

# LAUNCH CONTROL CENTER

GENERAL

STRUCTURAL

ELECTRICAL

AS E DWG NUMBER	TITLE
556-G-2	INDEX SHEET

CIVIL

SITE NO.	AS E DWG NUMBER	TITLE
1	10	WATER SYSTEM PLAN AND SECTION DETAILS
2	11	DRAINAGE AND SEWERAGE SYSTEM PLAN & SECTION DETAILS
3	12	WASTE DISPOSAL PLAN & SECTION DETAILS

ARCHITECTURAL

SITE NO.	AS E DWG NUMBER	TITLE
1	13	ARCHITECTURAL DETAILS
2	14	FLOOR PLANS
3	15	MECHANICAL

MECHANICAL

SITE NO.	AS E DWG NUMBER	TITLE
1	16	MECHANICAL
2	17	MECHANICAL
3	18	MECHANICAL
4	19	MECHANICAL
5	20	MECHANICAL
6	21	MECHANICAL
7	22	MECHANICAL
8	23	MECHANICAL
9	24	MECHANICAL
10	25	MECHANICAL
11	26	MECHANICAL
12	27	MECHANICAL
13	28	MECHANICAL
14	29	MECHANICAL
15	30	MECHANICAL
16	31	MECHANICAL
17	32	MECHANICAL
18	33	MECHANICAL
19	34	MECHANICAL
20	35	MECHANICAL
21	36	MECHANICAL
22	37	MECHANICAL
23	38	MECHANICAL
24	39	MECHANICAL
25	40	MECHANICAL
26	41	MECHANICAL
27	42	MECHANICAL
28	43	MECHANICAL
29	44	MECHANICAL
30	45	MECHANICAL
31	46	MECHANICAL
32	47	MECHANICAL
33	48	MECHANICAL
34	49	MECHANICAL
35	50	MECHANICAL
36	51	MECHANICAL
37	52	MECHANICAL
38	53	MECHANICAL
39	54	MECHANICAL
40	55	MECHANICAL

- 2-M-1
1. FLOW DIAGRAM H.V. & A.C.
  2. H.V. & A.C. PLANS
  3. H.V. & A.C. SECTIONS & DETS.
  4. ASSEMBLY OF H.V. & A.C. LINES
  5. PLUMBING PLAN - SHT. 1
  6. PLUMBING PLAN - SHT. 2
  7. PLUMBING PLAN - SHT. 3
  8. PLUMBING SECTIONS
  9. PLUMBING SECTS & DETS.
  10. FLOW DIAGRAM COMPRESSED AIR
  11. PIPE SUPPORTS SHT. 1
  12. PIPE SUPPORTS SHT. 2
  13. PIPE SUPPORTS SHT. 3
  14. AIR INTAKE AND EXHAUST BLAST CLOSURES
  15. ALTERNATE "M" H.V. & A.C. PLANS
- 3-M-1
1. FUEL CATCHMENT TANK SYSTEM TANK, PIPIN, PLAN & DETAILS

SITE NO.	AS E DWG NUMBER	TITLE
1	1	FOUNDATION & ROOF PLANS
2	2	TYPICAL CONCRETE SECTIONS
3	3	FOUNDATION REINFORCING PLAN
4	4	ROOF REINFORCING PLAN
5	5	STAIRWELL & VESTIBULE WALL ELEVATIONS
6	6	STAIRWELL & VESTIBULE REINFORCING SECTIONS SHT. 1
7	7	STEEL STAIRWAY FRAMING
8	8	BLAST DOOR DETAILS - SHT. 1
9	9	ESCAPE HATCH DETAILS - SHT. 1
10	10	ROOF LAYOUT DETAILS - SHT. 1
11	11	ROOF LAYOUT DETAILS - SHT. 2
12	12	ROOF FLOOR PLAN
13	13	ROOF PLAN
14	14	ROOF PLAN
15	15	ROOF PLAN
16	16	ROOF PLAN
17	17	ROOF PLAN
18	18	ROOF PLAN
19	19	ROOF PLAN
20	20	ROOF PLAN
21	21	ROOF PLAN
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36	36	ROOF PLAN
37	37	ROOF PLAN
38	38	ROOF PLAN
39	39	ROOF PLAN
40	40	ROOF PLAN

- 2-5-1
1. FOUNDATION & ROOF PLANS
  2. TYPICAL CONCRETE SECTIONS
  3. FOUNDATION REINFORCING PLAN
  4. ROOF REINFORCING PLAN
  5. STAIRWELL & VESTIBULE WALL ELEVATIONS
  6. STAIRWELL & VESTIBULE REINFORCING SECTIONS SHT. 1
  7. STEEL STAIRWAY FRAMING
  8. BLAST DOOR DETAILS - SHT. 1
  9. ESCAPE HATCH DETAILS - SHT. 1
  10. ROOF LAYOUT DETAILS - SHT. 1
  11. ROOF LAYOUT DETAILS - SHT. 2
  12. ROOF FLOOR PLAN
  13. ROOF PLAN
  14. ROOF PLAN
  15. ROOF PLAN
  16. ENTRY PLAN AND SECTIONS
  17. ENTRY SECTIONS & DETAILS
  18. STAIRWELL & VESTIBULE REINFORCING SECTIONS SHT. 2
  19. ESCAPE HATCH DETAILS - SHT. 2
  20. STAIRWAY FRAMING
  21. STAIRWAY FRAMING
  22. STAIRWAY FRAMING
  23. STAIRWAY FRAMING
  24. HUNG FLOORS SHOP DETAILS - SHT. 1
  25. HUNG FLOORS SHOP DETAILS - SHT. 2
  26. HUNG FLOORS SHOP DETAILS - SHT. 3
  27. HUNG FLOORS SHOP DETAILS - SHT. 4
  28. HUNG FLOORS SHOP DETAILS - SHT. 5
  29. HUNG FLOORS SHOP DETAILS - SHT. 6
  30. HUNG FLOORS SHOP DETAILS - SHT. 6
  31. HUNG FLOORS SHOP DETAILS - SHT. 6
  32. HUNG FLOORS SHOP DETAILS - SHT. 7

SITE NO.	AS E DWG NUMBER	TITLE
1	1	ELECT SINGLE LN DIAG
2	2	ELECT POWER PLAN
3	3	ELECT LIGHTING PLAN
4	4	ELECT G.C. DETS & SCHED
5	5	ELECT GROUNDING PLAN
6	6	ELECT GROUNDING PLAN
7	7	FACP PLAN - SHT. 1
8	8	FACP PLAN - SHT. 2
9	9	FACP WIRING DIAG - SHT. 1
10	10	FACP WIRING DIAG - SHT. 2
11	11	ELECT SCHED & DETS - SHT. 1
12	12	ELECT SCHED & DETS - SHT. 2
13	13	ELECT SECTS & DETS - SHT. 1
14	14	ELECT SECTS & DETS - SHT. 2
15	15	HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 1
16	16	HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 2
17	17	HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 3
18	18	HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 4
19	19	HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 5
20	20	HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 6
21	21	HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 7
22	22	ALTERNATE "A" ELECT SECTS & DETS - SHT. 2
23	23	PERSONAL IDENTIFICATION & DETAILS
24	24	HEAT TAPE FOR VALVES PITS AND CHLORINATOR PITS

