ARAL
CONSULTING
ENGINEERS, INC.

COA #4645 STRUCTURAL ENGINEERS

Date: January 31, 2024

To: City of Riviera Beach Building Department
600 West Blue Heron Blvd, @214C
Riviera Beach, FL 33404

Re: Villa Towers Condominium
3640 N. Ocean Drive, Riviera Beach, FL 33404
Milestone Inspection – Phase One Report
PCN# 56 43 42 27 17 000 0000

To Whom It May Concern:

Aral Consulting Engineers (ACE), Inc. has been retained by Villa Towers Condominium Association to perform Phase I Milestone Inspections for the referenced building (located at the address shown above), and to prepare an assessment report in accordance with Florida Statute 553.899. The objective of this assessment was to determine the general structural condition and integrity of the referenced building, including any necessary maintenance, repair, and/or replacement of any structural components of the building.

ACE. Inc. visited the above property on December 13, 14, 18 2023, & January 30, 2024, and performed visual inspections for Phase I of the Milestone Inspection, and prepared a written report that is attached to this letter.

Based on the encountered structural damage, repairs are required, but in general, the building is structurally sound and safe for its intended use under the present occupancy, pending remediation of the structural deficiencies defined in this report. A Milestone Inspection Phase II destructive investigation is not required, and the Condominium Association can proceed with the preparation of necessary construction documents to obtain a repair permit.

The report and its conclusions are based on the visually observed existing conditions, and our careful evaluation of the observed conditions, but cannot guarantee that all hidden structural deficiencies, defective conditions, and/or faulty building elements have been found during our investigation. However, to the best of my knowledge and belief, the report represents the present conditions of the referenced building as accurately as possible, and to the extent possible.

Prepared and submitted by,

Aral Consulting Engineers, Inc.

ERSIN ARAL LICENSE No. 36033 STATE OF FLORIDA PROFESSIONAL ENGINEER

Ersin (Eric) Aral, P.E.

Digitally signed by Ersin (Eric) Aral, P.E.
Date: 2024.02.02 16:52:27 -05'00'

This item has been electronically signed and sealed by Ersin (Eric) Aral on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the *SHA* authentication code must be verified on any electronic copies.

Ersin (Eric) Aral, PE, SI
PE #36033, SI #0599

1/31/2024

Date: January 31, 2024

To: Mr. Jeffrey Foster, President
Villa Towers Condominium Association, Inc.
3640 N. Ocean Drive
Riviera Beach, FL 33404

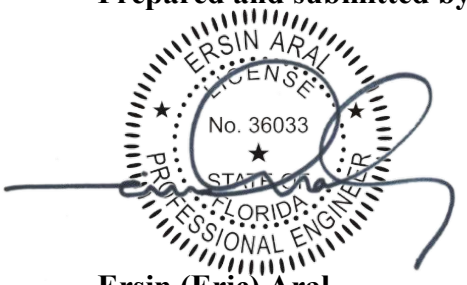
Re: Villa Towers Condominium
3640 N. Ocean Drive, Riviera Beach, FL 33404
Milestone Inspection – Phase I Report
PCN# 56 43 42 27 17 000 0000

Per our signed agreement (executed on September 27, 2023), Aral Consulting Engineers, Inc. (ACE, Inc.) performed a structural condition assessment of the referenced building (located at the address shown above) on December 13th, 14th, 18th, 2023, and January 30, 2024. The purpose of this assessment was to determine the general structural condition and integrity of the referenced building, including any necessary maintenance, repair, or replacement of any structural components of the building.

Visual inspections of the major building components were conducted, to the extent reasonably possible, by a two-man team with extensive experience in the fields of civil and structural engineering, and in the construction and repair of reinforced concrete structures. The investigations were carried out visually without removal of any deteriorated/damaged aspects of the building components. Therefore, the statements, comments and recommendations in this report are limited to the readily accessible and visually observable components of the building.

This investigation did not include testing of existing building materials, exploration of any hidden areas, performance of invasive or destructive explorations of building components. The report and its conclusions are based on our best engineering judgment and experience, but cannot guarantee that all hidden structural deficiencies, defective conditions, and/or faulty building elements have been found during our investigation.

Prepared and submitted by,



Ersin (Eric) Aral,
P.E. #36033, S.I. #599

1/31/2024

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VILLA TOWERS CONDOMINIUM ASSOCIATION INC.

MILESTONE INSPECTION
PHASE I REPORT
3640 N OCEAN DRIVE
RIVIERA BEACH, FL 33404

Aerial View of Building Location & Site (from Google Maps):

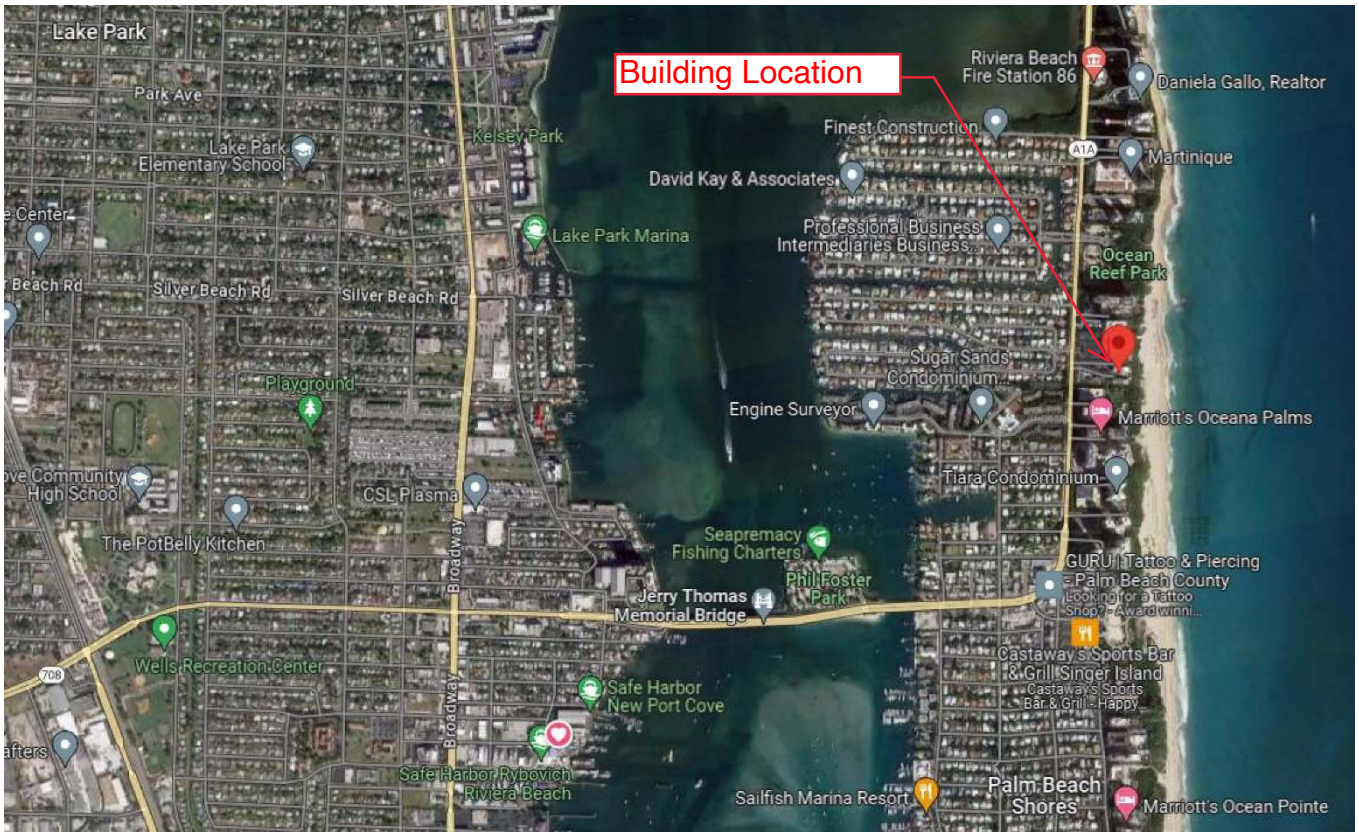

Photo 1: 3640 N. Ocean Drive, Riviera Beach, FL 33404 – Building Location

Photo 2: 3640 N. Ocean Drive, Riviera Beach, FL 33404 – Building Site View

Inspection Procedures:

Ersin (Eric) Aral, P.E., S.I. of ACE, Inc and Douglas Alonzo of J&M Building & Restoration conducted a milestone inspection of the referenced building on December 13, 14 & 18, 2023. Jeffrey Foster, President of Villa Towers was also present during our inspections. We also conducted an additional roof inspection on January 30, 2024, for the roofs of two towers (Elevator/Mechanical Room & West Stair Towers). The observation of these roof areas had to be postponed until more suitable weather conditions were attained. The observations required utilizing a ladder, and the wind-gust exceeding 10 mph made it unsafe.

The inspections were originally scheduled to be done in three consecutive days (December 13, 14 & 15), but due to a coincidental tropical storm, we cancelled the inspections for December 15th since the roof area could not be accessed due to high winds (over 50 mph winds). We inspected the roof area of the building on December 18th, and found the roof coverings severely damaged in some areas (for detail refer to the section below titled "Observed Conditions During Inspections – Item 1").

Visual inspections were performed at the following areas:

- Interiors of the 53 apartments, including their balconies.
- Common areas such as the laundry, storage, electrical & mechanical rooms, walkways, stairways, and any other common rooms.
- Roof areas of the building.
- Exterior elevations of the building.
- Pool area, including the restrooms and pool-equipment room.
- Ground-floor-level meeting, recreation and exercise rooms including the sauna and showers, and other enclosed rooms in this area.

The inspections were performed for visually noticeable defects such as cracks, distortions, sagging, and/or deflections. The interior and exterior components of the building (such as ceilings, floors, lintels, exterior stucco, interior exposed masonry walls, and interior drywalls) were observed for: visual differential settlements between the floor and ceiling slabs; water intrusion through exterior walls; water accumulation in roof areas; roof slope for roof drainage; peeling/loose surface finishes; and substantial structural deterioration.

Our inspection did not include determination of environmentally hazardous materials (such as asbestos), that were used in building components, or of the indoor air quality of the building (such as radon, moisture, or mildew) since that type of investigative work is outside of the milestone inspection scope of work.

Building Description and Structural Background Information:

The fourteen-story-high Villa Towers Condominium, per existing construction documents, was built in 1970 as two rectangular building towers (westside approximately 39 feet wide and 72.5 feet long, and the eastside, offset 11 feet to the north, approximately 39 feet wide and 58.5 feet long). The two towers were built to be 18 feet apart along the width of the building from roof to the 2nd floor level, but the towers are connected to each other with a 5-feet-wide common walkway along their southside elevations. At the second-floor level, the common walkway slab is built to extend to the north entry of the building (between the two towers) as a common terrace area, so that it provides a roof slab for the 1st floor lobby area.

The south elevation of the building also has an elevator tower (with a common lobby area) located between the two towers of the building, as well as two stairway towers located at the west and east elevations of the two towers about each end of the southern walkway. The building towers are separated by an expansion joint located about the east face of the west tower. The north elevations of the two towers have 4.5-feet-deep balconies cantilevered out and extending for the entire length of each tower. The walkways and the balconies are protected by 4-inch-thick masonry parapet walls which in turn are reinforced with 4 feet on center 4"x8" posts, and a same size continuous cap beam.

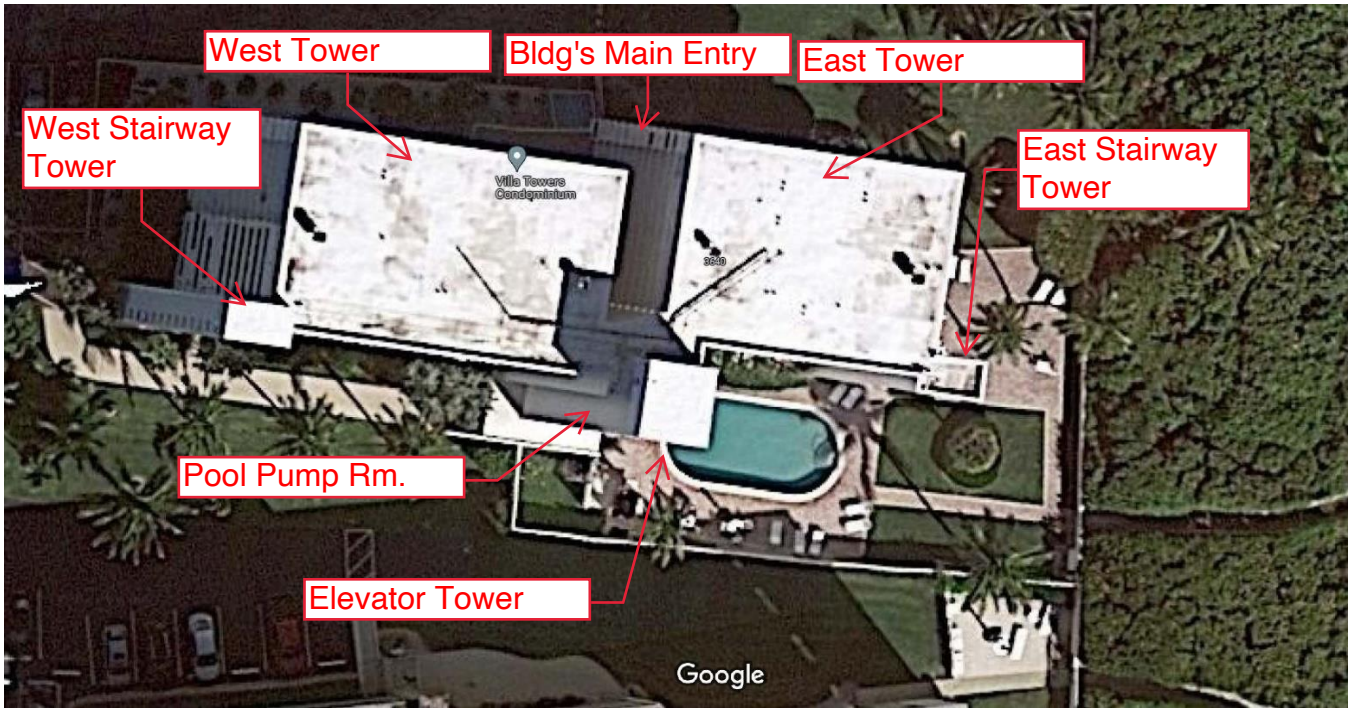

Photo 3: Existing Building Top View

The condominium building consists of a 7-inch-thick roof slab, and thirteen (13) 8-inch-thick floor slabs (designed as reinforced concrete flat-plate slabs) that are supported on three (3) rows of either 8-inch or 16-inch x various-length reinforced concrete columns. The maximum center-to-center column dimensions in a longitudinal direction is 20'-8", and in a transverse direction is approximately 20 feet. The stair towers were built as cast-in-place concrete shear walls for their entire height. In addition, each tower has an (8-inch-thick x 39-feet-long) continuous shear wall (placed between the apartment units) from the penthouse down to the 1st (ground) floor level. The exterior elevations of the building consist of 8-inch-thick, non-structural hollow-masonry-infill walls that are supported by the floor slabs.

