### Harbortown

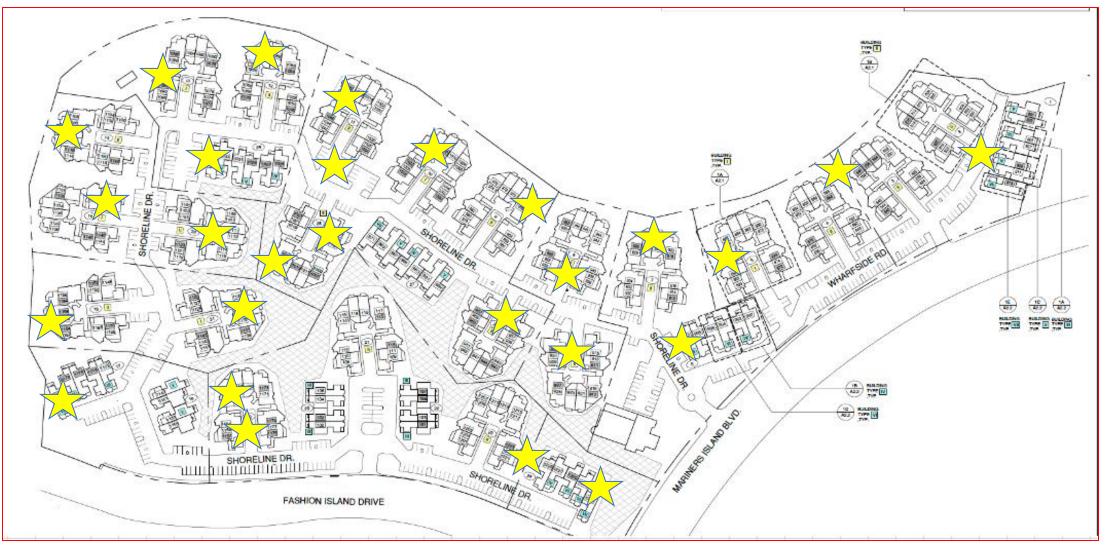
San Mateo, CA





# LOCATIONS INSPECTED







#### **Building 5**

#### Left Elevation

- Recently Painted Wood Clapboard Siding
- Felt Paper WRB
- Stained CDX Plywood

#### **Building 7**

#### Left Elevation

- Inside Corner at Window on Second Floor
- Compressed Fiber Lap Siding (Masonite)
- Felt Paper WRB
- Poly Fiber Reinforced Brown Paper Flashing Tape
- Stained CDX Plywood

#### Left Rear Elevation

- Roof to Wall at the base of the Chimney
- Noted Felt Paper WRB
- Detected moisture readings behind Felt Paper WRB
- Updated Architectural Asphalt Shingles and Heavy Gauge Step Flashings

#### Rear Elevation Windows

- Deteriorated Fiber Lap Siding below windows
- Noted Felt Paper WRB
- Noted Poly-woven window flashing wrap at rough openings
- Noted use of membrane flashing at window transitions
- Detected low moisture readings at corners and elevated moisture readings at the center of the window

#### \* Roof to Wall Transition Right

- Similar deteriorated Felt WRB
- Similar inconsistent roof flashing and sequencing
- Detected low moisture readings
- Rear Left Elevation Chimney Box
- Felt paper WRB
- Deteriorated Fiber Lap Siding



#### **Building 25**

- Front Elevation (x2)
- Painted Wood Shingle Siding
- Windows (x2)
- Noted Felt Paper WRB
- Noted similar window flashing at sills and jamb
- Stained CDX Plywood
- · Detected low moisture readings below windows inspected
- Center Elevation
- Outside Corner at Window on Second Floor
- Shingle Siding
- Felt Paper WRB
- Good shape
- Front Left Garage Elevation
- Window second floor
- Noted Felt Paper WRB
- Detected low moisture readings behind Felt Paper WRB
- Noted minor staining below the window
- Front Left Balcony and Wall Transition
- Noted Felt Paper WRB
- Noted Membrane Flashing Repairs
- Detected moisture readings at the corner in 3/8 plywood
- Roof to Wall Transition Right
- Similar deteriorated Felt WRB
- Similar inconsistent roof flashing and sequencing
- Detected low moisture readings



#### **Building 9**

#### Front Elevation

- Painted Lap Siding
- Front Windows (x2)
- Noted bulges in the siding below windows
- Noted Felt Paper WRB
- Noted similar window flashing at sills and jamb
- Stained and damp CDX Plywood
- Detected moisture readings below windows inspected

#### Rear Left Elevation - Corner

- Loose wood outside corner trim
- Noted membrane flashing repairs
- Felt Paper WRB
- Noted deteriorated sheathing
- Poor shape

#### Rear Elevation

- Window second floor
- Noted Felt Paper WRB
- Detected low moisture readings behind Felt Paper WRB
- Noted minor staining below the window

#### **Building 28**

#### Center Elevation Window

- Painted Shingles
- Noted missing and rotted shingles below the window
- Noted rotted sheathing
- See Video

#### Right Elevation Window

- Painted Shingles
- Noted missing and rotted shingles below the window
- Noted rotted sheathing
- See Video



#### **Building 14**

#### **❖** Front Elevation

- Painted Shingle Siding
- Noted varied repairs
- Noted Felt Paper WRB
- Stained and damp CDX Plywood
- Detected moisture readings below railings inspected

#### **Building 11**

#### **❖** Front Elevation

- Painted Lap Siding
- Noted varied repairs
- Noted Felt Paper WRB
- Noted Fiber Cement Siding used for replacement
- Detected moisture readings below transitions inspected

#### Rear Left Elevation - Corner

- Loose wood outside corner trim
- Noted membrane flashing repairs
- Felt Paper WRB
- Noted deteriorated sheathing
- Poor shape

#### **Building 30**

#### Window

- Painted Shingles
- Noted rotted shingles below the window
- Noted damaged and rotted sheathing
- See Video

#### **Right Elevation Window**

- Painted Shingles
- Noted saturated shingles below the window



#### **Building 16**

- Rear Elevation Window
- Painted Siding
- Noted varied repairs
- Noted Felt Paper WRB
- Stained and damp CDX Plywood
- Detected moisture readings below railings inspected

#### **Building 17**

- Left Elevation Windows (x2)
- Painted Lap Siding
- Noted varied repairs
- Noted Felt Paper WRB
- Detected moisture readings below the windows inspected
- \* Rear Right Elevation Corner
- Wood corner trim
- Noted membrane repairs
- Felt Paper WRB
- Low moisture readings

#### **Building 19**

- Left Elevation Chimney
- Painted Shingles
- Noted damaged shingles at the chimney boxes
- Noted Felt Paper WRB
- Detected low moisture readings
- Front Elevation Garage
- Painted Shingles
- Noted saturated shingles below the window
- Noted clogged downspout and rotted shingles
- Rear Elevation
- Missing shingles at the chimney
- Similar WRB and low moisture readings



#### Buildings 20, 21, & 22 Visual Inspections

- Noted Spot Repairs
- Freshly Painted Siding
- Noted varied trim and siding repairs
- Noted Felt Paper WRB with sealants
- Noted membrane flashing installation

#### **Building 24**

- Left Elevation
- Painted Lap Siding
- Noted varied repairs
- Rear Elevation Decks and Fences
- Aged and Worn Wood fences
- Aged and Worn Composite decking
- Updated Composite decking

#### **Building 4**

- Visual Inspections
- Painted Lap Siding
- Noted similar signs of moisture intrusion and damage
- Noted aged and worn windows and patio doors
- Noted moisture damage at numerous transitions

#### **Building 3**

- Visual Inspections
- Painted Shingle Siding
- Noted similar signs of moisture intrusion and damage behind shingles and below windows
- Noted aged, worn, and updated windows and patio doors

#### **Building 1**

- Visual Inspections
- Painted Lap Siding
- Noted similar signs of moisture intrusion and damage
- Noted aged, worn, and updated windows and patio doors

# **Building Envelope Summary**



#### • Siding:

- o Primarily horizontal wood lap siding (4" & 8") and shingles, all showing signs of age and wear.
- o Significant moisture intrusion and deterioration were observed at 26 of the 35 locations inspected, approximately 74%.
- o Conditions: Poor to Fair.
- This is typical for aged wood siding in this climate.

#### • Building Underlayment:

- o Original WRB consists of Asphalt Felt and/or Rosin Paper.
- o Multiple instances of skips, voids, and deterioration.
- o Moisture intrusion and degradation were observed at 32 of 35 locations inspected; approximately 91%
- o Condition: Poor to Fair.
- o This is typical for aged and improperly installed underlayment in this climate.

