NORTHROP GRUMMAN

Transmittal

Date: April 15, 2022

To: Lilian Abreu
Remedial Project Manager, Superfund Division
U.S Environmental Protection Agency Region 9
75 Hawthorne Street
San Francisco, CA 94105

From: Joshua Nandi, Environmental Project Manager
Northrop Grumman
One Space Park
Mail Stop: NGC CER-XE6D21
Redondo Beach, CA 90278

Subject/Title: Evaluation of Passive Sub-Slab Depressurization System
Former TRW Microwave Site, 825 Stewart Drive, Sunnyvale, CA

CC: Holly Holbrook, AECOM
Mark Riley, AECOM

Northrop Grumman is submitting the above-referenced

X	For your review and comment
	For your information and file
	For your approval
	For your signature

Total number of copies sent: 1

Remarks:

If you have any questions or comments regarding the enclosed report, please feel free to contact Joshua Nandi at Joshua.Nandi@ngc.com.

ED_013761_00000307-00001

AECOM
999 Town and Country Road
Orange, CA 92868
aecom.com

April 15, 2022

Lilian Abreu
Remedial Project Manager
Superfund & Emergency Response
Division
United States Environmental Protection
Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: Evaluation of Passive Sub-Slab Depressurization System, Former TRW Microwave Site, 825 Stewart Drive, Sunnyvale, California (CERCLIS ID#CAD00915988)

Dear Ms. Abreu,

At the request of the United States Environmental Protection Agency (USEPA), AECOM, on behalf of Northrop Grumman Systems Corporation (Northrop Grumman), evaluated the current configuration and status of the rooftop vents associated with the Passive Sub-Slab Depressurization (SSD) System, installed at the site in 2014. In their letter dated October 7, 2021, USEPA noted that several of the vents were reconfigured by the current building tenant after initial installation of the SSD System was completed in 2014.

Seven vents were originally installed as part of the SSD System in 2014 prior to the installation of the existing heating, ventilation, and air conditioning (HVAC) system (three on the Main Building, two on the West Lobby Building and two on the North Building, as shown on **Figure 1**). The existing HVAC system was subsequently installed by the current building tenant between May and December of 2015 without consideration for the location of the SSD System vents and their function. As result, the three vents on the Main Building Roof and two vents on the West Lobby Building Roof were put in close proximity to the HVAC intakes. The two vents on the North Building are not located near HVAC intakes and not of concern.

The objective of the evaluation is to relocate the vents on the affected buildings outside the assumed sphere of influence of the HVAC intakes. As stated in the Engineering Issues: Indoor Air Vapor Intrusion Mitigation Approaches (USEPA, 2008), the recommended distance from the riser vents to the HVAC intakes is 10 feet. A conservative safety factor of 2.5 was applied to the 10-foot recommendation, resulting relocation of the vents to a minimum of 25 feet away from HVAC intakes.

Figure 1 shows an aerial view of the three vents on the Main Building Roof and the two vents on the West Building roof and their proposed relocation outside the 25-foot spheres drawn around each intake.

The Main Building vent risers are proposed to be relocated approximately 27 feet to the south of the existing vents and approximately 42 feet from the nearest HVAC intake (**Figure 1**). The West Lobby Building vent risers are proposed to be relocated approximately 15 feet to the northeast, placing them approximately 37 feet away from the nearest HVAC intake (**Figure 2**). The height of the risers is designed to allow for airflow across the turbines while maintaining the overall building profile with all equipment located below the top of the windscreen at the edge of the building. The proposed piping schematic is shown on **Figure 3**. The scope of work will involve removing the existing turbines, trimming the vent to height, placing a 90-degree elbow, and routing the pipe horizontally to the new vent riser location as shown on **Figure 3**. The piping will be supported on the roof using Dura-blocks consistent with the existing supports for piping and conduit. The risers will be secured to existing structures as shown on **Figure 2** and **Figure 3**.

