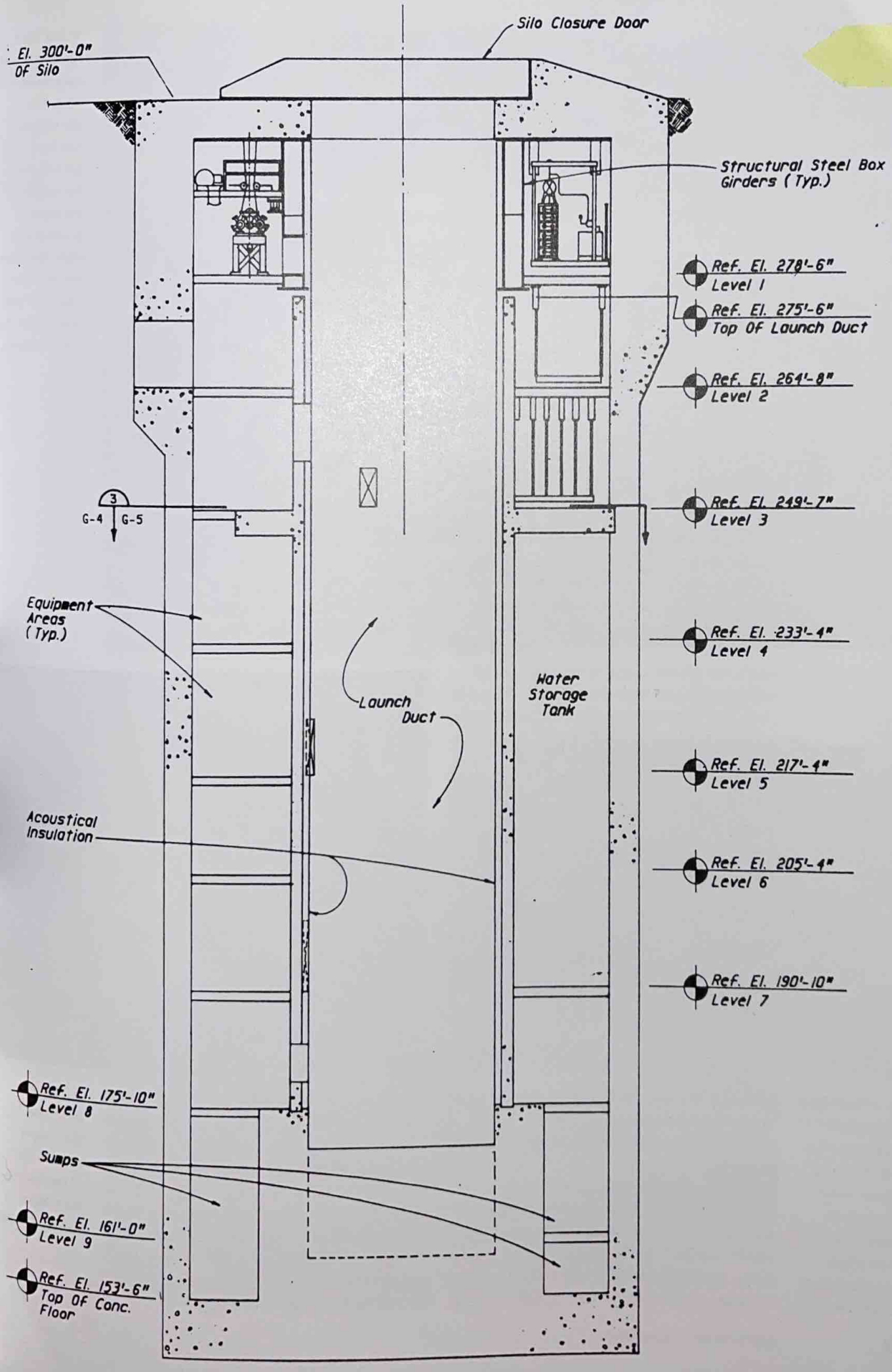
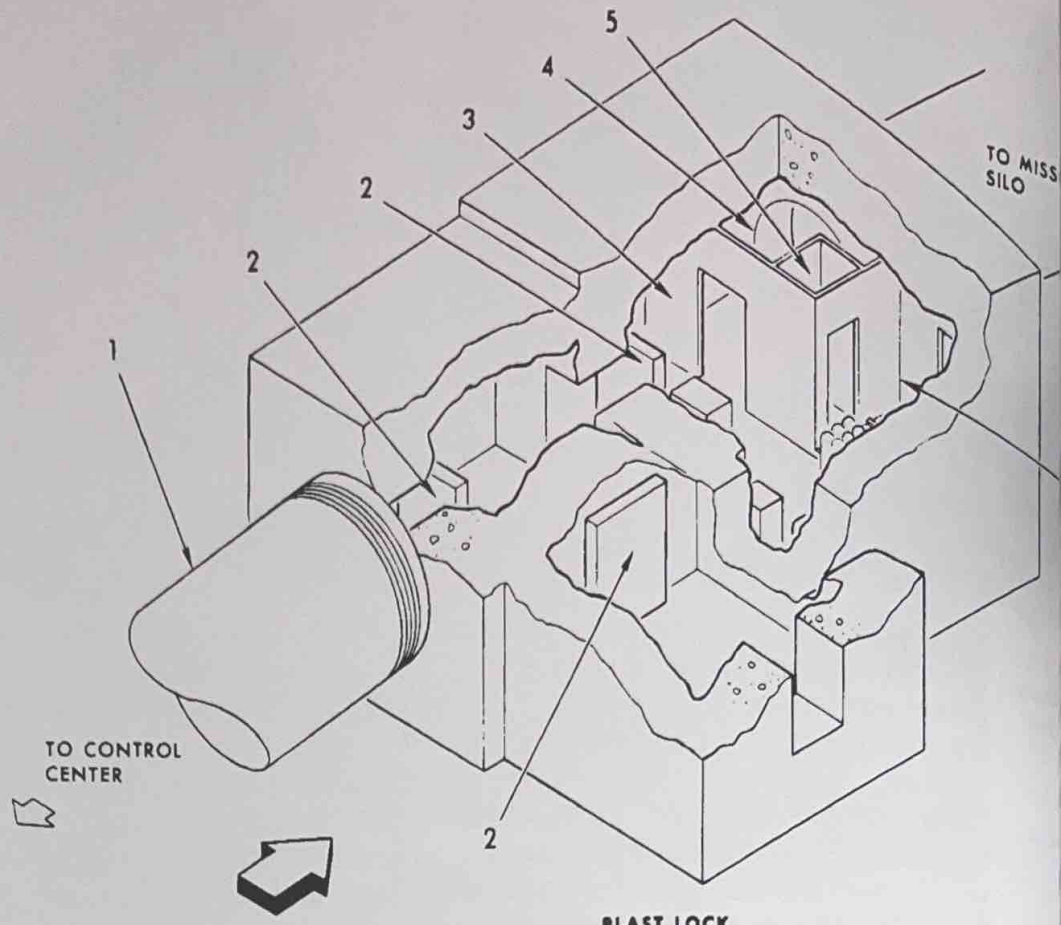
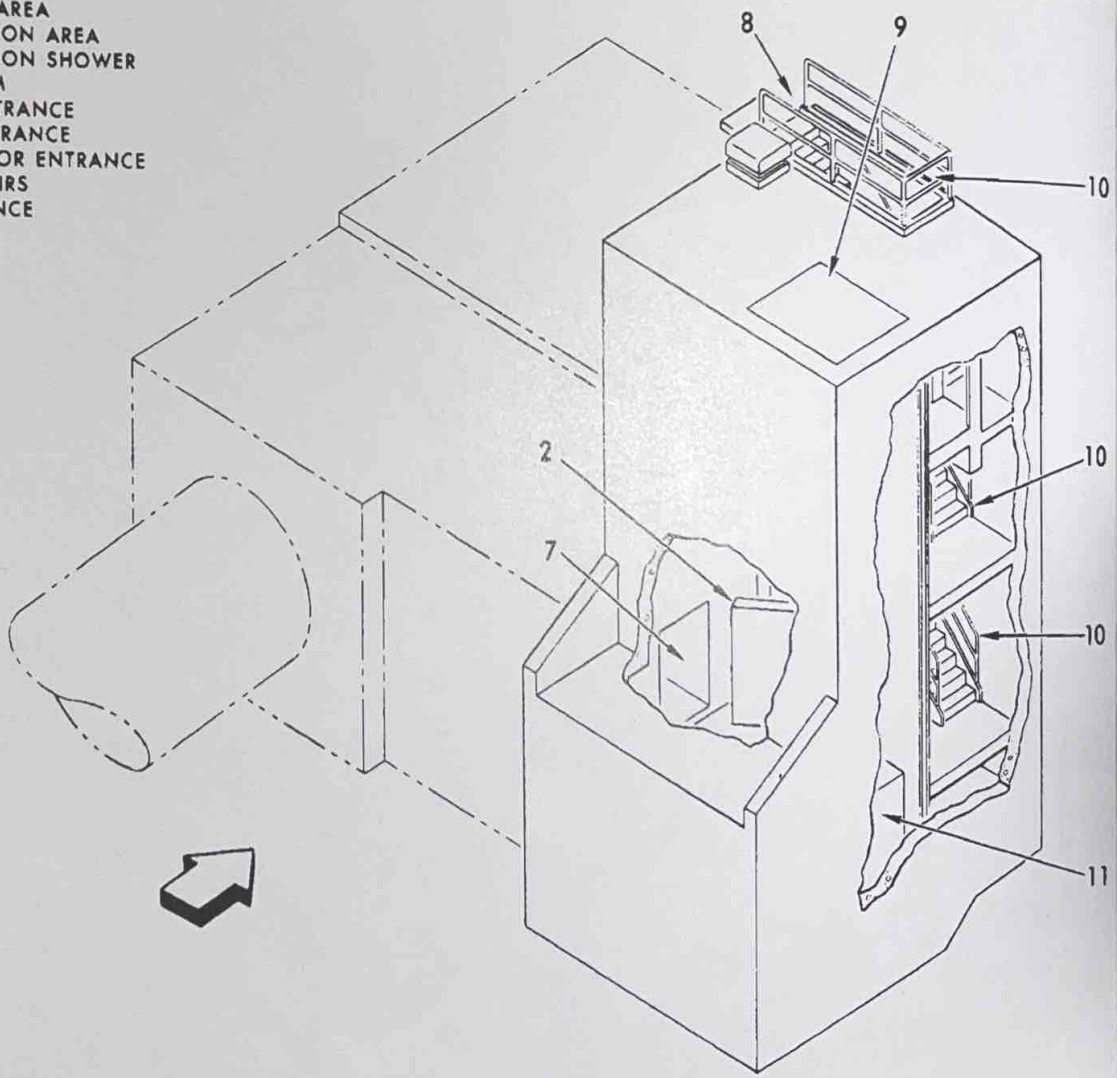


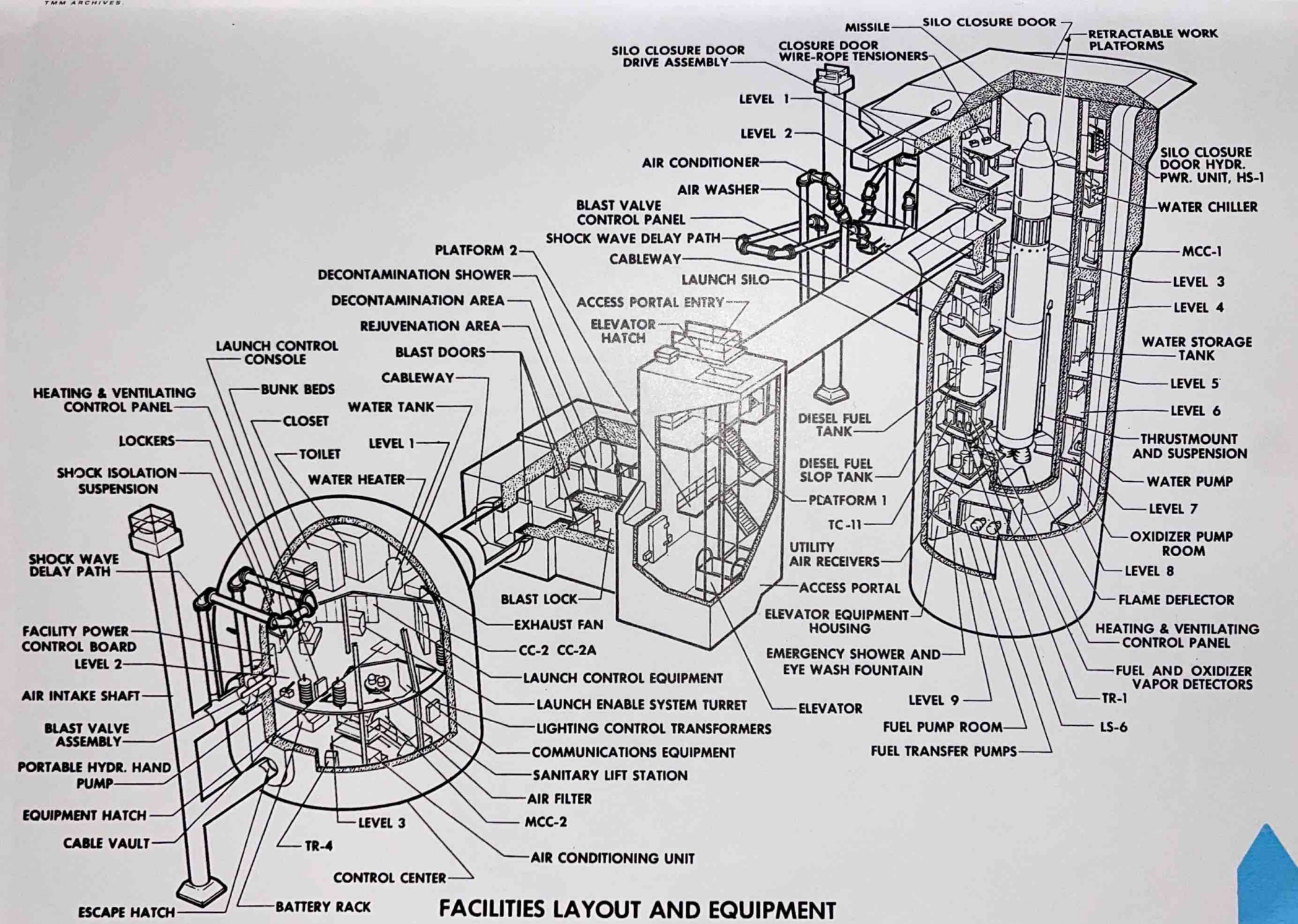


BLAST LOCK

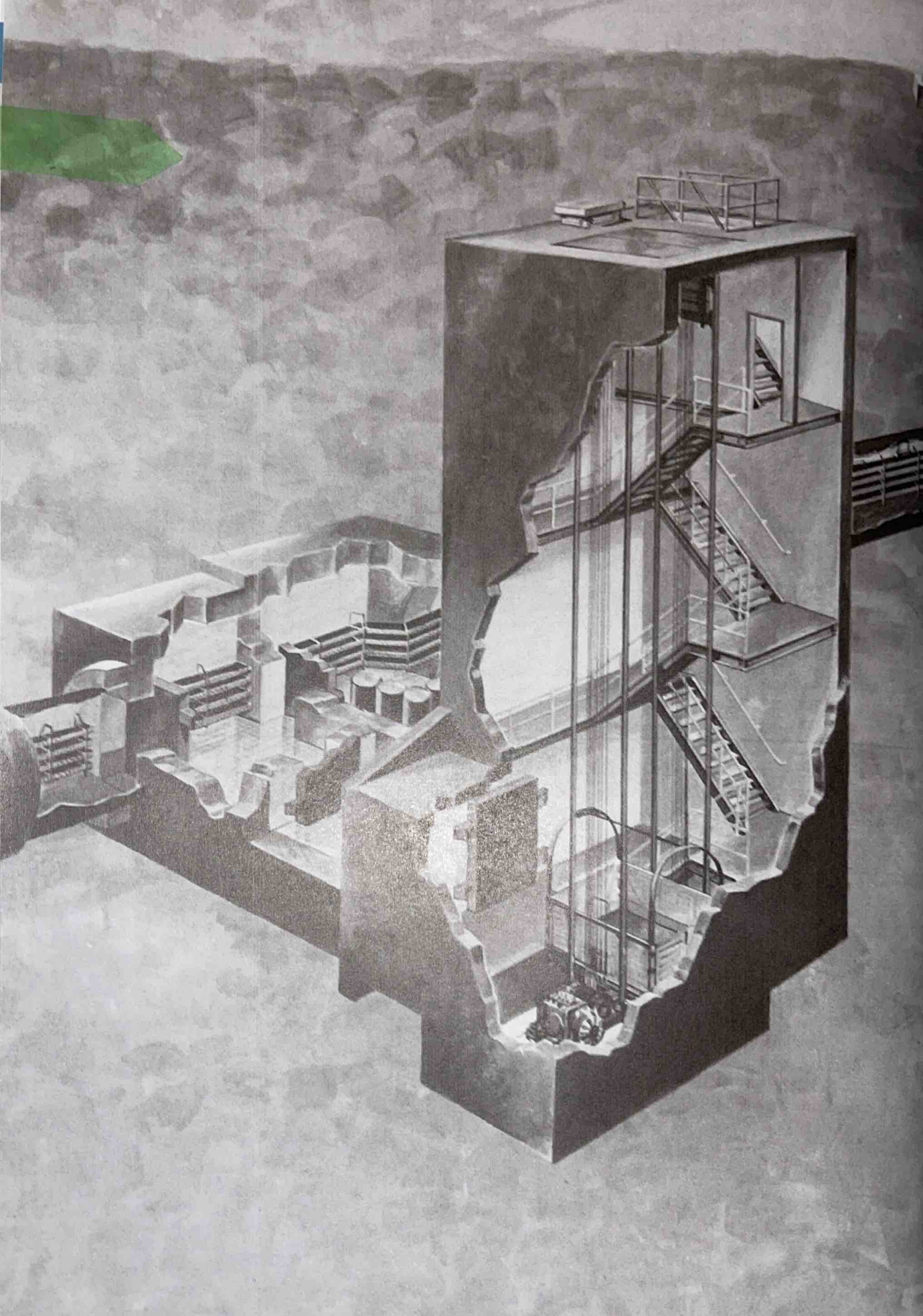
1. CABLEWAY
2. BLAST DOOR
3. REJUVENATION AREA
4. DECONTAMINATION AREA
5. DECONTAMINATION SHOWER
6. DRESSING ROOM
7. BLAST LOCK ENTRANCE
8. PERSONNEL ENTRANCE
9. FREIGHT ELEVATOR ENTRANCE
10. PERSONNEL STAIRS
11. FREIGHT ENTRANCE