#### • Trim:

- o Painted wood, PVC, and wood roofline trim.
- o Varied fastening and securement.
- Condition: Fair.
- Typical for aged trim.

#### • Windows/Doors:

- o Vinyl and Metal flanged windows and patio doors.
- o Aging seals, premature glass failure, and inconsistent flashing.
- Elevated moisture intrusion was observed at 15 of 17 window locations inspected; approximately 88%
- o Condition: Poor to Fair.
- o Typical for aged windows in this climate.

#### • Roofs:

- o Architectural asphalt shingles with typical granule loss due to weathering.
- o Inconsistent roof-to-wall flashing.
- Aged and worn chimney cladding and flashings.
- o Condition: Fair to Good.
- o Typical for aged asphalt shingles.

# **Building Envelope Summary**



#### • Roof-to-Wall Transitions:

- o Inconsistent integration and sequencing.
- o Skips, voids, and missing WRB were observed at 5 of 6 locations, approximately 83%.
- o High risk of moisture intrusion.
- o Condition: Poor to Fair.
- o Typical for aged and improperly installed transitions.

#### • Decks:

- Wood and composite decks with wood and concrete components.
- o Aged and worn materials with inconsistent fastening.
- o Condition: Poor to Fair.
- o Typical for aged decks.

#### **Key Findings & Takeaways:**

- Widespread moisture intrusion throughout the exterior envelope.
- Deteriorating building underlayment and roof-to-wall transitions.
- Aged and failing windows, doors, and siding.
- The overall condition of the exterior envelope ranges from Poor to Fair.
- The building envelope requires significant repairs and upgrades to address moisture intrusion and prevent further deterioration.
- Addressing the WRB issues is crucial to protect the building's structure.
- Window and door replacements may be necessary to improve energy efficiency and prevent further water damage.
- Deck repairs or replacements are recommended to ensure safety and prevent further deterioration.

#### **Overall:**

• The building envelope exhibits widespread signs of moisture intrusion and deterioration due to aging materials, varied installation practices, and climate effects. The report concludes that these conditions are typical for buildings of this age and construction type in the given climate.

### **Summary Notes**



- **SIDING:** Horizontal Painted Lap Siding and Shingles. Noted aged and worn wood horizontal 4" clapboards, compressed fibrous 8" horizontal lap siding, and painted wood shingles. We noted significant moisture intrusion and deteriorated surfaces at 26 of the 35 locations we inspected, Overall conditions ranged from poor to fair. Typical discovery for the existing product type, dated installation practices, product ages, and regional climate conditions.
- **BUILDING UNDERLAYMENT:** The original Weather Resistant Barriers (WRB) installed were an Asphalt Felt Wrap and/or Rosin Paper. We noted multiple locations with skips, voids, and deteriorated Felt and Rosin Paper WRB. We noted consistent attempts and connectivity around updated windows and patio doors. Overall, the WRB and CDX Sheathing conditions ranged from poor to fair. We noted moisture intrusion and deterioration of the aged and updated WRB systems at 32 of the 35 locations inspected. Typical discovery for the existing product types, installation practices, ages, and climate conditions.
- "TRIM" BOARDS: Noted painted wood, PVC trim, Wood roofline fascia, and rake trim. Noted varied fastening and securement techniques. Overall, the conditions were fair. Typical discovery for the existing product types, installation practices, product ages, and climate conditions.
- WINDOWS/DOORS & FLASHING: Vinyl and Metal Flanged Windows and Patio Doors. Noted signs of aging seals, premature glass failure, and attempts of consistent connectivity of updated window flashing to the original and/or spot-repaired Felt WRB system. Discovered a range of low to high moisture intrusion and moisture readings adjacent and below 15 of the 17 windows and patio door locations inspected. Overall, the existing window and door conditions ranged from poor to fair. Typical discovery for the existing aged and updated Metal and Vinyl Window type and climate conditions.

### **Summary Notes**



- ROOFS: Architectural asphalt shingles. Noted industry-standard residential roof flashing and fastening patterns, noted membrane flashing at both eaves and some of the repaired transitions. Noted inconsistent integration of roof-to-wall flashings. Note typical granule loss likely due to daily exposure to UV rays, wind, snow, rain, ice, and other weathering at many roofs, roof eaves, valleys, and roof transitions. Noted aged and worn chimney cladding. Visually noted a few locations with aged and worn vents, neoprene gaskets, and rusting chimney flashings. Overall shingle conditions ranged from fair to good. Typical discovery for the existing product type, updated installation practices, product age, and climate conditions.
- ROOF-TO-WALL TRANSITION: Noted inconsistent integration and sequencing techniques at the roof-to-wall transitions inspected. We discovered skips, voids, and missing WRB at 5 of the 6 locations inspected, exposing wall sheathing and/or gypsum board. Inconsistent and aged installation techniques will contribute to premature moisture and water intrusion into the structure of the building. Overall conditions ranged from poor to fair. Typical discovery for the existing aged and worn WRB system product types, varied installation practices, product age, and climate conditions.
- **Decks:** Aged & Worn Wood Framed Decks with wood and composite decking and enclosed wall railings or wood privacy fences. We noted coated concrete balconies, staircases, entry landings, and decks. We noted aged and worn coatings, inconsistent connector fastening, component fastening, and aged deck post supports. Overall conditions ranged from poor to fair. Typical discovery for the original aging wood and concrete deck systems, installation practices, and climate conditions.







Aged and Worn Painted Lap Siding and Shingles, Painted Wood and PVC trim, Wood Framed Decks, Wood Decking, Composite Decking, Glass Panel and Wood Capped Railings, Masonry Decks, Synthetic Roof Membrane, Updated Architectural Asphalt Shingles, Vinyl and Metal Flanged Windows and Patio Doors







Aged and Worn Painted Lap Siding and Shingles, Painted Wood and PVC trim, Wood Framed Decks, Wood Decking, Composite Decking, Glass Panel and Wood Capped Railings, Masonry Decks, Synthetic Roof Membrane, Updated Architectural Asphalt Shingles, Wood Fences, Wood Trellis, Vinyl, Wood, and Metal Flanged Windows, Patio & Utility Doors



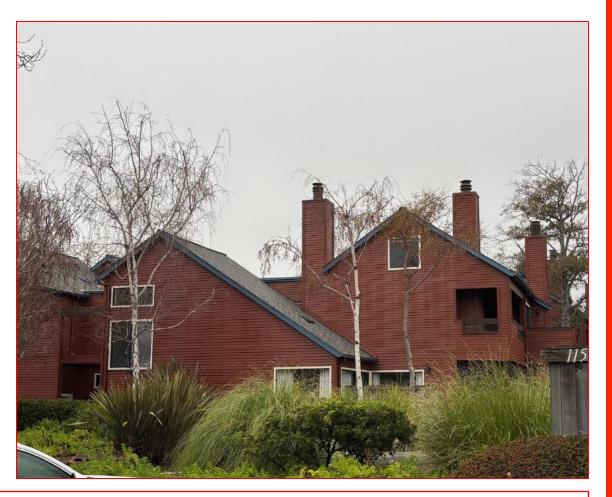




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Aged and Worn Painted Lap Siding and Shingles, Painted Wood and PVC trim, Wood Framed Decks, Wood Decking, Composite Decking, Glass Panel &Wood Capped Railings, Masonry Decks, Synthetic Roof Membrane, Updated Architectural Asphalt Shingles, Wood Fences, Wood Trellis, Vinyl, Wood, and Metal Flanged Windows, Patio & Utility Doors







Spot Repaired Aged and Worn Painted Wood Siding. Noted signs of moisture transfer, blistering paint, peeling paint, UV degraded, decayed with visible signs of top grain eroded surfaces

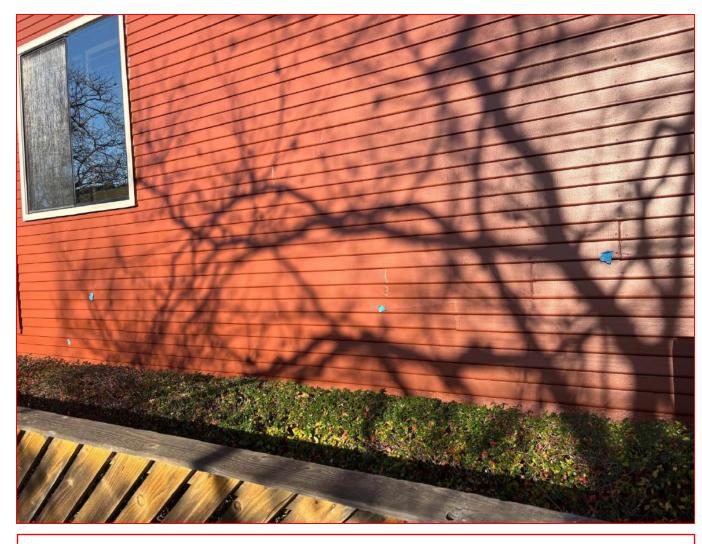






Visible Adhesion and Coating Failures on recently painted wood siding surfaces - Pervasive