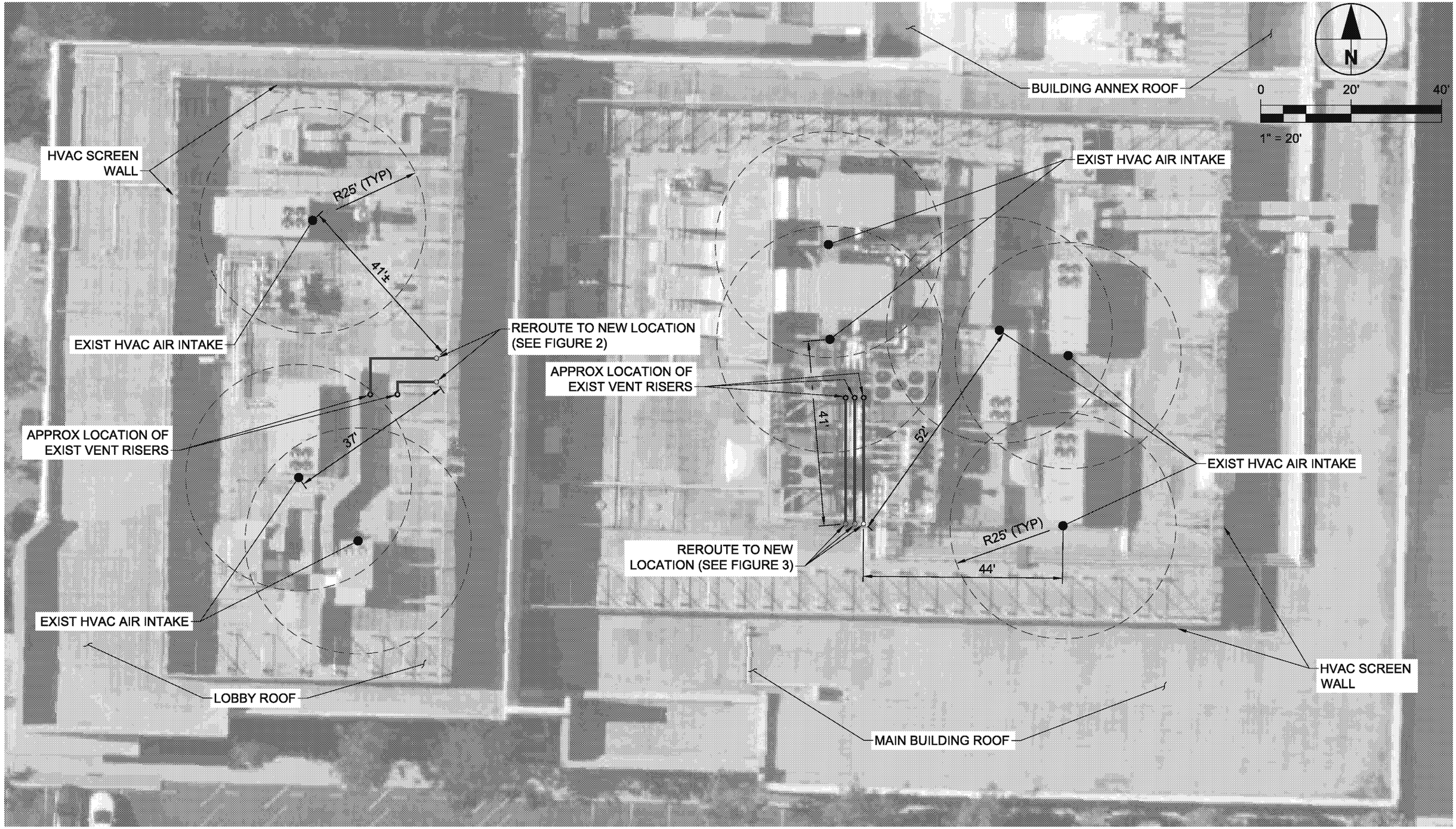
With USEPA approval, Northrop Grumman will proceed with the final design and implementation of these modifications. If you have any questions or would like to discuss, please contact Joshua Nandi, the Northrop Grumman Project Manager for this site, at 310-912-8307 or joshua.nandi@ngc.com.

Thank you,

Holly Holbrook
AECOM Project Manager
AECOM
T: 714-689-7215
M: 562-577-6058
E: Holly.Holbrook@aecom.com

