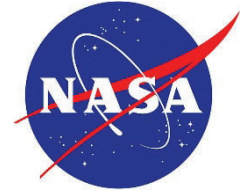


National Aeronautics and
Space Administration
Lyndon B. Johnson Space Center
2101 NASA Parkway
Houston, Texas 77058-3696



June 8, 2026

Reply to Attn of: JE-26-037

Mr. Brad Patterson
State Historic Preservation Office
Texas Historical Commission
P.O. Box 12276
Austin, TX 78711-2276

Subject: Initiation of Section 106 Consultation Project Review for the Renovation of
B16 Room 2109

Dear Mr. Patterson:

The National Aeronautics and Space Administration (NASA), Lyndon B. Johnson Space Center (JSC) is proposing to renovate Room 2109 of Building 16, the Avionics System Laboratory, a room that was identified as significant under the Programmatic Agreement Between the National Aeronautics and Space Administration, Johnson Space Center and the Texas State Historic Preservation Officer for the Mitigation of Adverse Effects and Management of Historic Properties Associated with the Space Shuttle Program at the Lyndon B. Johnson Space Center, Houston, Harris County, Texas (SSP PA) and, as such, has been determined to be a Federal undertaking subject to consultation under Stipulation II.C.2 of that agreement. Please see the attached enclosures for additional information. JSC is proposing a determination of “No Adverse Effect” for this project. JSC welcomes your comments on this project and the proposed determination.

If you have any questions or need additional information, please contact me at 346-686-5332 or by email at jennifer.l.morrison@nasa.gov.

Sincerely,

Jennifer
Morrison

Digitally signed by
Jennifer Morrison
Date: 2026.06.11
11:44:37 -05'00'

Jeni Morrison
JSC Cultural Resources Manager
JSC Environmental Management Office

Enclosures:

1. Project Description
2. Site Map and Proposed Project Area
3. Design Drawings
4. APE Analysis Photos

cc:

Ms. Miranda Grieder
Historic Preservation Project Reviewer
Federal and State Review Program
Division of Architecture
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711-2276

Ms. Emily Dylla
Program Coordinator
Archeology Review and Compliance
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711-2276

ENCLOSURE 1
Project Description

Project Description

The National Aeronautics and Space Administration (NASA), Lyndon B. Johnson Space Center (JSC) is proposing to renovate Room 2109 in Building 16, the Avionics System Laboratory (Enclosure 2). Room 2109 is a significant room in the context of the Space Shuttle Program, as identified in the Programmatic Agreement Between the National Aeronautics and Space Administration, Johnson Space Center and the Texas State Historic Preservation Officer for the Mitigation of Adverse Effects and Management of Historic Properties Associated with the Space Shuttle Program at the Lyndon B. Johnson Space Center, Houston, Harris County, Texas (SSP PA), executed on July 21, 2011. As listed in the SSP PA, Room 2109 was significant as a Control Room in the Test Operations Center (Figures 1-5). Historically, this room served as an operational space housing NASA support consoles integral to mission activities. Around 2012, the room transitioned from a console-based configuration to an open office environment to better support evolving organizational needs at that time.

As mission priorities, workforce structures, and collaborative practices continue to evolve, the existing open office configuration no longer fully meets current operational requirements. To maintain functional alignment with present-day mission support activities, JSC needs to renovate the interior with new carpet, new office furniture, and a modern huddle room within the open office footprint. The addition of a huddle room will support small-group technical discussions and tag-ups to improve workflow efficiency, provide a semi-private collaboration space that aligns with current JSC workplace standards and modern teaming approaches, and enhance the usability and adaptability of the office area.

The existing furniture will be removed, then the room will receive new carpet, paint, and minor electrical upgrades. These modifications are exempted under the SSP PA Appendix B 2.C. A small portion of wall on the south side of the room will be demolished. New sheetrock walls will be installed to make the south wall flush and to construct a new 14'-8" x 11'-3" huddle room with a door on the south side in the approximate center of the existing room. To accommodate the new huddle room, some of the lights will be relocated and the ceiling tile grid will be reconfigured, but the modular grids used in this room, like most office spaces across the site, were designed to be flexible, so this work will not damage the ceiling material and will allow the option to return it to its previous configuration in the future.

JSC met with Texas Historical Commission (THC) on April 23, 2026, to discuss this project and gather initial questions. THC requested information on the whereabouts of the consoles that were in the room at the time of documentation and the impact the new walls will have on the ceiling. Several of the consoles were relocated to the first-floor display area in B16 Room 1008, around the Shuttle Avionics Integration Laboratory (SAIL) facility (Figure 10-11), and currently serve as part of the interpretive exhibit in that space. The new walls will abut the existing ceiling without protruding above the ceiling plane into the plenum or damaging the ceiling tiles (see Enclosure 3, page 6, detail E4).