Noted recently painted wood siding surfaces with visible blisters, peeling, bubbles, and marked repairs



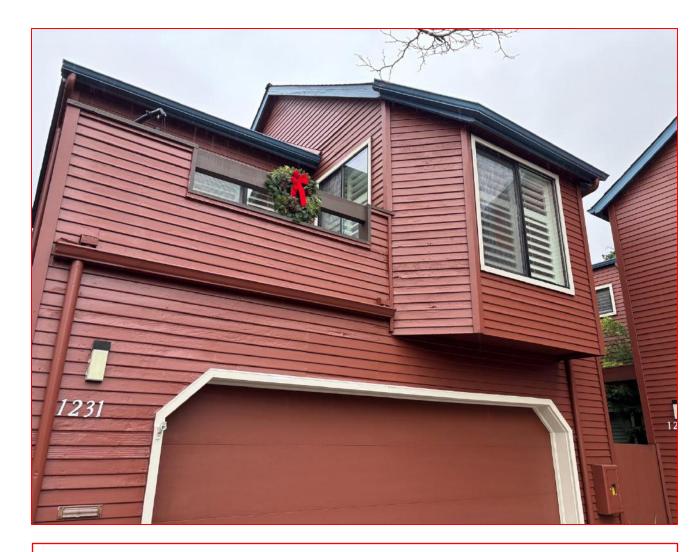


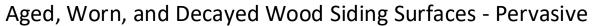


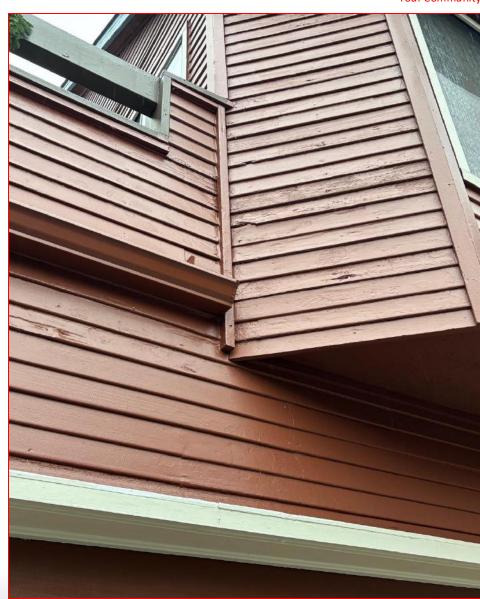
Noted dated and spot-replaced lap siding with stacked joints, overlaps, and signs of excessive moisture transfer - blisters















Aged and Worn Wood Shingles, Wood and PVC trim, Visible Signs of UV Degraded Shingle Surfaces, and Excessive Moisture Transfer















Cupped, Curled, and Decayed Wood Shingles - Pervasive









Adhesion and Coating Failures - Pervasive





Adhesion and coating failures on shingles and visible gaps exposing sheathing





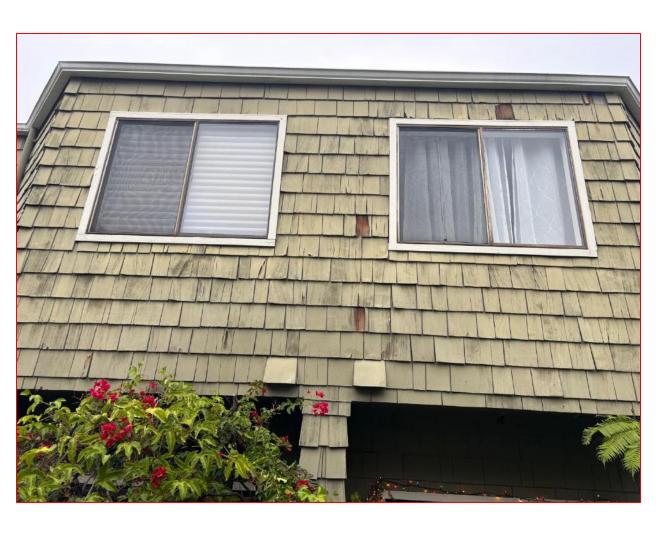


Visible signs of excessive moisture Intrusion from deck above.

Note organic growth and rotting wood shingles







Cupped, curled, UV faded, and missing wood shingles. Noted signs of excessive moisture intrusion behind the siding







Aged and Worn "Masonite Compressed Fiber" Lap Siding. Noted moisture damage and coating failures - Pervasive



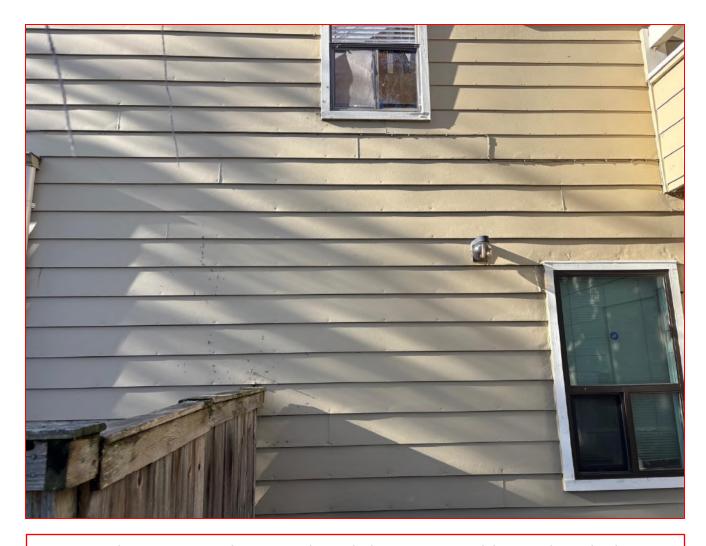




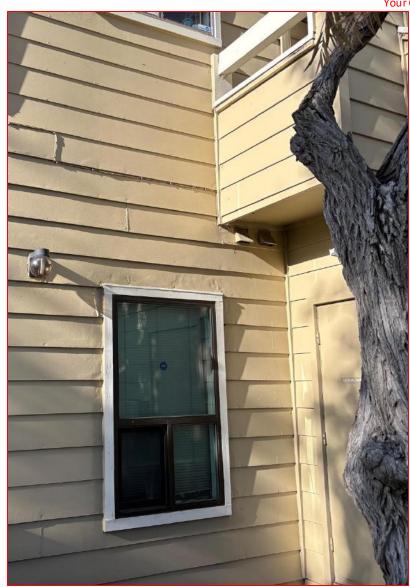
Visibly deteriorated lap siding at roof line transitions. Signs of moisture intrusion and wall damage below windows and penetrations.



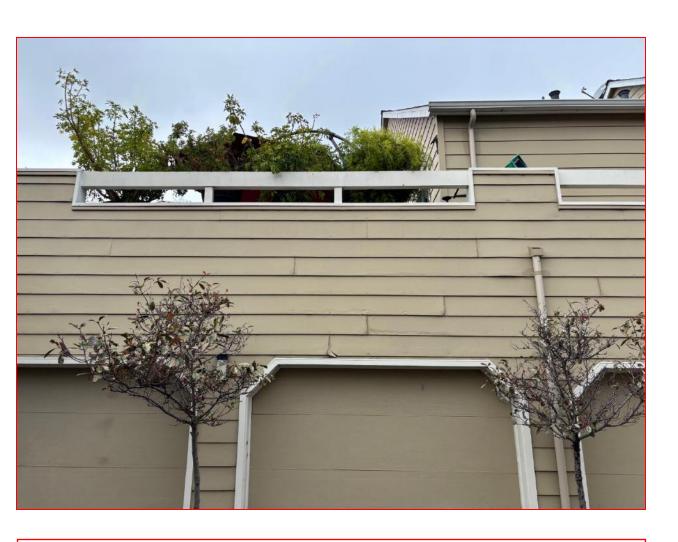




Noted moisture-damaged and deteriorated lap siding below numerous windows and balcony transitions.





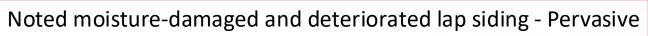


Noted moisture-damaged and deteriorated lap siding below numerous windows and balcony transitions.