cc: Joshua Nandi, Northrop Grumman
Mark Riley, AECOM

Attachment: Proposed SSD Modification Drawings

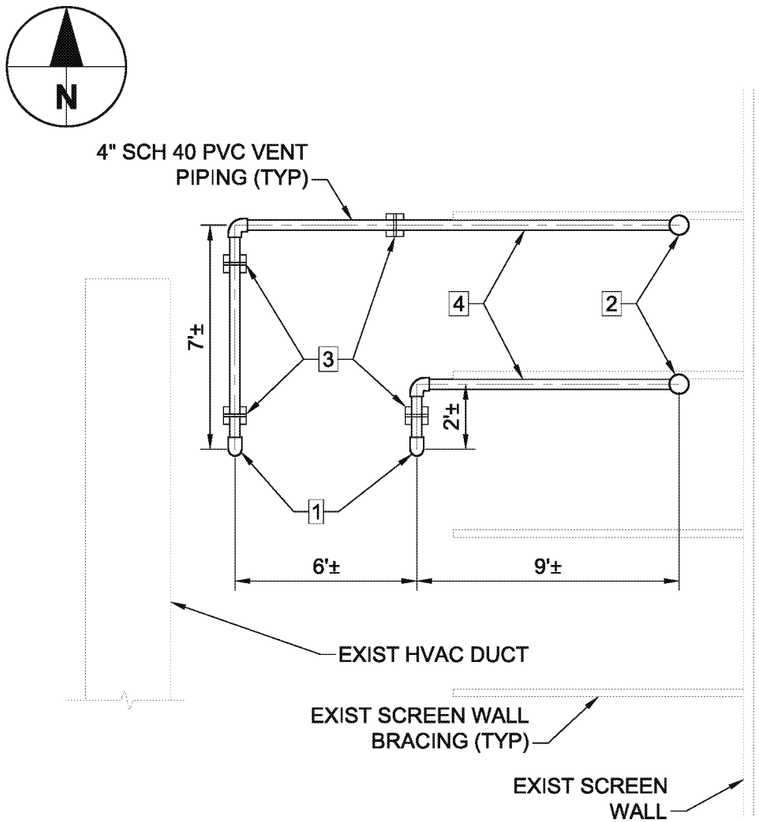


Former TRW Microwave Facility
Vapor Collection System - Roof Venting Compliance
825 Stewart Dr, Sunnyvale, CA
Project No: 60680270 Date: March 2022

ROOF PLAN

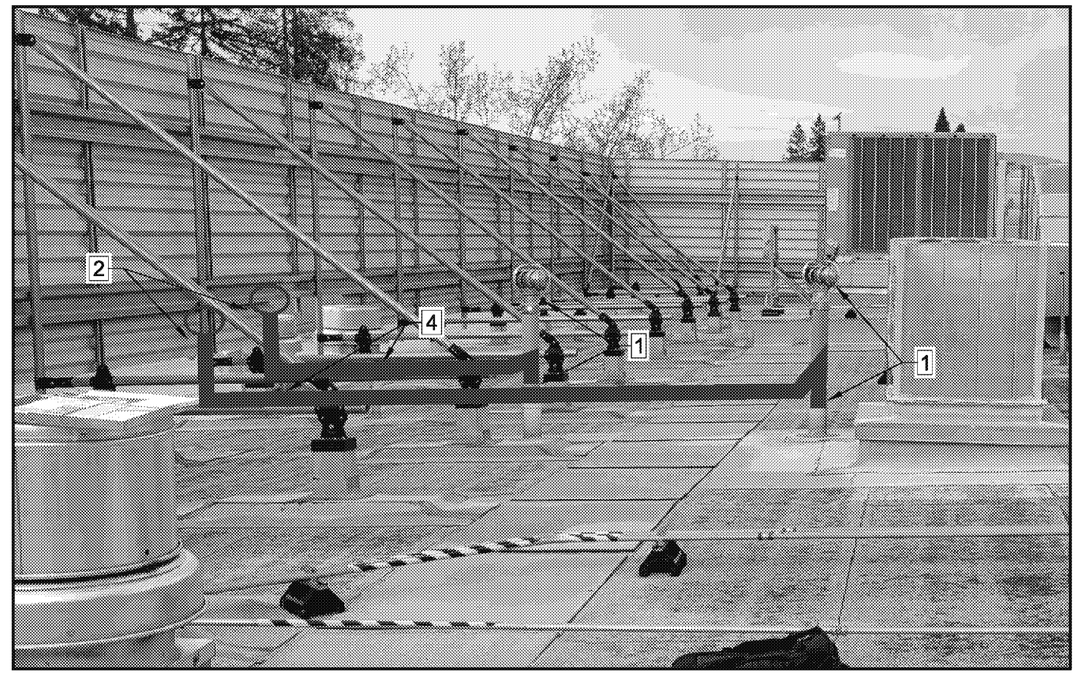
AECOM

Figure: 1



LOBBY ROOF VENT RELOCATION PLAN

SCALE: 1"= 5'