The 1st/ground floor level consists of 4-inch-thick slab-on-grade with 2 layers of welded wire fabric. The slab-on-grade and building columns are supported on various-size pile caps, and in turn the pile caps are supported on a various number of prestressed concrete piles.

The primary structural building elements (such as floor and ceiling slabs, interior columns and bearing walls, exterior infill-walls) were constructed of non-combustible (concrete base) materials. We assume that the secondary interior framing members (such as interior partition walls) are framed with either wood or metal studs, and fireproofed with drywall coverings.

Observed Conditions During Inspections:

Based on the observed building components, our inspection findings will be listed as follows:

1) Building Roof System:

Per the owner-provided roof proposal dated 5/8/2020, the present roof system is a little over 13 years old, and is a Thermoplastic Polyolefin (TPO) roof system. The proposal indicates that the roof system consists of a thermoplastic roof membrane that is adhered to the insulating boards with a bonding adhesive, and in turn the insulating boards are fully adhered to the concrete roof slab with the same bonding adhesive.

We observed the following:

Main Roof Area over the West Tower: The roof membrane is separated from the insulating boards, and the boards from the concrete roof slab. The damage was caused by the wind uplift. The roof membrane was torn in front of the roof access door causing rainwater entry into the insulation under the membrane. We noted separation/detachment of the roof membrane at the faces of parapet walls, plumbing vents, roof drains, and around the support legs of the AC rooftop supports (refer to Section 6, Observed Damage Drawings, SK-15).

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Photo 4: West Tower Roof, Looking Northeast.

Photo 5: West Tower Roof, Looking East

Main Roof Area over the East Tower: Most of the roof area looked intact except for the roof portion over the East Stairway Tower. At this location, the roof membrane is detached from the insulating boards and the parapet wall. We noted separation/detachment of the roof membrane around the plumbing pipe (refer to Section 6, Observed Damage Drawings, SK-15).

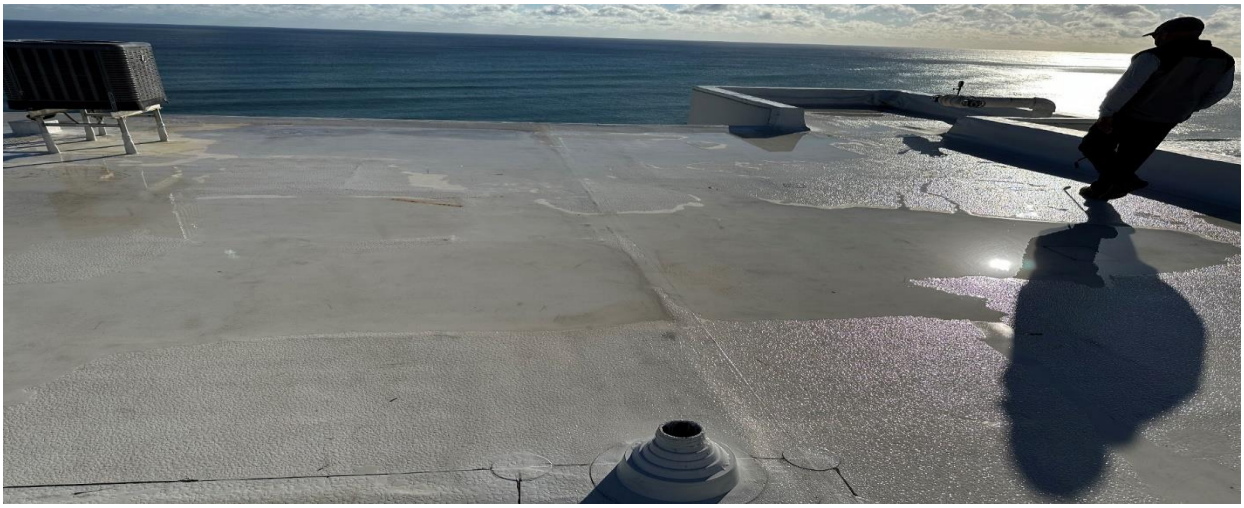


Photo 6: East Tower Roof, Looking East

Elevator Tower/Mechanical Room Roof :
The roof cover looked intact except for minor tears indicating that the membrane had been detached during the storm. The roof membrane needs to be inspected and repaired by an experienced roofing contractor.

Photo 7: Elevator Tower Roof, Looking East.

Photo 8: Elevator Tower Roof, Looking West

West Stair Tower Roof :
The roof cover looked intact free of visual damage, but it is advisable that the roof membrane be inspected by a roofing contractor.

Photo 9: East Tower Roof, Looking East

2) Roof Top AC Units & Their Anchorage:

We found that all AC Units are anchored to the AC stands at four corners of the units except the one located at the westside of the West Tower. We also noticed that in some locations the anchor screws were extremely corroded. It is advisable that they be checked and replaced with stainless steel screws or bolts.

Photo 10: AC Strap Corrosion Damage.

As mentioned above, some of the pitch pans and boots around the AC stand legs, AC conduits, and plumbing vents were damaged during the tropical storm. They need to be repaired so that any water leaks into the living areas below can be prevented.

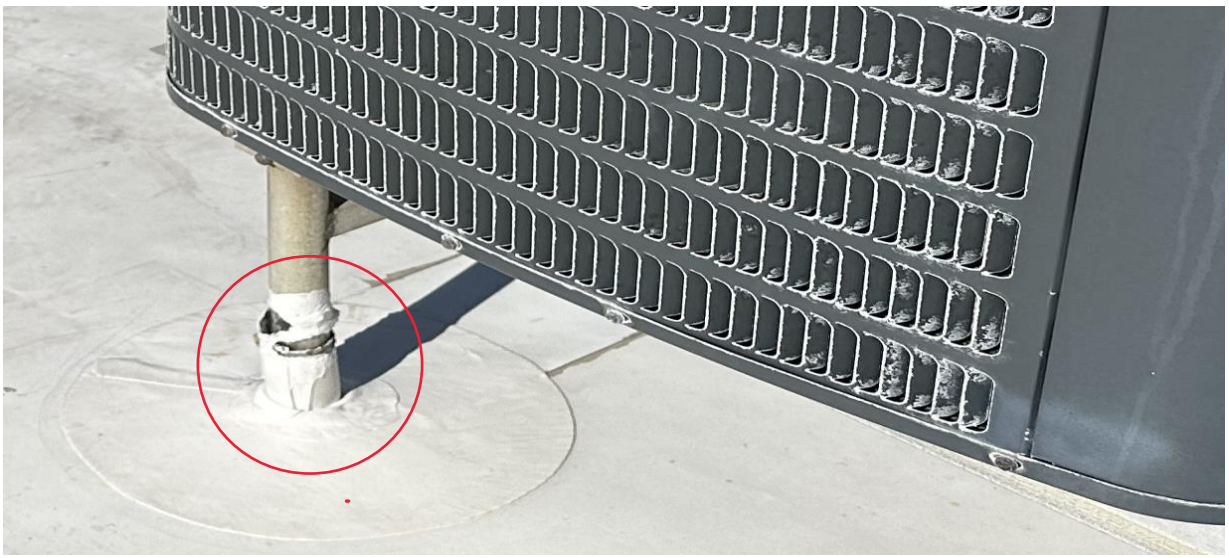


Photo 11: AC Unit Boot Damage.

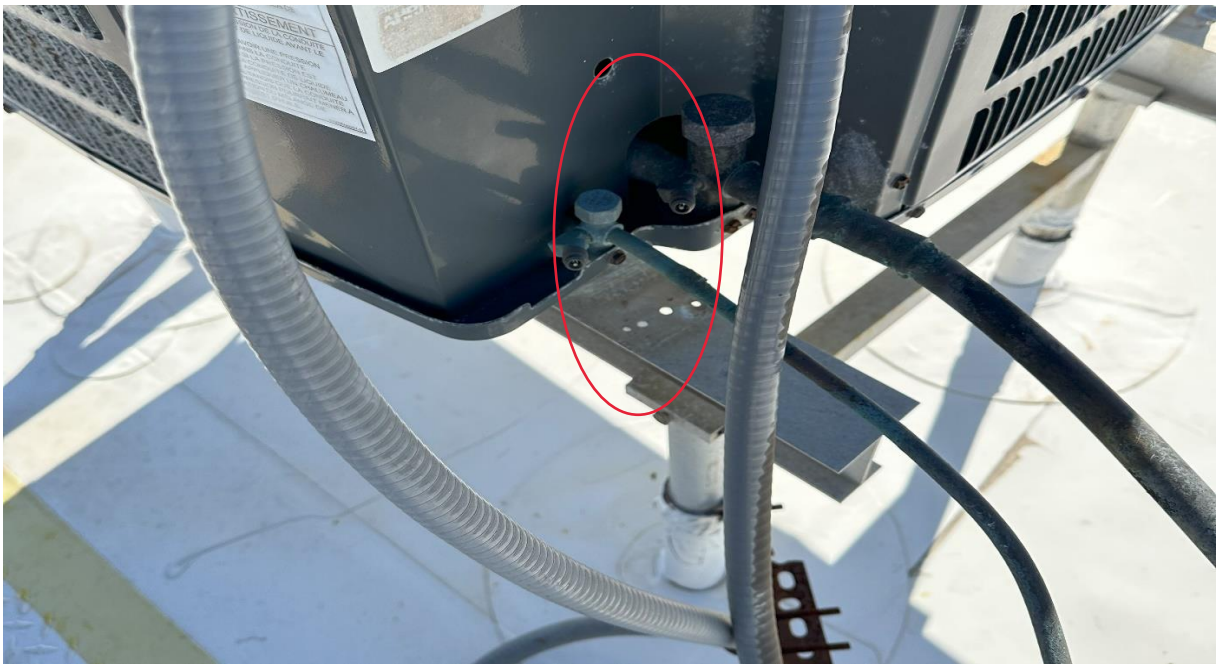


Photo 12: AC Unit with a Missing Strap.

3) Exterior Building Elevations:

We were told that the building was recently painted, and observed that most of the exterior cracks were patched prior to painting. We sighted many patched/repaired cracks during our observation along the building elevations. Since the cracks were covered and then painted, we could not determine if the observed stucco, masonry wall, and concrete cracks are structurally critical. If any of the repaired cracks become visually noticeable, then it will be advisable to perform a follow up inspection at these locations.

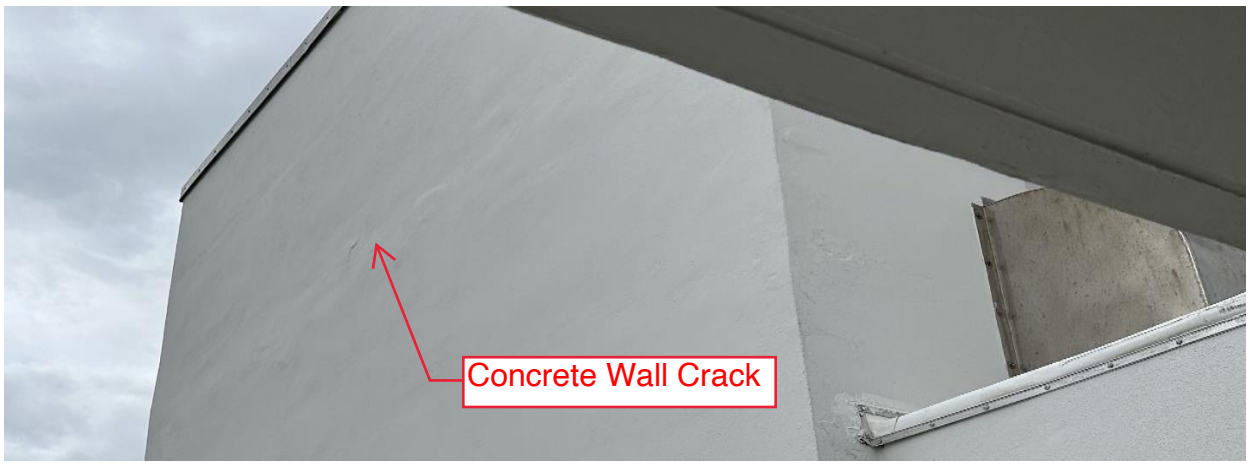


Photo 13: Elevator Tower, East Elevation.

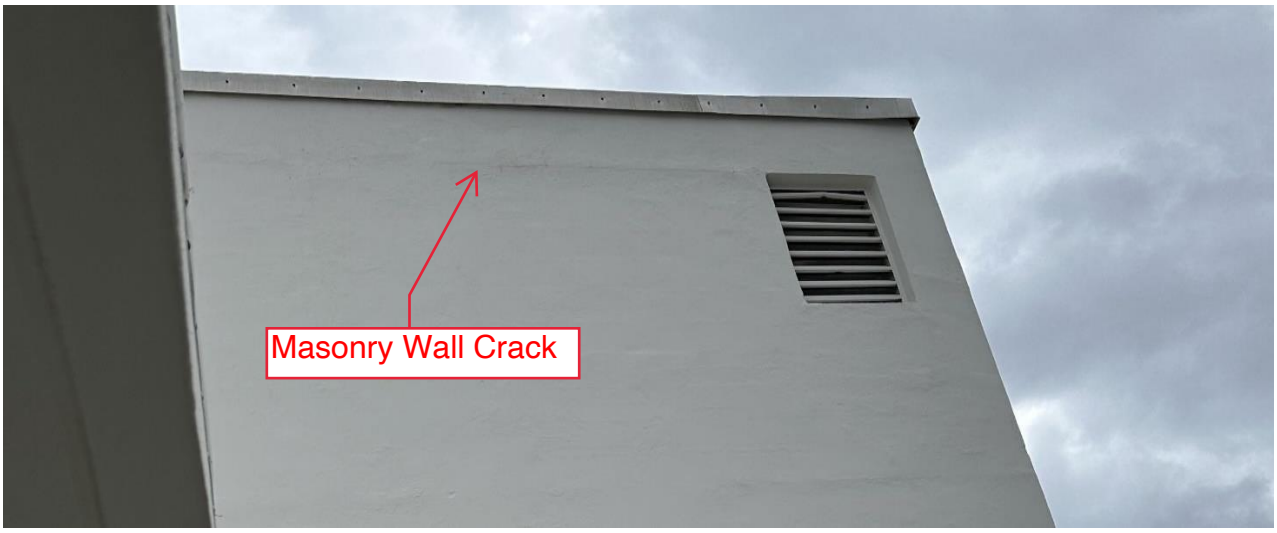


Photo 14: Elevator Tower, West Elevation.