- 2-E-1
1. ELECT SINGLE LN DIAG
  2. ELECT POWER PLAN
  3. ELECT LIGHTING PLAN
  4. ELECT G.C. DETS & SCHED
  5. ELECT GROUNDING PLAN
  6. ELECT GROUNDING PLAN
  7. FACP PLAN - SHT. 1
  8. FACP PLAN - SHT. 2
  9. FACP WIRING DIAG - SHT. 1
  10. FACP WIRING DIAG - SHT. 2
  11. ELECT SCHED & DETS - SHT. 1
  12. ELECT SCHED & DETS - SHT. 2
  13. ELECT SECTS & DETS - SHT. 1
  14. ELECT SECTS & DETS - SHT. 2
  15. HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 1
  16. HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 2
  17. HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 3
  18. HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 4
  19. HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 5
  20. HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 6
  21. HUNG POWER & COMM. SECTIONS & DETAILS - SHT. 7
  22. ALTERNATE "A" ELECT SECTS & DETS - SHT. 2
  23. PERSONAL IDENTIFICATION & DETAILS
  24. HEAT TAPE FOR VALVES PITS AND CHLORINATOR PITS

THE BASIC SITE IS SITE 2. WHEN SITE 2 IS CHANGED FROM CONTRACT SET, THE LETTER "A" APPEARS. FURTHER CHANGES ON OTHER SITES RECEIVE SUBSEQUENT LETTERS.

N.C. = NO CHANGE FROM CONTRACT DWGS.  
 \* = DWG. NOT A PART OF THIS SET.

In accordance with instructions in BSO/DSDF 24 November 1950, this drawing is certified as being for the following site. Changes for the designing key:

1. Changes made using REWORK REWORKS or notes or instructions on drawings.
2. Changes made using REWORKS or notes or instructions on drawings.
3. Changes made using REWORKS or notes or instructions on drawings.

JUN 13 1962

556 -A -1 -A-1 (DRAWING NO. EXAMPLE) EXPLANATION

SQUADRON NO.	SITE LETTER	FACILITY NO.	LAYOUT GROUP	DWG NO.
556	A	1 SILO	G GENERAL	
		2 LCC	C CIVIL	
		3 SITE	A ARCH.	
			S STRUCT.	
			M MECH.	
			E ELECT.	

NO.	1-2913	OPERATIONAL AS BUILT	NATAR	1775
ISSUED FOR	MITSUBISHI A.F.B.		CEM/COR	
REVISION	DATE	DESCRIPTION	AGENCY	UNIT
BECHTEL CORPORATION DEPARTMENT OF THE AIR FORCE ENGINEERS AND CONSTRUCTORS AIR FORCE BALLISTIC MISSILE DIVISION (ARDC) 304 FRANCISCO - LOS ANGELES - NEW YORK				
DESIGNED BY	DATE		WS-10 A-1 OPERATIONAL BASE	
CHECKED BY	DATE		UNITARY SILO	
A.P.	DATE		LAUNCH CONTROL CENTER	
APPROVED	DATE		INDEX SHEET	
REV	DATE	DESCRIPTION	REVISION NO.	SCALE
			ENG-25-066-60-52	
			15 FEB 1960	
REVISION	DATE	DESCRIPTION	AGENCY	UNIT
			556	2-6-2

# LAUNCHING SILO

GENERAL

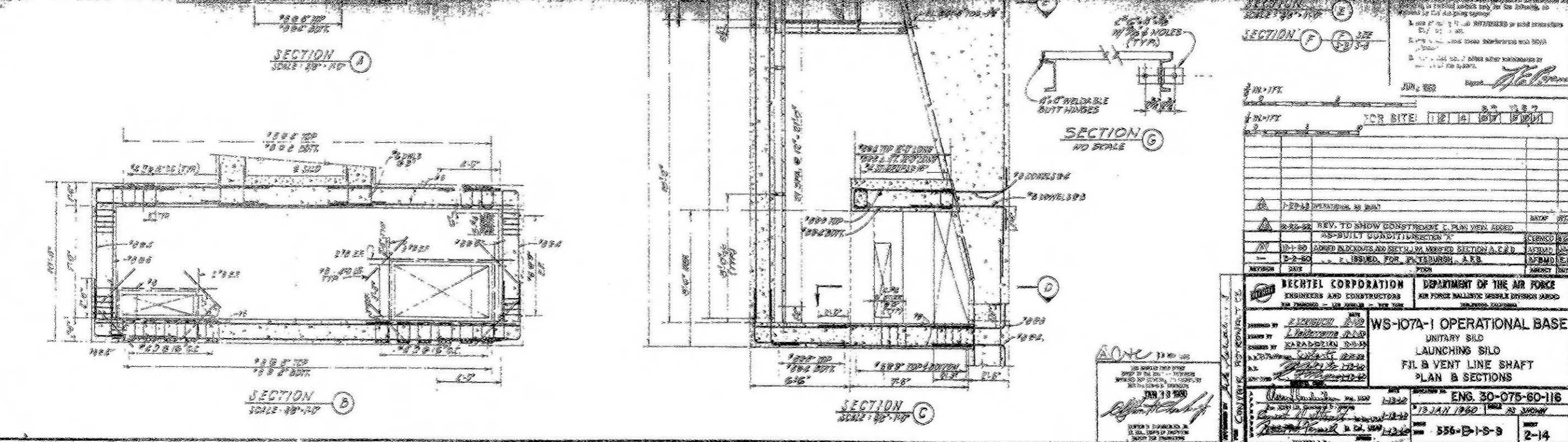
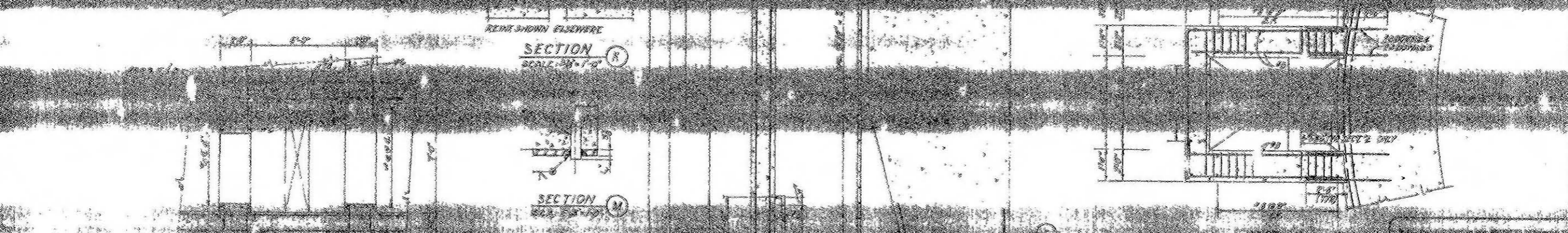
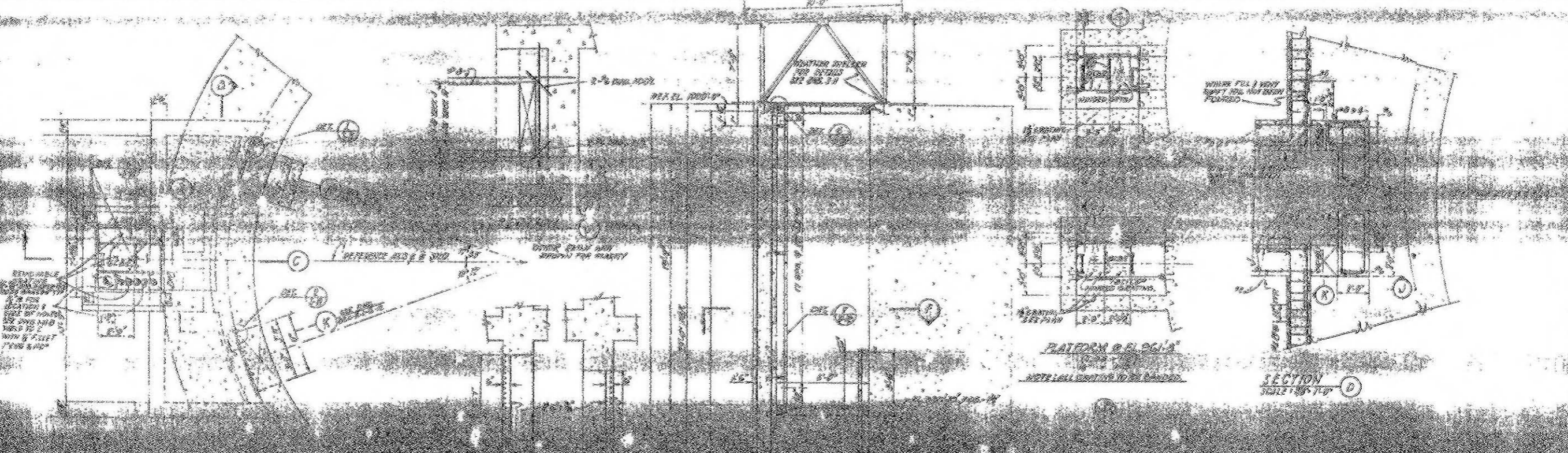
S-1556-I-G-4 INDEX SHEET

