or razor scrapers to remove dirt, residues or other markings from the floor. This will damage the protective wear