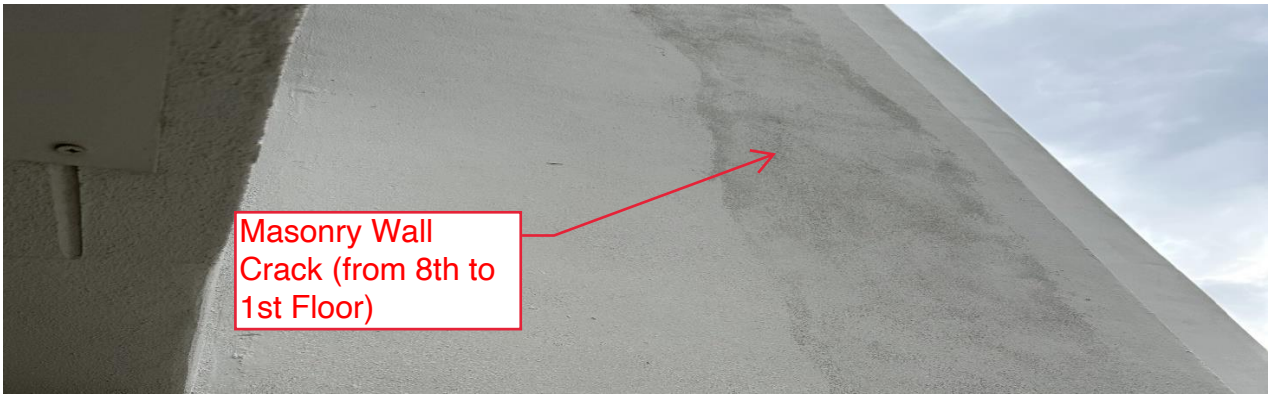


Photo 15: Elevator Tower, West Elevation.

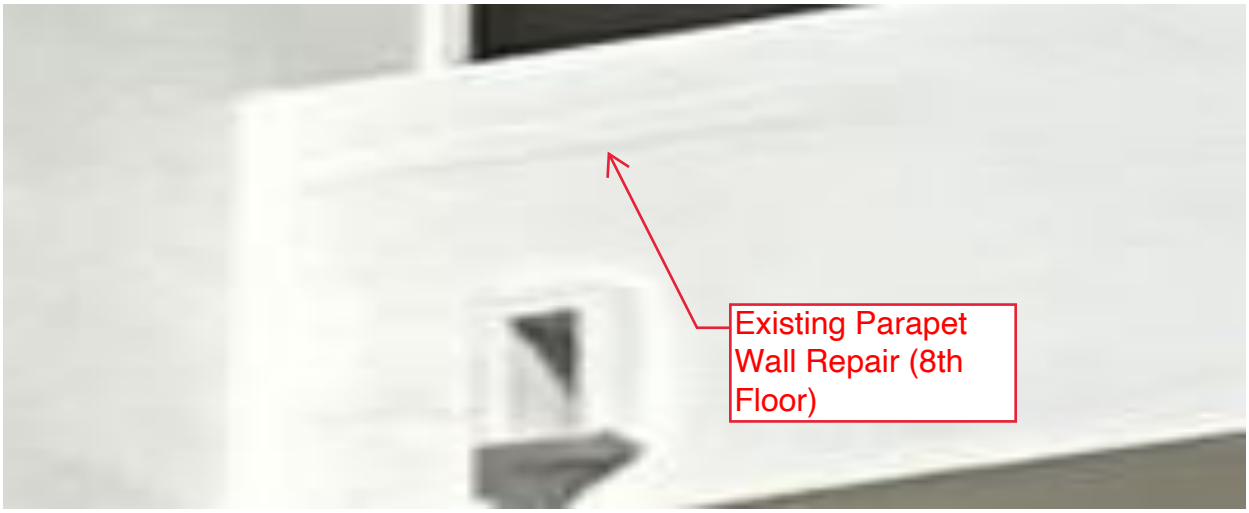


Photo 16: South Elevation Walkways, Existing Parapet Wall Repair Prior to Building Painting.

4) Pool Pump Room:

We observed various wall cracks and concrete spalls in the pump room. The encountered damage is shown on the ground-floor-damage drawing (refer to Section 6, Observed Damage Drawings, SK-1).

Photo 17: Pool Pump Room Ceiling, Concrete Spall.

Photo 18: Pool Pump Room Floor, Wall Spalls.

We did not observe any structural damage in the pool bathrooms.

5) Observed Conditions in Building Interiors, Balconies, Walkways, and Stairways:

We did not observe any critical structural damage in building interiors. Most of the observed damage was located on walkways and balconies and almost all damage was minor. The observed damage and their locations are shown on the attached floor-sketch-drawings from the Penthouse floor down to the Ground/1st floor (refer to Section 6, Observed Damage Drawings, SK-1 through SK-14).

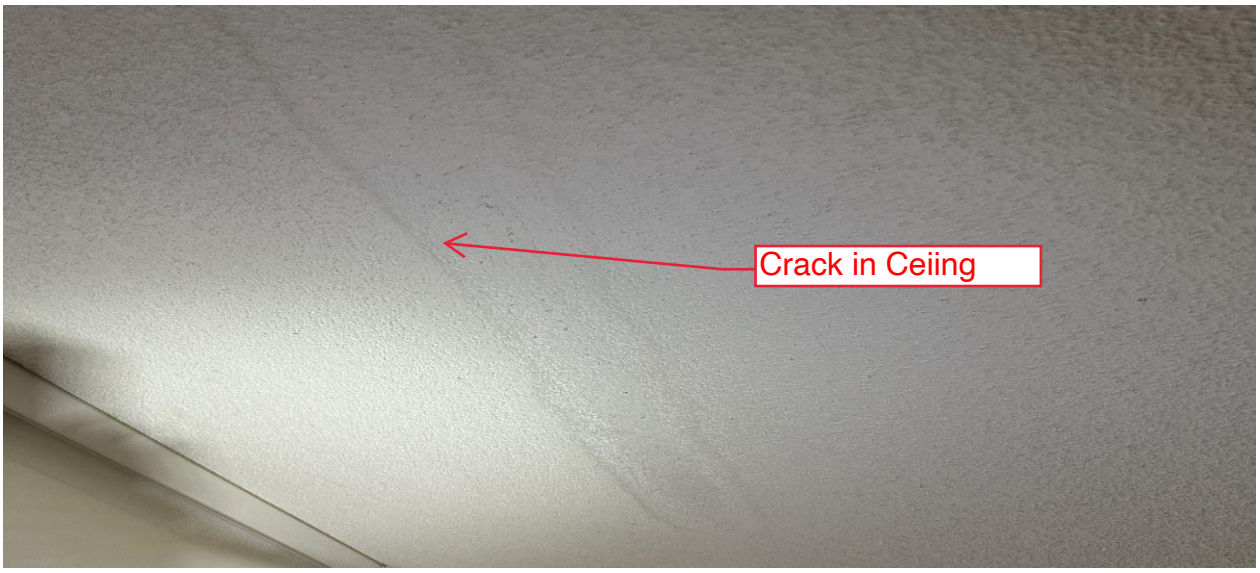


Photo 19: Interior Ceiling, Concrete Crack.

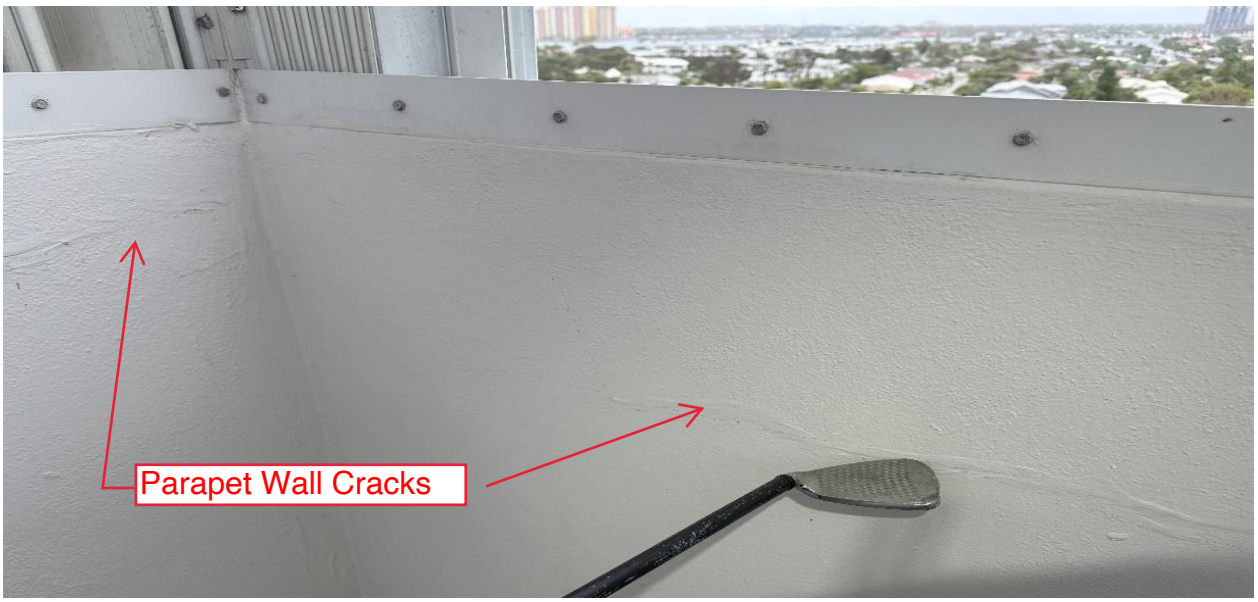


Photo 20: Balcony Parapet Wall, Masonry Wall Cracks.

Photo 21: Balcony Parapet Wall, Concrete Spall.

Photo 22: Balcony Floor, Concrete Spall Caused by Unremoved Fasteners.

Photo 23: Balcony Floor, Concrete Spall.

Photo 24: Balcony Window Sill, Concrete Spall.

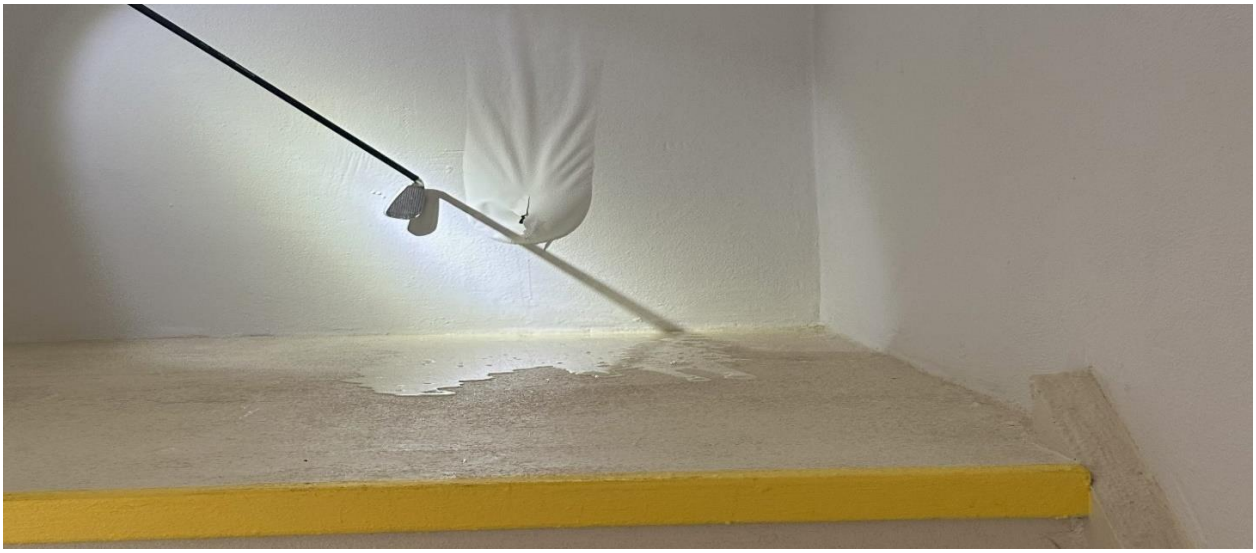


Photo 25: East Stairway Tower, Water Intrusion.

Photo 26: Balcony Floor, Corroding Unremoved Fasteners.

Photo 27: South Elevation Walkways, Parapet Wall Spalls.

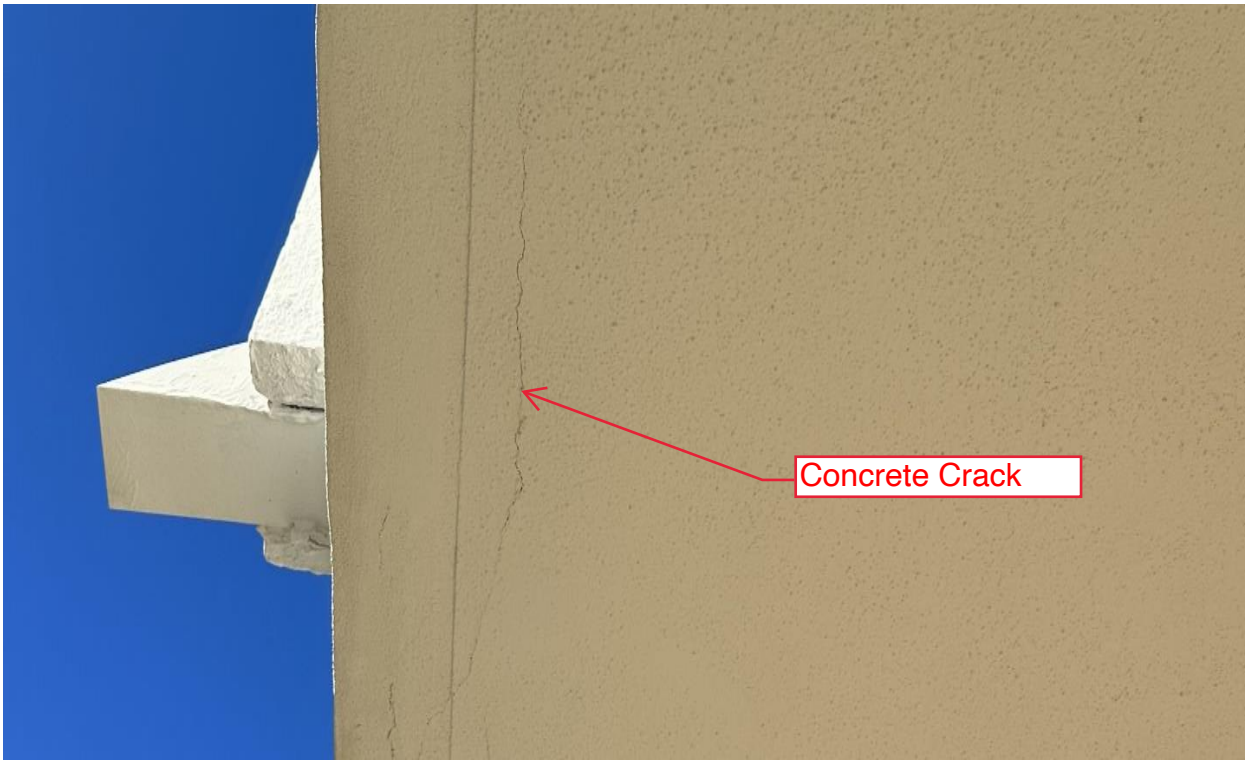


Photo 28: South Elevation Walkways, Ceiling Concrete Crack.