Building 16 is located in the Engineering Quad east of Building 17 and was constructed in 1964. JSC evaluated Building 16 as part of the NASA-Wide Survey and Evaluation of Historic Facilities and Properties in the Context of the U.S. Space Shuttle Program, which determined that Building 16 is eligible for listing in the National Register of Historic Places (NRHP) under Criteria A and C. In 2017, NASA JSC evaluated the building again as part of the Historic and Architectural Survey and Evaluation of Facilities, which identified and made recommendations of significance on all 459 of JSC's assets. This survey found that Building 16 is also eligible for listing in the NRHP under Criterion B. In 2013, NASA JSC conducted a 100 percent pedestrian and reconnaissance archaeological survey of the approximately 1,670-acre campus. This study identified no archaeological sites or resources within the direct Area of Potential Effect (APE). The interior nature of the project will also avoid any potential impacts on archaeological resources.

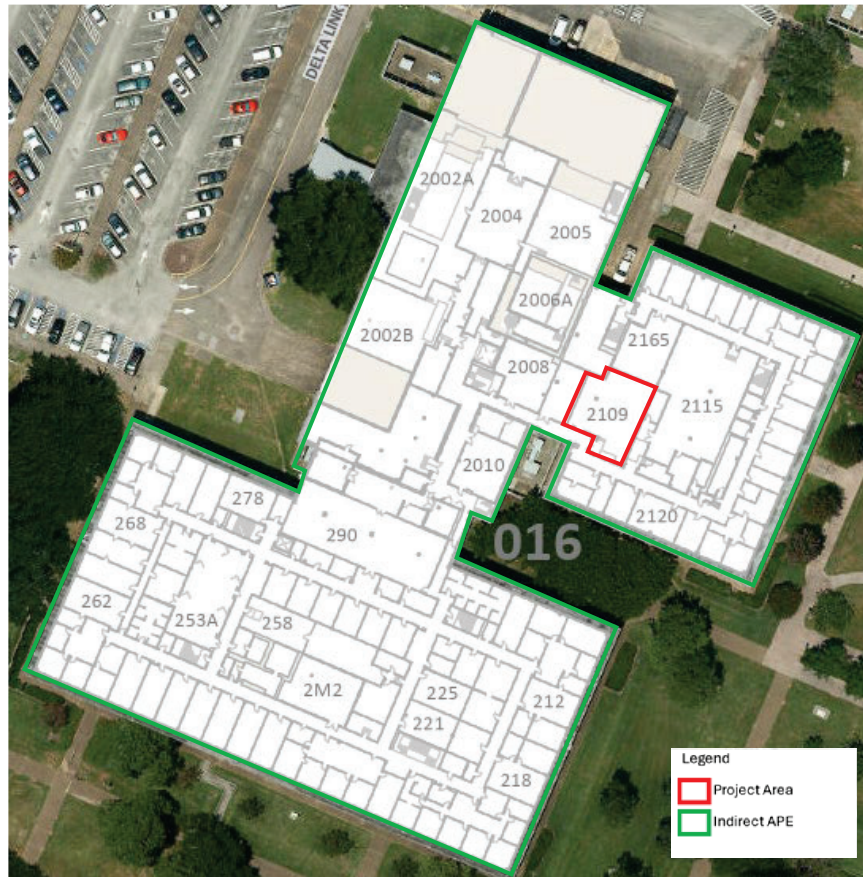
The proposed Project would lie within the NRHP-eligible JSC Historic District. As the project is confined to Building 16, there will be no additional historic properties affected in the visual APE or the Historic District. However, NASA has determined that the addition of walls and reconfiguration of the lighting in a significant room constitutes an undertaking requiring consultation under Stipulation II.C.2, which includes "significant changes to floor plans," per the SSP PA. As such, NASA is consulting with THC. Although the project will impact the floor plan of Room 2109, these changes were necessary to improve the functionality of the office space. The space no longer retains the function or equipment for which it was originally determined to be significant. Therefore, JSC does not feel that these changes represent a substantial further impact. NASA proposes a determination of No Adverse Effect and requests concurrence to proceed.

Consistent with the obligations under the SSP PA, NASA JSC will seek input from interested parties and the public on this project. These notices are in progress concurrently with this consultation with your office. Should outreach result in an opinion that conflicts or provides useful information as it pertains to the determination of No Adverse Effect, we will supplement the file with your office. NASA JSC requests your concurrence to proceed with the renovations to Room 2109 in Building 16.