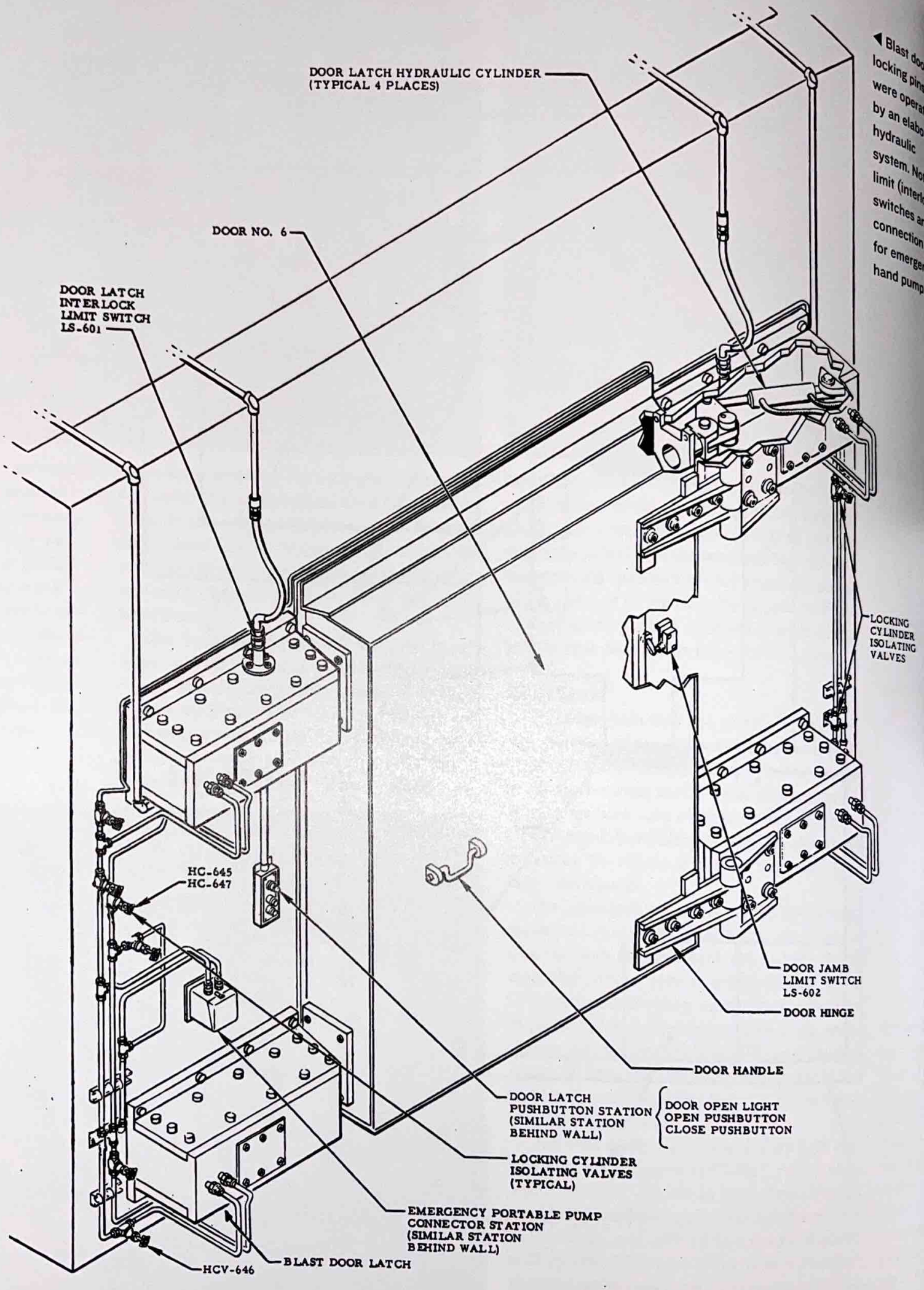


ACCESS PORTAL

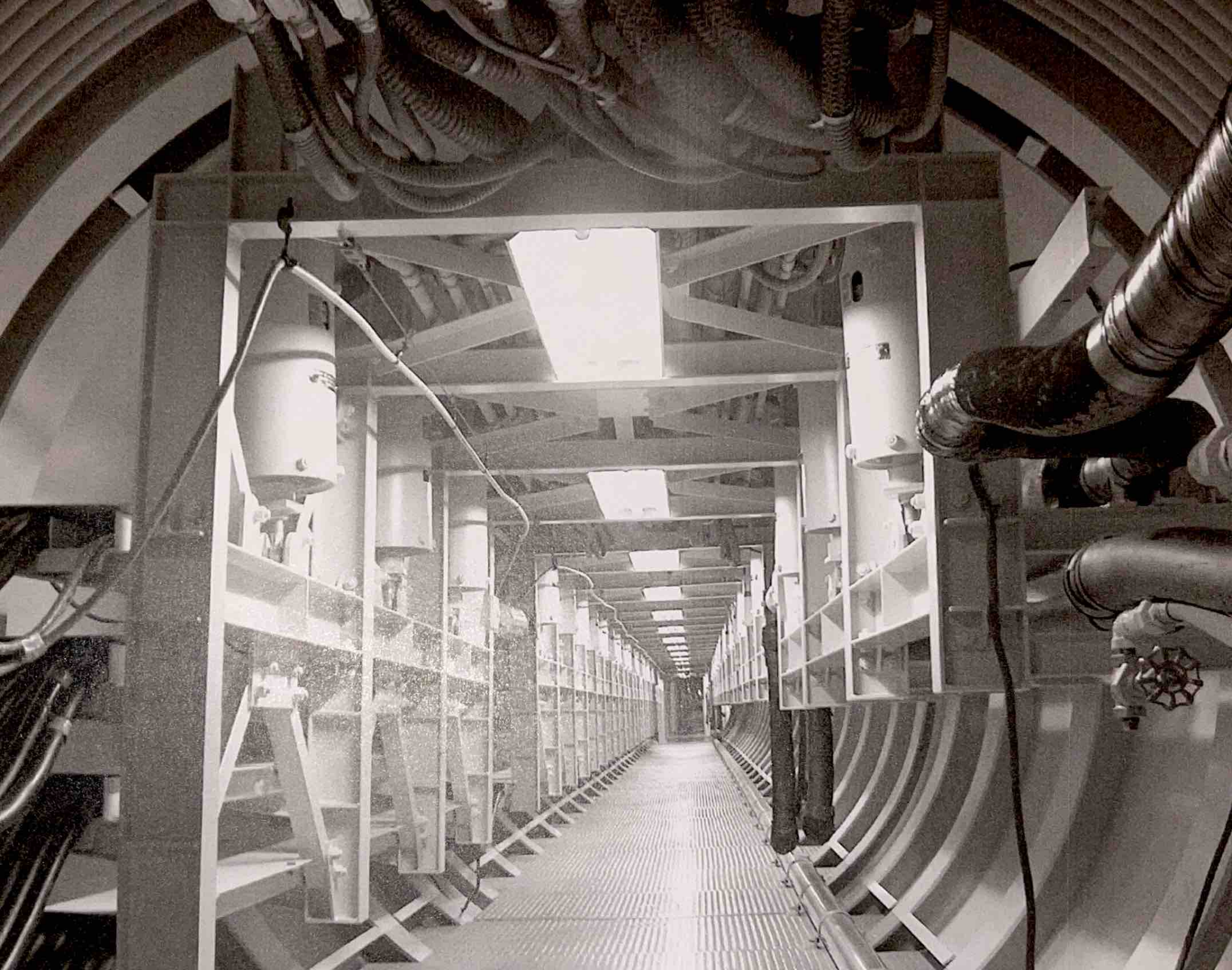


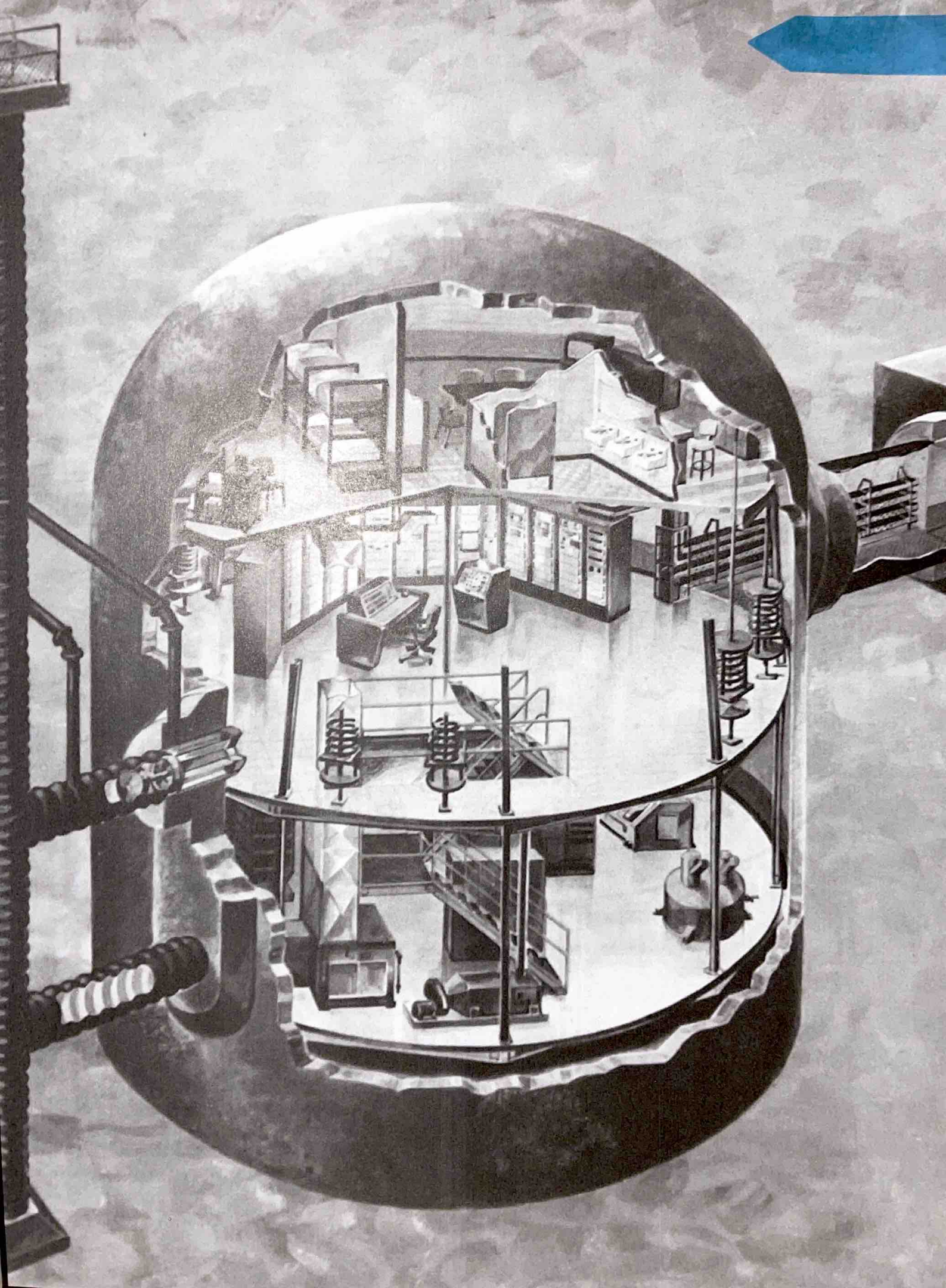
FACILITIES LAYOUT AND EQUIPMENT

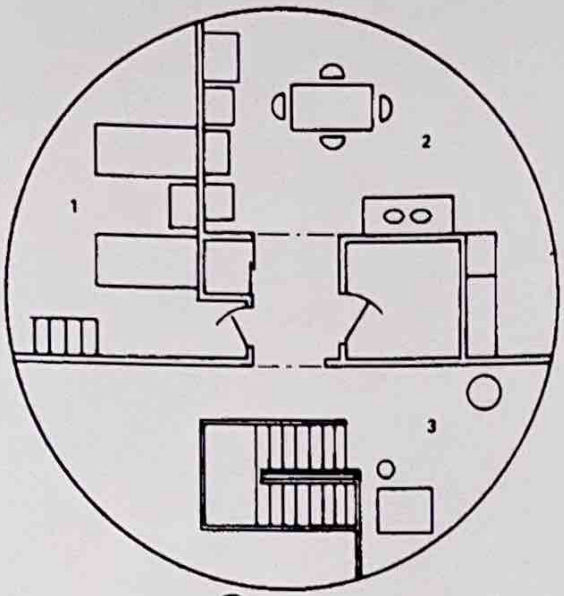




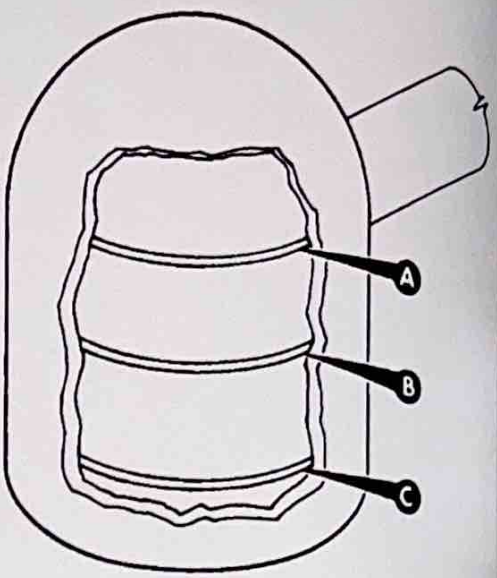
◀ Blast door locking pins were operated by an elaborate hydraulic system. Note limit (interlock) switches and connection for emergency hand pump.