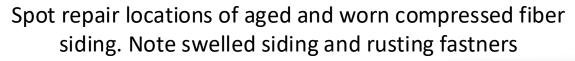


Existing aged and worn wood fiber lap siding. Noted excessive moisture saturation, damage, spot repair, and UV faded coatings. Pervasive















Visible moisture and signs of water intrusion above and below transitions. Pervasive



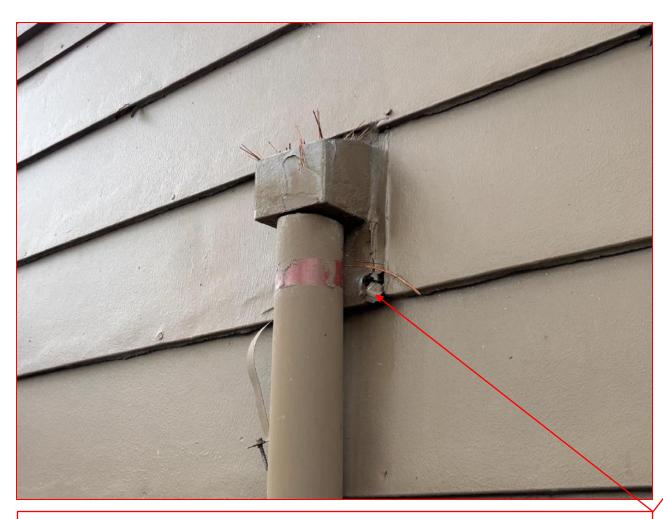




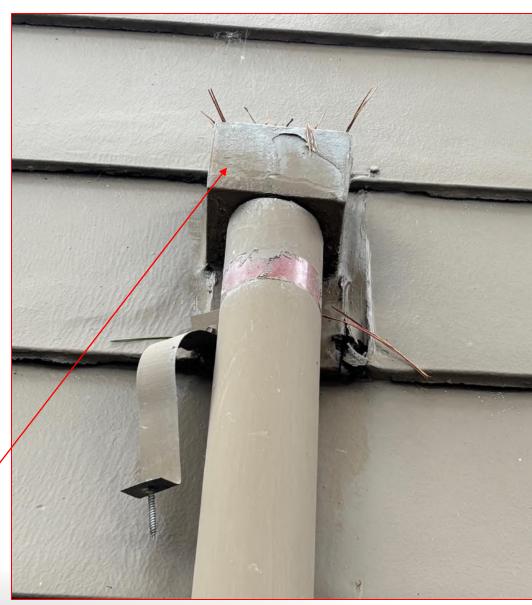


Aged and Worn lap siding. Swelled, damp, deteriorated, damaged siding, and UV Faded Coatings - Pervasive

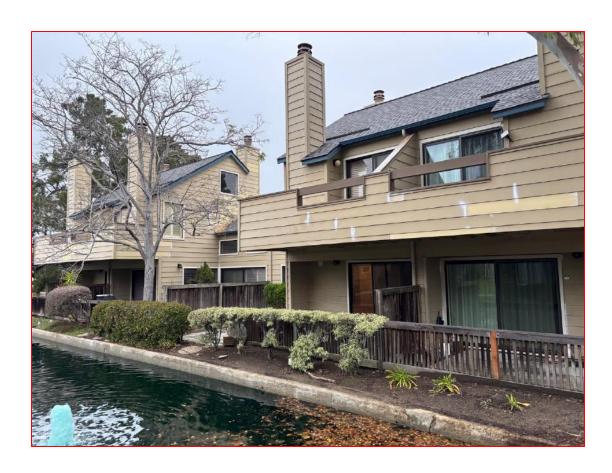




Recently painted lap siding with clogged scuppers, deteriorated siding, and excessively caulked transitions.









Recent "Spot" Repaired Lap Siding





Aged and Worn Windows. Noted numerous failing seals, gaskets, screens, and frames. Pervasive







Aged and Updated Flanged Windows and Doors. Noted numerous locations of moisture penetration behind siding









Aged and Updated Flanged Windows with signs of moisture penetration behind the lap siding - Pervasive

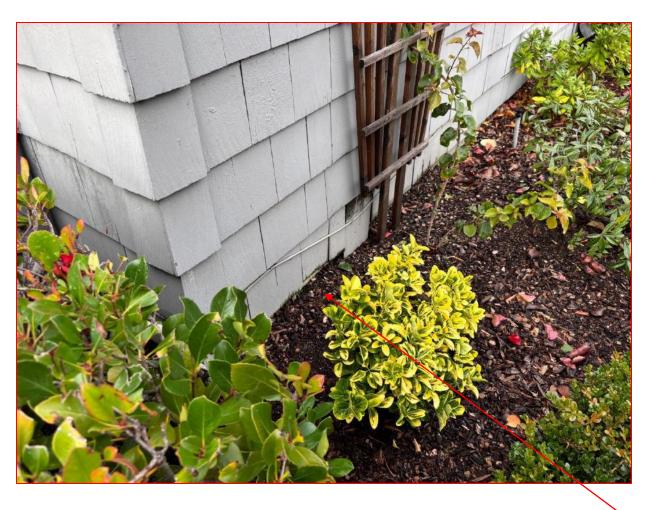






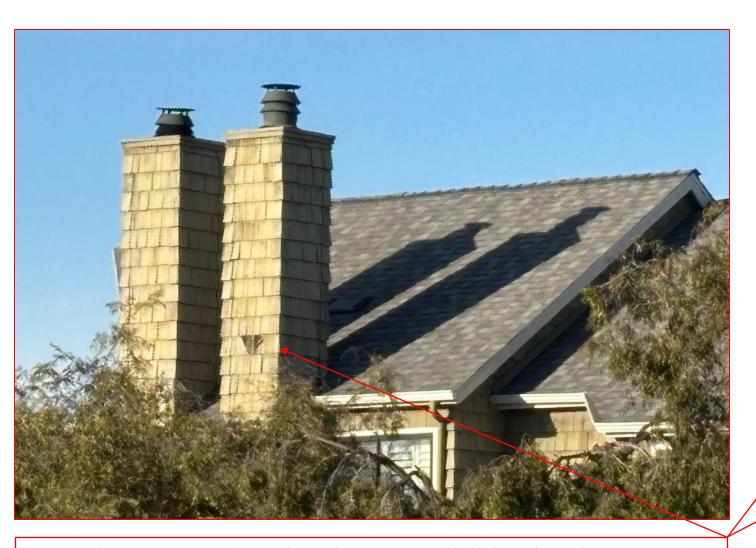
Mature landscaping, trees, plantings, mulch beds, and maintained shrubbery





Mature landscaping, trees, plantings, mulch beds, and maintained shrubbery.





Aged, Worn, Weathered, and UV Degraded Shingle Siding. Noted Loose, cupped, missing, and curled shingles on above roof locations and chimneys



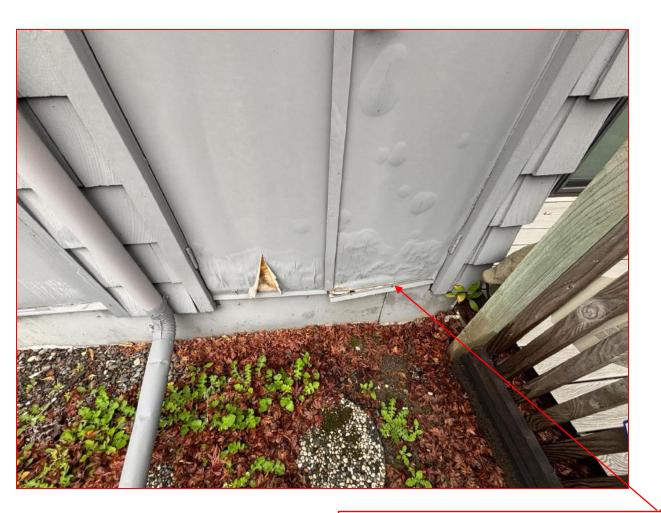




Aged, Worn, Weathered, and UV Degraded deck coating, and common area mailboxes, utility doors, and extinguisher boxes