ARCHITECTURAL

MECHANICAL

ELECTRICAL

ARCHITECTURAL												MECHANICAL												ELECTRICAL											
A&E DWG. NUMBER												A&E DWG. NUMBER												A&E DWG. NUMBER											
SITE NO.												SITE NO.												SITE NO.											
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
556 1-19A MISSILE AREA ENCLOSURE SHEET 1 198 MISSILE AREA ENCLOSURE SHEET 2 19C FLEXIBLE CONNECTION 1-A-20. SPIRAL STAIRWAY & GENERATOR ENCLOSURE 21. SCHEDULES & DETAILS 22. GENERAL ARRANGEMENT PLAN AND SECTION 23. PIPELINE AND AIR CONDITIONING DUCT IDENTIFICATION 24. MISCELLANEOUS PIPING IDENTIFICATION												1-13. LIQUID OXYGEN STORAGE TANK 14. LN <sub>2</sub> STORAGE & LN <sub>2</sub> /H <sub>2</sub> HEAT EXCHANGER 17. LIQUID OXYGEN TOPPING TANK 69. H.V. & A.C. EQUIP & DUCTWORK PLAN AT LEVEL 1 70. H.V. & A.C. EQUIP & DUCTWORK PLAN AT LEVEL 2 71. H.V. & A.C. EQUIP & DUCTWORK PLAN AT LEVEL 3 72. H.V. & A.C. EQUIP & DUCTWORK PLAN AT LEVEL 4 73. H.V. & A.C. EQUIP & DUCTWORK PLAN AT LEVEL 5 74. H.V. & A.C. EQUIP & DUCTWORK PLAN AT LEVEL 6 & 7 75. H.V. & A.C. EQUIP & DUCTWORK SECTION AT LEVELS 1, 2 & 3 76. H.V. & A.C. EQUIP & DUCTWORK SECTION AT LEVELS 1 & 2 77. H.V. & A.C. EQUIP & DUCTWORK SECTION AT LEVELS 4, 5 & 6 78. H.V. & A.C. EQUIP & DUCTWORK SECTION AT LEVELS 4, 5 & 6 79. H.V. & A.C. FACILITY PIPING PLAN AT LEVEL 7 80. H.V. & A.C. FACILITY PIPING SUPPORT & HANGER DETAILS SHT. 1 81. H.V. & A.C. EQUIP & DUCTWORK PLAN AT LEVEL 8 82. H.V. & A.C. EQUIP & DUCTWORK PLAN BELOW LEVEL 8												1-E-1. GROUNDING-PLAN & ELEVATION 2. ESSENTIAL BUS POWER-SINGLE NE DIAGRAM 3. NON-ESSENTIAL BUS POWER-SINGLE LINE DIAGRAM 4. CONTROL SCHEMATIC-HEATING, VENTILATING & A.C.-PART 1 5. CONTROL SCHEMATIC-HEATING, VENTILATING & A.C.-PART 2 6. CONTROL SCHEMATIC ALARMS, MIS PART 1 7. CONTROL SCHEMATIC ALARMS, MIS PART 2 8. ESSENTIAL MOTOR CONTROL CENTER WIRING DIAGRAM-PART 1 9. ESSENTIAL MOTOR CONTROL CENTER WIRING DIAGRAM-PART 2 10. NON-ESSENTIAL MOTOR CONTROL CENTER WIRING DIAGRAM-PART 1 11. NON-ESSENTIAL MOTOR CONTROL CENTER WIRING DIAGRAM-PART 2 12. NON-ESSENTIAL MOTOR CONTROL CENTER WIRING DIAGRAM-PART 3 13. FACILITIES TERMINAL CABINET NO. WIRING DIAGRAM 14. FACILITIES TERMINAL CABINET NO. WIRING DIAGRAM 15. FACILITIES INTERFACE CABINET WIRING DIAGRAM 16. PROPELLANT LOADING SYSTEM INSTALLATION WIRING DIAGRAM 17. GROUNDING DETAILS 18. FACILITIES INTERFACE CABINET TERMINAL & CONNECTOR DESIGNATIONS 24. ELECTRICAL CONDUIT PLAN LEVEL 4 25. ELECTRICAL CONDUIT PLAN LEVEL 5 26. ELECTRICAL CONDUIT PLAN LEVEL 6 27. ELECTRICAL CONDUIT PLAN LEVEL 7 28. ELECTRICAL CONDUIT PLAN LEVEL 8											