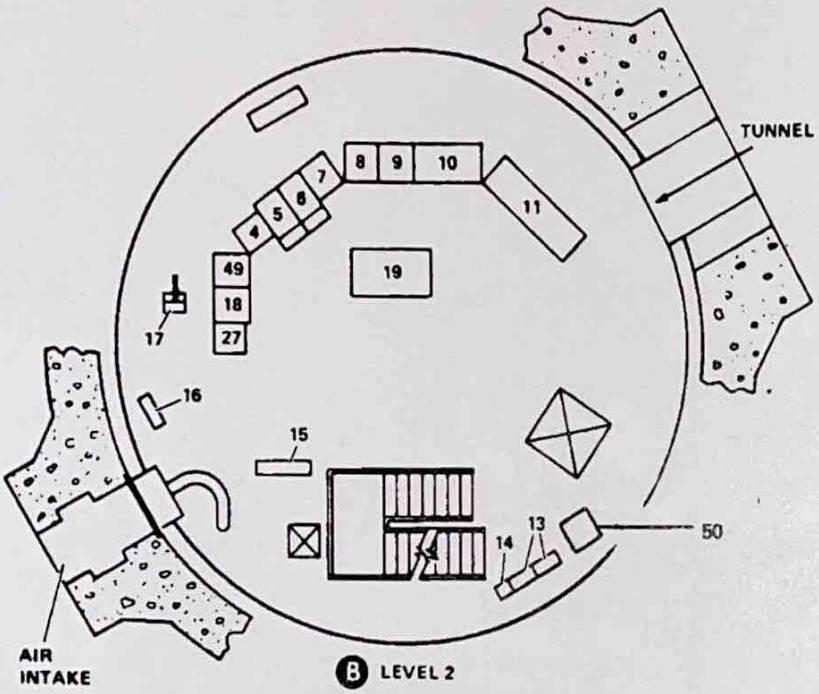




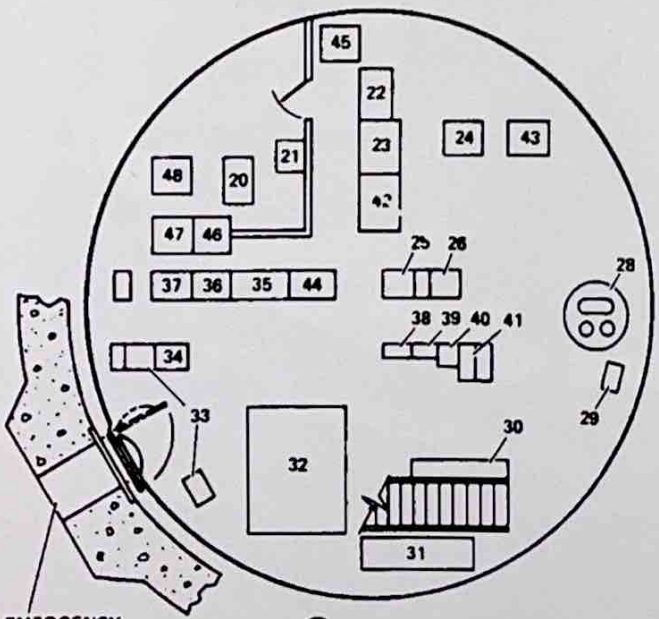


A LEVEL 1





B LEVEL 2



C LEVEL 3

1. SLEEPING QUARTERS
2. KITCHEN AND DINING AREA
3. STAIRWAY AND EQUIPMENT AREA
4. PRIMARY ALERT SYSTEM
5. ALTERNATE LAUNCH OFFICERS CONSOLE
6. VHF AND SSB RADIO
7. FACILITY POWER CONTROL BOARD
8. MISSILE SYSTEMS FAULT LOCATOR
9. CONTROL MONITOR GROUP
10. CONTROL POWER DISTRIBUTION
11. ALIGNMENT-CHECKOUT GROUP
12. (DELETED)
13. LIGHTING PANEL
14. CONTACTOR PANEL
15. HEAT AND VENTILATION CONTROL PANEL
16. DISTRIBUTION PANEL
17. HYDRAULIC HAND PUMP
18. SUBSCRIBER C
19. LAUNCH CONTROL COMPLEX FACILITIES PANEL
20. WIRE PROTECTION AND DISTRIBUTION CABINET
21. TELEPHONE CO. EQPT. CABINET (DMAFB ONLY)
22. MOTOR GENERATOR (DEACTIVATED)
23. BATTERY POWER SUPPLY 1
24. POWER SUPPLY 1
25. VOICE SIGNALING SYSTEM (VSS) CABINET
26. RADIO-TYPE MAINTENANCE NETWORK (RTMN) CABINET
27. HF-UHF RADIO
28. SANITARY LIFT
29. LIGHTING AND CONTROL TRANSFORMER
30. MOTOR CONTROL CENTER
31. AIR FILTER
32. A/C UNIT
33. FACILITY TRANSFORMER
34. CARRIER BAYS
35. COMMUNICATIONS 24-VOLT POWER EQUIPMENT BAY
36. WIRE CONTROL AND TRANSMISSION (WCT) EQUIPMENT BAY (ALOC)
37. WIRE CONTROL AND TRANSMISSION (WCT) EQUIPMENT BAY (LCCFC)
38. TERMINAL EQUIPMENT GROUP
39. MULTIPLEXER RECEIVER GROUP
40. MULTICOUPLER
41. TRANSMITTERS
42. BATTERY POWER SUPPLY 2
43. POWER SUPPLY 2
44. WIRE CONTROL AND TRANSMISSION (WCT) EQUIPMENT BAY (HV/HVPL SWITCHING SELECTIVE SIGNALING CIRCUITS)
45. ELECTRICAL INTERFERENCE FILTER GROUP
46. ELECTRICAL INTERFERENCE FILTER GROUP
47. ELECTRICAL INTERFERENCE FILTER GROUP (ACP ONLY)
48. ELECTRICAL INTERFERENCE FILTER GROUP
49. 487L
50. RTMN TRANSCEIVER BATTERY CHARGERS

The MCCC, typically a captain or a major, was in charge of the complex. He or she (women were allowed to be crew members starting in the late 70s) authorized and coordinated all activities on the complex. The MCCC also copied, decoded, validated and authenticated all emergency action messages (EAMs). EAMs included everything from simple communication tests, to exercise messages, orders to change targets and the order to launch, among others.

The DMCCC, often a captain or first or second lieutenant, assisted the MCCC in performing his or her duties, and had the additional responsibility of monitoring communications to, from and within the complex. She or he also kept track of the location of all personnel on the facility, and like the MCCC, copied, decoded, validated and authenticated all EAMs.

The BMAT, an enlisted person, was responsible for monitoring the status of the missile and providing the MCCC with information concerning the missile's readiness condition.

The MFT, also an enlisted person, kept track of the status of the entire launch complex, and all the support systems therein, and provided the MCCC with information regarding the readiness of the complex.

The BMAT and the MFT also were trained to copy and decode EAMs.

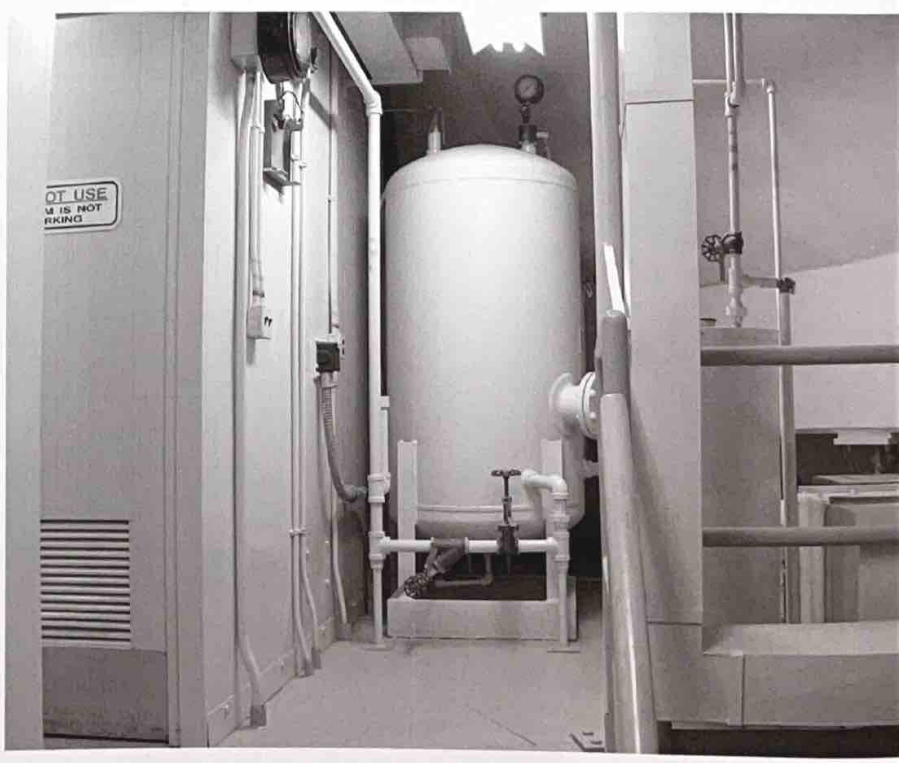
LCC Level 1

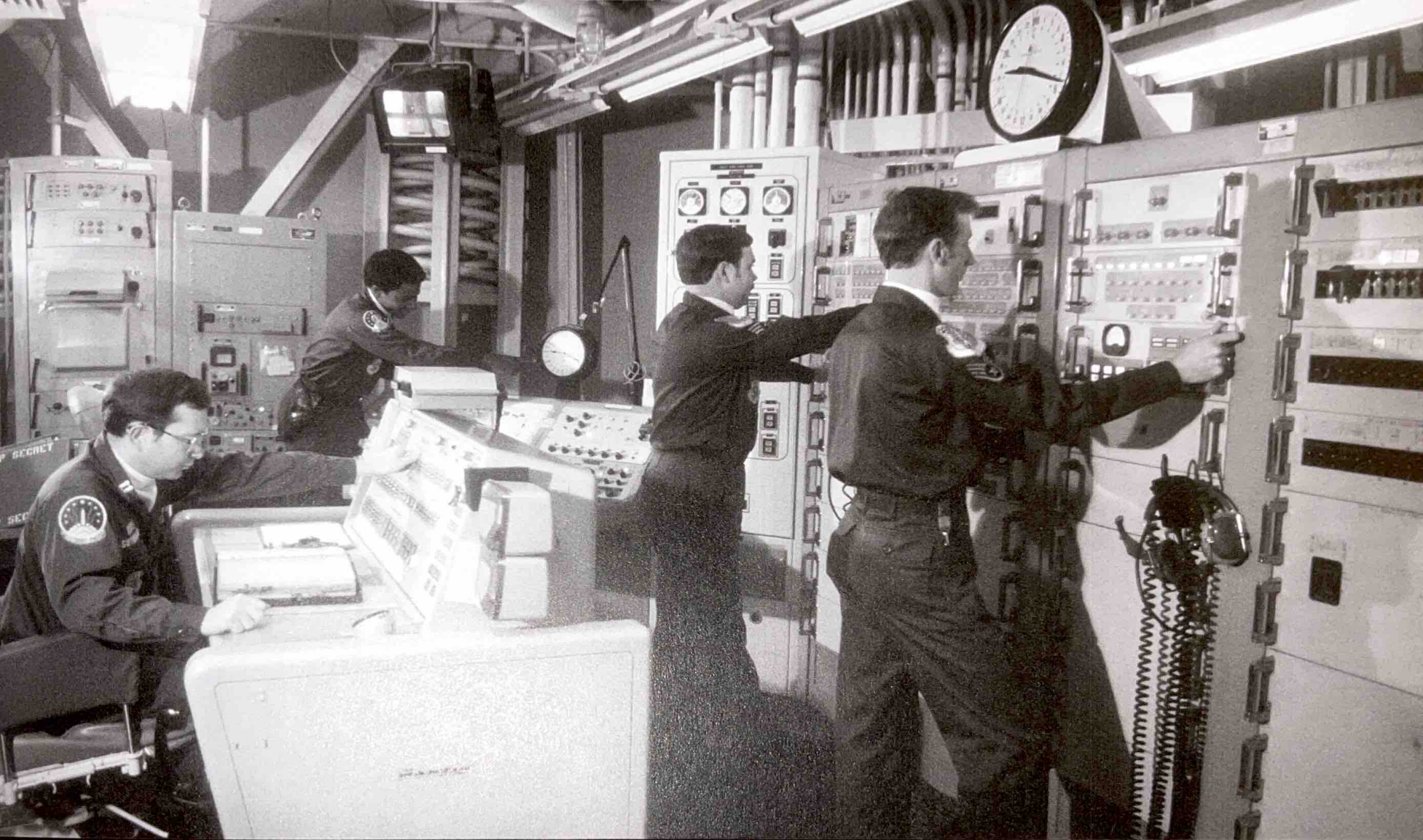
Crew members worked a 24-hour shift known officially as an *alert*. Because a crew would be on alert for a full 24 hours, they needed a place to eat, sleep, relax, take a shower and so on. Level 1 of the LCC contained the crew's minimalist quarters. The bedroom contained two sets of bunk beds and a privacy screen for mixed crews. The kitchen was equipped with all the basics: a stove, refrigerator, sink, table and chairs. The restroom was fitted with a toilet, urinal, washbasin and shower. Also on level 1 were a hot water heater, a domestic water storage tank, and an air system exhaust fan.

A 250-gallon (950 l) storage tank held 124 gallons (470 l) of potable water. The extra volume permitted pressurization by the utility air compressor system on silo level 7.[1]

LCC Level 2

Level 2 of the LCC was the nerve center of the launch complex and was where the crew spent most of their time. It was here where the order to launch would have arrived, and from here where the crew would have launched the missile. From here the crew could monitor the entire complex and all the activities therein.