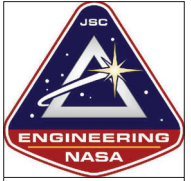
ENCLOSURE 2
Site Map and Proposed Project Area

Site Map and Proposed Project Area

Site Map:



ENCLOSURE 3
Design Drawings



2109 EAWR FY26 (ER)

BUILDING 16E
LEVEL 2

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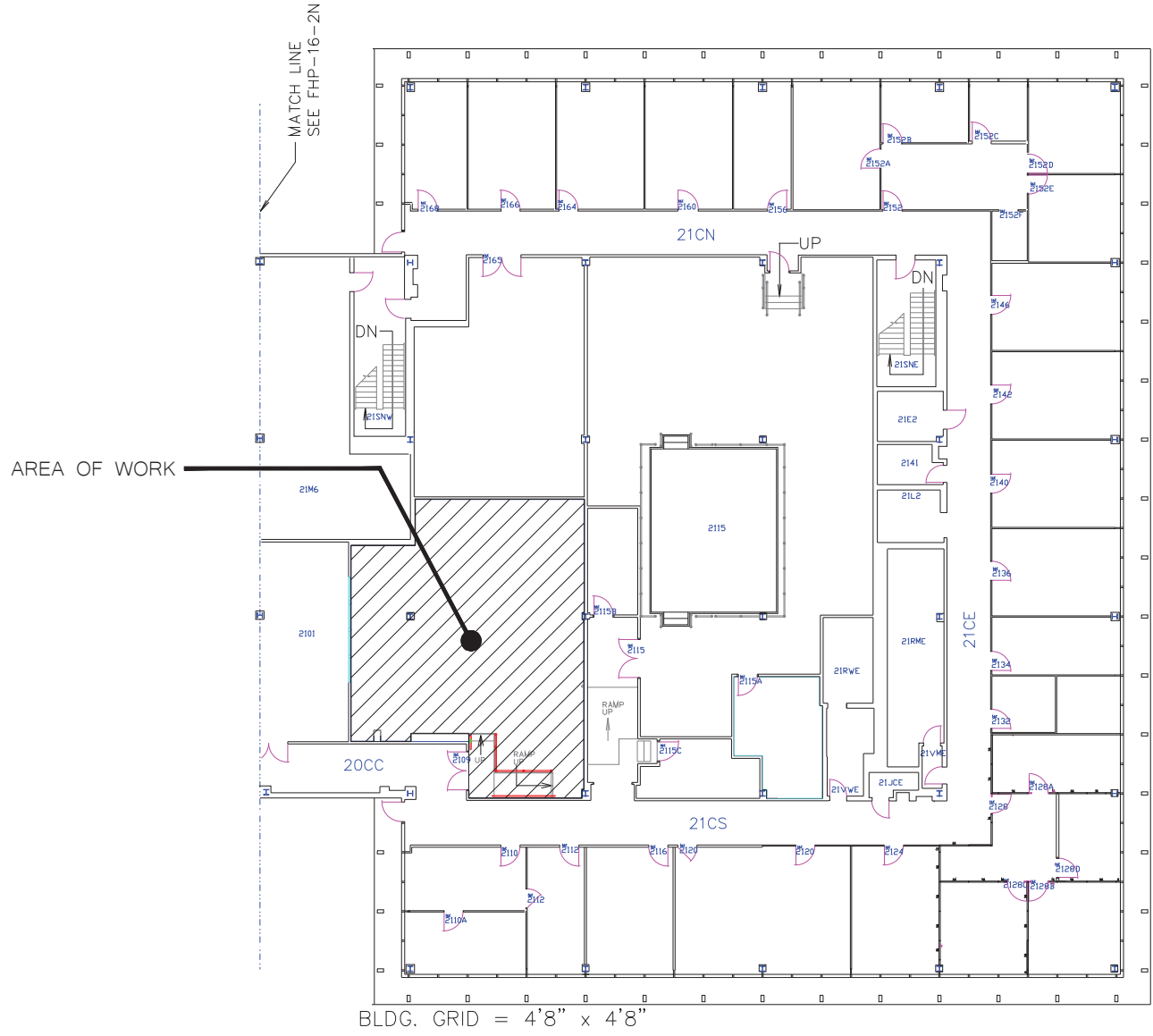
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AREA OF WORK
SCALE: NTS