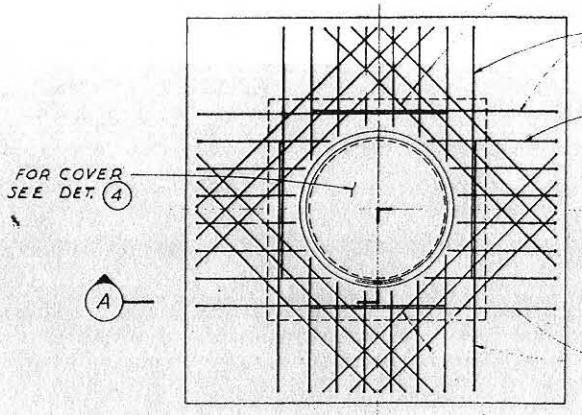


<p>REVISIONS</p> <p>NO. DATE BY</p> <p>1-20-62 OPERATIONAL AS BUILT</p> <p>2-20-62 REV. TO SHOW CONSTRAINED PLAN VIEW ADDED</p> <p>10-1-60 AS-BUILT CONDITION SECTION 'K'</p> <p>2-2-60 AS-BUILT BLOCKOUTS AND SECTION 'M' MARKED SECTION A, C &amp; D</p> <p>2-2-60 ISSUED FOR PITTSBURGH, AFB</p>		<p>JUN 1960</p> <p>FOR SITE: 112 14 07 0001</p>
<p>BECHTEL CORPORATION ENGINEERS AND CONSTRUCTORS SAN FRANCISCO - LOS ANGELES - NEW YORK</p>		<p>DEPARTMENT OF THE AIR FORCE AIR FORCE BALLISTIC MISSILE DIVISION (ARMD) SANTA MONICA, CALIFORNIA</p>
<p>DESIGNED BY: J. J. JENNINGS 1-12-60</p> <p>DRAWN BY: J. J. JENNINGS 1-12-60</p> <p>CHECKED BY: KARADOLIAN 2-11-60</p> <p>DATE: 1-12-60</p> <p>BY: [Signature]</p>		<p>WS-107A-1 OPERATIONAL BASE LAUNCHING SILO FIL &amp; VENT LINE SHAFT PLAN &amp; SECTIONS</p> <p>ENG. 30-075-60-116</p> <p>19 JAN 1960</p> <p>556-B-1-S-9</p> <p>2-14</p>

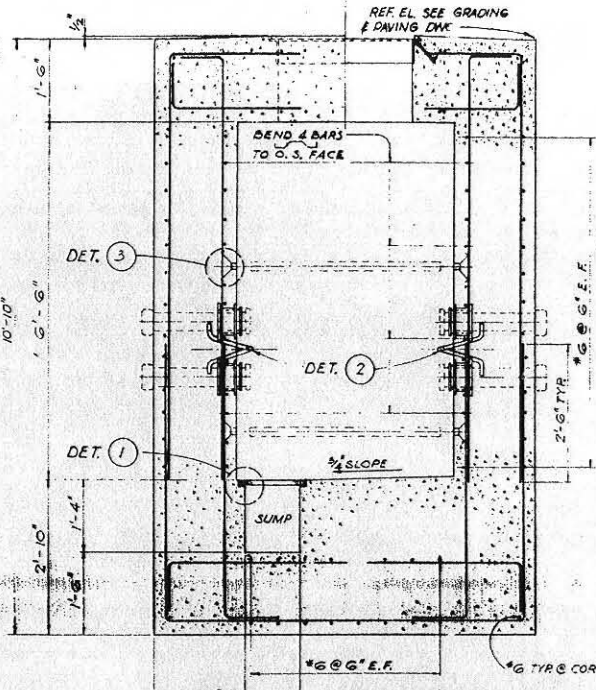
In accordance with instructions from BSD/BSSFB 24 November 1961, this drawing is certified as built only for the following:   
 1. This drawing is for the design of the structure.   
 2. This drawing is for the design of the structure.   
 3. This drawing is for the design of the structure.   
 4. This drawing is for the design of the structure.   
 5. This drawing is for the design of the structure.   
 JUN 13 1962   
 SIGNED: J. P. Pennington

MANHOLE & M.H. COVER  
 TO L.C.C. - SEE  
 GRADING & PAVING DWG.

REIN. SYM.  
 A.L.C. M.H.

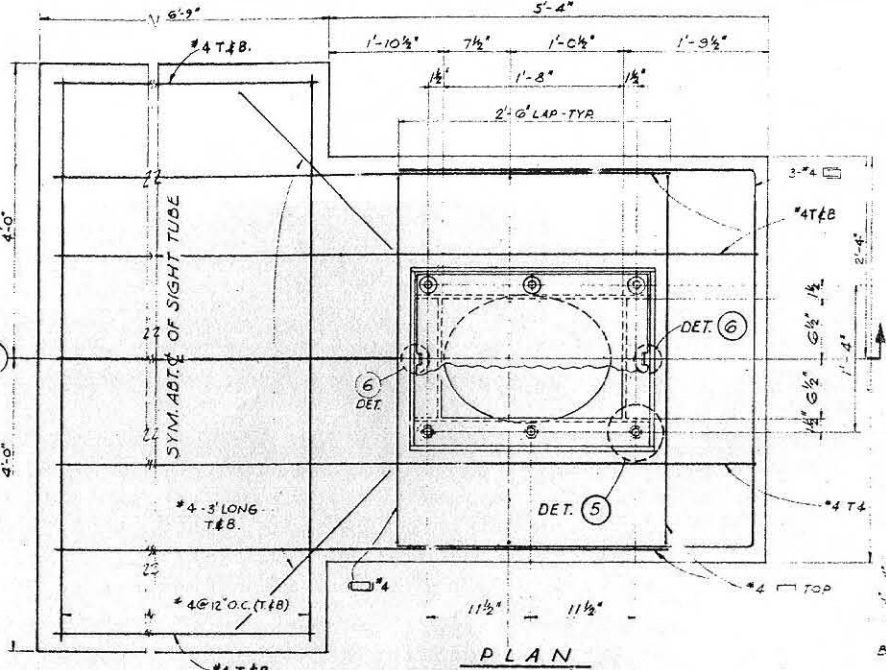


ROOF PLAN  
 COMMUNICATIONS MANHOLE  
 3/4" = 1'-0"

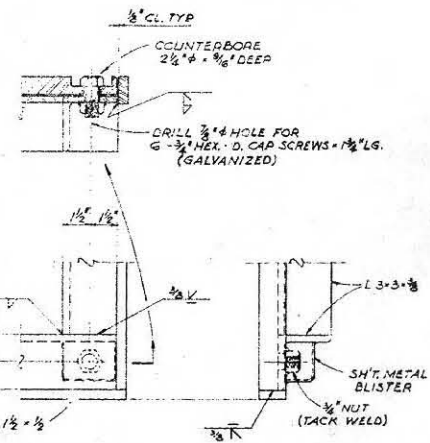


SECTION A  
 1/2" = 1'-0"