CHAPTER 6

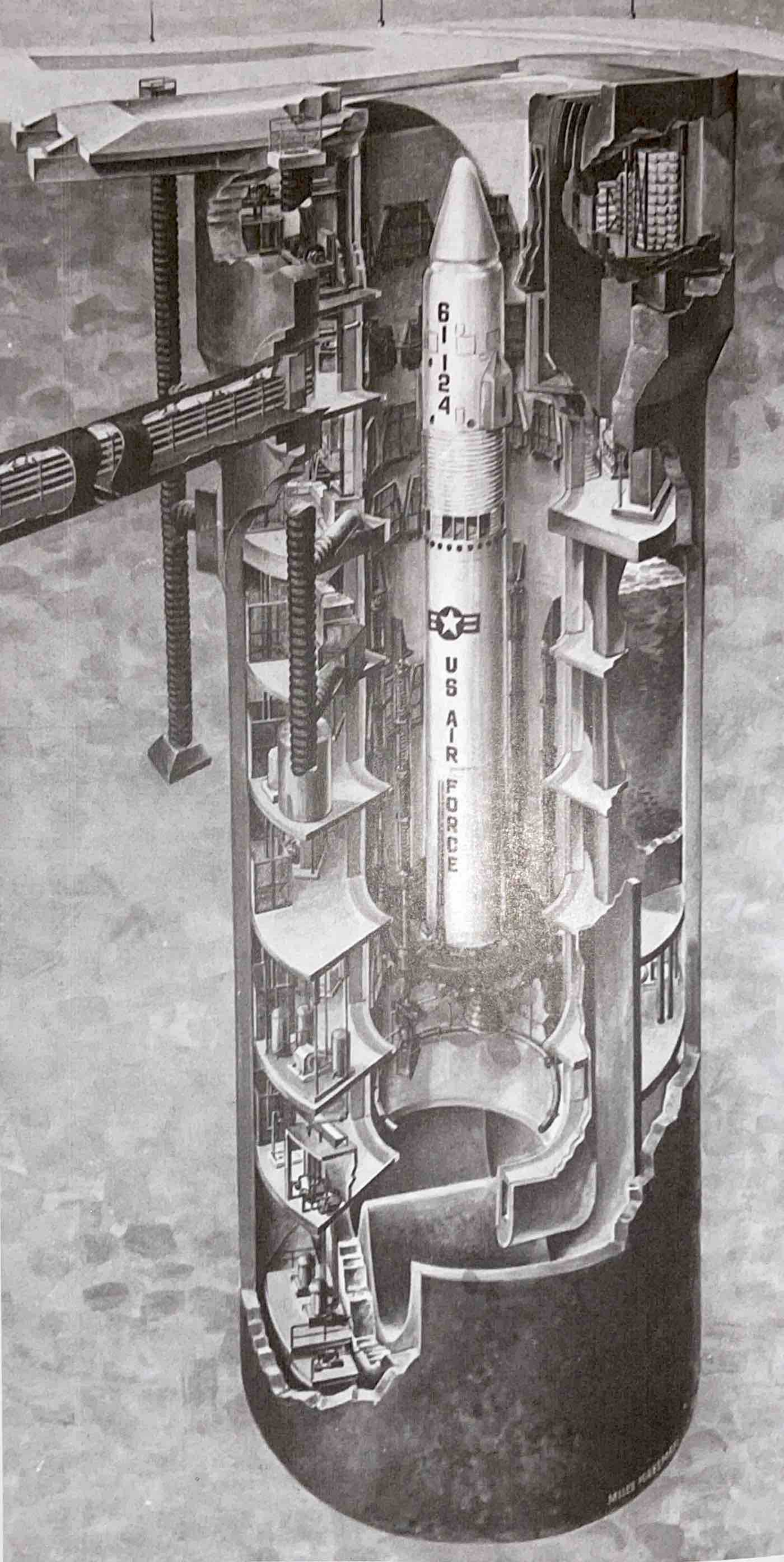
THE SILO

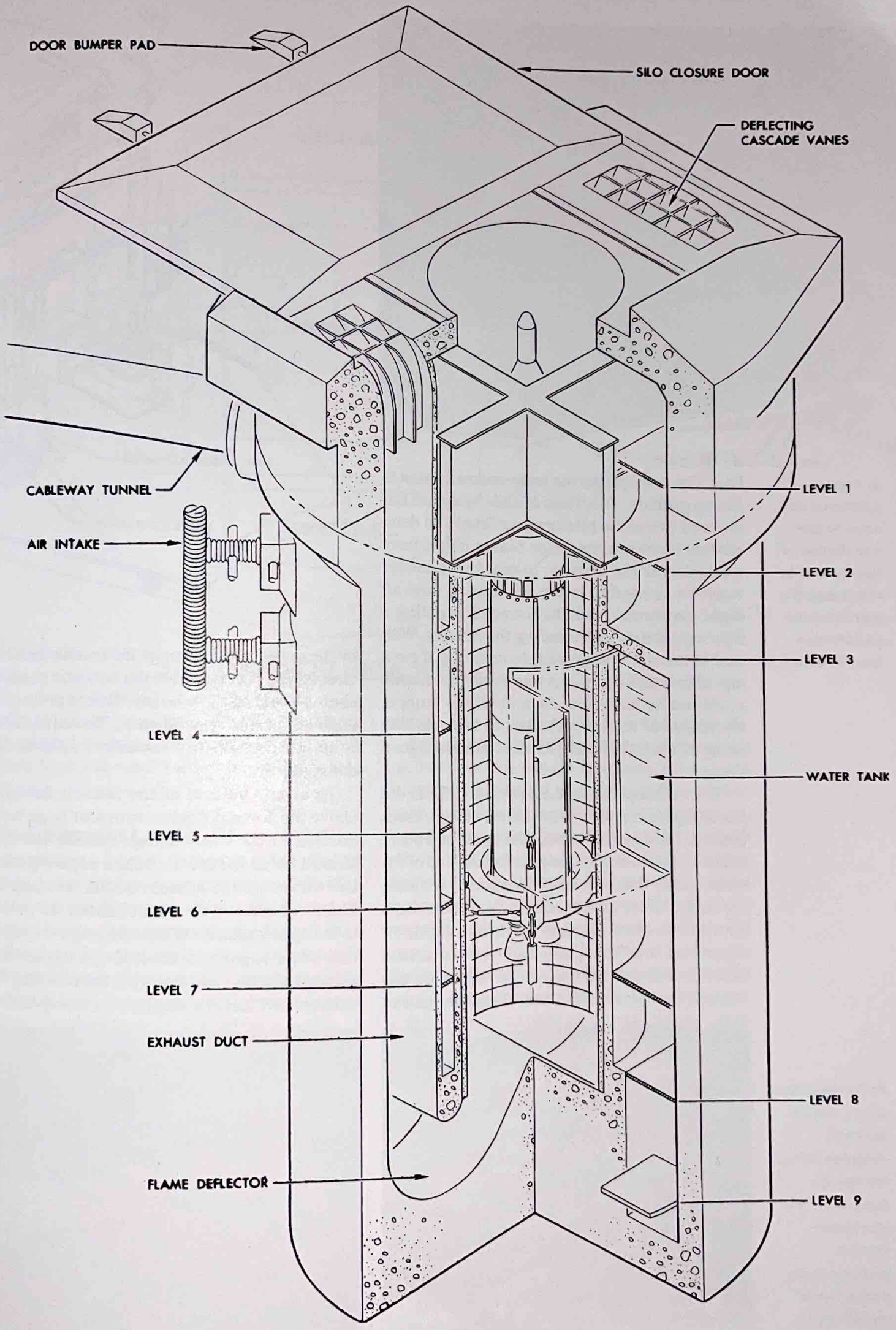
The silo was composed of two elements, essentially two concentric cylinders: the inner cylinder, called the launch duct, with an inside diameter of 26.5 feet (8 m), which housed the missile; and the outer cylinder with an inside diameter of 55 feet (17 m). The space between these two cylinders was called the silo equipment area—a warren of pipes, cables and machinery needed to keep the missile in a constant state of readiness.

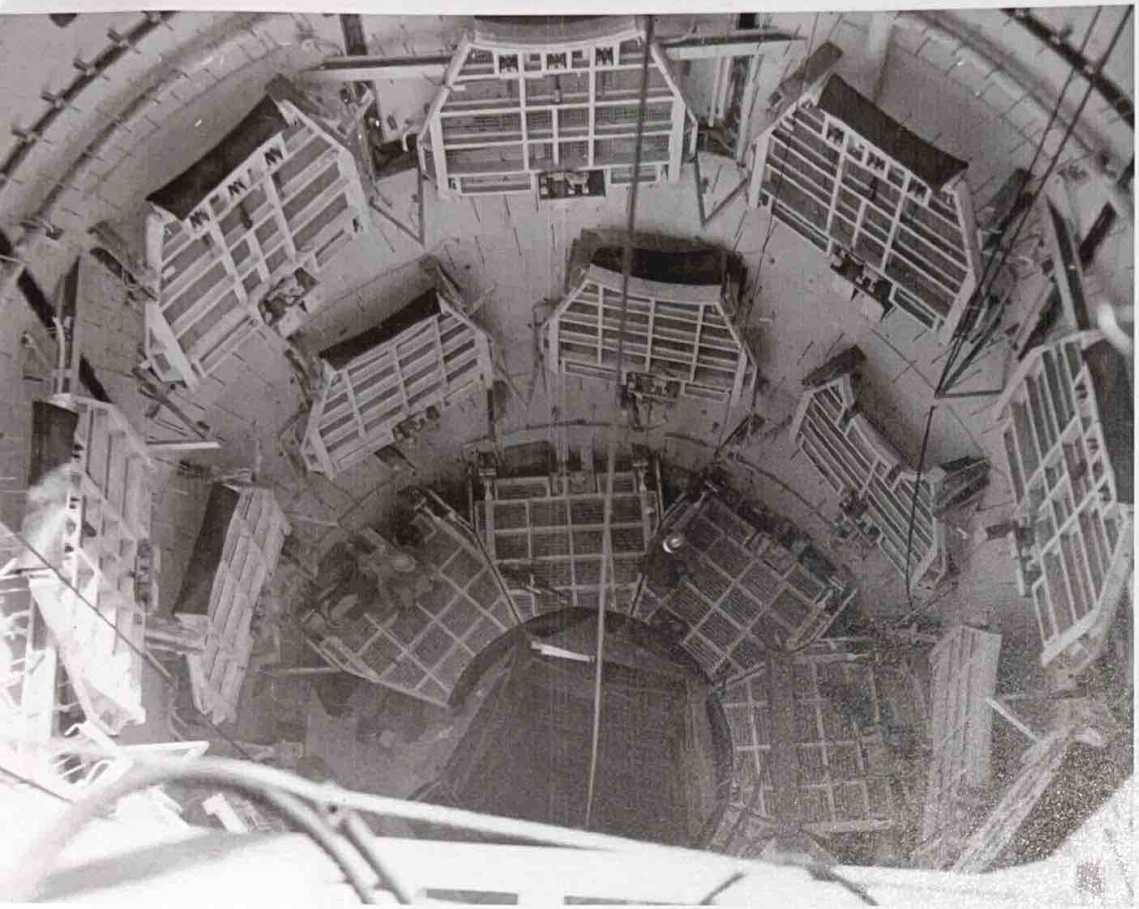
While the launch duct was hollow the silo equipment area surrounding it was divided into nine levels. Each level contained equipment for a specific purpose, and six levels had doors for access to the launch duct. A ladderway provided access to all levels of the silo equipment area while an elevator could access all levels except 1 and 9.

The structure of the silo was dictated by a number of engineering requirements that made it impossible to fully shock-isolate it in the same way the LCC was isolated from its surroundings. By necessity, the launch duct was connected to the silo at the base, and was braced by a concrete floor at level 3. Shock waves impacting the outer silo wall would, therefore, be transmitted to the launch duct. For that reason, all critical equipment in the silo was independently shock isolated—virtually everything was suspended from springs. Even the missile was cradled by an enormous set of shock absorbers.

Because silo shock isolation was impossible in any practical terms, engineers employed what might best be thought of as silo shock management: they designed the structures to absorb, damp and minimize shock transmission

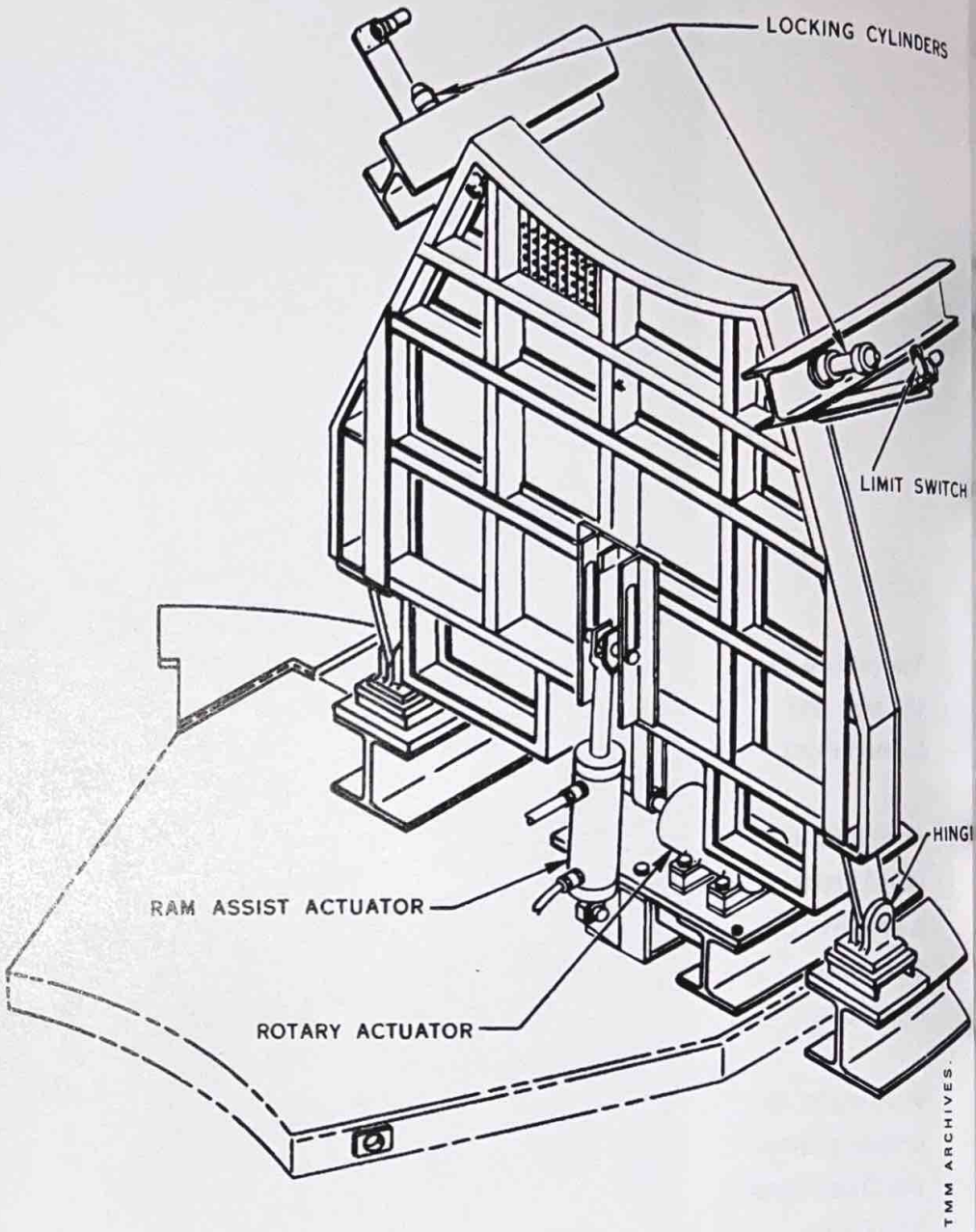

61124
US AIR FORCE


DOOR BUMPER PAD
SILO CLOSURE DOOR
DEFLECTING CASCADE VANES
CABLEWAY TUNNEL
AIR INTAKE
LEVEL 1
LEVEL 2
LEVEL 3
LEVEL 4
WATER TANK
LEVEL 5
LEVEL 6
LEVEL 7
EXHAUST DUCT
LEVEL 8
FLAME DEFLECTOR
LEVEL 9



▲ Work platforms as seen before installation of the missile. In this image the platforms on level 5 have been lowered.

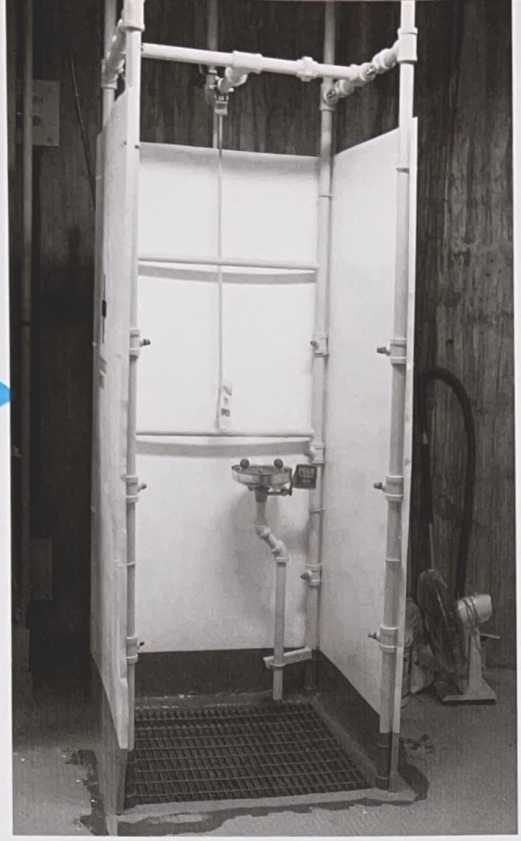
four. The work platforms were normally kept in the up position. The Titan Missile Museum has lowered two of the platforms on level 2 to demonstrate how maintenance teams might have worked near the missile. In reality, whenever workers needed to enter the launch duct all eight platforms would be lowered, creating a floor completely surrounding the missile. With that in mind it is important to note that if even one of the work platforms was down the missile could not be launched. An inability to launch, for whatever reason, resulted in the complex being off alert, and being off alert was not a good thing.

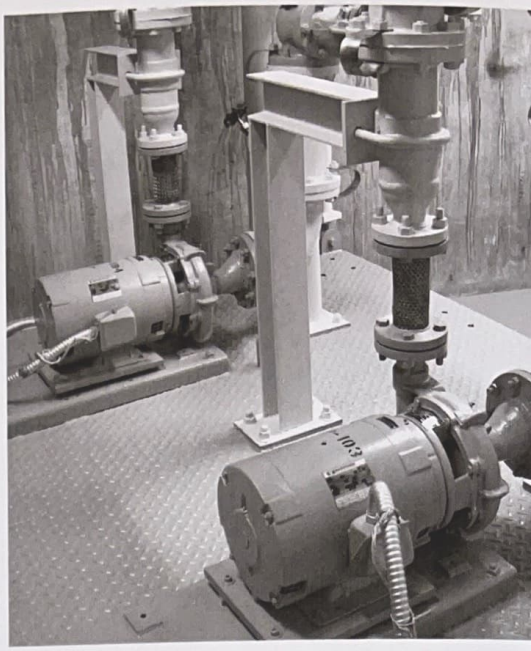


by the noise would damage the missile before it cleared the silo. Because the acoustic modules alone were thought to be insufficient protection, engineers came up with an additional measure to make certain the missile would not be damaged.

▲ Schematic showing platform, hydraulic motor and locking pins.

▶ One of several emergency showers located in the silo.