2109 EAWR FY26 (ER)

BUILDING 16E
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GENERAL NOTES

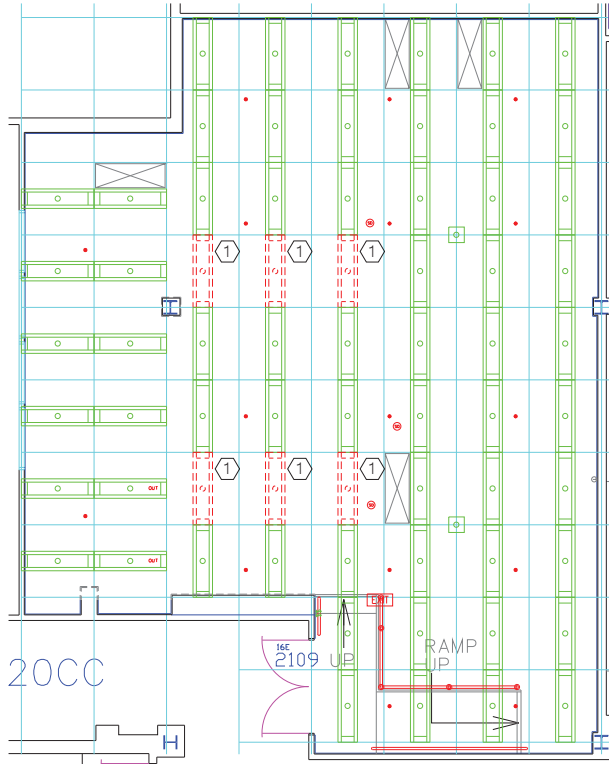
1. THE FOLLOWING NOTES PERTAIN TO ALL DRAWINGS IN THIS DOCUMENT.
2. THE PURPOSE OF THIS DOCUMENT IS TO SHOW DESIGN INTENT ONLY AND IS NOT INTENDED TO BE USED AS A WORKING DRAWING FOR CONSTRUCTION. HOWEVER, ANY CHANGES TO THE MATERIALS REQUESTED SHALL BE PRESENTED TO KIM HORTON.
3. THIS DOCUMENT DOES NOT DEPICT NEW OR RELOCATED HVAC, FIRE PROTECTION/DETECTION/ALARM OR LIFE SAFETY SYSTEMS. THE ABOVE LISTED SYSTEMS SHALL BE ENGINEERED AS REQ'D AND BE INCLUDED IN THE DESIGN PACKAGE.
4. ANY ASBESTOS WORK THAT IS IDENTIFIED SHALL BE PERFORMED PER JSC REQUIREMENTS.
5. FOR ANY DISCREPANCIES OR CLARIFICATIONS CONTACT KIM HORTON (281)-483-1308.
6. ALL ITEMS ARE EXISTING UNLESS NOTED OTHERWISE.
7. DASHED LINES INDICATE ITEM(S) THAT ARE SCHEDULED TO BE REMOVED OR RELOCATED UNLESS NOTED OTHERWISE.
8. REPLACE DAMAGED CEILING TILES AS NEEDED.
9. REPLACE DAMAGED FLOOR TILES AS NEEDED.

KEYNOTES - RCP DEMO PLAN

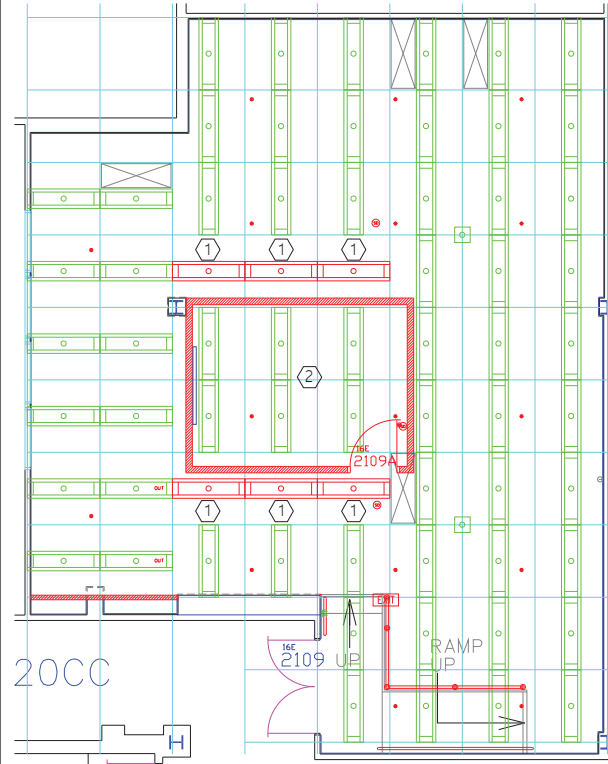
- ① RELOCATE 2x4 LIGHT FIXTURES (6) AND RECONFIGURE CEILING GRID AS NEEDED.

KEYNOTES - RCP FLOOR PLAN

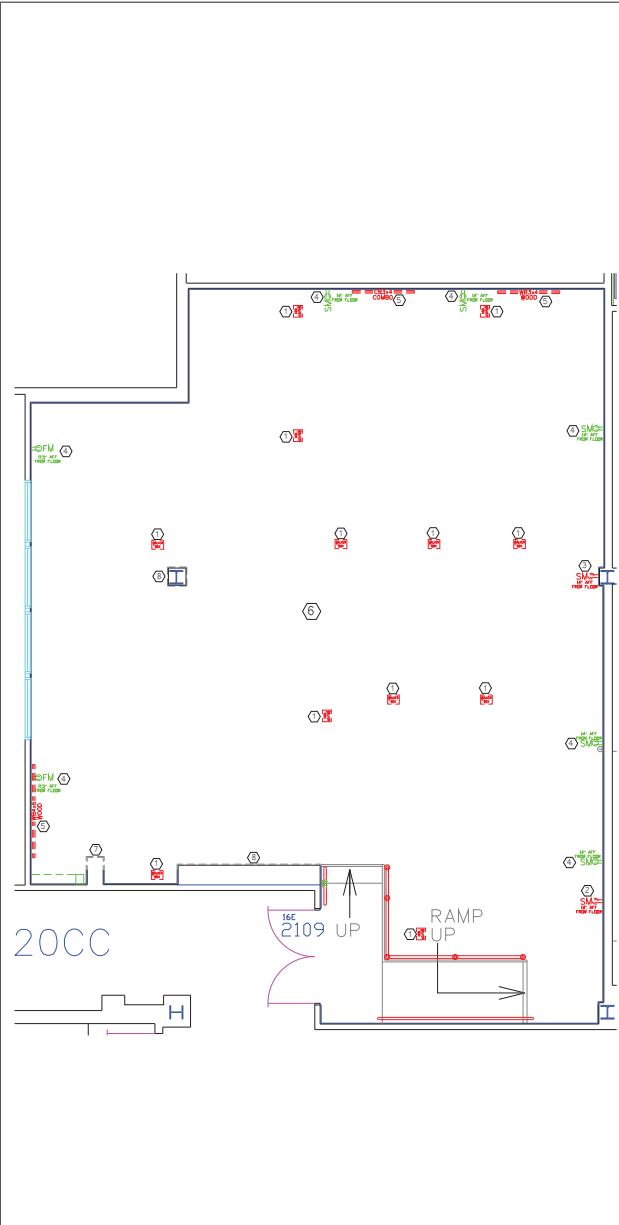
- ① RELOCATED 2x4 LIGHT FIXTURES (6).
- ② PURCHASE AND INSTALL SOUND ATTENUATION INSULATION ABOVE LAY-IN CEILING IN NEW HUDDLE ROOM 2109A ONLY.