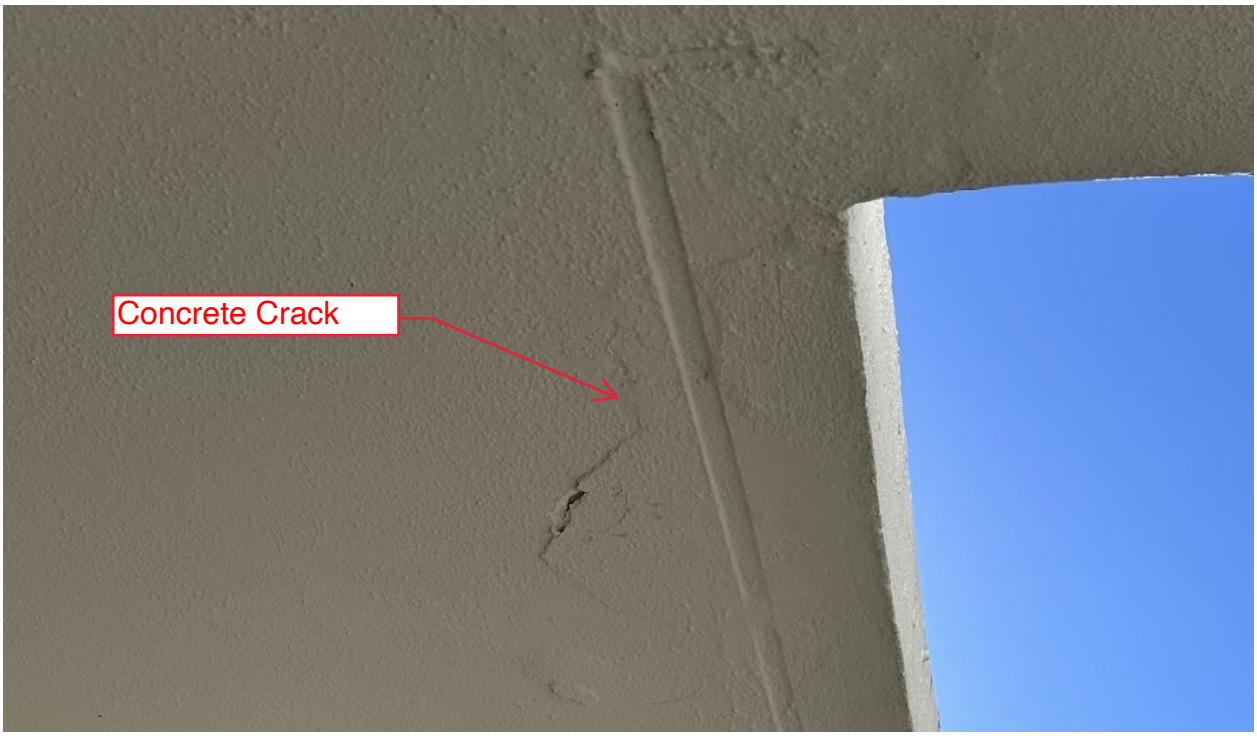


Photo 29: South Elevation Walkways, Ceiling Concrete Crack.

Photo 30: Pump Room, Ceiling Spall with Exposed Rebar.

6) Observed Damage Drawings:

SK-1: Ground/1st Floor

SK-2: 2nd Floor

SK-3: 3rd Floor

SK-4: 4th Floor

SK-5: 5th Floor

SK-6: 6th Floor

SK-7: 7th Floor

SK-8: 8th Floor

SK-9: 9th Floor

SK-10: 10th Floor

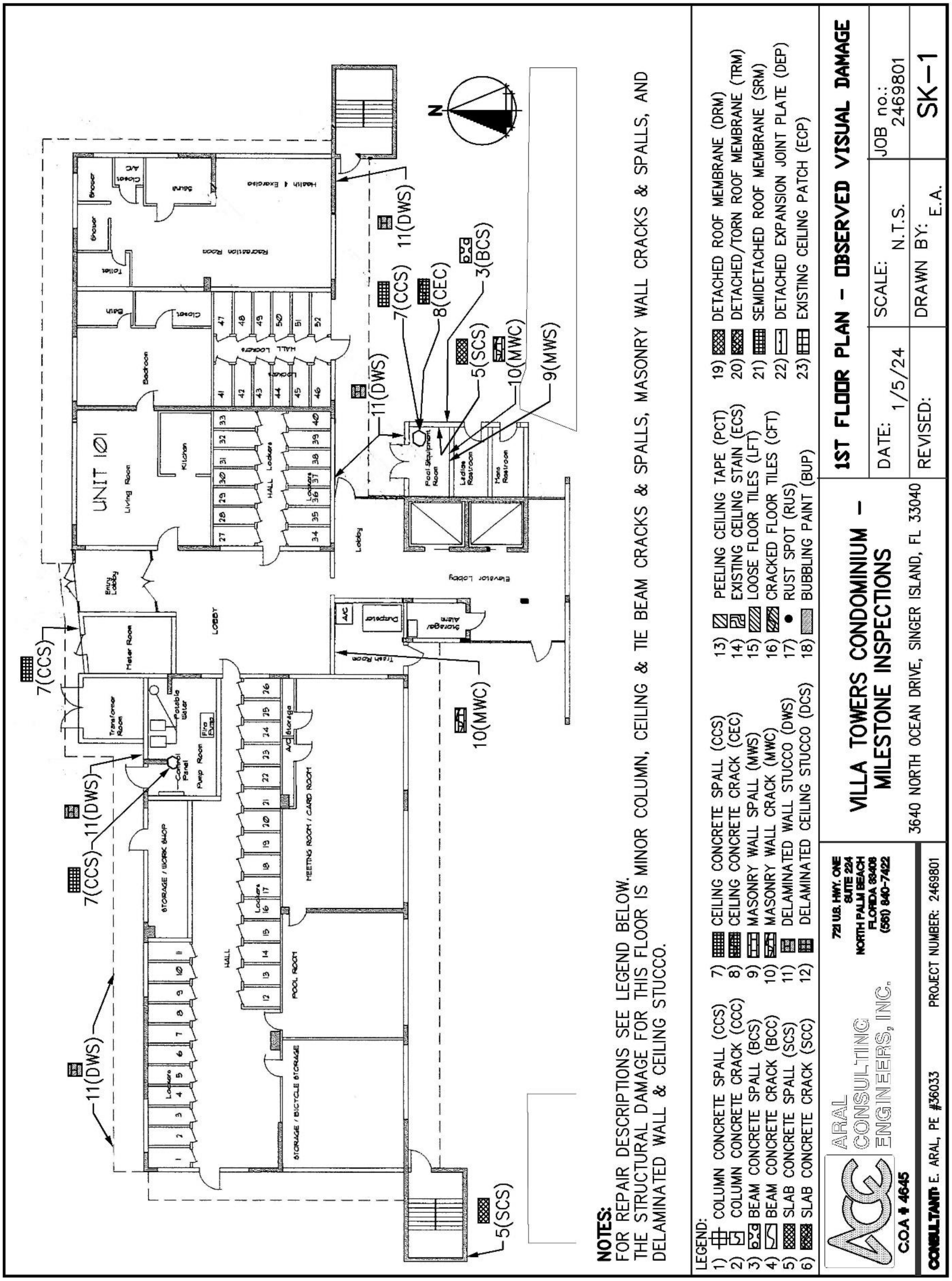
SK-11: 11th Floor

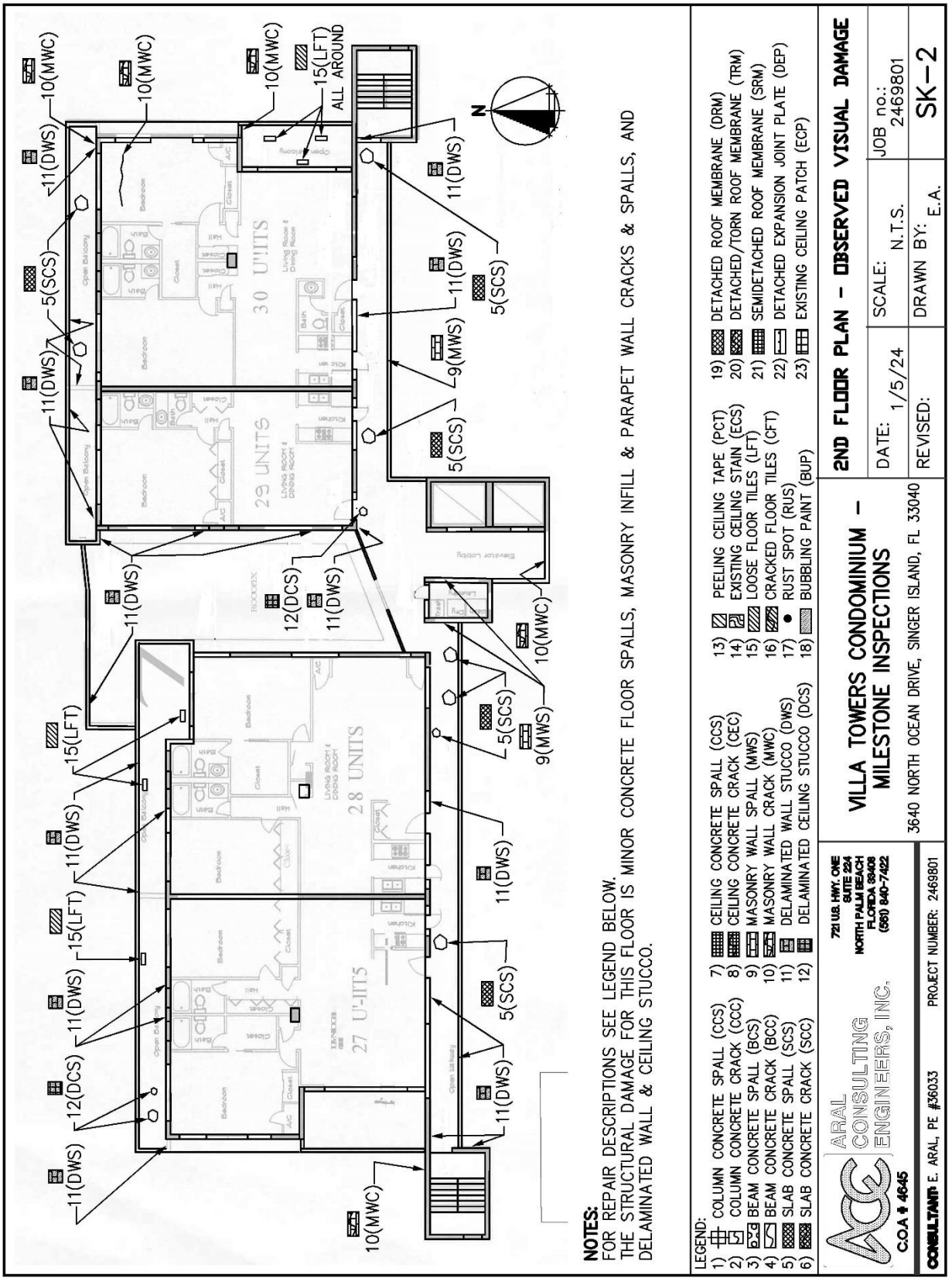
SK-12: 12th Floor

SK-13: 14th Floor

SK-14: Penthouse Floor

SK-15: Roof


NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR COLUMN, CEILING & TIE BEAM CRACKS & SPALLS, MASONRY WALL CRACKS & SPALLS, AND DELAMINATED WALL & CEILING STUCCO.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
ARAL CONSULTING ENGINEERS, INC.
C.O.A # 4645
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
VILLA TOWERS CONDOMINIUM – MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
1ST FLOOR PLAN – OBSERVED VISUAL DAMAGE
DATE: 1/5/24
SCALE: N.T.S.
JOB no.: 2469801
REVISED:
DRAWN BY: E.A.
SK–1
CONSULTANT: E. ARAL, PE #36033
PROJECT NUMBER: 2469801
5(SCS)
11(DWS)
7(CCS)
11(DWS)
7(CCS)
10(MWC)
11(DWS)
7(CCS)
8(CEC)
3(BCS)
5(SCS)
10(MWC)
9(MWS)
11(DWS)
N
UNIT 101
Living Room
Kitchen
Bedroom
Closet
Bath
Recreation Room
Toilet
Shower
Sauna
Closet
A/C
Health & Exercise
HALL
Lockers
HALL Lockers
LOBBY
Entry Lobby
Lobby
Elevator Lobby
Meter Room
Transformer Room
Pump Room
Potable Water
Fire Pump
Control Panel
STORAGE / WORK SHOP
STORAGE / BICYCLE STORAGE
POOL ROOM
MEETING ROOM / CARD ROOM
A/C
Storage
Trash Room
Pool Equipment Room
Ladies Restroom
Mens Restroom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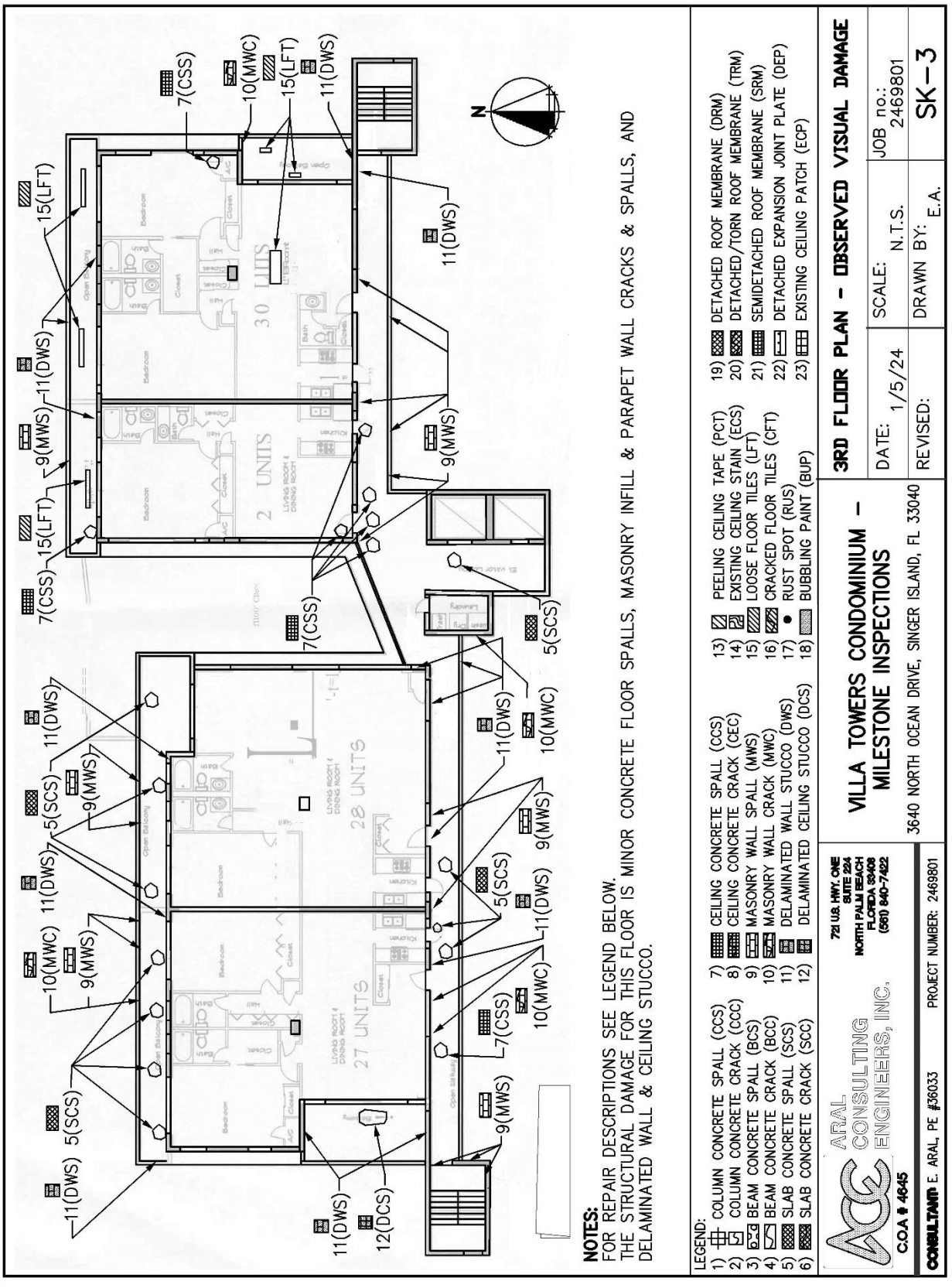
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT: E. ARAL, PE #36033 PROJECT NUMBER: 2469801
VILLA TOWERS CONDOMINIUM – MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
2ND FLOOR PLAN – OBSERVED VISUAL DAMAGE
DATE: 1/5/24
SCALE: N.T.S.
JOB no.: 2469801
REVISED:
DRAWN BY: E.A.
SK–2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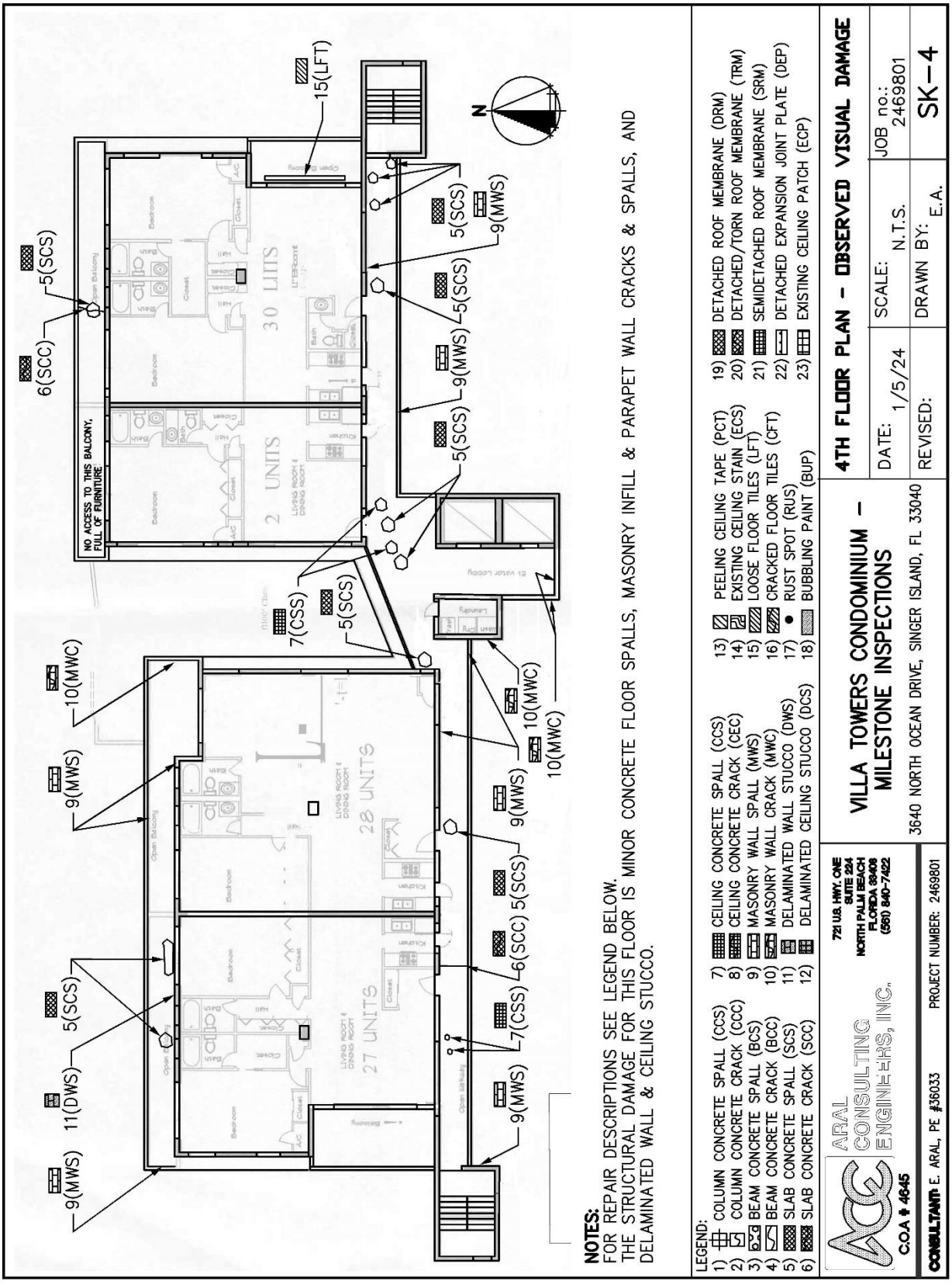
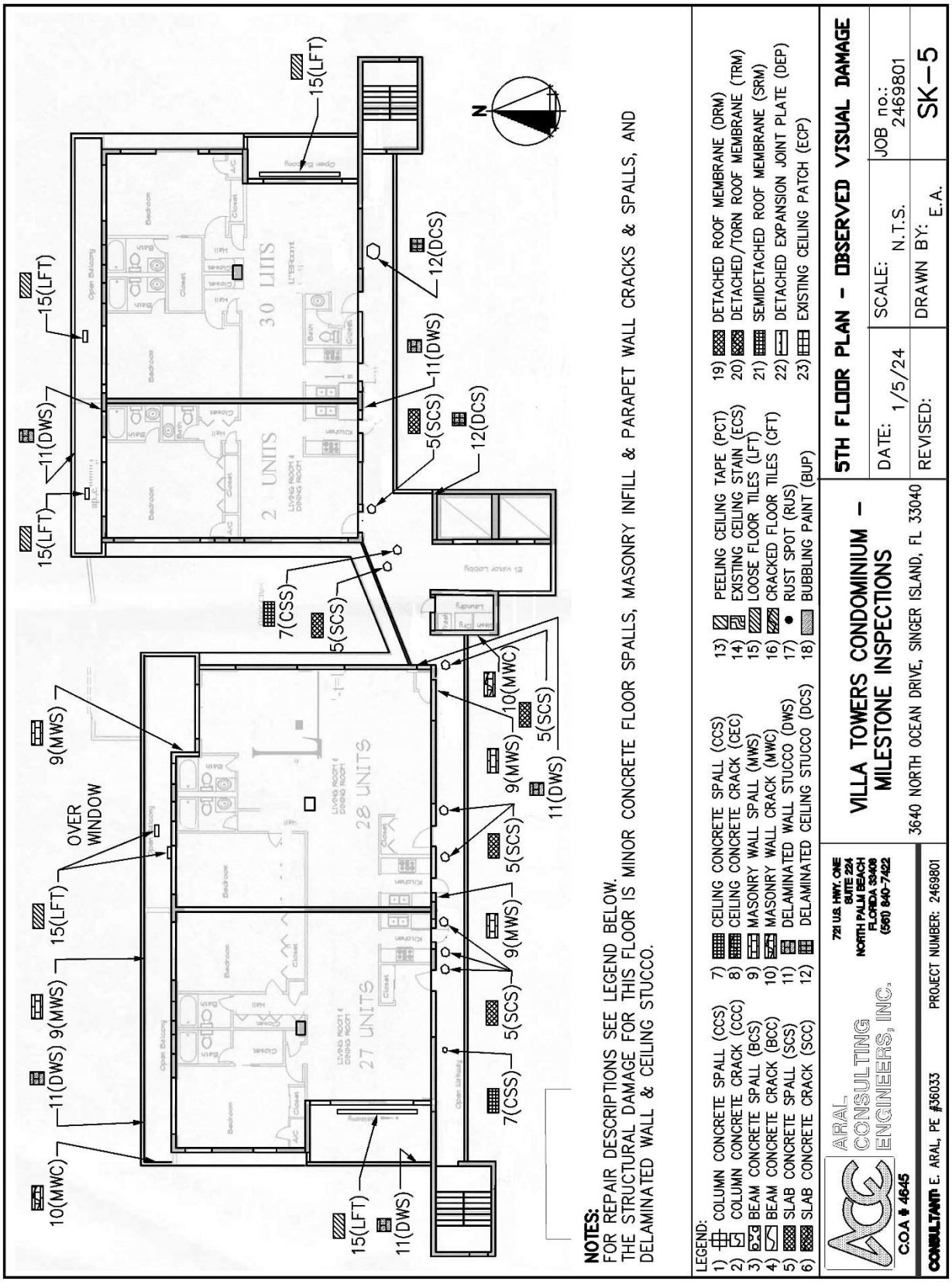
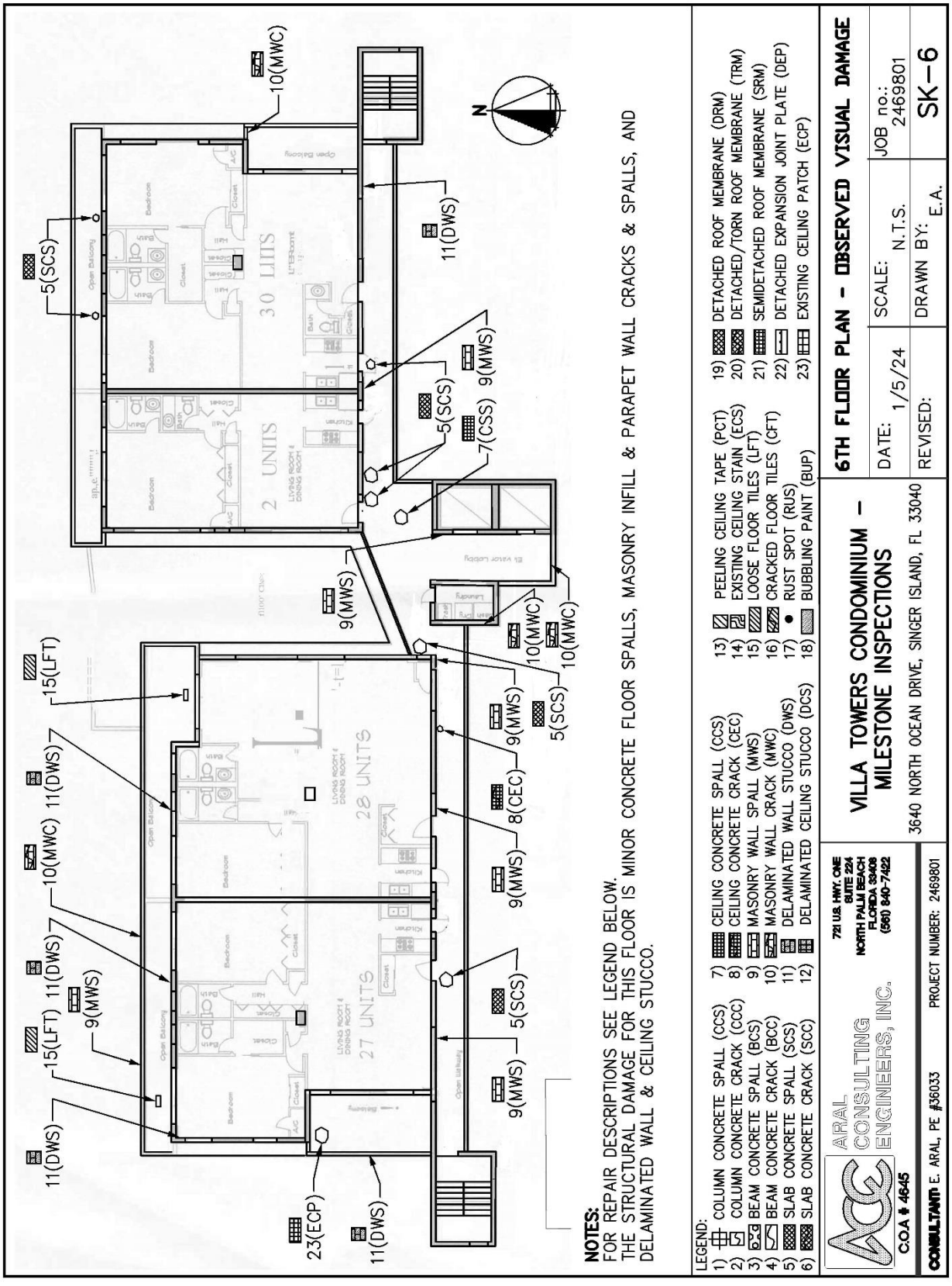
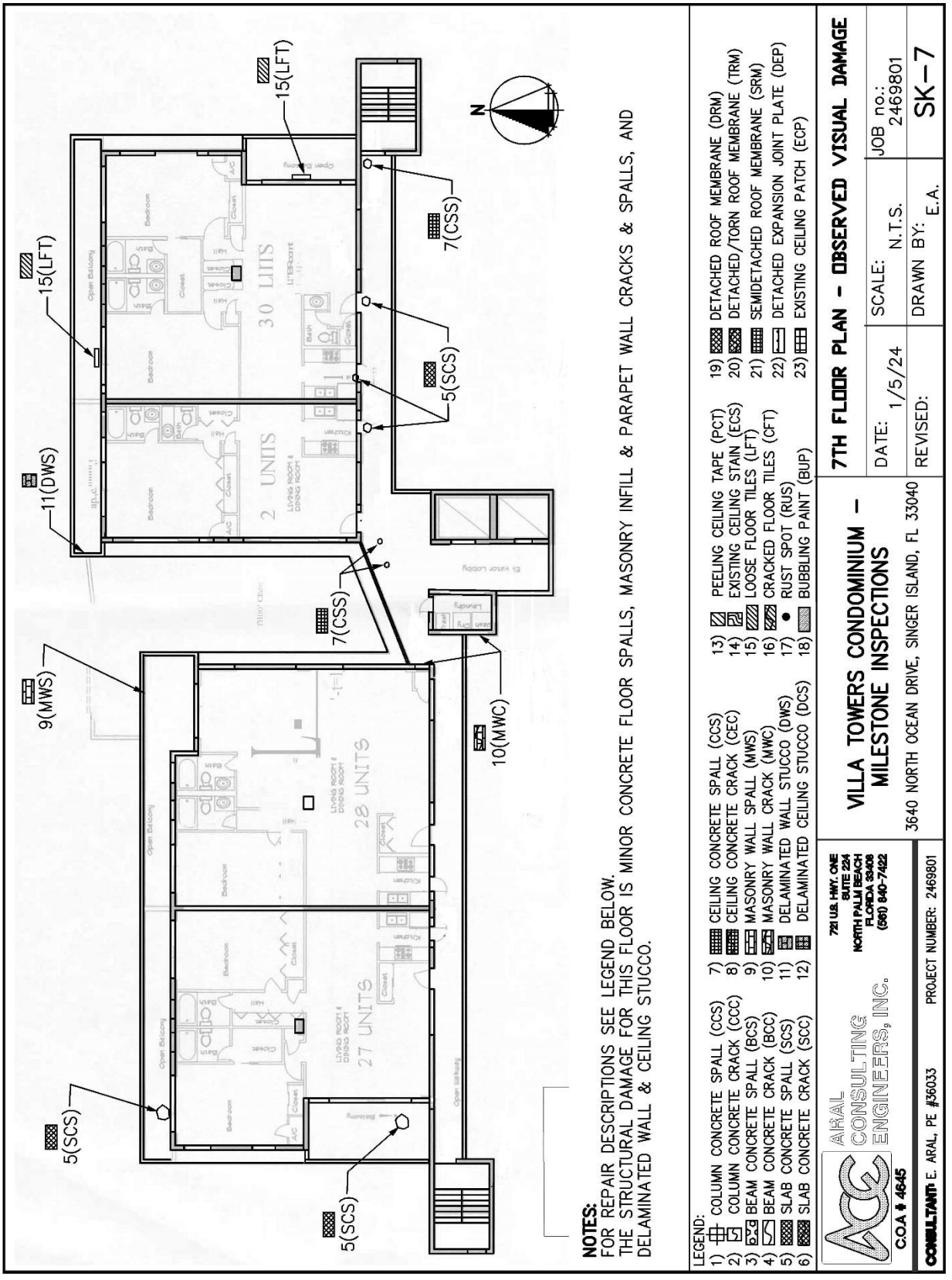
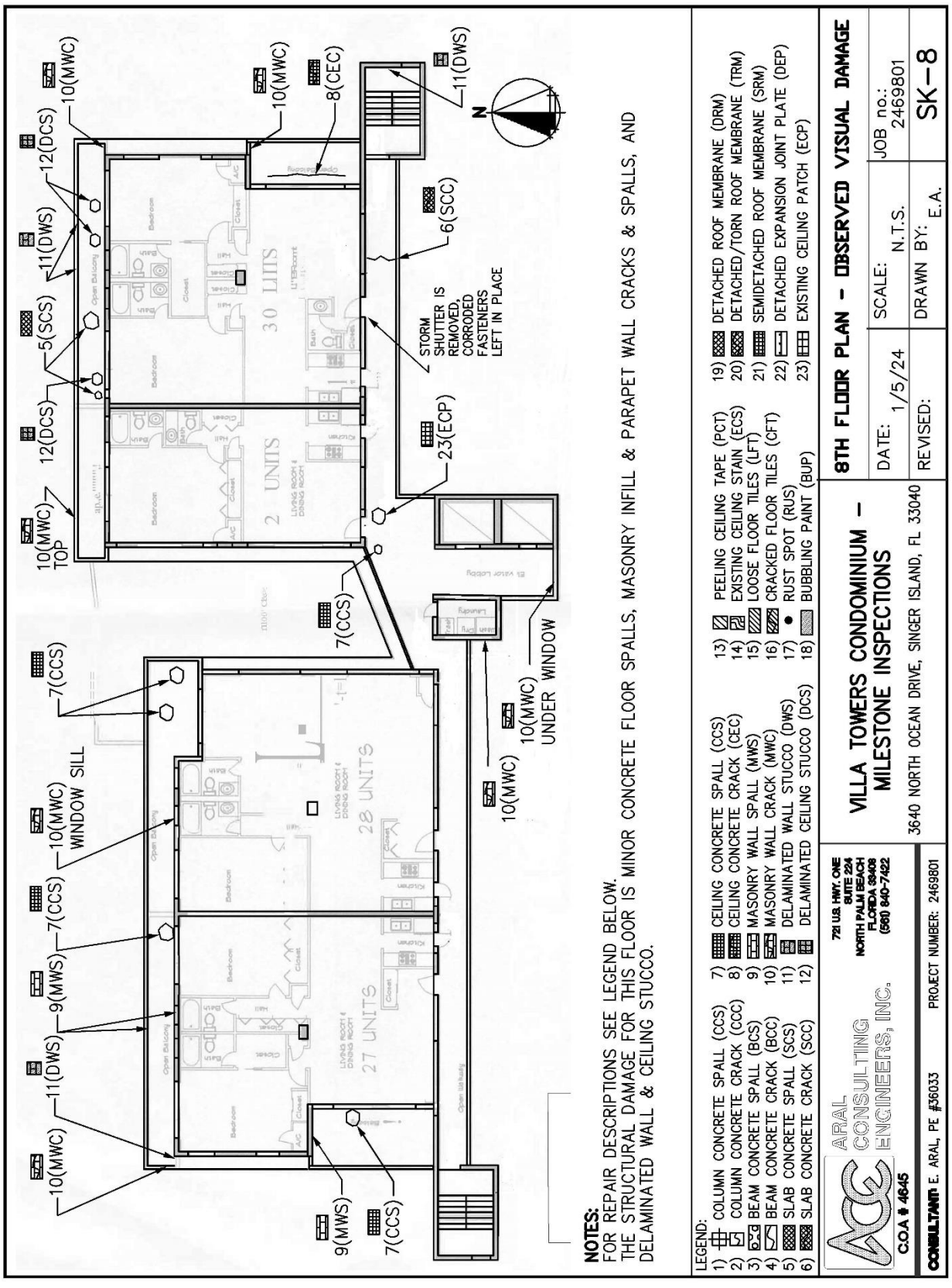
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT: E. ARAL, PE #36033 PROJECT NUMBER: 2469801
VILLA TOWERS CONDOMINIUM – MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
3RD FLOOR PLAN – OBSERVED VISUAL DAMAGE
DATE: 1/5/24
SCALE: N.T.S.
JOB no.: 2469801
REVISED:
DRAWN BY: E.A.
SK–3