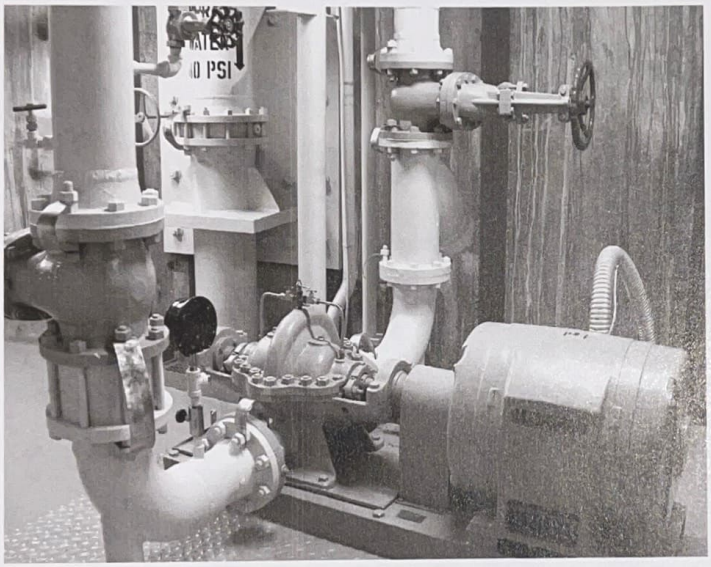


supplying these pumps would be closed.

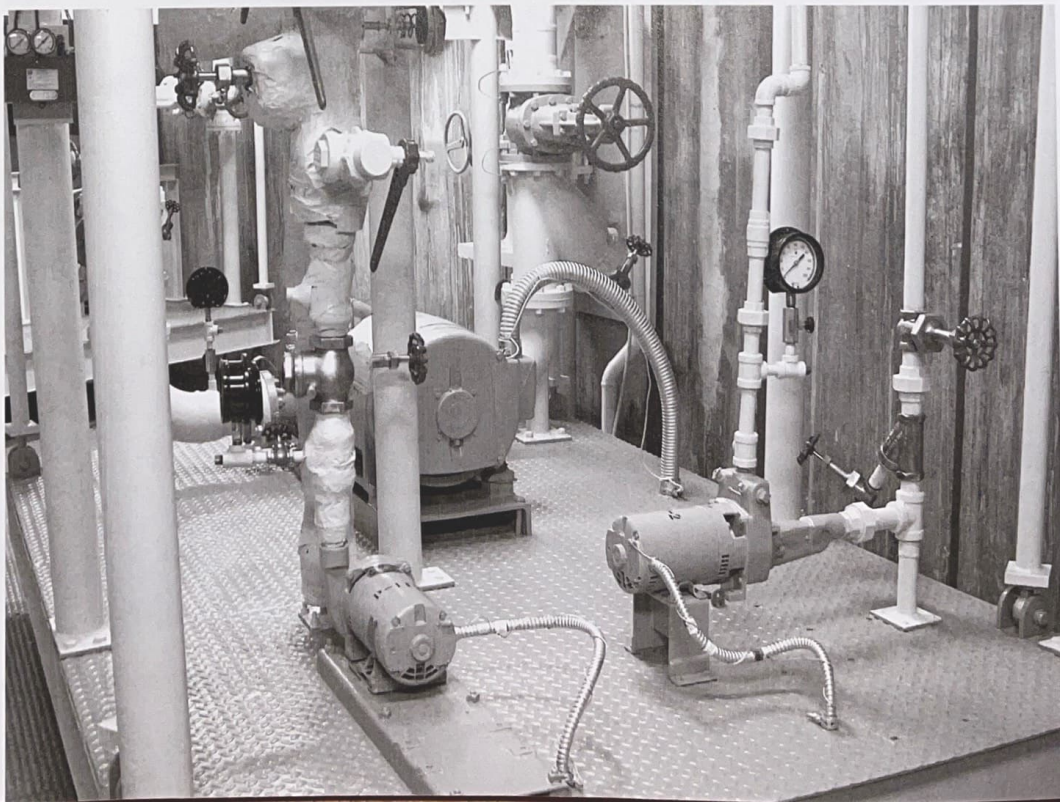
In a plumbing shut-off scenario, the domestic water system would be cut off and the crew would be limited to the water in the pressure tank on LCC level 1. Pump P-2 would then be used to pressurize the industrial water system, utilizing the 100,000-gallon (380,000 l) tank as a supply.

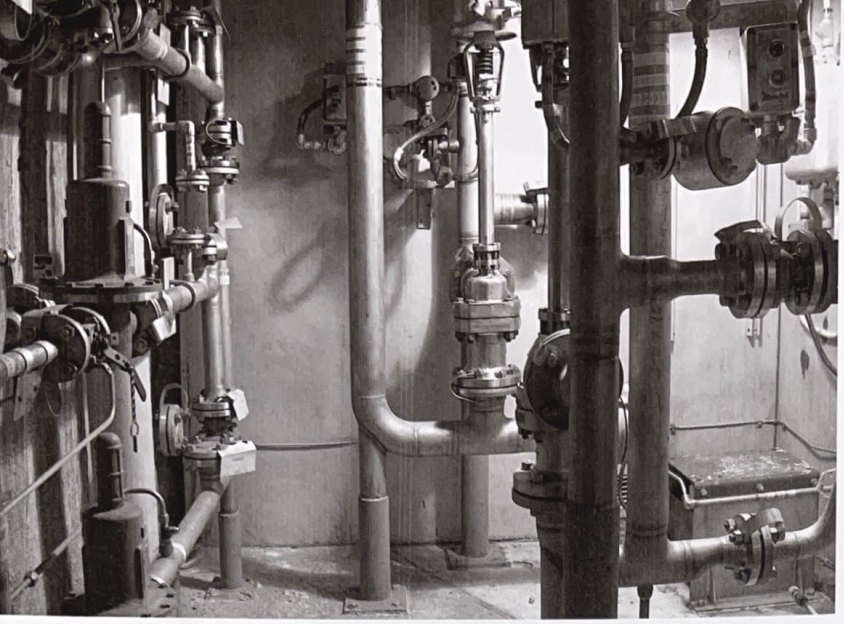
Fire pump P-1 was driven by a 60-horsepower electric motor and was plumbed in parallel with pump P-2. P-1 would not start unless the demand for fire suppression water became so great that P-2 could not maintain sufficient pressure.[25] P-1 could deliver an astonishing 800 gallons (3000 l) per minute against 200 feet (61 m) of head pressure.[26]

Cooling water pumps P-103 and P-104 circulated water to the topside cooling towers and then returned it to the chiller units. When the underground chillers were replaced with mod-

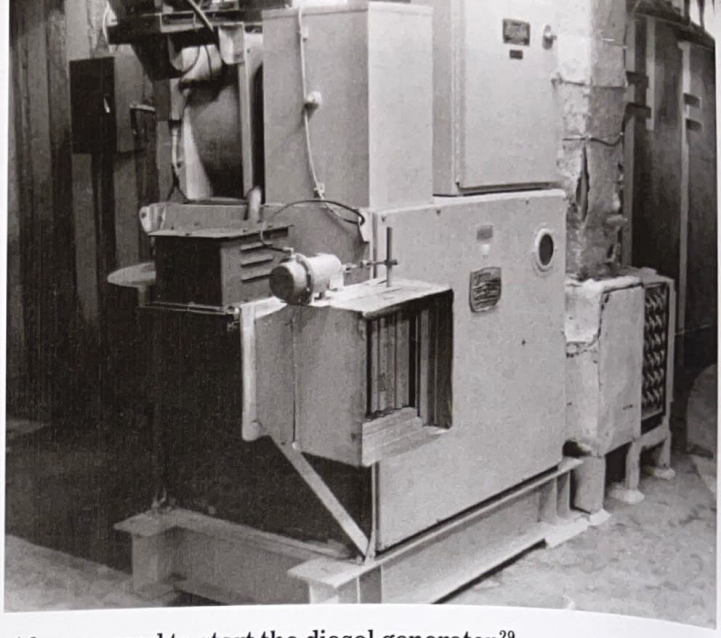


▲ Fire pump P-1. At 60 horsepower, it was by far the largest electric motor on the complex.





▲ The oxidizer pump room. Used in PTS operations for loading and unloading oxidizer on the missile.



▲ The launch duct dehumidifier kept the relative humidity inside the launch duct at or below 30 percent.

ern topside units, these pumps were no longer required except in plumbing shut-off mode when they would be used to circulate cooling water through the silo water tank.[27]

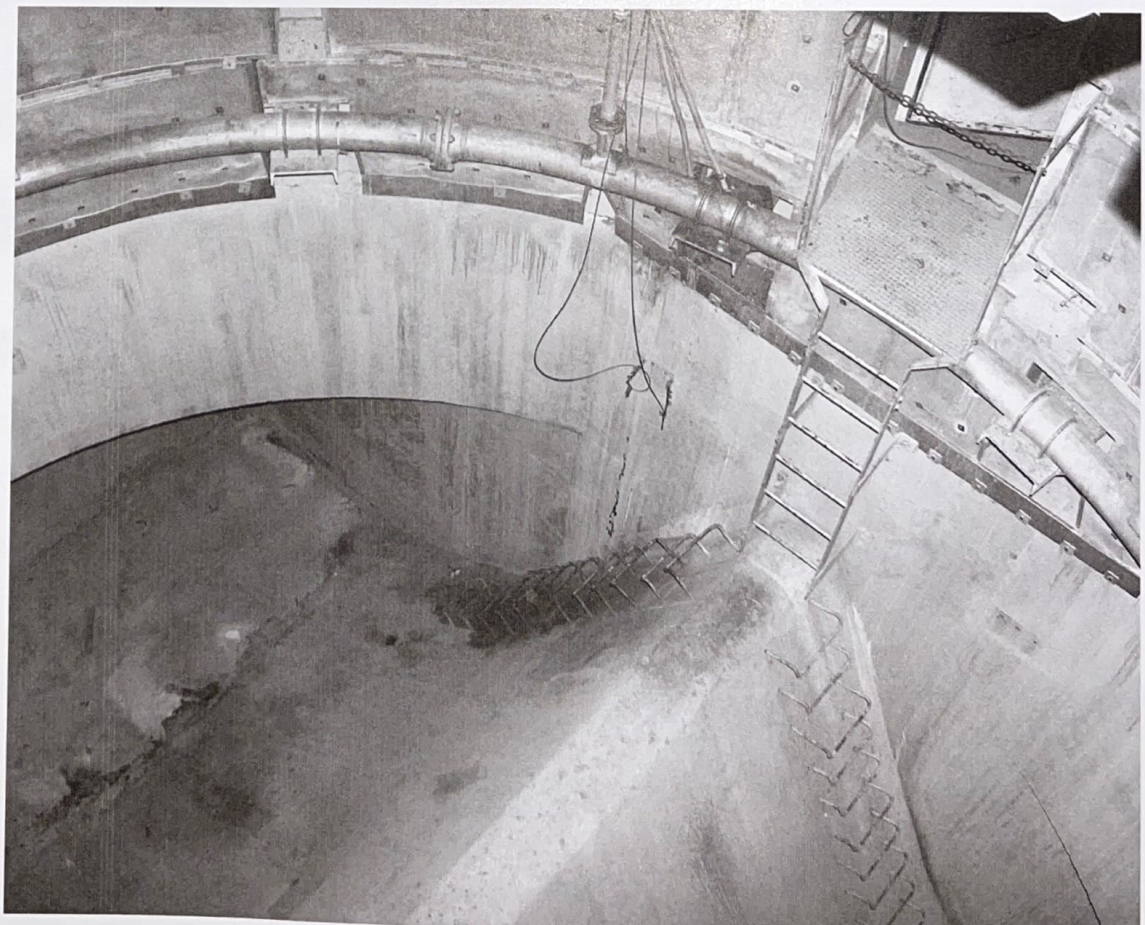
P-112 circulated chilled water through the silo tank to keep the water at or below 73° F (23° C).[28]

Also on level 7 was the air compressor system that provided compressed air to the pneumatic systems on the complex. Air stored in two tanks on the left side was routed through air-drying canisters and used to operate several systems including the locking pins for the launch duct work platforms and the plumbing shut-off plug valves. Air from two tanks on the right side was used to start the diesel generator.[29]

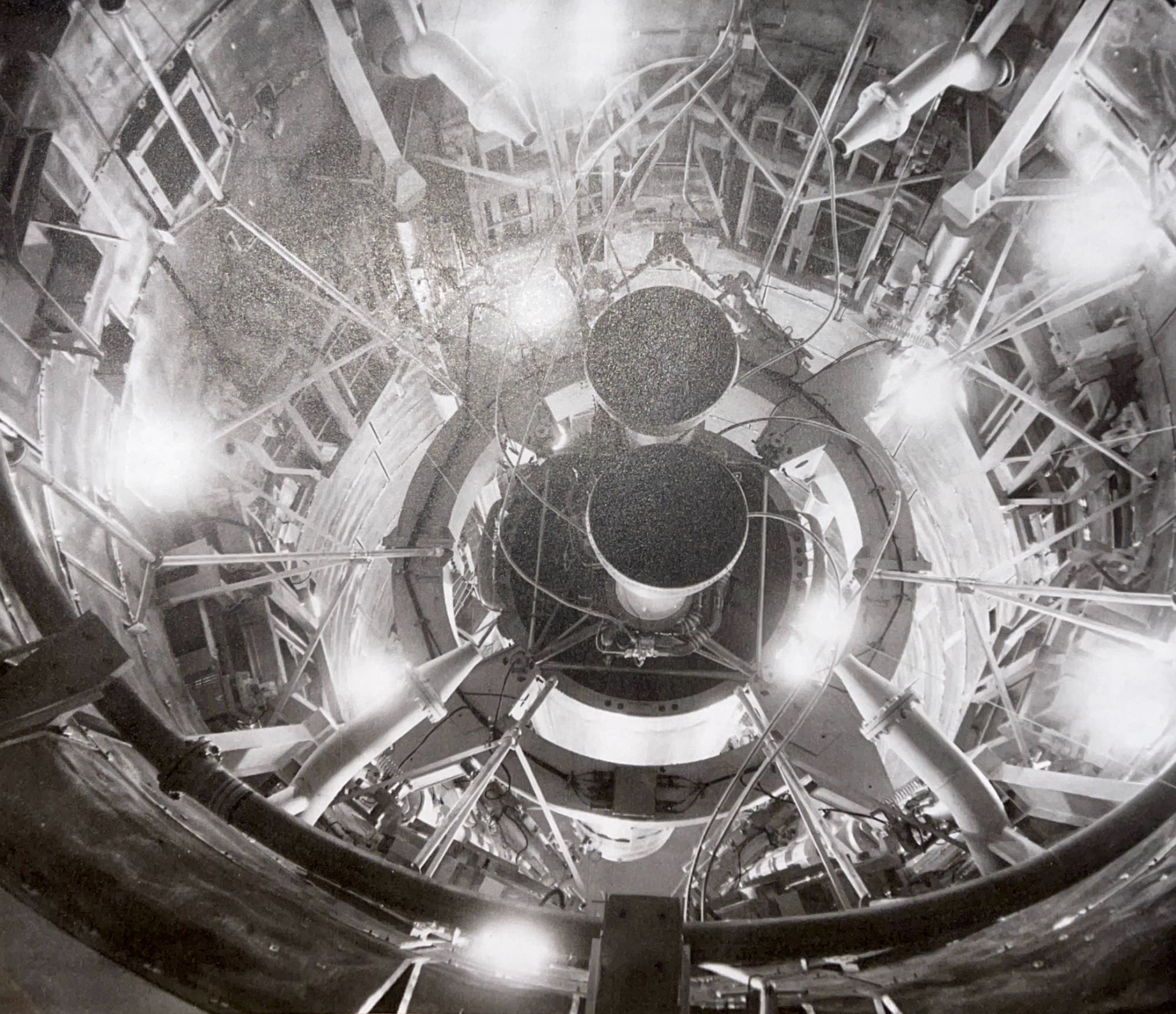
Level 7 also provided access to the launch duct at the level of the stage one engine.