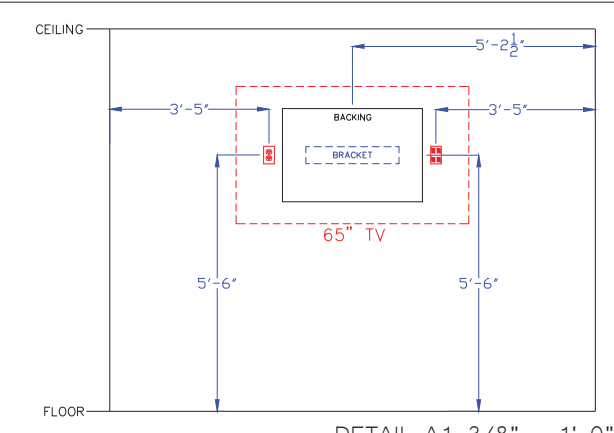
RCP DEMO PLAN
SCALE: 1/8" = 1'-0"



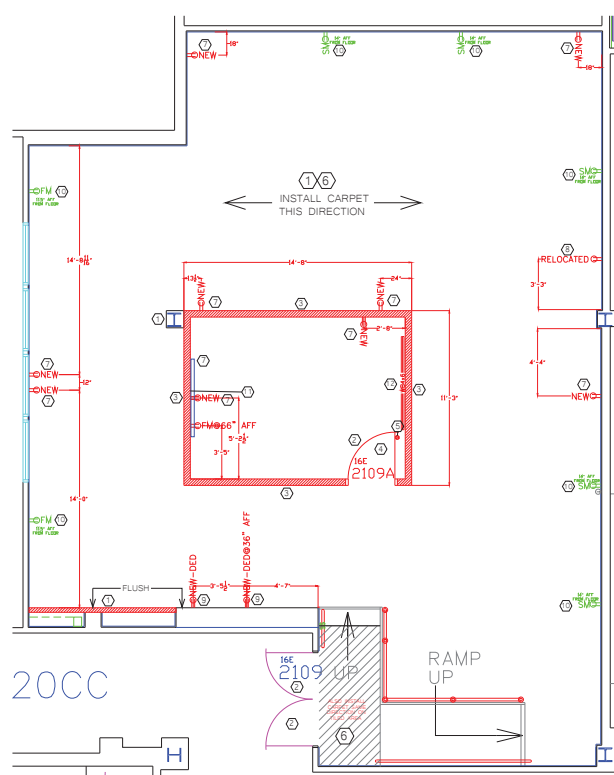
RCP FLOOR PLAN
SCALE: 1/8" = 1'-0"



ARCHITECTURAL DEMO PLAN
SCALE: 1/8" = 1'-0"



DETAIL A1-3/8" = 1'-0"



ARCHITECTURAL FLOOR PLAN
SCALE: 1/8" = 1'-0"

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KEYNOTES - DEMO PLAN

- 1 REMOVE WALKER BOXES & POWER (12). COVER HOLES WITH PLATES OR REPLACE TILE AS NEEDED.
- 2 DEMO DUPLEX OUTLET (1). COVER HOLE IN SOUNDSOAK WITH SILVER COVER PLATE.
- 3 REMOVE DUPLEX OUTLET AND RELOCATE TO RE-USE CIRCUIT (1). COVER HOLE IN SOUNDSOAK WITH SILVER COVER PLATE.
- 4 EXISTING OUTLETS TO REMAIN IN PLACE. DO NOT REMOVE (7).
- 5 REMOVE & DISCARD (3) WHITEBOARDS.
- 6 DEMO EXISTING BERGAMOS CARPET (1,400 SQFT).
- 7 -----DEMO EXISTING SOUNDSOAK AND PORTION OF JUT OUT TO BE FLUSH WITH ADJACENT WALL (NOTE 8).
- 8 -----DEMO EXISTING SOUNDSOAK AROUND COLUMN.