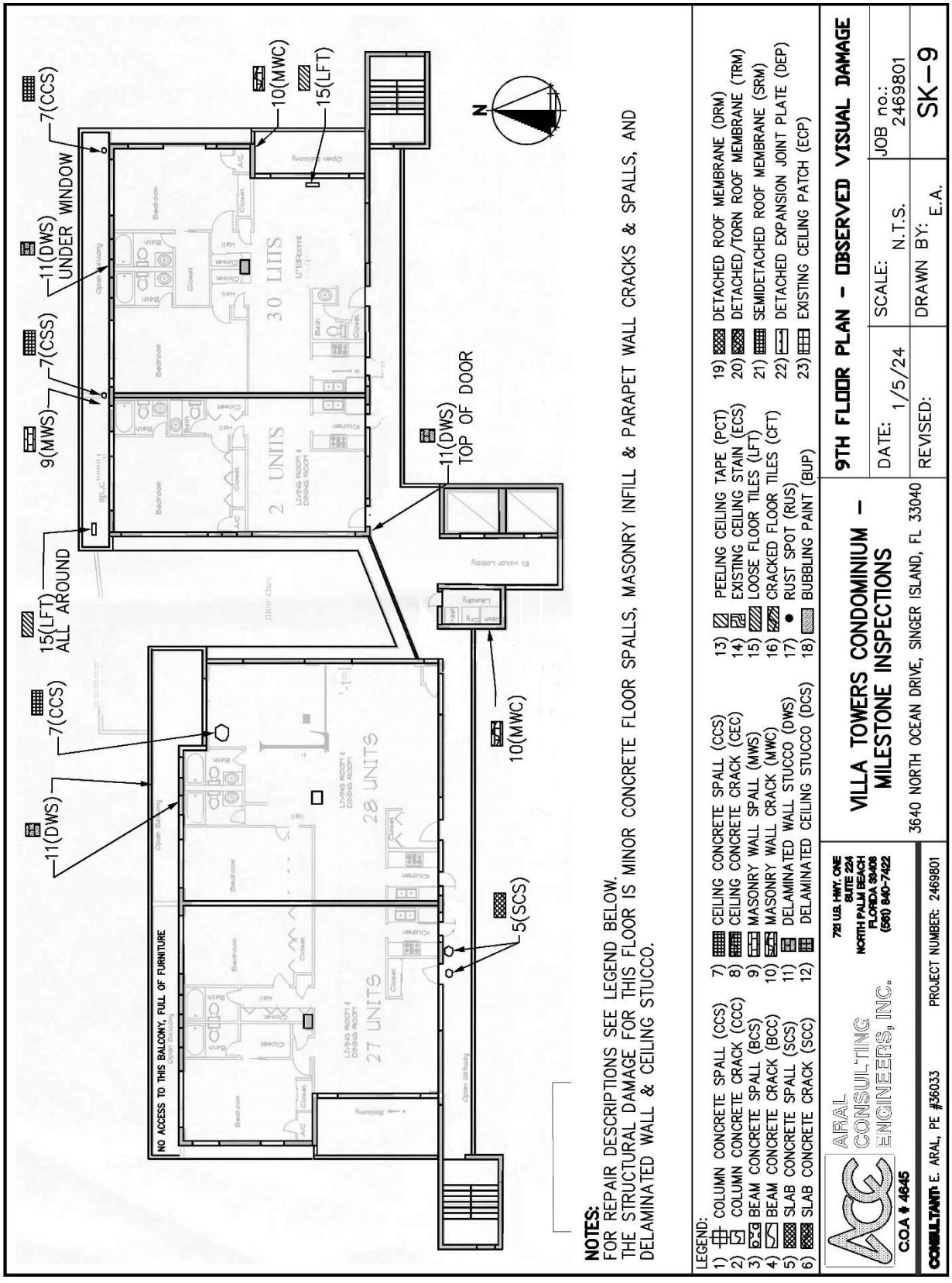

NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR CONCRETE FLOOR SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, AND DELAMINATED WALL & CEILING STUCCO.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
30 UNITS
2 UNITS
28 UNITS
27 UNITS
NO ACCESS TO THIS BALCONY, FULL OF FURNITURE
15(LFT)
5(SCS)
6(SCC)
9(MWS)
10(MWC)
7(CSS)
11(DWS)
4TH FLOOR PLAN - OBSERVED VISUAL DAMAGE
VILLA TOWERS CONDOMINIUM - MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
DATE: 1/5/24
SCALE: N.T.S.
JOB no.: 2469801
REVISED:
DRAWN BY: E.A.
SK-4
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT: E. ARAL, PE #36033
PROJECT NUMBER: 2469801

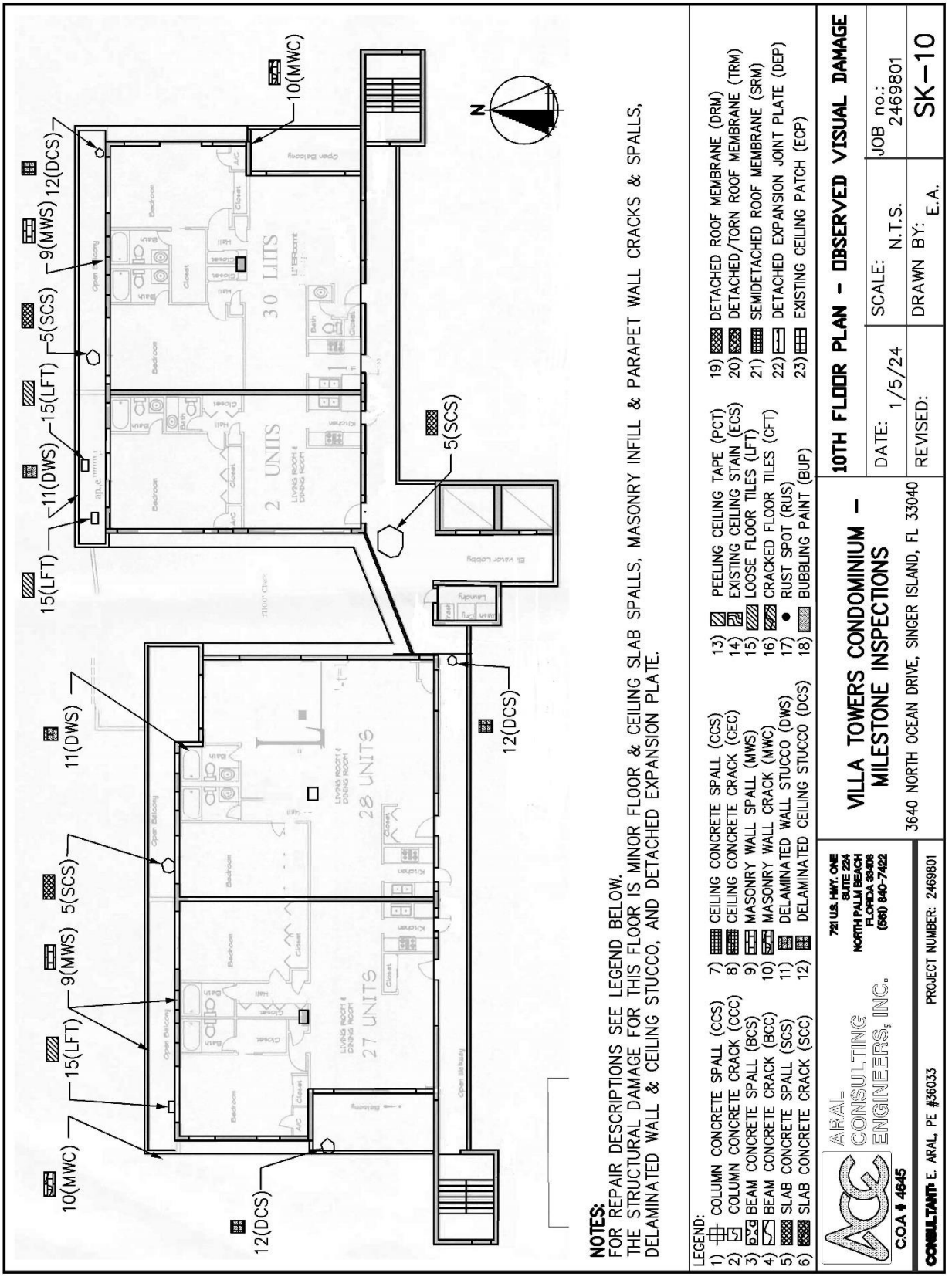

30 UNITS
2 UNITS
28 UNITS
27 UNITS
15(LFT)
11(DWS)
9(MWS)
OVER WINDOW
10(MWC)
7(CSS)
5(SCS)
12(DCS)
N
NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR CONCRETE FLOOR SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, AND DELAMINATED WALL & CEILING STUCCO.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT E. ARAL, PE #36033 PROJECT NUMBER: 2469801
VILLA TOWERS CONDOMINIUM – MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
5TH FLOOR PLAN – OBSERVED VISUAL DAMAGE
DATE: 1/5/24
SCALE: N.T.S.
JOB no.: 2469801
REVISED:
DRAWN BY: E.A.
SK-5