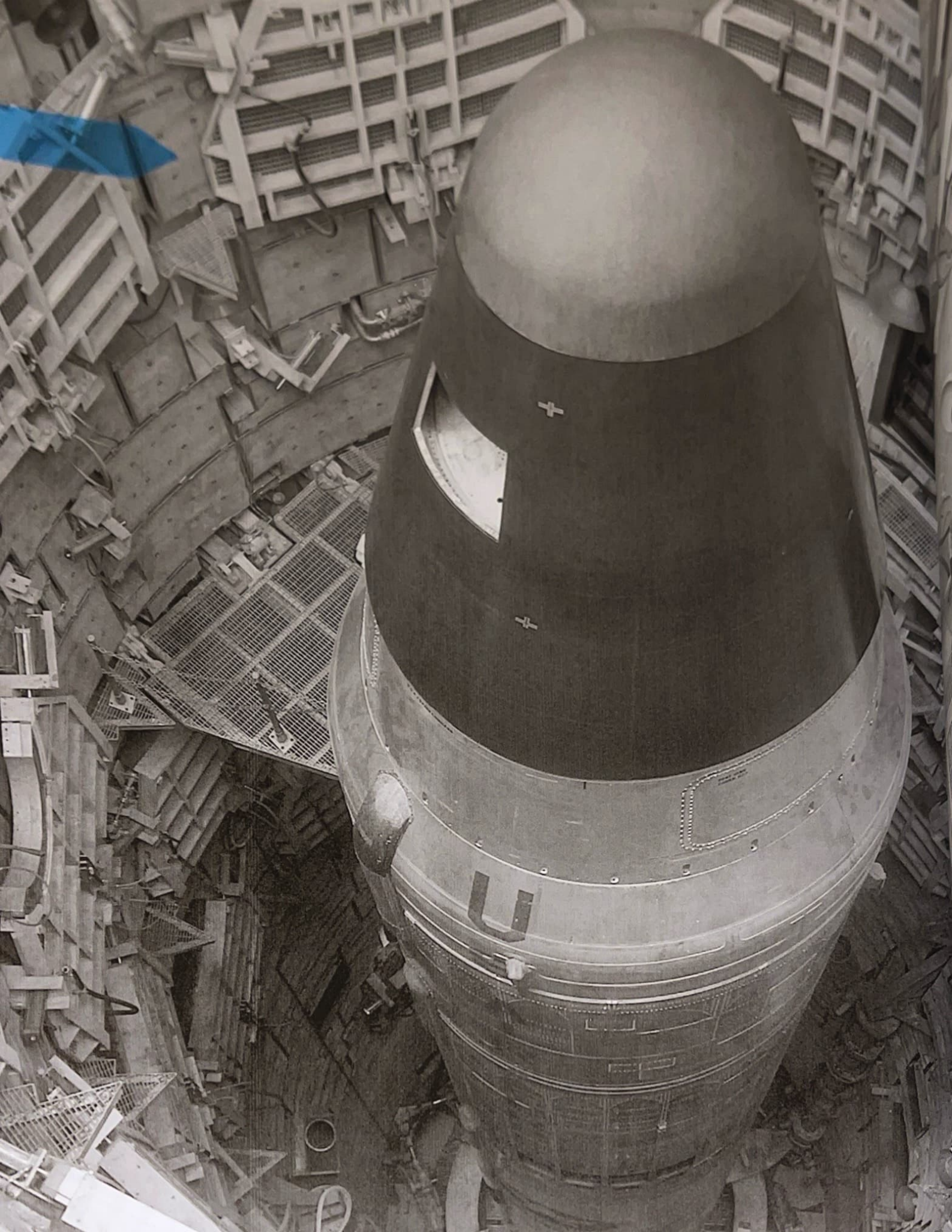
Silo Equipment Level 8

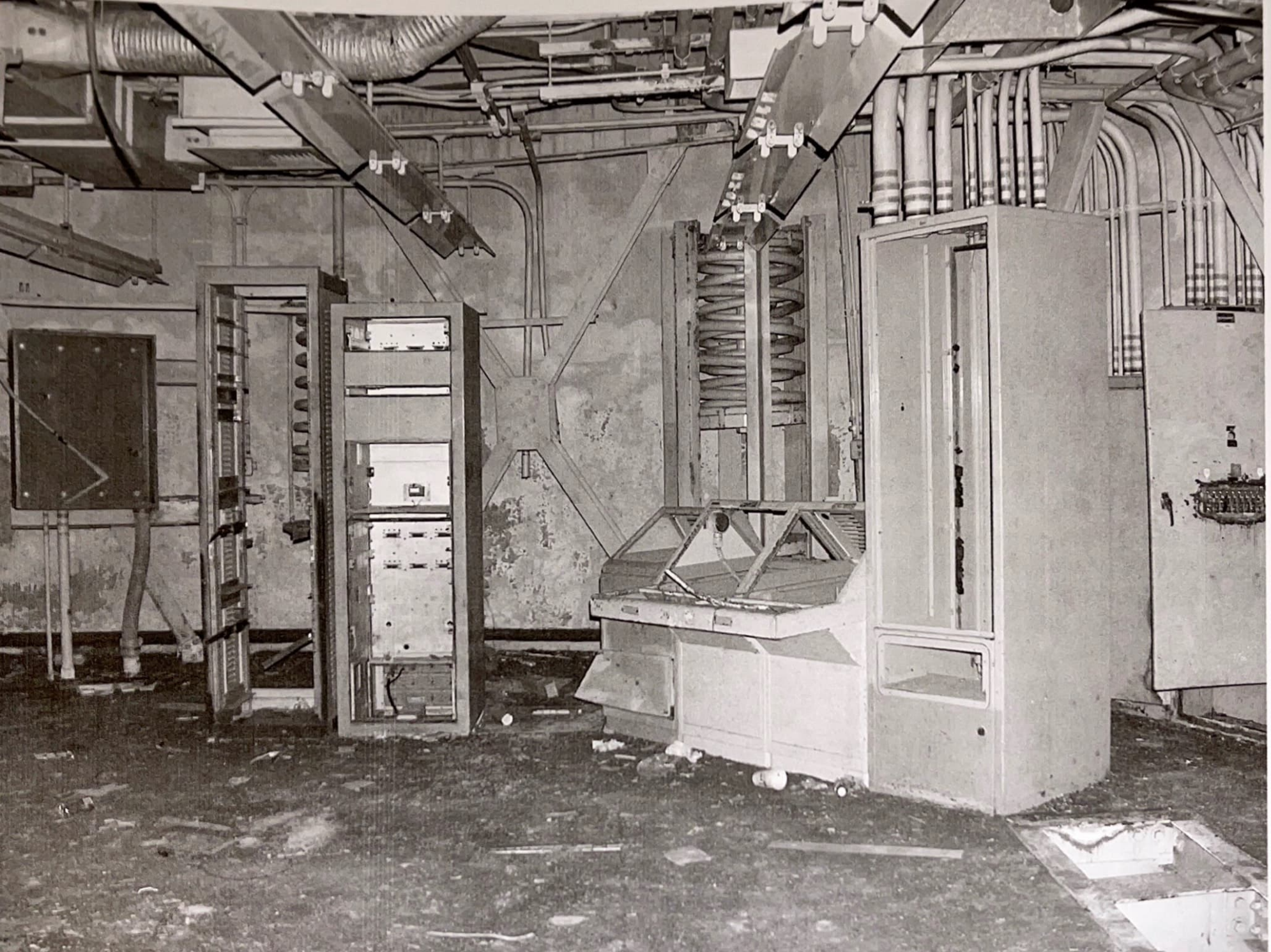
Loading propellant onto the missile was accomplished by gravity. Offloading was accomplished with pumps installed in separate small stainless steel rooms known as the fuel and oxidizer pump rooms. Both were located on level 8. As originally designed, the offloading pumps were permanently installed in each pump room. After emergency offloading capability was abandoned (along with the topside dump tanks) in 1979, the pumps were



▶ The "diving board" (at upper right) on level 8 as seen from level 7. Note flame deflector. This massive concrete wedge directed missile exhaust into two vertical shafts.



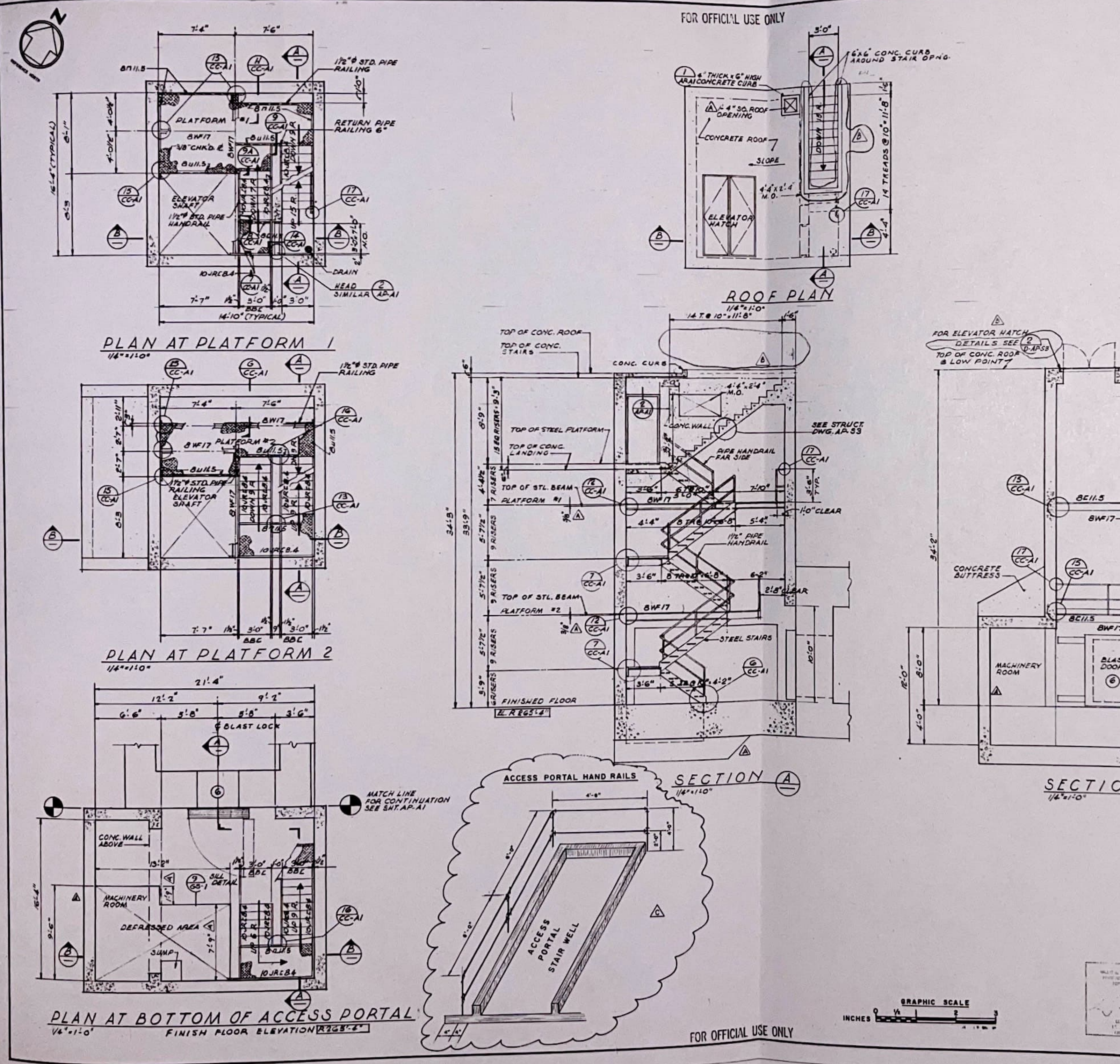




◀ Typical abandoned LCC. HF/UHF radio cabinets at left. The SLFCS cabinet is gone. ALOC and FPCB cabinets are at right. The LCCFC would have been in the center. It is pitch dark. The only illumination in this image was the camera's flash.

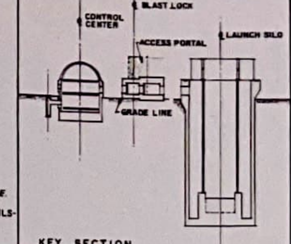
GLOSSARY

AAS..... azimuth alignment set
ABM ..... anti-ballistic missile
AC..... air conditioner
AC..... alternating current
ACP..... alternate command post
AFB..... air force base
ALOC .... alternate launch officer's console
AM ..... amplitude modulation
AMARG .. Aerospace Maintenance and Regeneration Group
APS..... accessory power supply
AW ..... air washer
BFRC .... big freaking red cloud
BLX..... basic launch complex
BMAT .... ballistic missile analyst technician
BV..... blast valve
BVL..... butterfly valve lock
BVLC .... butterfly valve lock control
C ..... centigrade
CB..... circuit breaker
CB ..... citizen's band (radio)
CBR..... chemical, biological and radiation (filter)
CMG ..... control monitor group
DC..... direct current
DMCCC .. deputy missile combat crew commander
CEP..... circular error probable
EAM ..... emergency action message
ELU..... emergency lighting unit
EMP ..... electromagnetic pulse
ERCS .... emergency rocket communications system
EWO ..... emergency war orders
F ..... Fahrenheit
FAC..... failure of alternating current
FM..... frequency modulation
FPCB..... facilities power control board
GMT ..... Greenwich Mean Time
Ha..... Hectares (land area)
HF..... high frequency
HS..... hydraulic system
ICBM..... intercontinental ballistic missile
IMU..... inertial measurement unit
IRBM..... intermediate range ballistic missile
IRCS ..... intercomplex radio communications system
ITU ..... International Telecommunications Union
Kg..... kilogram
kHz..... kilohertz
kt..... kiloton (one thousand tons)
LCC..... launch control center
LCCFC ... launch control complex facilities console
LOX..... liquid oxygen
MCC ..... motor control center
MCCC.... missile combat crew commander
MFL ..... missile fault locator
MFT ..... missile facilities technician
MGACG .. missile guidance and alignment checkout group
MGC ..... missile guidance computer
MHz ..... megahertz
MSA ..... Mine Safety Appliance
MT..... megaton (one million tons)
NASA .... National Aeronautics and Space Administration
OGE..... operating ground equipment
PDC..... power distribution and control
PSI ..... pounds per square inch
PTPMU... propellant tank pressure monitoring unit
PTS..... propellant transfer system
PTT..... push to talk
RAM ..... random access memory
RFHCO... rocket fuel handler's clothing outfit
RP-I..... a highly refined kerosene used as rocket fuel
RPIE ..... real property installed equipment
RPM ..... revolutions per minute
RTMN.... radio type maintenance net
RV..... reentry vehicle
SAC..... Strategic Air Command
SAC-CEM. Strategic Air Command civil engineering manual
SACCS ... strategic automated command and control system
SALT..... Strategic Arms Limitations Treaty
SLFCS ... survivable low frequency communication system
SMS ..... strategic missile squadron
SMW..... strategic missile wing
SSB..... single sideband
T.O..... technical orders
U.S.S.R. .. Union of Soviet Socialist Republics (the Soviet Union)
UHF..... ultra high frequency
UTC..... coordinated universal time
VDAP .... vapor detector annunciator panel
VIP ..... very important person
VLF..... very low frequency
VSS..... voice signaling system
WCP ..... wing command post
WCT ..... wire control and transmission
WTMN ... wire type maintenance net
WWV .... radio callsign for the National Institutes of Standards and Technology shortwave time station
ZULU .... military jargon for UTC


PLAN AT PLATFORM 1
1/4"=1'-0"
ELEVATOR SHAFT
RETURN PIPE RAILING 6"
1 1/2" Ø STD. PIPE RAILING
14'-10" (TYPICAL)
PLAN AT PLATFORM 2
1/4"=1'-0"
PLAN AT BOTTOM OF ACCESS PORTAL
1/4"=1'-0"
FINISH FLOOR ELEVATION 265'-6"
BLAST LOCK
CONC. WALL ABOVE
MACHINERY ROOM
DEPRESSED AREA
SUMP
MATCH LINE FOR CONTINUATION SEE SHT. AP-A1
ROOF PLAN
1/4"=1'-0"
CONCRETE ROOF
ELEVATOR HATCH
14 TREADS @ 10" = 11'-8"
SECTION A
1/4"=1'-0"
TOP OF CONC. ROOF
TOP OF STEEL PLATFORM
TOP OF STL. BEAM PLATFORM #1
TOP OF STL. BEAM PLATFORM #2
STEEL STAIRS
FINISHED FLOOR
EL. R 265'-6"
SECTION B
1/4"=1'-0"
PIPE RAILING
FOR ELEVATOR HATCH DETAILS SEE 2/D-AP-53
CONCRETE BUTTRESS
CONCRETE LANDING
MACHINERY ROOM
BLAST DOOR
ACCESS PORTAL HAND RAILS
ACCESS PORTAL STAIR WELL
GRAPHIC SCALE
INCHES