KEYNOTES - ARCHITECTURAL FLOOR PLAN

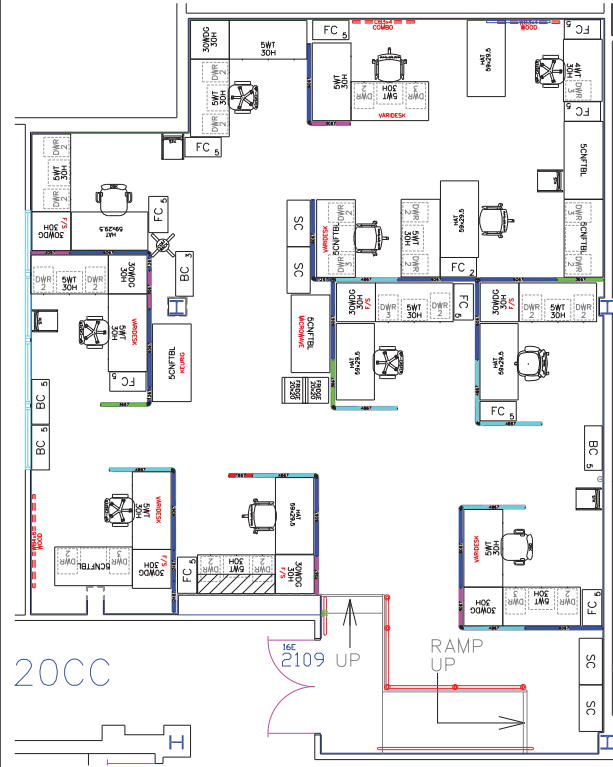
- 1 PATCH AND PAINT WALLS AND COLUMN WHERE SOUNDSOAK WAS REMOVED 101 GRAY.
- 2 PAINT INTERIOR ROOM SIDE OF DOORS 101 GRAY (2).
- 3 [Hatched Area] HATCH INDICATES NEW SHEETROCK WALLS. INSTALL SOUND ATTENUATION INSULATION IN 2109A WALLS ONLY. PAINT TO BE 101 GRAY.
- 4 PROVIDE NEW STANDARD DOOR AND FRAME. PAINT TO BE 101 GRAY
- 5 PROVIDE AND INSTALL NEW DOORSTOP.
- 6 PURCHASE AND INSTALL NEW MILLIKAN SCATTERGRAPH METRICS CARPET REFERENCE FLOOR PLAN AND COORDINATE WITH KIM HORTON FOR DIRECTION BEFORE INSTALL. (~1,500 SQ.FT.)
- 7 NEW DUPLEX OUTLETS AT DIMENSIONS SHOWN (10). FLUSH MOUNT IF POSSIBLE.
- 8 RELOCATED OUTLET (1). FLUSH MOUNT IF POSSIBLE.
- 9 NEW DEDICATED DUPLEX OUTLETS (2). FLUSH MOUNT IF POSSIBLE.
- 10 EXISTING OUTLETS TO REMAIN IN PLACE (7).
- 11 INSTALL BACKING IN WALL TO SUPPORT 65" TV. INSTALL CUSTOMER PROVIDED MOUNTING BRACKET. SEE DETAIL A1.
- 12 (1) NEW 4'X6' - 72X48 WHITE (G7248W) WHITE QUARTET INFINITY MAGNETIC GLASS MARKER BOARD, CONFIRM LOCATION BEFORE INSTALL. BOARDS CAN BE PURCHASED THROUGH: <https://www.qsaadvantage.gov>



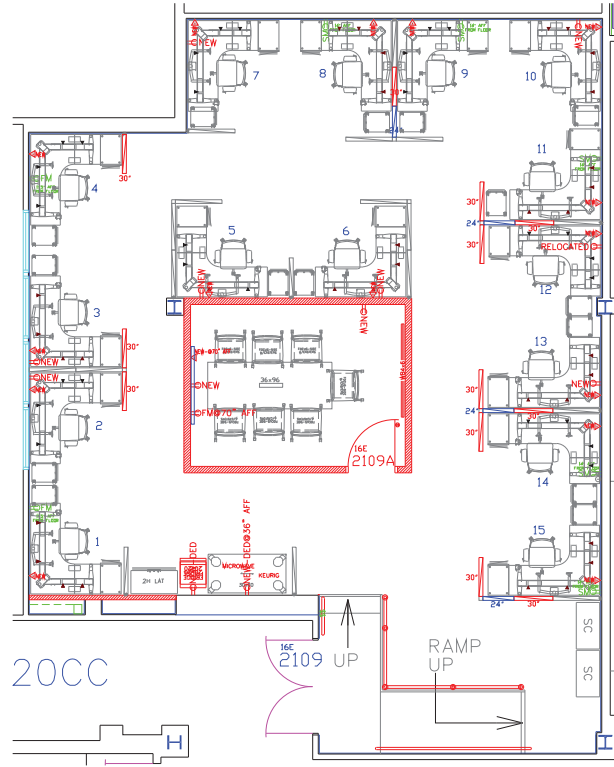
2109 EAWR FY26 (ER)