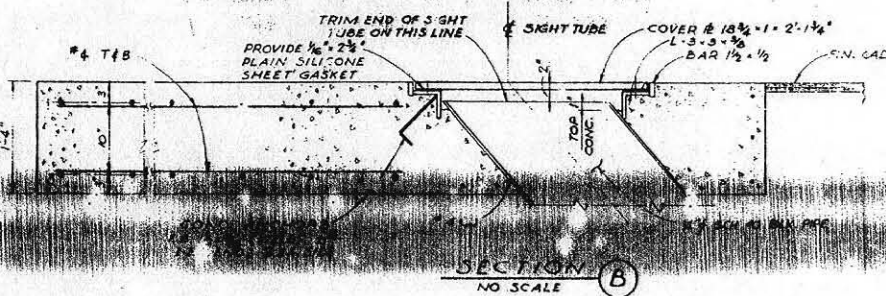
NOTE: FOR SIZE, QUANTITY AND LOCATION OF CONDUITS, INSERTS AND PLAIN IRONS SEE DWG. AFBMD-3-E-2



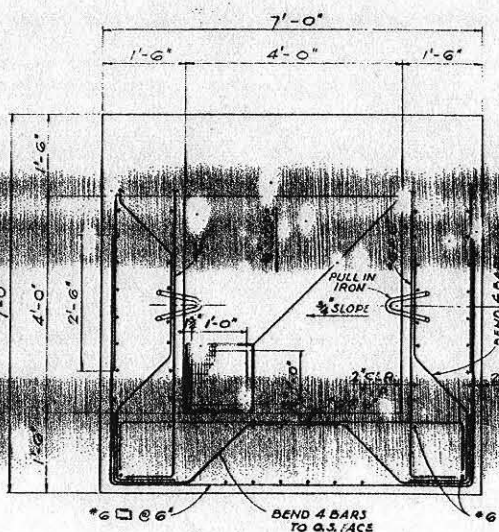
PLAN  
 SIGHT TUBE END CAP  
 NO SCALE



DETAIL 5  
 3/8" = 1'-0"

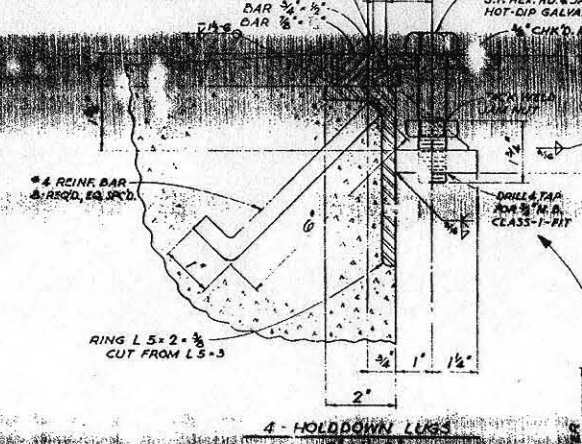


SECTION B  
 NO SCALE

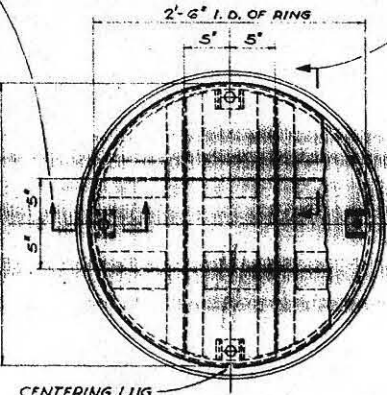


SECTIONAL PLAN  
 1/2" = 1'-0"

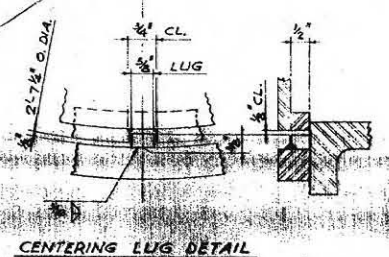
DETAIL 1  
 3/8" = 1'-0"



DETAIL 3  
 NO SCALE



DETAIL 4  
 1/2" = 1'-0"



CENTERING LUG DETAIL  
 3/8" = 1'-0"

FOR SITES 1 2 3 4 5 6 7 8 9 10 11 12

NOTES

1. FR LOCATION OF COMMUNICATIONS MANHOLE AND SIGHT TUBE END CAP SEE GRADING AND PAVING PLAN.
2. FINES AND COVERS SHALL BE SEAL WELDED AND HOT-DIP GALVANIZED AFTER FABRICATION EXCEPT AS NOTED.
3. CONCRETE SHALL BE CLASS AA.

NO.	DATE	REVISION	BY
1	12-15-61	OPERATIONAL AS BUILT	SAFIC
2	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC
3	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC
4	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC
5	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC
6	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC
7	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC
8	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC
9	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC
10	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC
11	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC
12	12-15-61	REV. TO SHOW CONCRETE CURVED SECTION IS	SAFIC

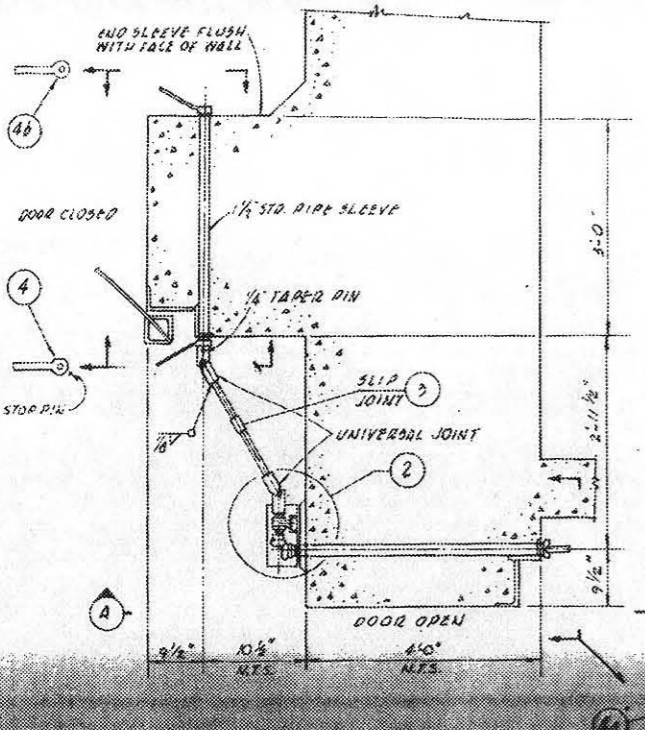
**BERTEL CORPORATION**  
 ENGINEERS AND ARCHITECTS  
 1115 N. 10TH ST. SUITE 100  
 DENVER, COLORADO 80202

**DEPARTMENT OF THE AIR FORCE**  
 AIR FORCE BALLISTIC MISSILE DIVISION (AMDC)  
 1115 N. 10TH ST. SUITE 100  
 DENVER, COLORADO 80202