GENERAL NOTES

1. FOR DOOR SCHEDULE, SEE SHT. AP-A1
2. REFERENCE ELEVATION 300'-0" FOR ACTUAL ELEVATIONS, SEE CIVIL SHEETS.
3. FOR CONCRETE OPENINGS, WALL AND FOUNDATION DIMENSIONS, SEE STRUCTURAL SHEETS -SHT. AP-53
4. ALL STEEL PLATFORM & LANDING DIMENSIONS SHOWN IN ELEVATION ARE TO TOP OF CHECKERED FLOOR PLATE.
5. MATERIAL FOR ACCESS PORTAL HAND RAILS-
   A - 1-1/2" GALV. PIPE RAIL AND SCREWED FITTINGS.
   B - CIRCULAR FLOOR FLANGES WITH COUNTER SUNK HOLES AND ANCHOR BOLTS TO MATCH



KEY SECTION
NO SCALE

REVISION NO.	DATE	DESCRIPTION
	1 JAN 70	ADD HAND RAIL-PER DMAFB WO 1320-8
O.A.B.	8-1-64	OPERATIONAL AS BUILT
C.A.B.	3-14-62	CONSTRUCTION AS BUILT SITE (8) 1-18
	6-15-62	ISSUED FOR CERTIFICATION
	8-25-61	REMOVED PIPE RAILING & REVISED ELEVATOR HATCH DETAILS.
	11-7-60	REVISIONS AS SHOW

THE RALPH M. PARSONS COMPANY
ARCHITECT – ENGINEER
LOS ANGELES 17, CALIFORNIA

DEPARTMENT OF THE AIR FORCE
AIR FORCE BALLISTIC MISSILE DIVISION (ARDC)
INGLEWOOD, CALIFORNIA

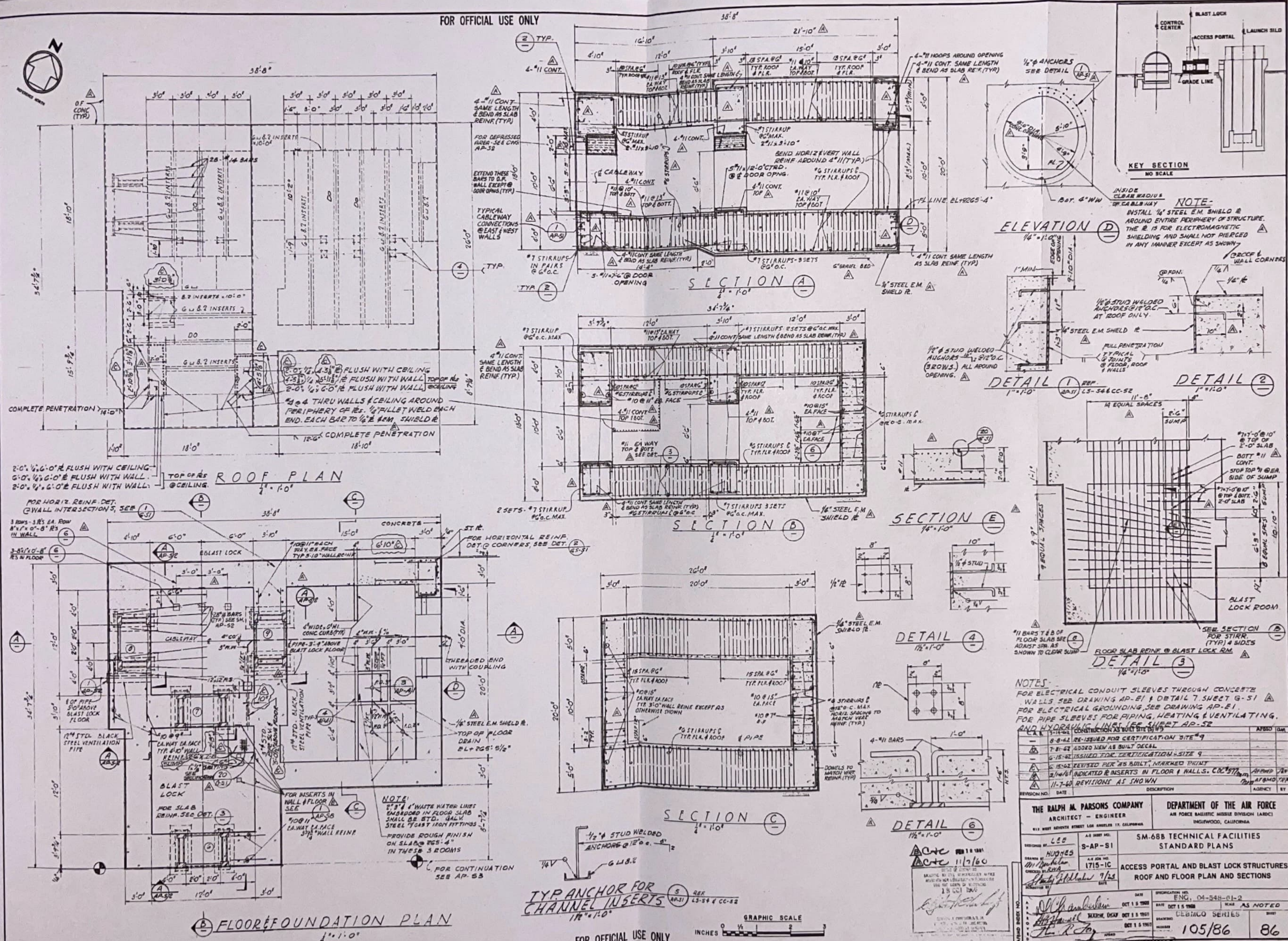
SM-68B TECHNICAL FACILITIES
STANDARD PLANS

ACCESS PORTAL
PLANS & SECTIONS

DESIGNED BY E. NECHELES
S-AP-A2
1715-IC
ENG. 04-548-61
SCALE AS NOTED
105/85
85

OPERATIONAL AS BUILT – NOT A CONTRACT DRAWING

FOR OFFICIAL USE ONLY



NOTES-
FOR ELECTRICAL CONDUIT SLEEVES THROUGH CONCRETE WALLS SEE DRAWING AP-E1 & DETAIL 7, SHEET G-S1
FOR ELECTRICAL GROUNDING, SEE DRAWING AP-E1.
FOR PIPE SLEEVES FOR PIPING, HEATING & VENTILATING, AND HYDRAULIC LINES SEE SHEET AP-S2

REVISION NO.	DATE	DESCRIPTION	AGENCY	BY
C.A.B.	3-14-62	CONSTRUCTION AS BUILT SITE (S) Nº 9	AFBSD	
—	8-8-62	RE-ISSUED FOR CERTIFICATION SITE #9		
	7-31-62	ADDED NEW AS BUILT DECAL		
—	6-15-62	ISSUED FOR CERTIFICATION - SITE 9		
C	6-15-62	REVISED PER "AS BUILT", MARKED PRINT		
B	2/14/61	INDICATED R INSERTS IN FLOOR & WALLS. CDC #577	AFBMD	
A	11-7-60	REVISIONS AS SHOWN	AFBMD	

THE RALPH M. PARSONS COMPANY
ARCHITECT — ENGINEER
617 WEST SEVENTH STREET LOS ANGELES 17, CALIFORNIA

DEPARTMENT OF THE AIR FORCE
AIR FORCE BALLISTIC MISSILE DIVISION (ARDC)
INGLEWOOD, CALIFORNIA

DESIGNED BY LEE
DRAWN BY HUGHES
CHECKED BY RWA
A-E SHEET NO. S-AP-S1
A-E JOB NO. 1715-IC

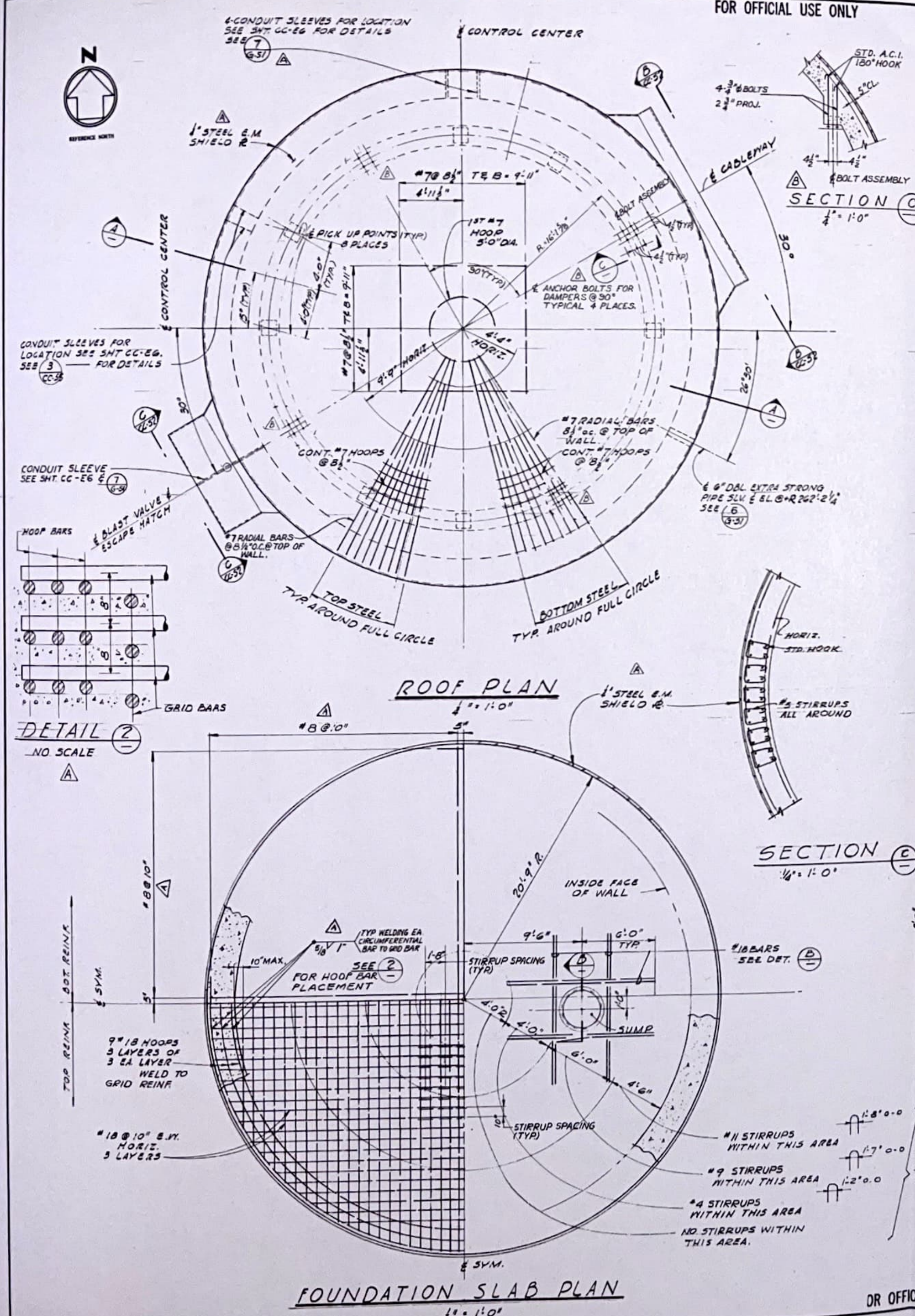
SM-68B TECHNICAL FACILITIES
STANDARD PLANS

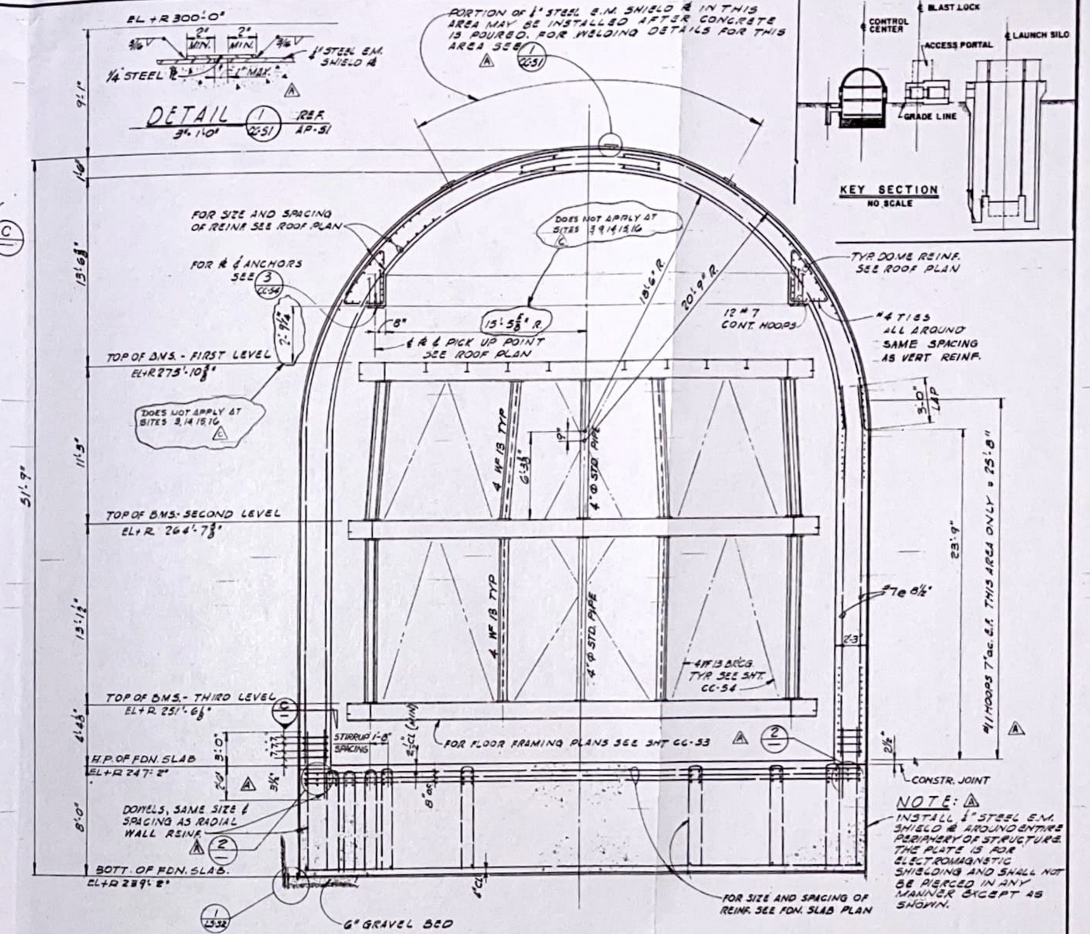
ACCESS PORTAL AND BLAST LOCK STRUCTURES
ROOF AND FLOOR PLAN AND SECTIONS

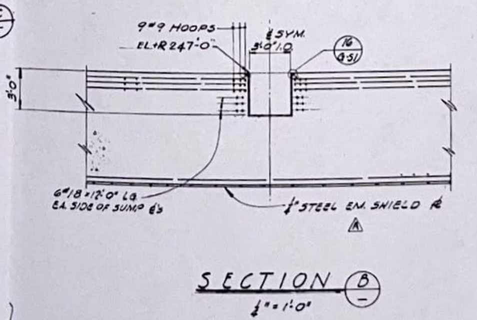
SPECIFICATION NO. ENG. 04-548-61-2
DATE OCT 1 5 1960
SCALE AS NOTED
CEBMCO SERIES
DRAWING NUMBER 105/86
SHEET 86

FOR OFFICIAL USE ONLY

OPERATIONAL AS BUILT - NOT A CONTRACT DRAWING


N
REFERENCE NORTH
6-CONDUIT SLEEVES FOR LOCATION SEE SHT. CC-E6 FOR DETAILS SEE 7 G-51
℄ CONTROL CENTER
1/4" STEEL E.M. SHIELD ℞
#7@8 1/2"
T.& B. = 9'-11"
℄ CABLEWAY
℄ PICK UP POINTS (TYP) 8 PLACES
1ST #7 HOOP 3'-0" DIA.
ANCHOR BOLTS FOR DAMPERS @ 30° TYPICAL 4 PLACES.
CONDUIT SLEEVES FOR LOCATION SEE SHT CC-E6. SEE 3 CC-51 FOR DETAILS
CONDUIT SLEEVE SEE SHT. CC-E6 ℄ 7 G-51
℄ BLAST VALVE & ESCAPE HATCH
CONT. #7 HOOPS @ 8 1/2"
#7 RADIAL BARS 8 1/2" o.c. @ TOP OF WALL
#7 RADIAL BARS @ 8 1/2" o.c. @ TOP OF WALL.
TOP STEEL TYP. AROUND FULL CIRCLE
BOTTOM STEEL TYP. AROUND FULL CIRCLE
℄ 6" DBL. EXTRA STRONG PIPE SLV. ℄ EL ⊕R 262'-2 1/4" SEE 6 G-51
ROOF PLAN
1/4" = 1'-0"
STD. A.C.I. 180° HOOK
4-3/4" ⌀ BOLTS 2 3/4" PROJ.
℄ BOLT ASSEMBLY
SECTION C
1/2" = 1'-0"
HOOP BARS
GRID BARS
DETAIL 2
NO SCALE
HORIZ. STD. HOOK
#5 STIRRUPS ALL AROUND
1/4" STEEL E.M. SHIELD ℞
SECTION C
1/4" = 1'-0"
#8 @ 10"
INSIDE FACE OF WALL
20'-9" R.
TYP. WELDING EA. CIRCUMFERENTIAL BAR TO GRID BAR
10" MAX.
SEE 2 FOR HOOP BAR PLACEMENT
STIRRUP SPACING (TYP)
#18 BARS SEE DET. B
SUMP
9 #18 HOOPS 3 LAYERS OF 3 EA. LAYER WELD TO GRID REINF.
#18 @ 10" E.W. HORIZ. 3 LAYERS
TOP REINF. BOT. REINF.
#11 STIRRUPS WITHIN THIS AREA
#9 STIRRUPS WITHIN THIS AREA
#4 STIRRUPS WITHIN THIS AREA
NO STIRRUPS WITHIN THIS AREA.
STIRRUP SPACING 20" x 10"
SEE FDN PLAN & SECTION A CC-51
℄ SYM.
FOUNDATION SLAB PLAN
1/4" = 1'-0"