BUILDING 16E
LEVEL 2

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FURNITURE DEMO PLAN
SCALE: 1/8" = 1'-0"



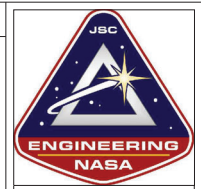
FURNITURE FLOOR PLAN
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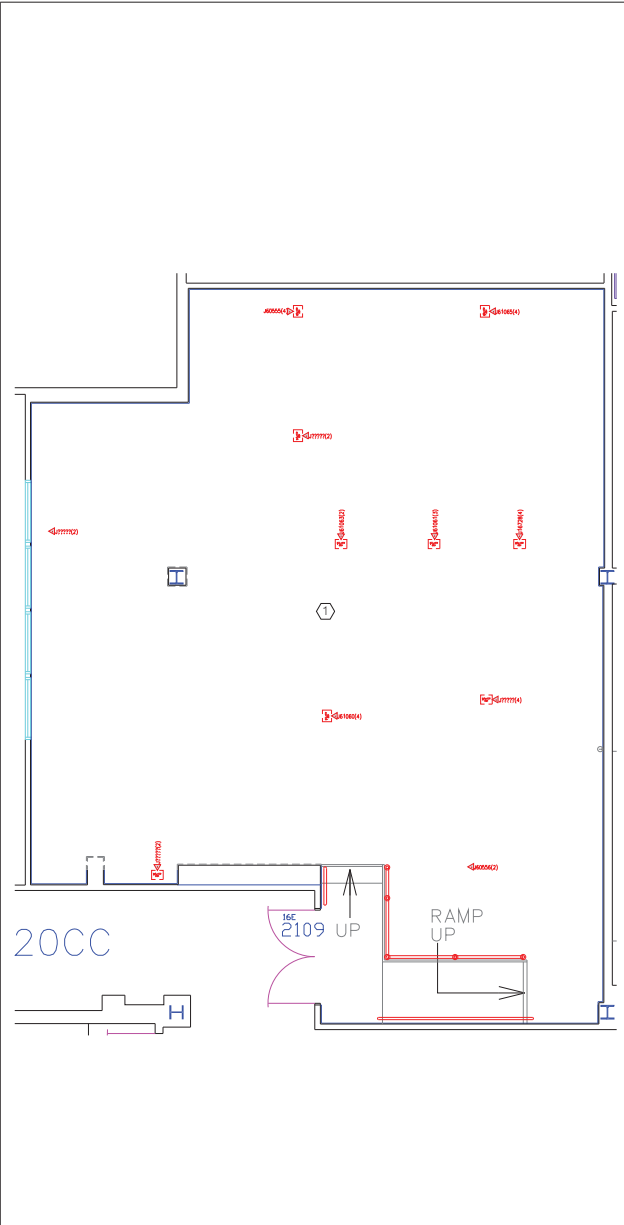
KEYNOTES - FURNITURE PLAN

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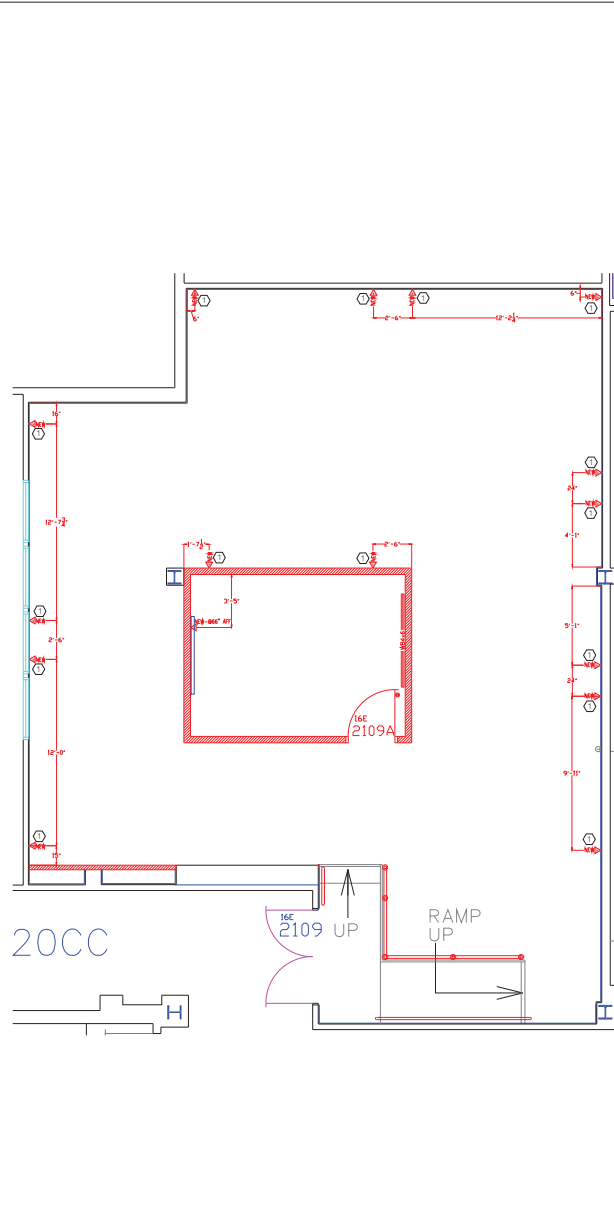