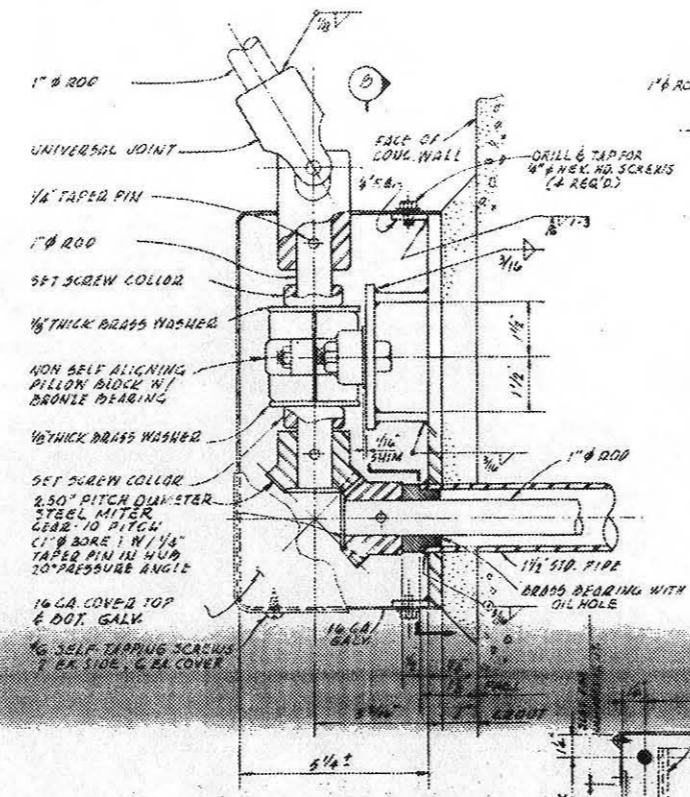
**WS-107-A-1 OPERATIONAL BASE**  
 UNITARY SILO  
 LAUNCH COMPLEX  
 COMMUNICATIONS MANHOLE AND  
 SIGHT TUBE END GAP DETAILS

DESIGNED BY: S. JMS 12-15-61  
 DRAWN BY: SH 12-15-61  
 CHECKED BY: JH 12-15-61  
 A.C. 12-15-61  
 A.E. 12-15-61

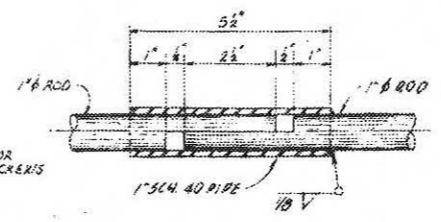
DATE: 13 JAN 1960  
 SCALE: AS NOTED  
 NUMBER: 556-A-3-0-3



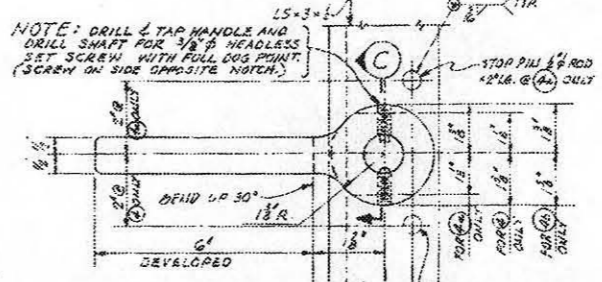
**TAPE**  
**SCALE 1"=1'-0"**  
**PLAN OF INTER-LOCKING MECHANISM**



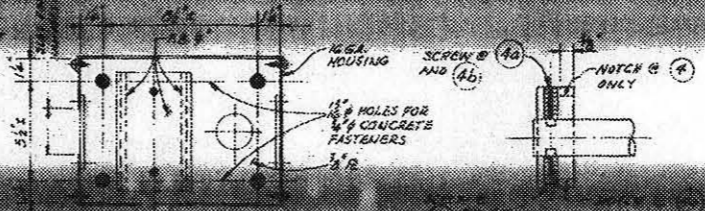
**DETAIL**  
**SCALE 3/4"=1'-0"**



**DETAIL**  
**SCALE 1/2"=1'-0"**

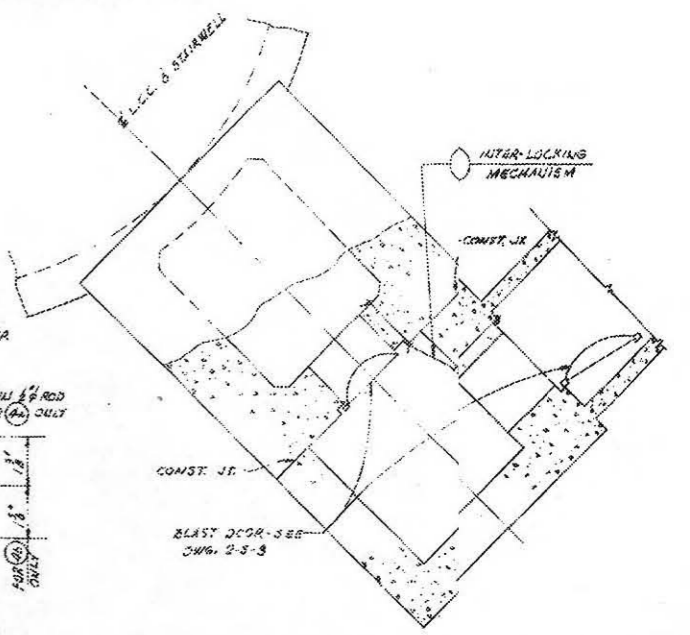


**DETAILS**  
**SCALE 1/2"=1'-0"**



**SECTION B**  
**SCALE 3/8"=1'-0"**

**SECTION C**  
**SCALE 1/2"=1'-0"**



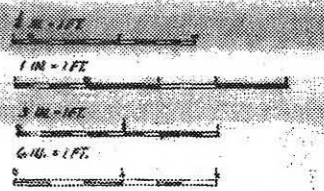
**ARRANGEMENT PLN**  
**SCALE 1/4"=1'-0"**

**NOTE**  
 1. ALL SET SCREWS SHALL BE SELF LOCKING CUP-POINT TYPE UNLESS OTHERWISE NOTED.  
 2. BRASS CONTACT SURFACES SHALL BE POLISHED TO A FINISH OF 150.

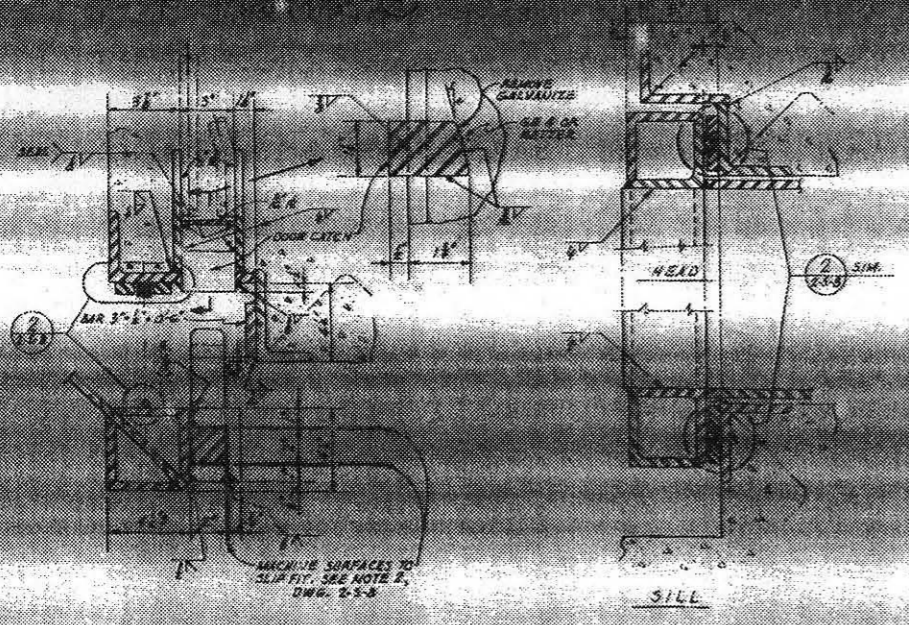
In accordance with Specification 88000-100-100-001 of 20 November 1963 this drawing is verified section by section by the following: as indicated by the designating sign.