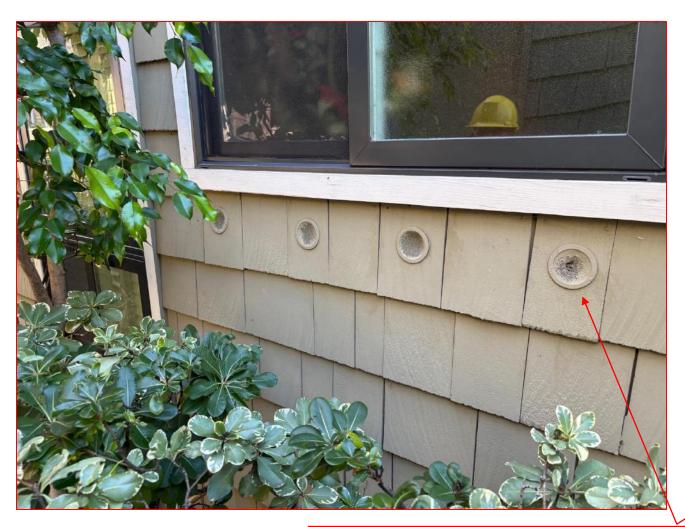






Aged, Worn, Weathered, and UV Degraded Utility Doors.
Pervasive

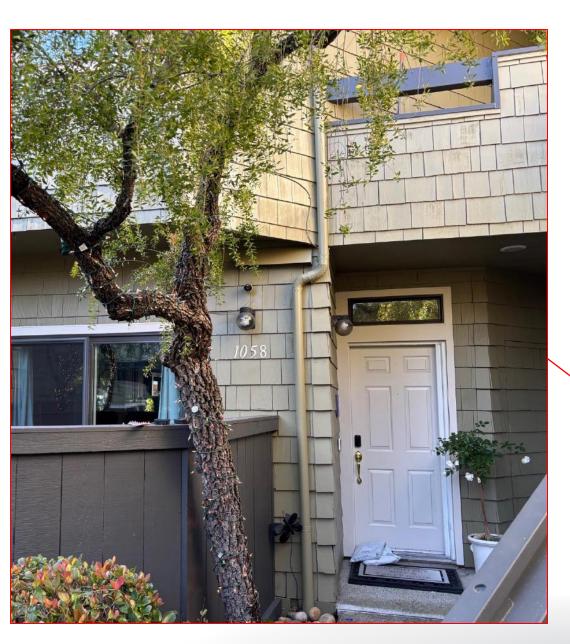






Aged, Worn, and Varying types of vents at high moisture locations and wall cavities. Noted many were clogged and painted closed







Recently spot repaired and painted wood shingles and building trim.





Visible framing decay, damage, and rot on wood cantilevered balconies.

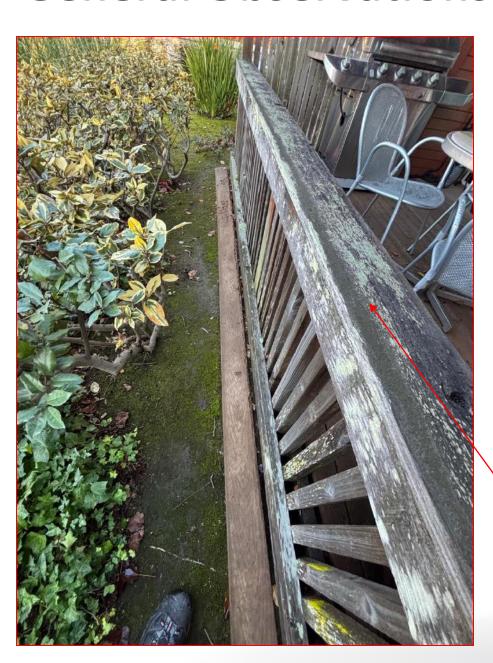


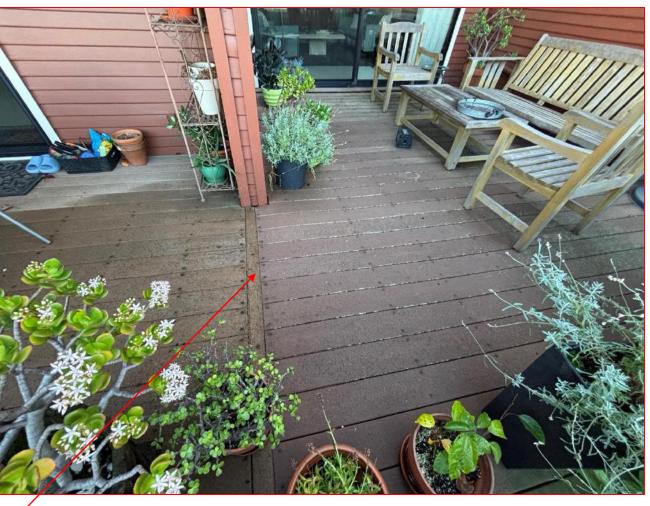




Visible framing decay, damage, and rot on wood cantilevered balconies.

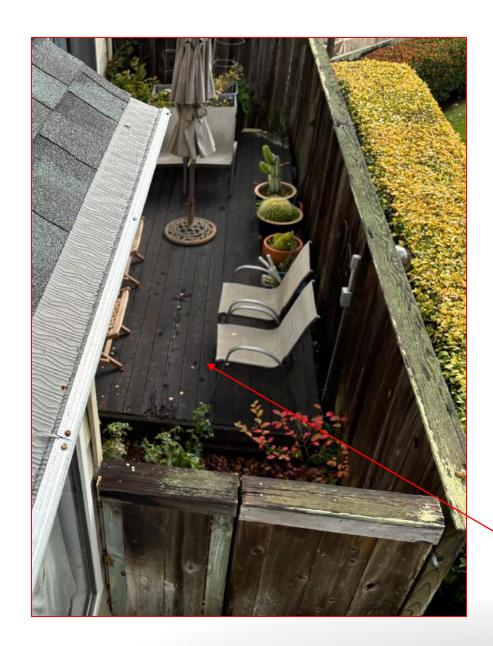


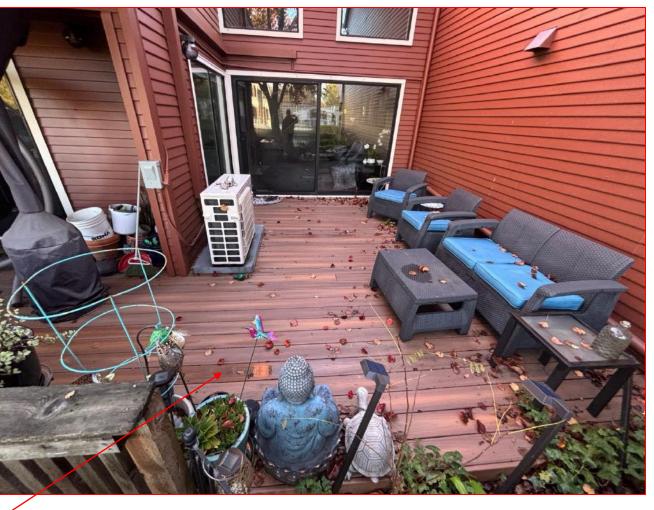




Aged, Worn, Weathered, and Degraded Wood Fences, Wood and Composite Decks.







Aged and Worn Wood Decks and Wood Fences. Updated composite decks and recently painted buildings.







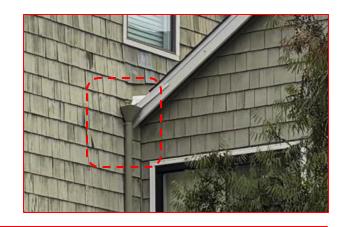
Aged, worn, and weathered balcony surface coatings. Noted varied updated ceramic tile and applied floor coatings.



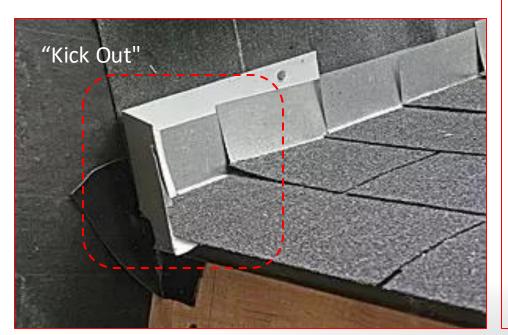
# **Above Roof To Wall Transitions**

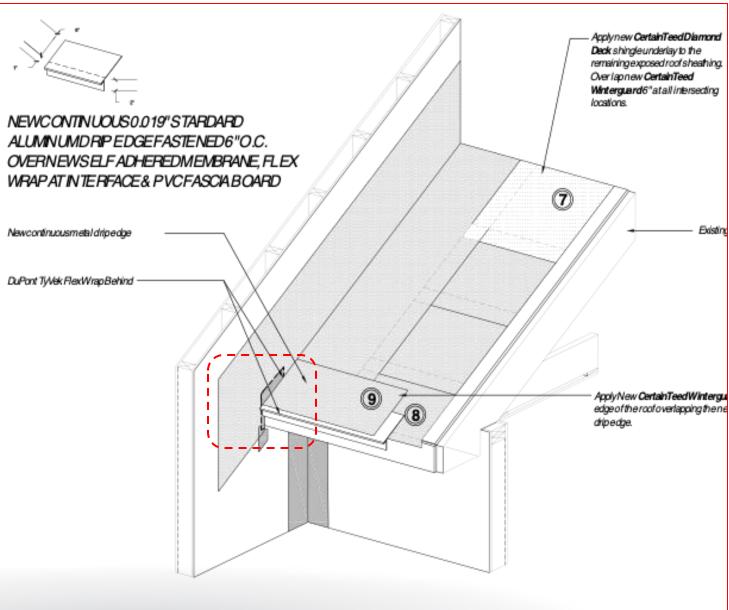






Noted roofing was not installed with "kick outs" or wall diverter flashings. Please note "Kick Outs" will help keep water away and/or from getting behind siding and into the structure of the building.