EL + R 300'-0"
1/4" STEEL ℞
1/4" STEEL E.M. SHIELD ℞
DETAIL 1 REF. AP-51
3" = 1'-0"
PORTION OF 1/4" STEEL E.M. SHIELD ℞ IN THIS AREA MAY BE INSTALLED AFTER CONCRETE IS POURED. FOR WELDING DETAILS FOR THIS AREA SEE 1 CC-51
CONTROL CENTER
BLAST LOCK
ACCESS PORTAL
LAUNCH SILO
GRADE LINE
KEY SECTION
NO SCALE
FOR SIZE AND SPACING OF REINF. SEE ROOF PLAN
FOR ℞ & ℄ ANCHORS SEE 3 CC-54
DOES NOT APPLY AT SITES 3, 9, 14, 15, 16
TYP. DOME REINF. SEE ROOF PLAN
15'-5 3/4" R.
18'-6" R.
20'-9" R.
12 #7 CONT. HOOPS
#4 TIES ALL AROUND SAME SPACING AS VERT. REINF.
℄ PICK UP POINT SEE ROOF PLAN
TOP OF BMS. - FIRST LEVEL EL+R 275'-10 3/8"
DOES NOT APPLY AT SITES 3, 14, 15, 16
4 WF 13 TYP
4" ⌀ STD. PIPE
TOP OF BMS. - SECOND LEVEL EL+R 264'-7 3/8"
#11 HOOPS 7" o.c. ℄ THIS AREA ONLY = 25'-8"
#7 @ 8 1/2"
4 WF 13 BRCG. TYP. SEE SHT. CC-54
TOP OF BMS. - THIRD LEVEL EL+R 251'-6 1/8"
FOR FLOOR FRAMING PLANS SEE SHT CC-53
H.P. OF FDN. SLAB EL+R 247'-2"
STIRRUP 1'-8" SPACING
CONSTR. JOINT
DOWELS, SAME SIZE & SPACING AS RADIAL WALL REINF.
BOTT. OF FDN. SLAB. EL+R 239'-2"
6" GRAVEL BED
FOR SIZE AND SPACING OF REINF. SEE FDN. SLAB PLAN
NOTE: A
INSTALL 1/4" STEEL E.M. SHIELD ℞ AROUND ENTIRE PERIPHERY OF STRUCTURE. THE PLATE IS FOR ELECTROMAGNETIC SHIELDING AND SHALL NOT BE PIERCED IN ANY MANNER EXCEPT AS SHOWN.
SECTION A CC51 REF. CC52
1/4" = 1'-0"
51'-9"



NOTES

1. ALL ELEVATIONS ARE TAKEN FROM REFERENCE ELEVATION + R 300'-0"
2. (A) FOR ELECTRICAL GROUNDING SEE SHT CC-E6
3. FOR GENERAL NOTES & TYPICAL DETAILS SEE SHT. G-51.
4. (a) THE PERIPHERY OF THE FOUNDATION SLAB SHALL BE THE HIGH POINT (H.P.)
   (b) THE FOUNDATION SLAB SHALL HAVE A UNIFORM SLOPE TO EL+R 247'-0" AT THE SUMP.
5. (A) THE CONTRACTOR SHALL PROVIDE REMOVABLE SUPPORTS APPROVED BY THE CONTRACTING OFFICER FOR THE STEEL FRAMING TO MAINTAIN INDICATED ELEVATION OF TOP OF BEAMS. SUPPORTS SHALL BE LEFT IN PLACE.

REVISION NO.	DATE	DESCRIPTION	AGENCY	BY
O.A.B.	8-1-64	OPERATIONAL AS BUILT	AFBSD	SRC
C.A.B.	9-14-62	CONSTRUCTION AS BUILT SITE (S) # 1-18	AFBSD	[illegible]
	6/15/62	ISSUED FOR CERTIFICATION SITES 1 - 18		
C	6/15/62	REVISED PER "AS BUILT" MARKED PRINT		
B	2/16/61	ADD. ANCHOR BOLTS. C.O.C. #577	AFBMD	JRB
A	11-7-60	REVISIONS AS SHOWN	AFBMD	JRB

THE RALPH M. PARSONS COMPANY
ARCHITECT – ENGINEER
617 WEST SEVENTH STREET LOS ANGELES 17, CALIFORNIA

DEPARTMENT OF THE AIR FORCE
AIR FORCE BALLISTIC MISSILE DIVISION (ARDC)
INGLEWOOD, CALIFORNIA

DESIGNED BY Palacol
DRAWN BY Stamberg
CHECKED BY RWA
SUBMITTED BY Stanley Hollahr 9/23

A-E SHEET NO. S-CC-S1
A-E JOB NO. 1715-1C

SM-68B TECHNICAL FACILITIES STANDARD PLANS

CONTROL CENTER
ROOF AND FOUNDATION PLANS
& SECTIONS

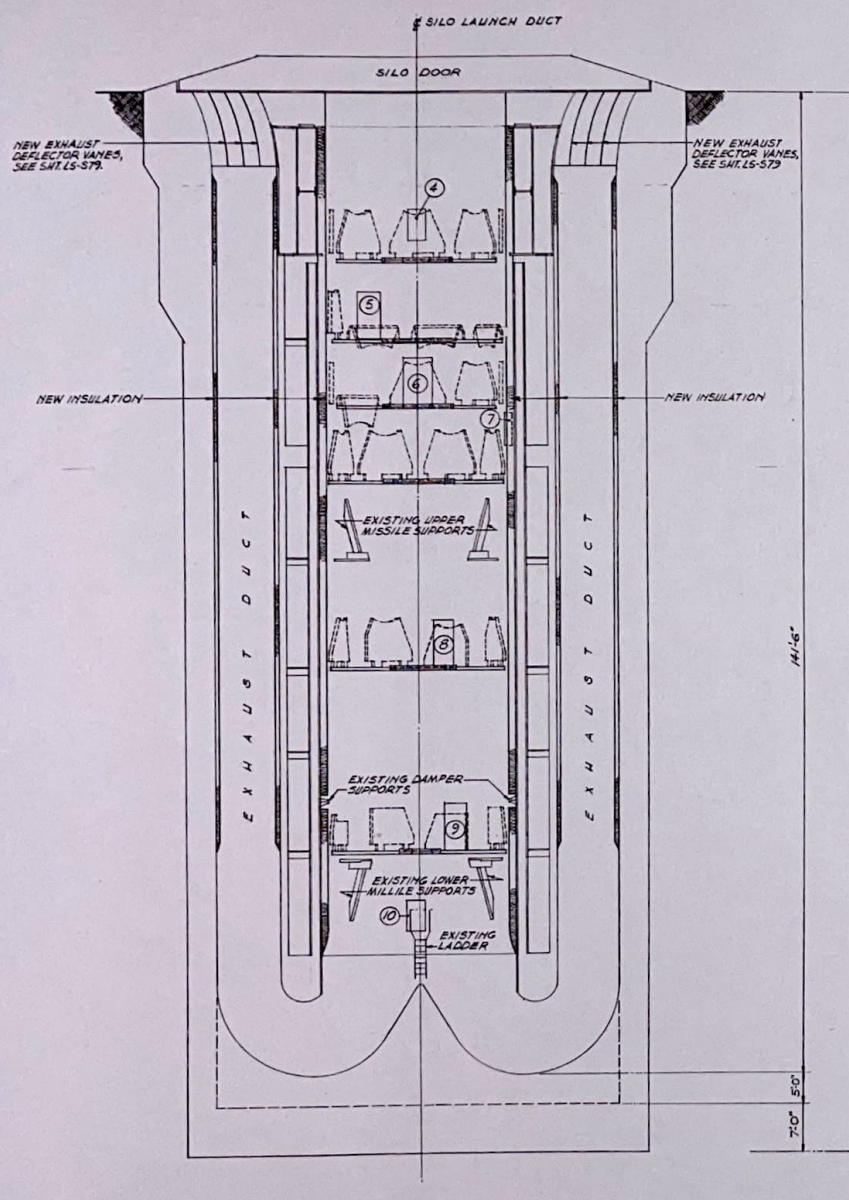
APPROVED: OCT 1 5 1960; OCT 1 5 1960; OCT 1 5 1960 AFBMD

SPECIFICATION NO. ENG. 04-548-61-2
DATE OCT 1 5 1960
SCALE AS NOTED
CEBMCO SERIES
DRAWING NUMBER 105/78
SHEET 78

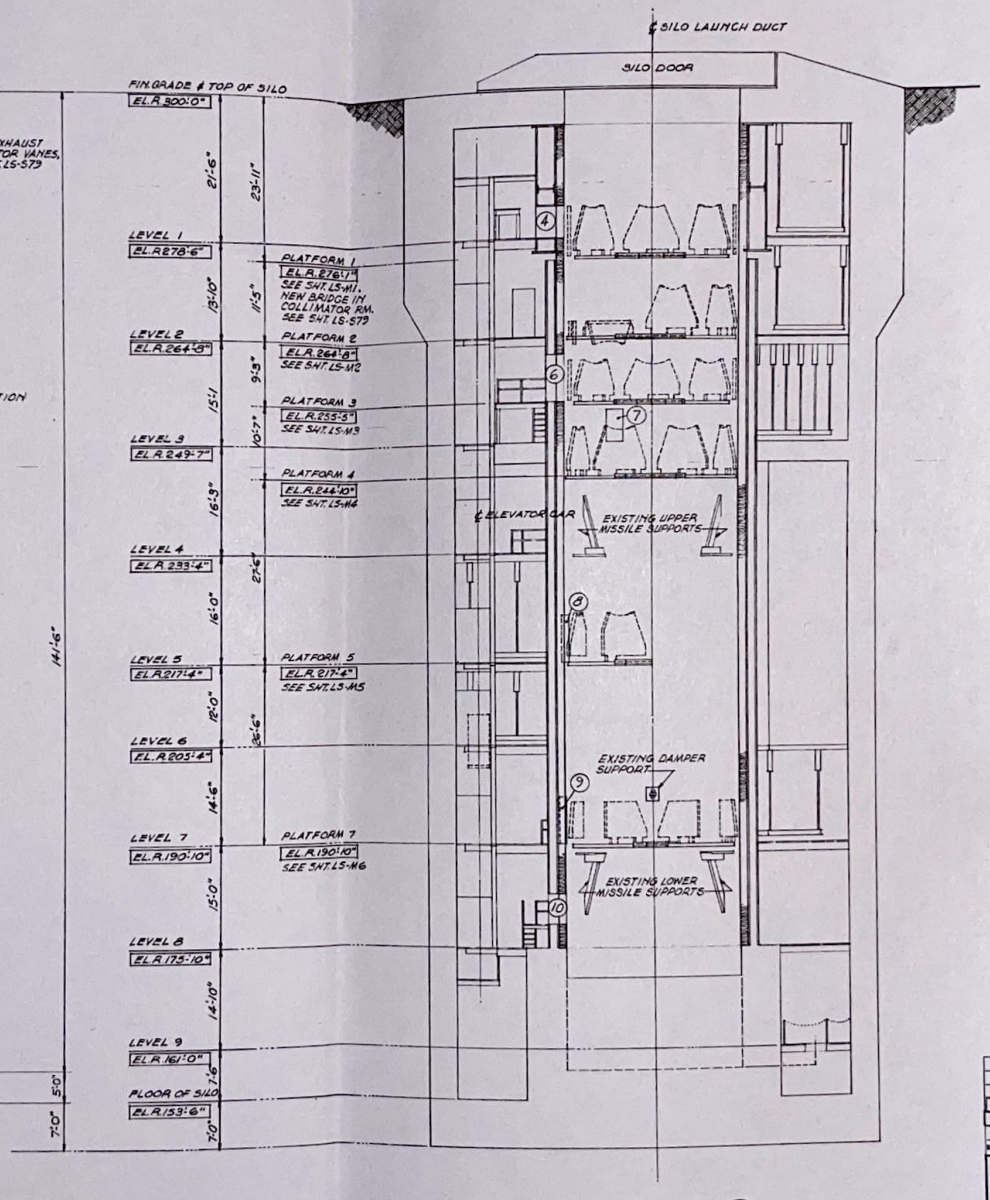
C-C FEB 1 8 1961
C-C 11-7-60

OPERATIONAL AS BUILT – NOT A CONTRACT DRAWING

FOR OFFICIAL USE ONLY

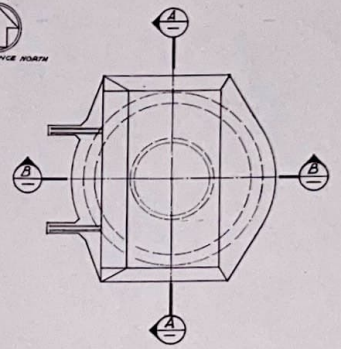


SECTION (A)
1/8"=1'0"



SECTION (B)
1/8"=1'0"

REFERENCE NORTH



KEY PLAN

GENERAL NOTES

1. FOR DEVELOPED ELEVATION OF LAUNCH DUCT WALL, SEE SHEETS LS-A6 & LS-A7.
2. FOR DEVELOPED ELEVATION OF LAUNCH DUCT INSULATION, SEE SHT. LS-581 & LS-582.
3. ALL CONSTRUCTION OUTSIDE LAUNCH DUCT, IS EXISTING, EXCEPT AS NOTED.
4. ALL CONSTRUCTION INSIDE LAUNCH DUCT IS EXISTING EXCEPT FOR PLATFORMS, PLATFORM SUPPORTS AND INSULATION.
5. (4) TO (10) INDICATES DOOR NO. OF EXISTING DOORS TO LAUNCH DUCT.

REVISION NO.	DATE	DESCRIPTION	AGENCY	BY
O.A.B.	1-7-65	OPERATIONAL AS BUILT	AFBSD	SRC
C.A.B.	8-12-63	CONSTRUCTION AS BUILT SITE (S) 1-18	AFBSD	KAS
—	9-4-62	ISSUED FOR CERTIFICATION SITES 1-18		

THE RALPH M. PARSONS COMPANY
ARCHITECT — ENGINEER
617 WEST SEVENTH STREET LOS ANGELES 17, CALIFORNIA

DEPARTMENT OF THE AIR FORCE
AIR FORCE BALLISTIC MISSILE DIVISION (ARDC)
INGLEWOOD, CALIFORNIA

DESIGNED BY E. NECHELES
DRAWN BY DICK, L.
CHECKED BY E.N.
QUANTITIES BY

A-E SHEET NO. S-LS-A5
A-E JOB NO. 1715-1C

SM-68B TECHNICAL FACILITIES
STANDARD PLANS

LAUNCH SILO
COMPOSITE SECTIONS

DATE SEP 11 1961
SPECIFICATION NO. ENG. 04-548-62-2
DATE SEP 11 1961
SCALE 1/8"=1'-0"
DRAWING NUMBER 146/20
CEBMCO SERIES
SHEET 20

AFNAD INDEX NO.

CORPS OF ENGINEERS
APPROVED FOR CONSTRUCTION
SEP 11 1961

GRAPHIC SCALE
INCHES 0 1/4 1 2 3

FOR OFFICIAL USE ONLY

OPERATIONAL AS BUILT - NOT A CONTRACT DRAWING