LOBBY ROOF VENTS LOOKING NORTH

CONSTRUCTION NOTES

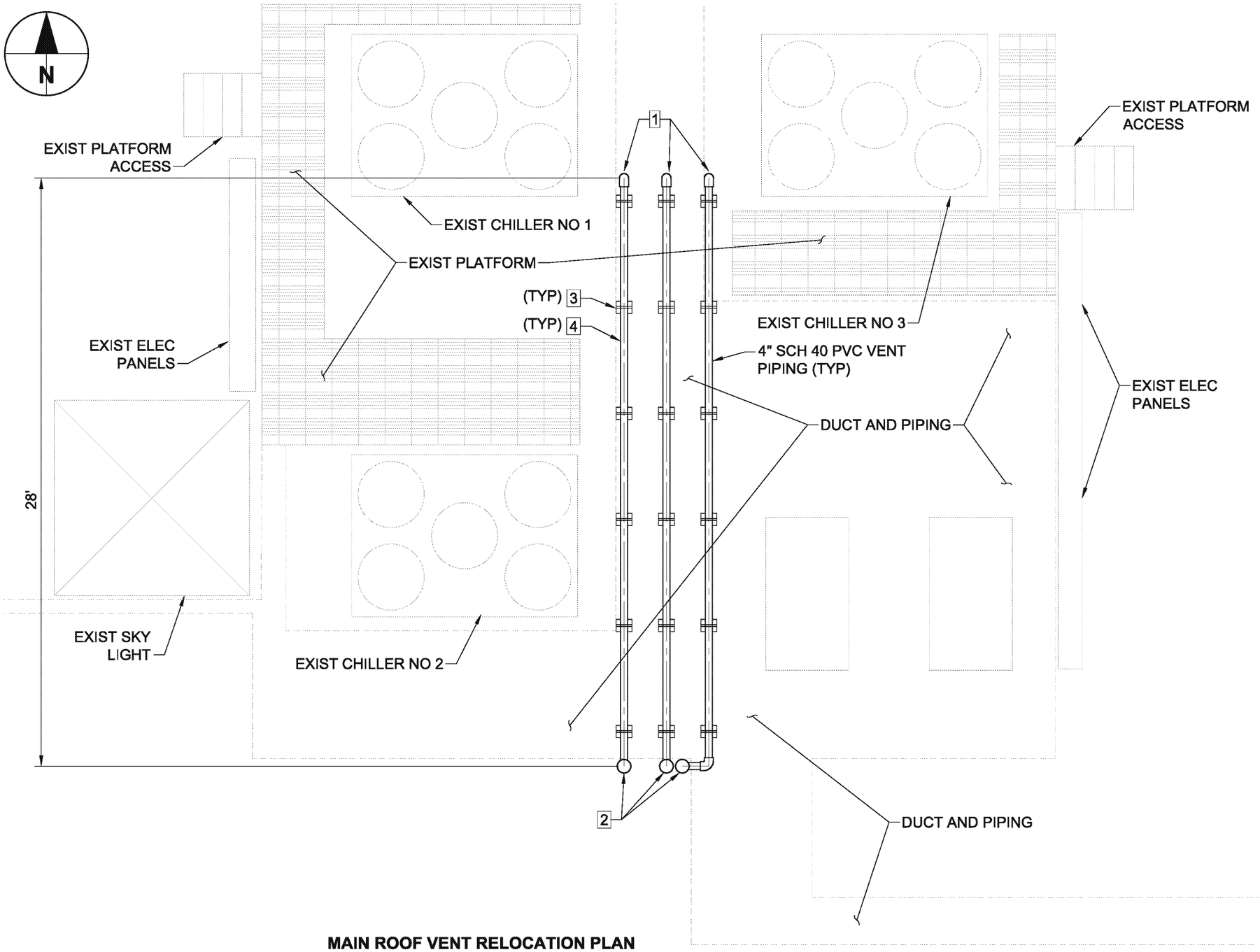
1. REMOVE EXISTING VENT TURBINE, CUT PVC RISER AND INSTALL 90° BEND.
2. INSTALL NEW 4" SCHEDULE 40 PVC RISER AND ATTACH SALVAGED VENT TURBINE.
3. INSTALL PIPE SUPPORT AT 5' MAX SPACING (DURABLOK SERIES DB-20 ROOFTOP SUPPORT SYSTEM OR EQUAL).
4. MOUNT NEW 4" SCH 40 PVC PIPE TO EXIST SCREEN WALL HORIZONTAL BRACING.

Former TRW Microwave Facility
Vapor Collection System - Roof Venting Compliance
825 Stewart Dr, Sunnyvale, CA
Project No: 60680270 Date: March 2022

LOBBY ROOF VENT RELOCATION

AECOM

Figure: 2



CONSTRUCTION NOTES

1. REMOVE EXISTING VENT TURBINE, CUT PVC RISER AND INSTALL 90° BEND.
2. INSTALL NEW 4" SCHEDULE 40 PVC RISER AND ATTACH SALVAGED VENT TURBINE. ATTACH RISER TO EXISTING HVAC EQUIPMENT FRAMING.
3. INSTALL PIPE SUPPORT AT 5' MAX SPACING (DURABLOK SERIES DB-20 ROOFTOP SUPPORT SYSTEM OR EQUAL).
4. ROUTE 4" SCHEDULE 40 PVC VENT PIPING BEST WAY UNDER AND AROUND EXISTING HVAC EQUIPMENT AND FRAMING.

MAIN ROOF VENT RELOCATION PLAN

SCALE: 1"= 5'

Former TRW Microwave Facility
Vapor Collection System - Roof Venting Compliance
825 Stewart Dr, Sunnyvale, CA
Project No: 60680270 Date: March 2022

MAIN ROOF VENT RELOCATION

AECOM

Figure: 3