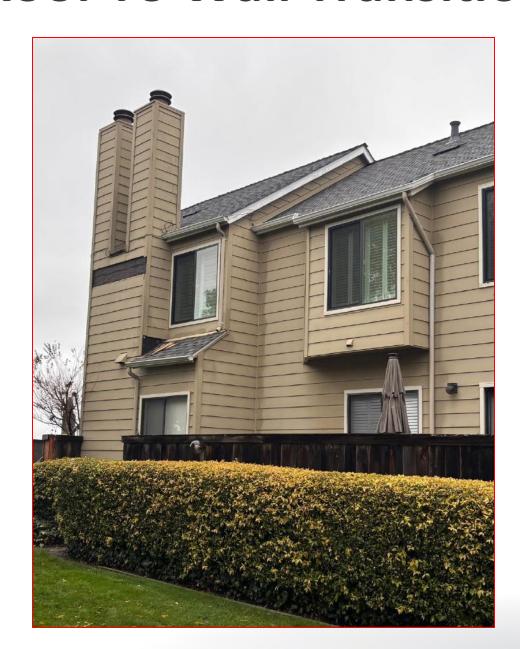




Typical Front roof-to-wall transition at chimneys, and deck railing transitions.









Front roof-to-wall transition. Noted Tyvek WRB System and Grace Installed incorrectly over cedar shingles with – Poor Sequencing







Typical transitions at Chimney Boxes. Noted aged and worn felt paper WRB and lack of membrane flashing at the roof-to-wall transitions. Detected elevated moisture readings at the base of the chimneys inspected



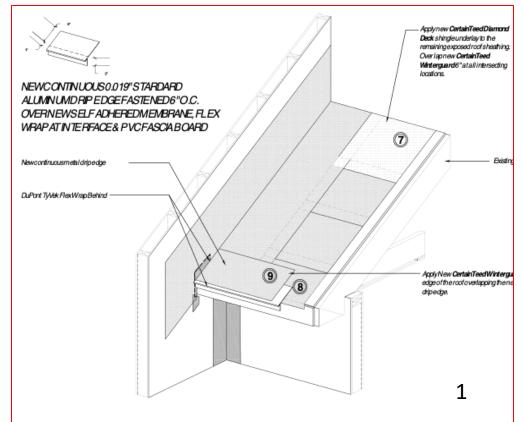


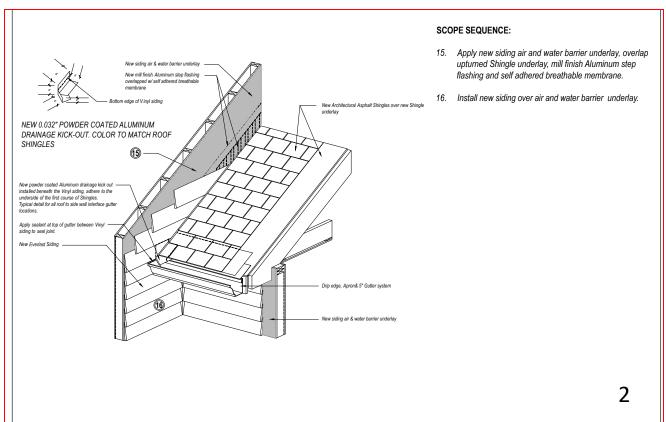
Typical deck-to-wall transition. Noted spot repaired flashing and aged and worn felt paper WRB. Detected elevated moisture readings. Please Note: Moisture readings of 12% and Less can be considered to be "Dry"



## **Roof To Wall Transition - Illustrations**







Sequencing Illustrations







Aged, Worn, and Updated Vinyl Flanged Casement Windows, Bay Windows, Picture Windows, Awning Windows and Patio Doors





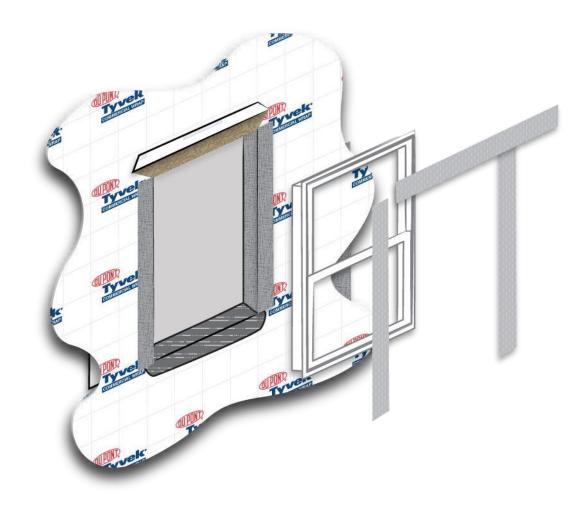




Aged, Worn, and Updated Vinyl Flanged Windows, Rolling Windows, Picture Windows, Awning Windows

# Flashing Details on a Flanged or "New Construction" Window for proper sequencing with Tyvek WRB





# Flashing Details on a Flanged or "New Construction" Window for proper sequencing with Tyvek WRB





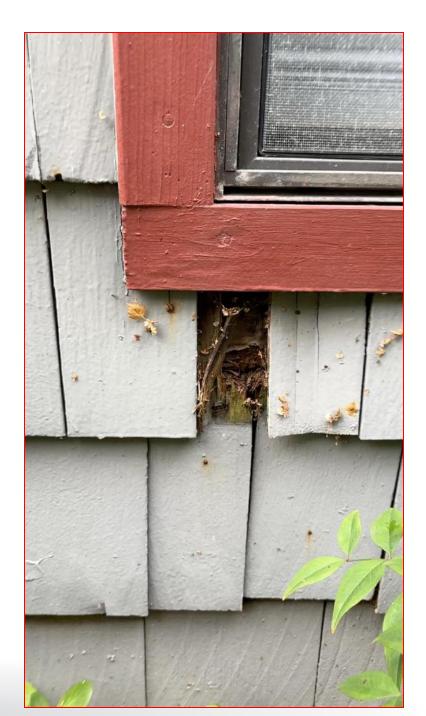






Visibly Missing wood shingles and sheathing Rot below windows

VIDEO









Noted Elevated Moisture Readings Below Window Corners – 26.4% Left and 48.6% Right – Please Note moisture readings of 12% and Less can be considered to be "Dry"



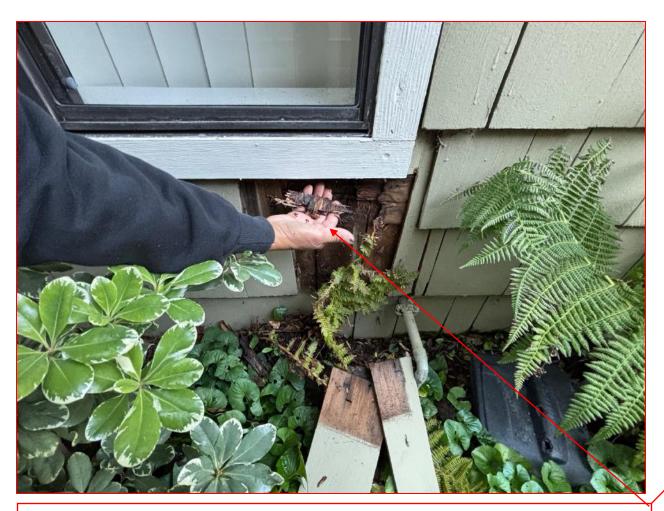






Noted Moisture Readings Below Left Siding Transition and Right Window Corners – Ranging from 15.2% up to 45.6% – Please Note moisture readings of 12% and Less can be considered to be "Dry"