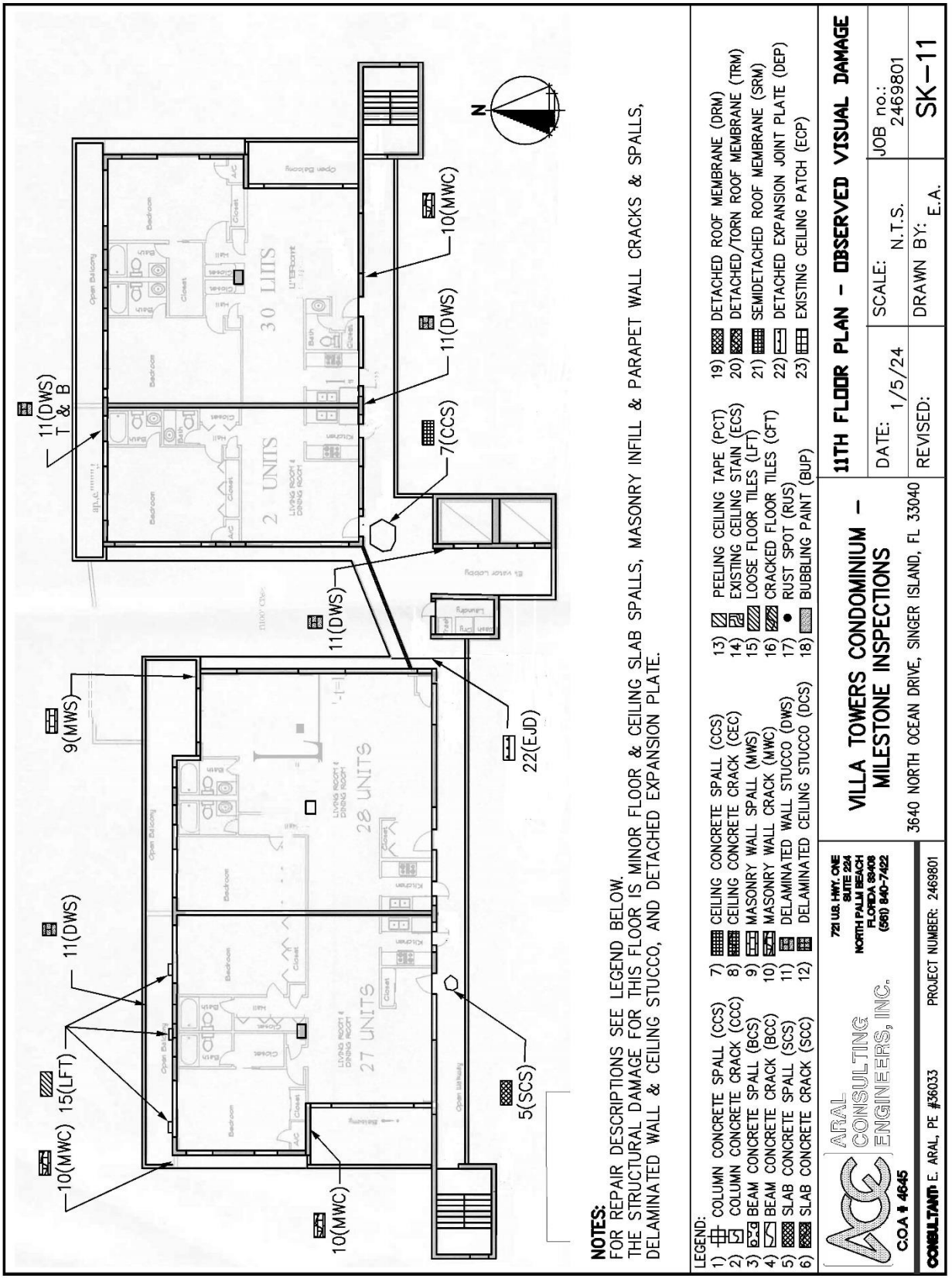

30 UNITS
2 UNITS
28 UNITS
27 UNITS
N
5(SCS)
10(MWC)
11(DWS)
9(MWS)
7(CSS)
15(LFT)
10(MWC)
8(CEC)
23(ECP)
NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR CONCRETE FLOOR SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, AND DELAMINATED WALL & CEILING STUCCO.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT: E. ARAL, PE #36033 PROJECT NUMBER: 2469801
VILLA TOWERS CONDOMINIUM – MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
6TH FLOOR PLAN – OBSERVED VISUAL DAMAGE
DATE: 1/5/24
SCALE: N.T.S.
JOB no.: 2469801
REVISED:
DRAWN BY: E.A.
SK–6

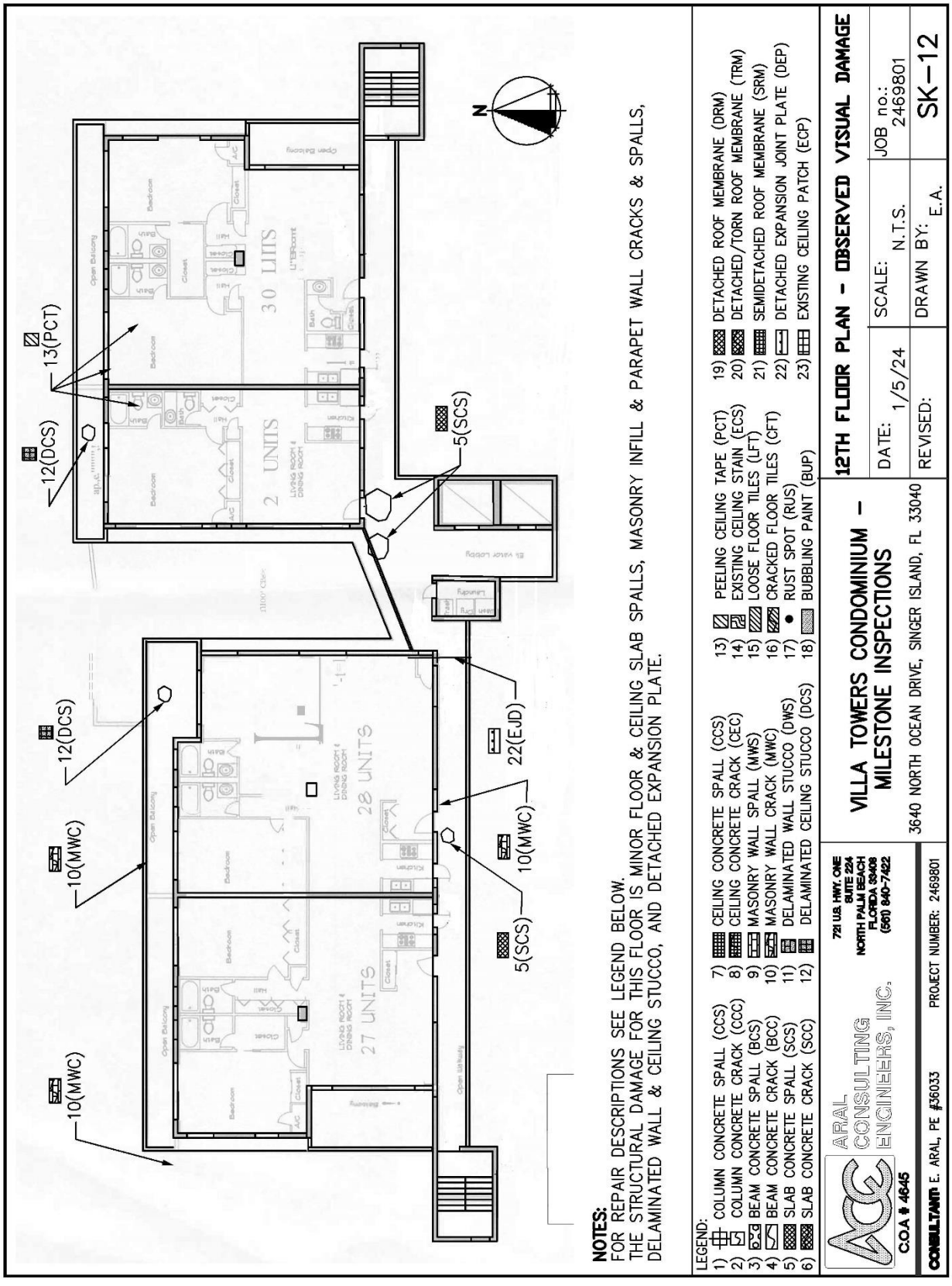

15(LFT)
7(CSS)
15(LFT)
5(SCS)
11(DWS)
7(CSS)
9(MWS)
10(MWC)
5(SCS)
5(SCS)
30 UNITS
2 UNITS
28 UNITS
27 UNITS
N
NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR CONCRETE FLOOR SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, AND DELAMINATED WALL & CEILING STUCCO.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT: E. ARAL, PE #36033 PROJECT NUMBER: 2469801
VILLA TOWERS CONDOMINIUM - MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
7TH FLOOR PLAN - OBSERVED VISUAL DAMAGE
DATE: 1/5/24
REVISED:
SCALE: N.T.S.
DRAWN BY: E.A.
JOB no.: 2469801
SK-7

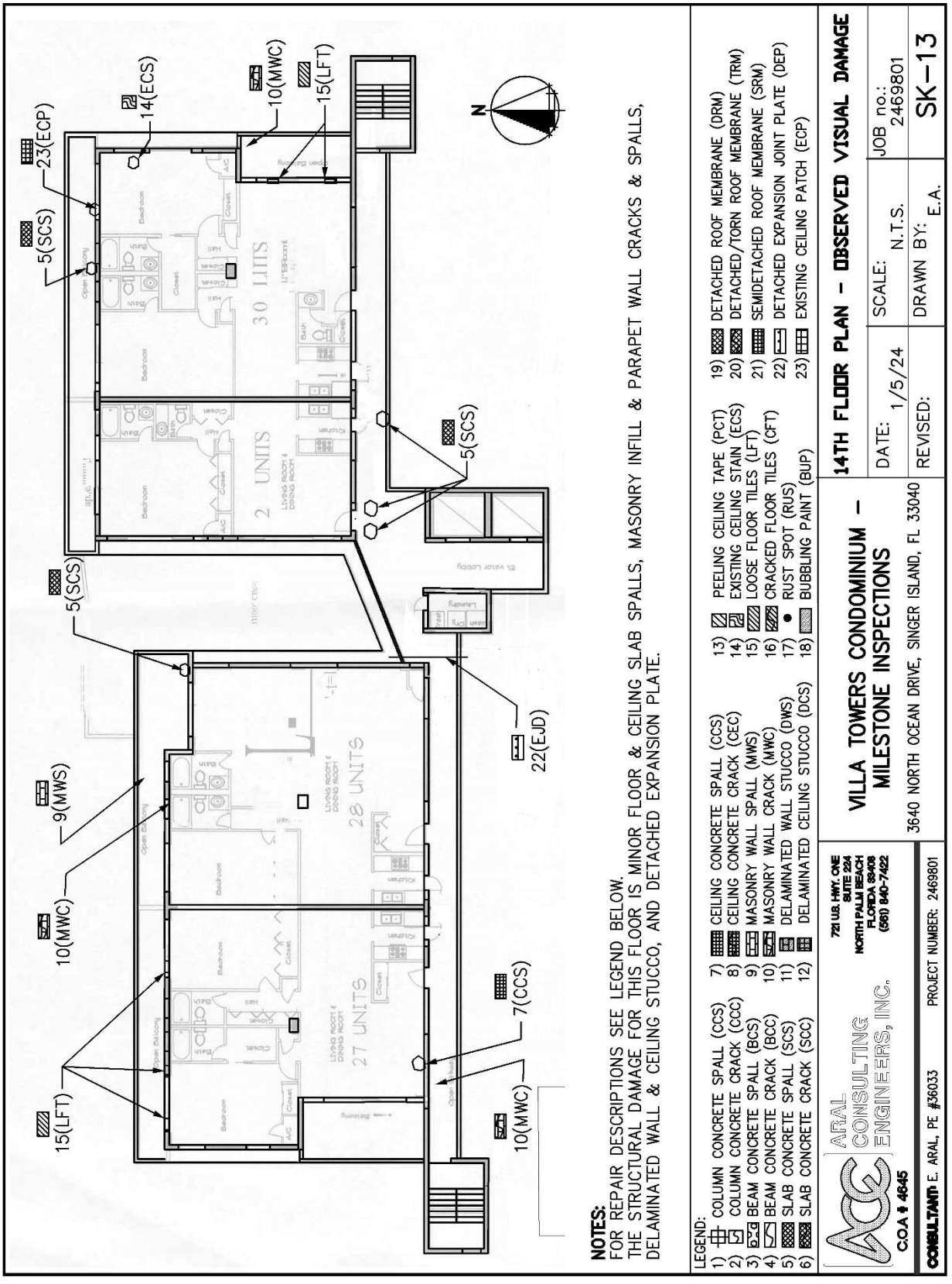

30 UNITS
2 UNITS
28 UNITS
27 UNITS
STORM SHUTTER IS REMOVED, CORRODED FASTENERS LEFT IN PLACE
10(MWC) TOP
10(MWC) WINDOW SILL
10(MWC) UNDER WINDOW
11(DWS)
12(DCS)
5(SCS)
10(MWC)
8(CEC)
6(SCC)
23(ECP)
7(CCS)
9(MWS)
N
NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR CONCRETE FLOOR SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, AND DELAMINATED WALL & CEILING STUCCO.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
8TH FLOOR PLAN - OBSERVED VISUAL DAMAGE
VILLA TOWERS CONDOMINIUM - MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
DATE: 1/5/24
SCALE: N.T.S.
JOB no.: 2469801
REVISED:
DRAWN BY: E.A.
SK-8
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT: E. ARAL, PE #36033
PROJECT NUMBER: 2469801

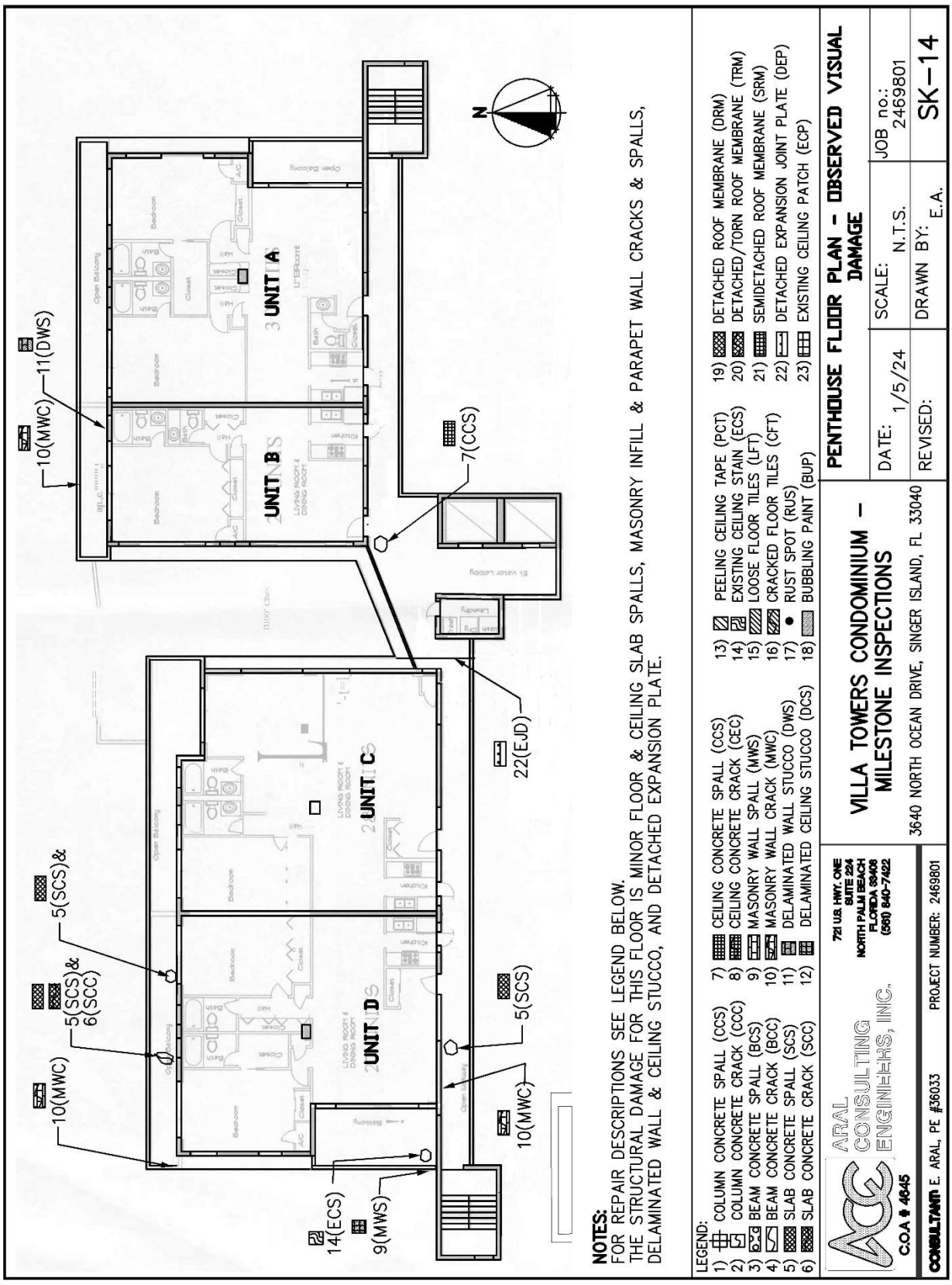

NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR CONCRETE FLOOR SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, AND DELAMINATED WALL & CEILING STUCCO.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
30 UNITS
2 UNITS
28 UNITS
27 UNITS
NO ACCESS TO THIS BALCONY, FULL OF FURNITURE
11(DWS) UNDER WINDOW
7(CCS)
10(MWC)
15(LFT)
9(MWS)
7(CSS)
15(LFT) ALL AROUND
11(DWS) TOP OF DOOR
5(SCS)
N
9TH FLOOR PLAN - OBSERVED VISUAL DAMAGE
VILLA TOWERS CONDOMINIUM - MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
DATE: 1/5/24
SCALE: N.T.S.
JOB no.: 2469801
REVISED:
DRAWN BY: E.A.
SK-9
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT: E. ARAL, PE #36033
PROJECT NUMBER: 2469801


NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR FLOOR & CEILING SLAB SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, DELAMINATED WALL & CEILING STUCCO, AND DETACHED EXPANSION PLATE.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
10TH FLOOR PLAN - OBSERVED VISUAL DAMAGE
VILLA TOWERS CONDOMINIUM - MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
DATE: 1/5/24
REVISED:
SCALE: N.T.S.
DRAWN BY: E.A.
JOB no.: 2469801
SK-10
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT: E. ARAL, PE #36033
PROJECT NUMBER: 2469801
30 UNITS
2 UNITS
28 UNITS
27 UNITS
10(MWC)
15(LFT)
9(MWS)
5(SCS)
11(DWS)
12(DCS)
N


NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR FLOOR & CEILING SLAB SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, DELAMINATED WALL & CEILING STUCCO, AND DETACHED EXPANSION PLATE.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
11TH FLOOR PLAN - OBSERVED VISUAL DAMAGE
VILLA TOWERS CONDOMINIUM - MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
DATE: 1/5/24
SCALE: N.T.S.
JOB no.: 2469801
REVISED:
DRAWN BY: E.A.
SK-11
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT: E. ARAL, PE #36033
PROJECT NUMBER: 2469801
30 UNITS
2 UNITS
28 UNITS
27 UNITS
11(DWS) T & B
10(MWC)
11(DWS)
7(CCS)
11(DWS)
22(EJD)
9(MWS)
11(DWS)
15(LFT)
10(MWC)
5(SCS)
10(MWC)
N


30 UNITS
2 UNITS
28 UNITS
27 UNITS
N
13(PCT)
12(DCS)
5(SCS)
12(DCS)
10(MWC)
22(EJD)
10(MWC)
5(SCS)
10(MWC)
NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR FLOOR & CEILING SLAB SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, DELAMINATED WALL & CEILING STUCCO, AND DETACHED EXPANSION PLATE.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT E. ARAL, PE #36033 PROJECT NUMBER: 2469801
VILLA TOWERS CONDOMINIUM – MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
12TH FLOOR PLAN - OBSERVED VISUAL DAMAGE
DATE: 1/5/24
REVISED:
SCALE: N.T.S.
DRAWN BY: E.A.
JOB no.: 2469801
SK–12


NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR FLOOR & CEILING SLAB SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, DELAMINATED WALL & CEILING STUCCO, AND DETACHED EXPANSION PLATE.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
30 UNITS
2 UNITS
28 UNITS
27 UNITS
23(ECP)
5(SCS)
14(ECS)
10(MWC)
15(LFT)
9(MWS)
22(EJD)
7(CCS)
N
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT: E. ARAL, PE #36033
PROJECT NUMBER: 2469801
VILLA TOWERS CONDOMINIUM – MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
14TH FLOOR PLAN – OBSERVED VISUAL DAMAGE
DATE: 1/5/24
REVISED:
SCALE: N.T.S.
DRAWN BY: E.A.
JOB no.: 2469801
SK–13


UNIT A
UNIT B
UNIT C
UNIT D
N
10(MWC)
11(DWS)
5(SCS)&
5(SCS)&
6(SCC)
10(MWC)
7(CCS)
22(EJD)
5(SCS)
10(MWC)
14(ECS)
9(MWS)
NOTES:
FOR REPAIR DESCRIPTIONS SEE LEGEND BELOW.
THE STRUCTURAL DAMAGE FOR THIS FLOOR IS MINOR FLOOR & CEILING SLAB SPALLS, MASONRY INFILL & PARAPET WALL CRACKS & SPALLS, DELAMINATED WALL & CEILING STUCCO, AND DETACHED EXPANSION PLATE.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
17) RUST SPOT (RUS)
18) BUBBLING PAINT (BUP)
19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
ARAL CONSULTING ENGINEERS, INC.
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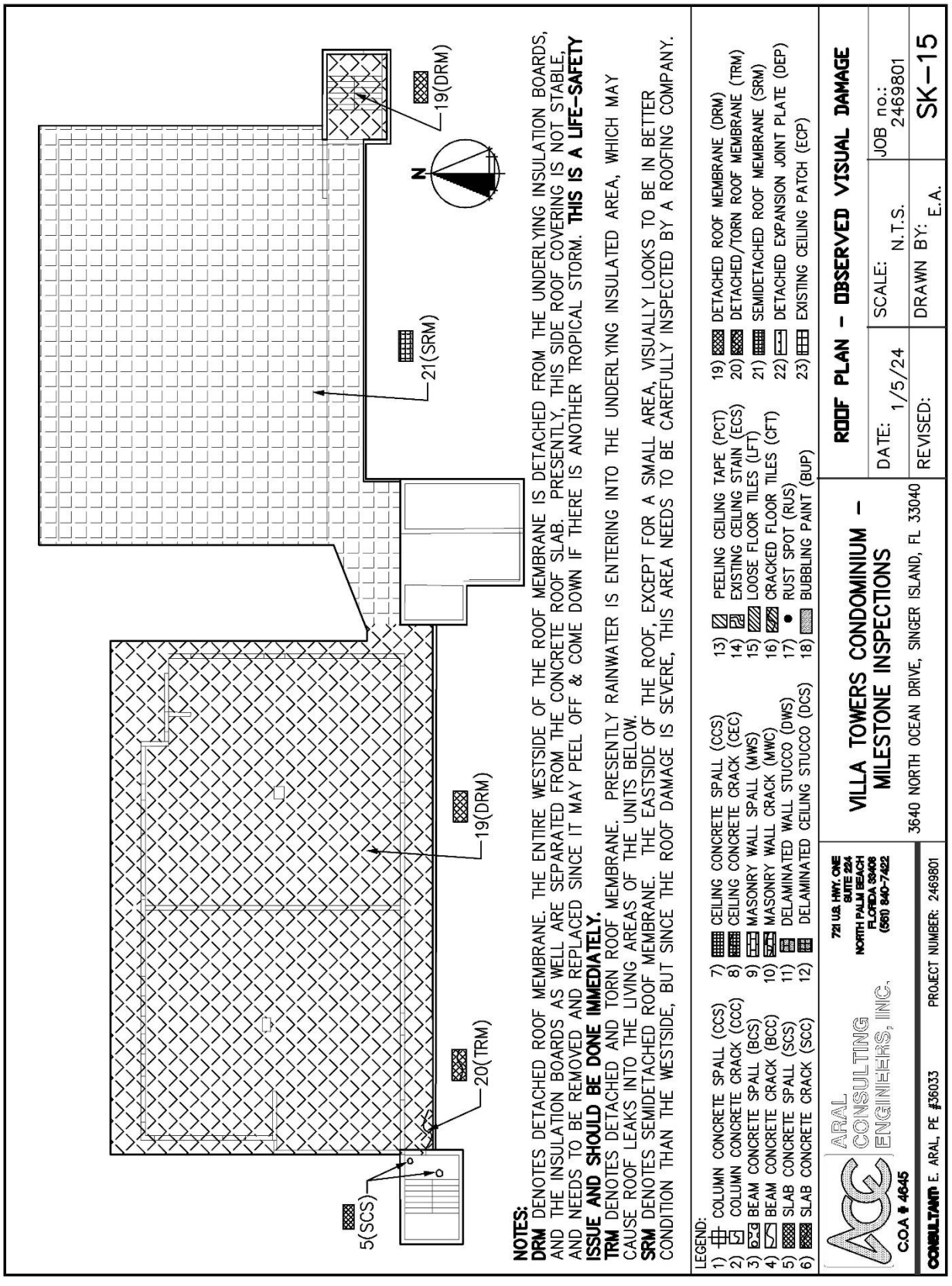
C.O.A # 4645
CONSULTANT E. ARAL, PE #36033 PROJECT NUMBER: 2469801
VILLA TOWERS CONDOMINIUM – MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
PENTHOUSE FLOOR PLAN – OBSERVED VISUAL DAMAGE
DATE: 1/5/24
REVISED:
SCALE: N.T.S.
DRAWN BY: E.A.
JOB no.: 2469801
SK–14


N
21(SRM)
19(DRM)
19(DRM)
20(TRM)
5(SCS)
NOTES:
DRM DENOTES DETACHED ROOF MEMBRANE. THE ENTIRE WESTSIDE OF THE ROOF MEMBRANE IS DETACHED FROM THE UNDERLYING INSULATION BOARDS, AND THE INSULATION BOARDS AS WELL ARE SEPARATED FROM THE CONCRETE ROOF SLAB. PRESENTLY, THIS SIDE ROOF COVERING IS NOT STABLE, AND NEEDS TO BE REMOVED AND REPLACED SINCE IT MAY PEEL OFF & COME DOWN IF THERE IS ANOTHER TROPICAL STORM. THIS IS A LIFE-SAFETY ISSUE AND SHOULD BE DONE IMMEDIATELY.
TRM DENOTES DETACHED AND TORN ROOF MEMBRANE. PRESENTLY RAINWATER IS ENTERING INTO THE UNDERLYING INSULATED AREA, WHICH MAY CAUSE ROOF LEAKS INTO THE LIVING AREAS OF THE UNITS BELOW.
SRM DENOTES SEMIDETACHED ROOF MEMBRANE. THE EASTSIDE OF THE ROOF, EXCEPT FOR A SMALL AREA, VISUALLY LOOKS TO BE IN BETTER CONDITION THAN THE WESTSIDE, BUT SINCE THE ROOF DAMAGE IS SEVERE, THIS AREA NEEDS TO BE CAREFULLY INSPECTED BY A ROOFING COMPANY.
LEGEND:
1) COLUMN CONCRETE SPALL (CCS)
2) COLUMN CONCRETE CRACK (CCC)
3) BEAM CONCRETE SPALL (BCS)
4) BEAM CONCRETE CRACK (BCC)
5) SLAB CONCRETE SPALL (SCS)
6) SLAB CONCRETE CRACK (SCC)
7) CEILING CONCRETE SPALL (CCS)
8) CEILING CONCRETE CRACK (CEC)
9) MASONRY WALL SPALL (MWS)
10) MASONRY WALL CRACK (MWC)
11) DELAMINATED WALL STUCCO (DWS)
12) DELAMINATED CEILING STUCCO (DCS)
13) PEELING CEILING TAPE (PCT)
14) EXISTING CEILING STAIN (ECS)
15) LOOSE FLOOR TILES (LFT)
16) CRACKED FLOOR TILES (CFT)
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19) DETACHED ROOF MEMBRANE (DRM)
20) DETACHED/TORN ROOF MEMBRANE (TRM)
21) SEMIDETACHED ROOF MEMBRANE (SRM)
22) DETACHED EXPANSION JOINT PLATE (DEP)
23) EXISTING CEILING PATCH (ECP)
ROOF PLAN - OBSERVED VISUAL DAMAGE
VILLA TOWERS CONDOMINIUM - MILESTONE INSPECTIONS
3640 NORTH OCEAN DRIVE, SINGER ISLAND, FL 33040
DATE: 1/5/24
SCALE: N.T.S.
JOB no.: 2469801
REVISED:
DRAWN BY: E.A.
SK-15
ARAL CONSULTING ENGINEERS, INC.
721 U.S. HWY. ONE SUITE 224 NORTH PALM BEACH FLORIDA 33408 (561) 840-7422
C.O.A # 4645
CONSULTANT E. ARAL, PE #36033
PROJECT NUMBER: 2469801

7) Summary of Observations:

As described in the *"Building Roof System"* section above and the Drawing SK-15 Roof Plan, the roof damage is the most critical event which happened during our observations. The roof covering of the West Tower and a small part of the East Tower are completely detached from the roof slab, **and these areas need immediate repairs**. The remaining roof areas including the Elevator Tower and the West Stairway Tower Roofs need to be inspected by an experienced roofing contractor.

As listed in the *"Observed Conditions in Building Interiors, Balconies, Walkways, and Stairways"* section above, our inspection revealed multiple ongoing concrete/stucco damage at various locations of the building. Most observed damage presently is minor, but if left as is (with water and salt exposure) the ongoing damage will quickly increase, will cause corrosion in reinforcing bars, and will deteriorate the load bearing capacity of the concrete floor slabs, thereby reducing the structural integrity of the building.

8) Recommendations:

We strongly recommend the following:

- ***The damaged/detached roof membrane is a life-safety issue, and should be repaired immediately.***
- ***All spalling floor and ceiling concrete on walkways and balconies should be repaired to stop structural deterioration of the building.***
- ***All delaminated masonry wall stucco should be repaired to stop water intrusion into the wall cavities.***
- ***All other observations and recommendations concerning the building components (that are not currently building deficiencies, but will be affecting the load carrying capacity of the building indirectly) should be incorporated into the building's regular maintenance program (e.g., to monitor expansion joint materials, AC tie-downs, rooftop pitch pans, roof covering, etc.) so that any future structural damage can be degraded.***

9) Conclusions:

Based on our observations and review of the available original construction documents, and per our engineering evaluation, it our professional opinion that:

As of the date of this report, the Villa Towers Condominium building is certified as structurally sound and safe for its intended use under the present occupancy, pending remediation of the structural deficiencies defined in this report.

Milestone Inspection Phase II, Destructive Investigation is not required, and the Condo Association may proceed with the preparation of construction documents to obtain repair permits, and remediation of the repairs.

Please do not hesitate to contact our office should you have any questions regarding this report.