2109 EAWR FY26 (ER)

BUILDING 16E
LEVEL 2



IT DEMO PLAN
SCALE: 1/8" = 1'-0"



IT FLOOR PLAN
SCALE: 1/8" = 1'-0"

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KEYNOTES - IT DEMO PLAN

- ① REMOVE ALL NETWORK CABLES, MISC CABLES FROM WALLS AND WALKER BOXES. SAVE FOR RE-USE IN NEW LAYOUT.

KEYNOTES - IT FLOOR PLAN

- ① NEW/RELOCATED DATA DROP (16). REFERENCE FURNITURE PLAN FOR ADDITIONAL INFORMATION. FLUSH MOUNT WHEN POSSIBLE.



2109 EAWR FY26 (ER)

BUILDING 16E
LEVEL 2

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ENCLOSURE 4
APE Analysis Photos

APE Analysis Photos

APE Historic Photos:



Figure 1. View of the Test Operations Center, Room 2109 of the SAIL, camera facing northeast, September 2009.

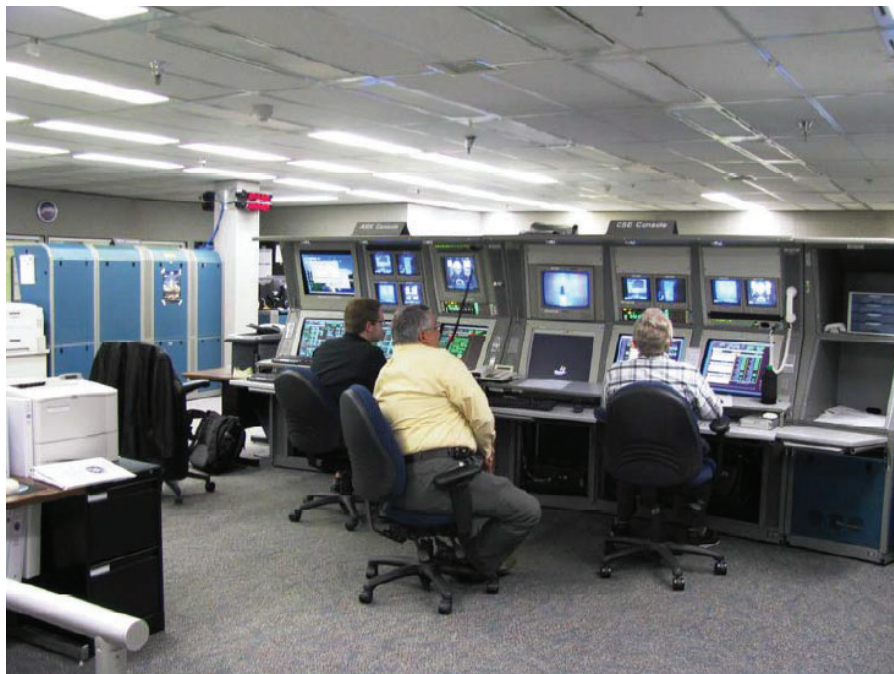


Figure 2. Detail view of the Non-Avionics Simulation Systems Engineer and Communications Systems Engineer consoles in the Test Operations Center, Room 2109 of the SAIL, camera facing northwest, September 2009.



Figure 3. Detail view of the Flight Control GN&C System Engineer and Guidance and Navigation Engineer consoles in the Test Operations Center, Room 2109 of the SAIL, camera facing northeast, September 2009.



Figure 4. Detail view of the 'Sponsor's' console in the Test Operations Center, Room 2109 of the SAIL, camera facing northwest, September 2009.



Figure 5. Detail view of the USA Test Conductor's console in the Test Operations Center, Room 2109 of the SAIL, camera facing northeast, September 2009.

APE Current Photos:



Figure 6. View from southeast corner of Room 2109, facing east, April 21, 2026.



Figure 7. View from southeast corner of Room 2109, facing northwest, April 21, 2026.



Figure 8. View from south wall of Room 2109, facing northwest, April 21, 2026.



Figure 9. View from northwest corner of Room 2109, facing southeast, April 21, 2026.

Historic Console Current Photos:



Figure 10. RTC Console on display in B16 R1008, near SAIL facility.



Figure 11. QC Console on display in B16 R1008, near SAIL facility.