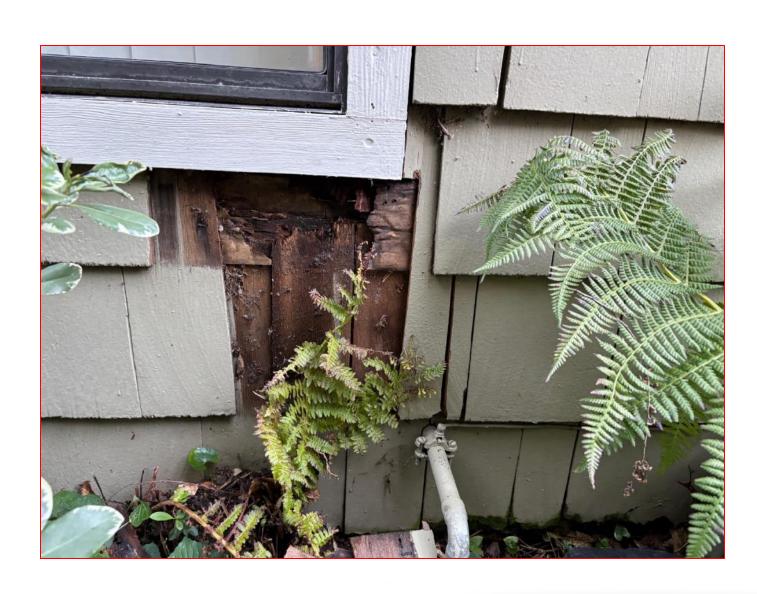




Noted elevated moisture readings and sheathing Rot below the right window of 33.1.% Please Note moisture readings of 12%, and Less can be considered to be "Dry"







Video





Typical Updated Flanged Window Installation, Aged WRB, and Existing Flashing Sequences. Noted Felt Paper WRB, Jamb Flashing, and Sill Flashing







Typical Updated Flanged Window Installation and Flashing Sequences. Detected low moisture readings below the left corner of the windows









Noted multiple layers of flashing and WRB with signs of moisture intrusion, staining, and damaged CDX sheathing surfaces

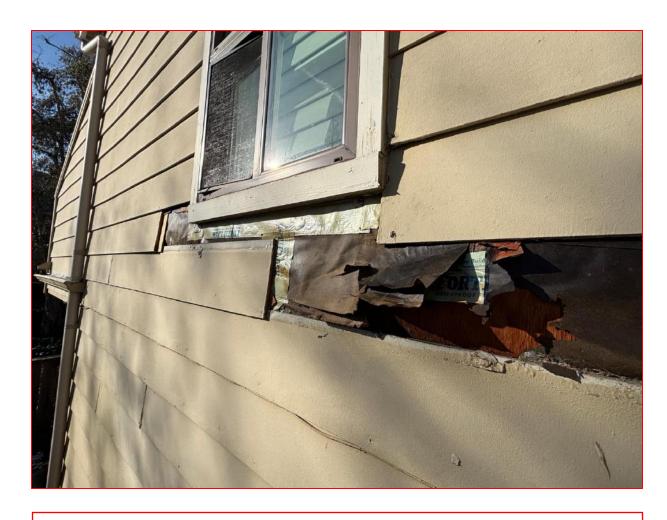




Noted Moisture Readings Below the Window of 23.6% - at center – Please Note moisture readings of 12%, and Less can be considered to be "Dry"







Typical Updated Flanged Window Installation and Flashing Sequencing. Noted signs of water staining, swelled, and damaged CDX sheathing surfaces







Typical Updated Flanged Window Installation, Aged WRB, and Existing Flashing Sequences. Noted Felt Paper WRB, Jamb Flashing, and Sill Flashing



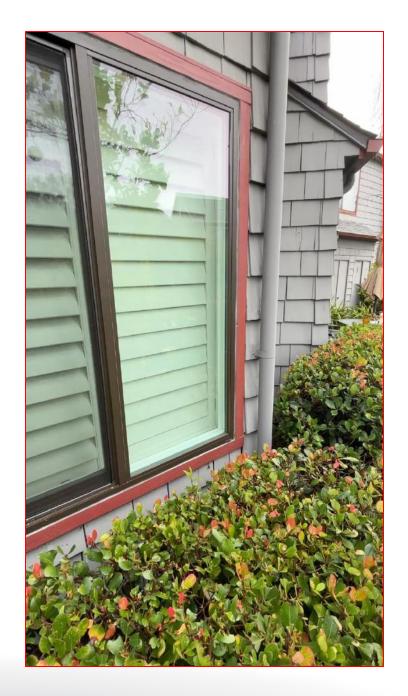




Noted Moisture Readings Below Updated Window Corners – 18.5 % Left and 19.7% Right – Please Note moisture readings of 12% and Less can be considered to be "Dry"

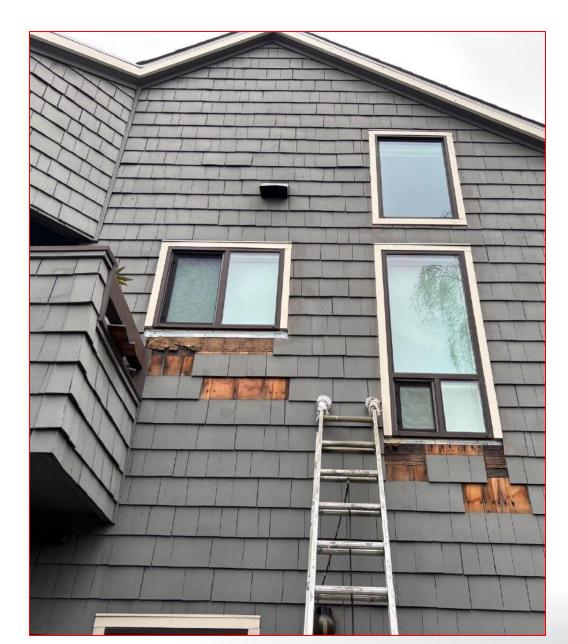


VIDEO





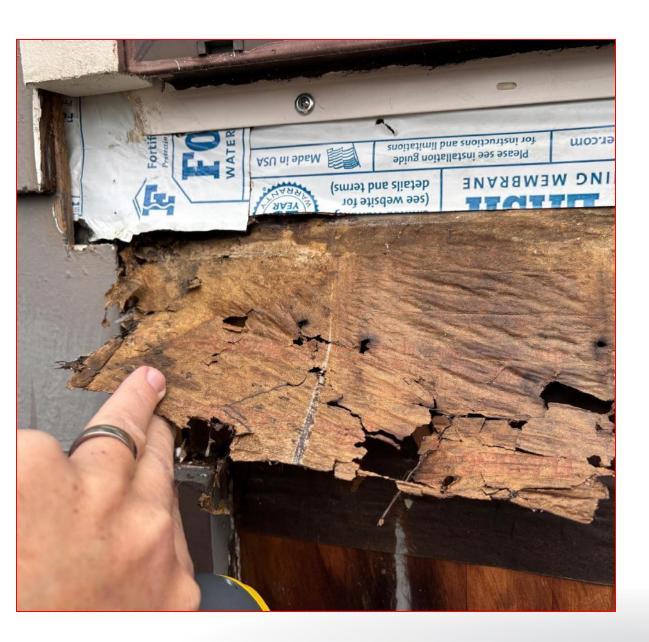






Typical Updated Flanged Window Installation, Aged WRB, and Existing Flashing Sequences. Noted Felt Paper WRB, Jamb Flashing, and Sill Flashing



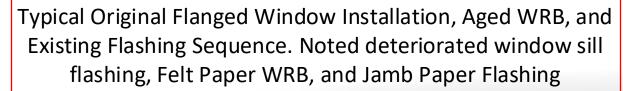




Noted updated window sill flashing installed on the aged, worn, and deteriorated WRB. Noted staining and surface damage on CDX sheathing below the window













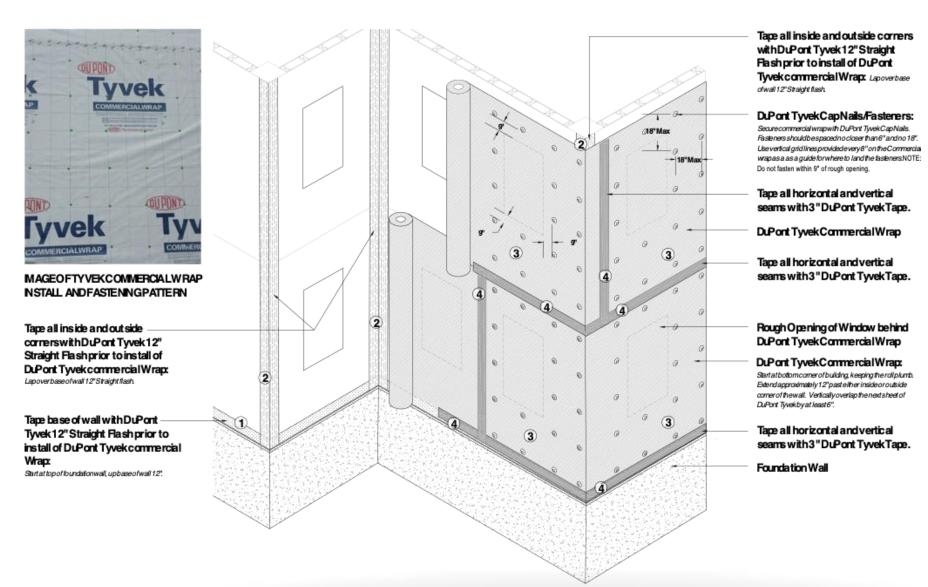


Noted LOW Moisture Readings Below Window Corners – 10.6% Left and 12.5% Right – Please Note moisture readings of 12% and Less can be considered to be "Dry"



# **Tyvek Installation Flashing Requirements**









Typical Aged and Worn WRB and CDX sheathing behind painted wood shingles







Typical Aged and Worn Felt Paper WRB behind the painted wood clapboard siding



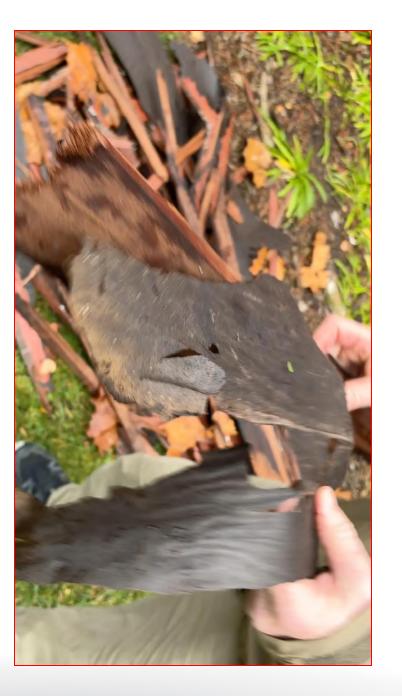




Typical Aged and
Worn Original
Installation of
the Felt Paper
WRB at
Windows and
Outside Corner
Transitions.
Noted



VIDEO









Noted Typical Felt Paper WRB System with Poly Reinforced Vertical Paper Flashing at windows, patio doors, and vertical wall transitions.









Noted updated "Spot" repaired lap siding, trim, membrane flashing, and WRB – Noted additional sealant added to WRB fastener heads.

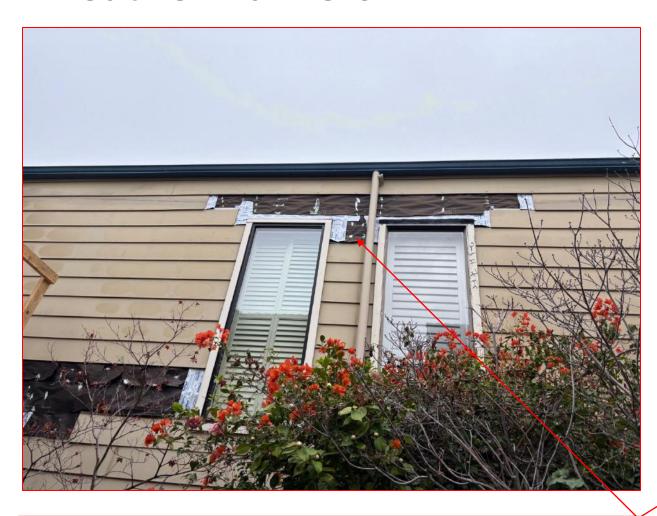




Noted updated "Spot" repaired lap siding, trim, membrane flashing, and WRB – Noted additional sealant added to WRB fastener heads.







Updated "Spot" repaired WRB, Window flashing, and original aged and worn Felt Paper WRB







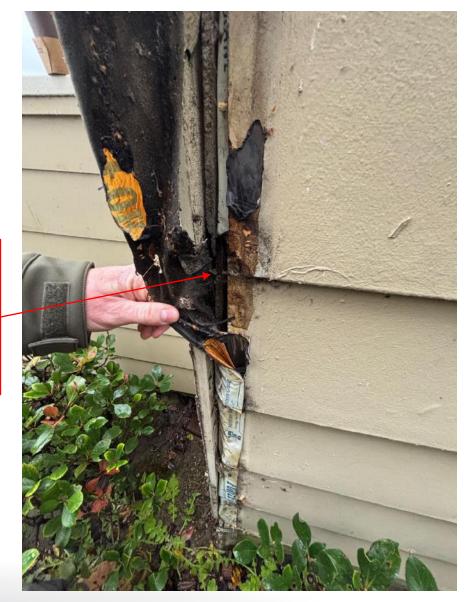


Typical Existing Aged and Worn Felt Paper WRB

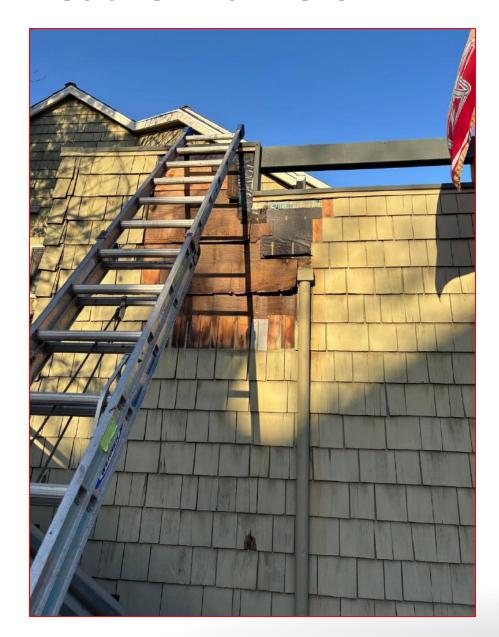




Noted Emergency
Repaired Corner Flashing
over Aged and Worn WRB
and Damaged CDX
Sheathing



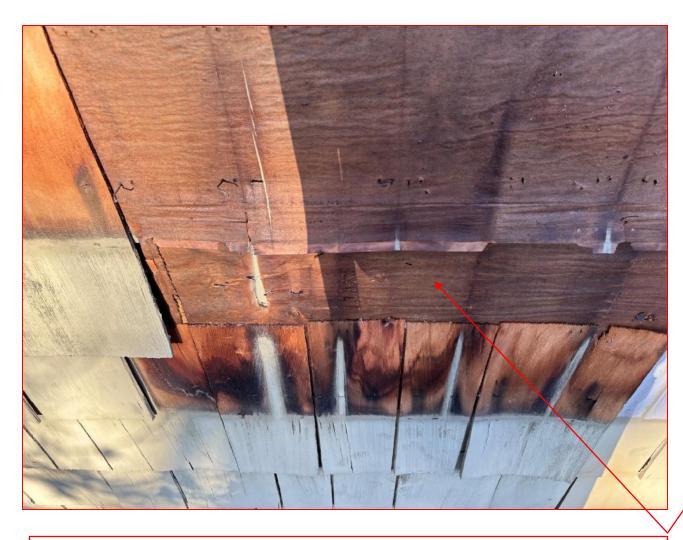




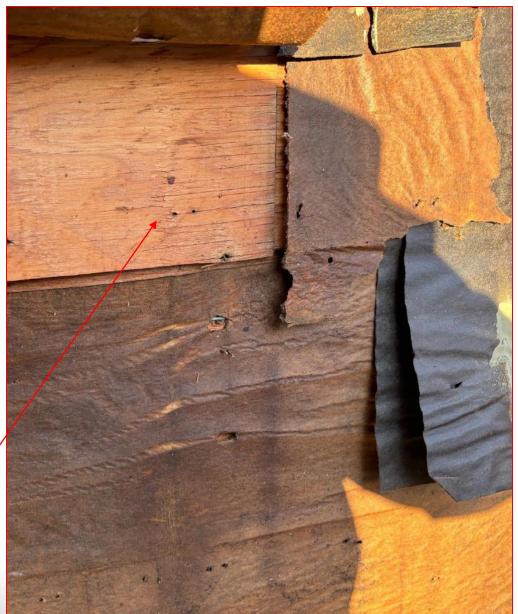


Typical Deck Wall and Cap Flashing and WRB Repairs. Noted Membrane flashing installed onto aged and worn Felt paper WRB. Detected low moisture readings.





Noted original aged and worn felt paper WRB. Noted surface of CDX sheathing was dry.







Noted Typical aged and worn WRB behind the cedar shingles.

Detected low moisture readings and noted surface of CDX sheathing was good shape and dry







Noted typical original Felt paper WRB and wood shingle siding.
Noted aged and worn shingles, felt paper WRB, and CDX sheathing.