1. Brass self-aligning pillow bearing and roller bearings.

2. Steel self-aligning pillow bearing and roller bearings.



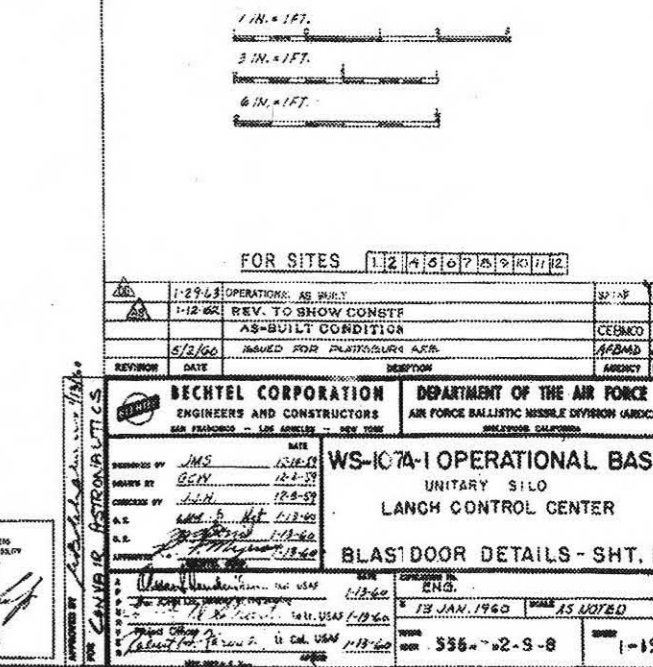
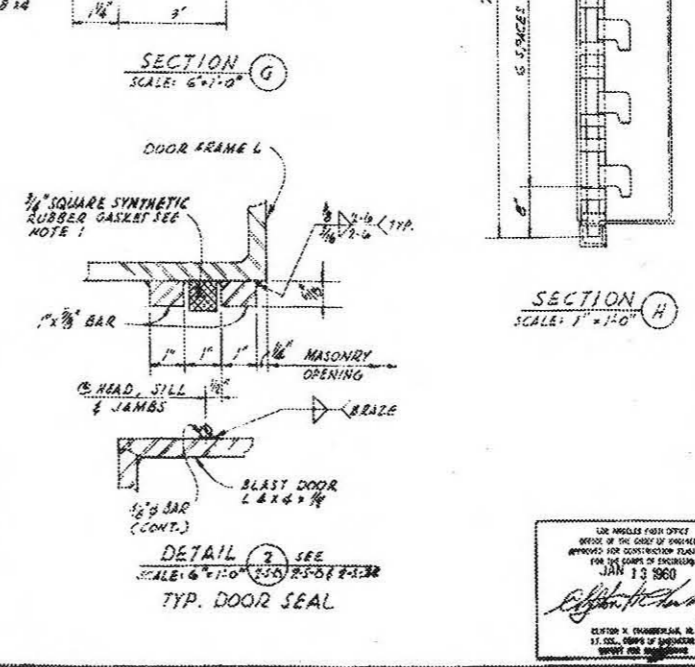
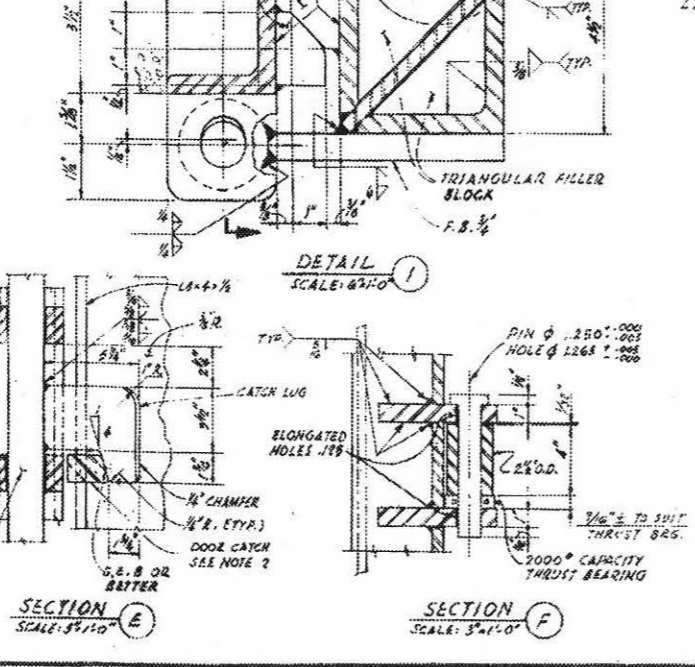
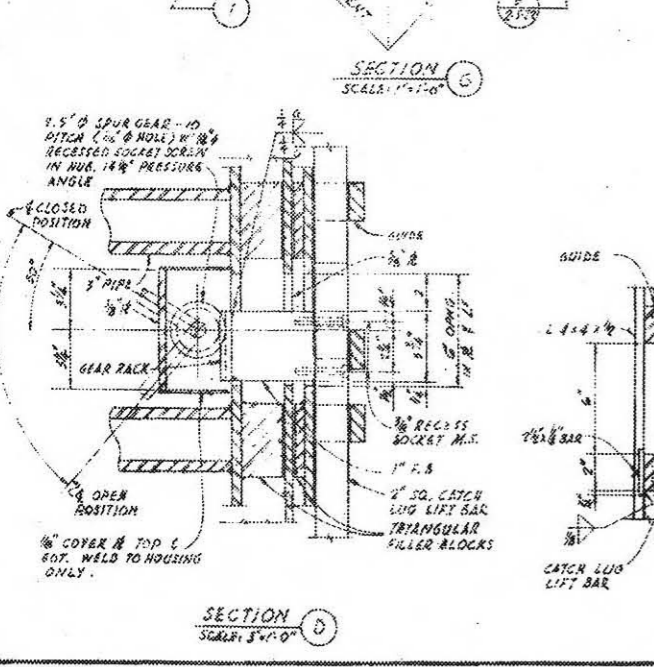
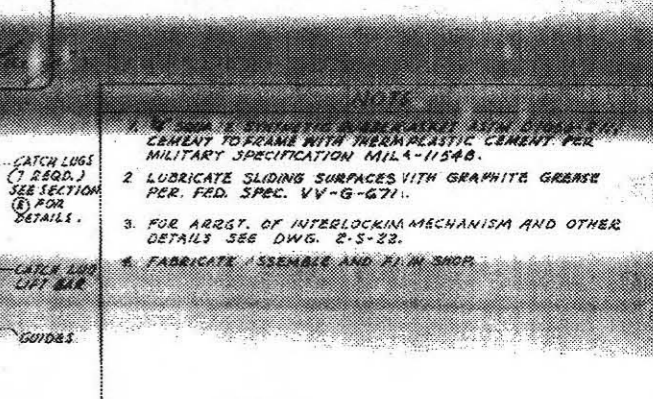
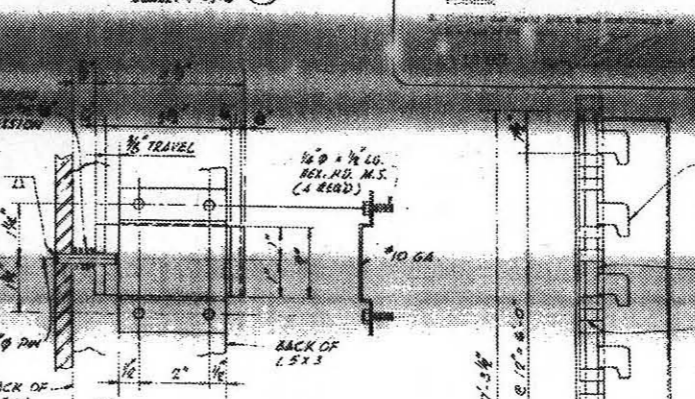
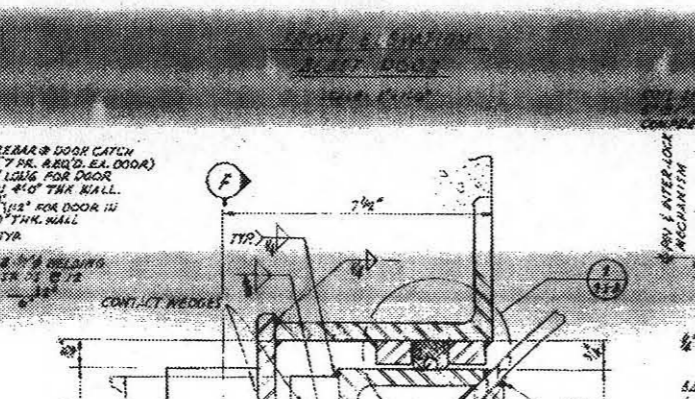
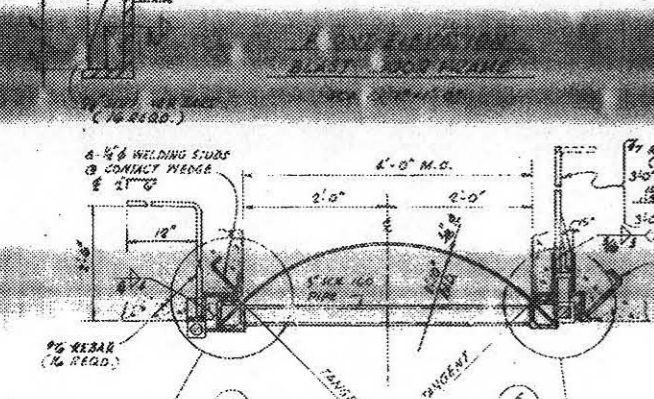
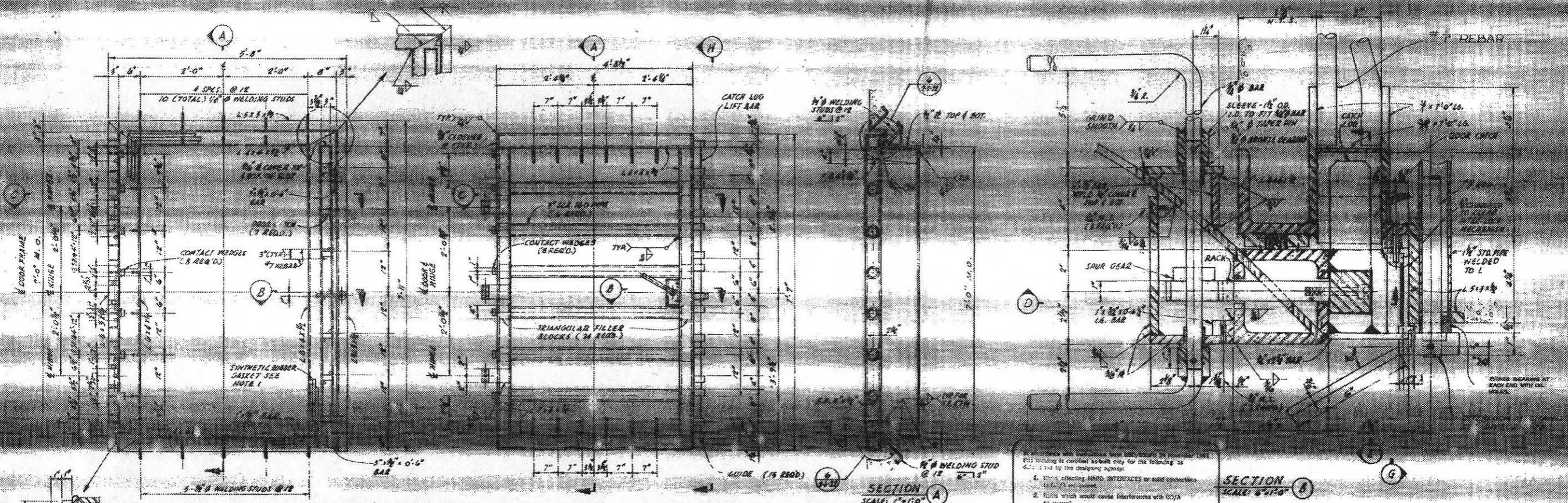
FOR SITES: HONOLULU AIRPORT



**DETAIL 3**  
**SCALE 1/2"=1'-0"**

**DETAIL 4**  
**SCALE 3/8"=1'-0"**

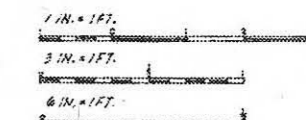
<b>TECHNICAL CORPORATION</b> 1234 5th St. S.W. ALBUQUERQUE, N.M. 87102		DEPARTMENT OF THE AIR FORCE AIR FORCE ENGINEERING CENTER WRIGHT-PATTERSON AFB, OHIO 45433	
<b>WS-10A-1 OPERATIONAL BASE</b> UNITARY SILO LANCH CONTROL CENTER		<b>BLAST DOOR DETAILS - SHT. 2</b>	
DATE: 12-22-60 DRAWN BY: J.E.S. CHECKED BY: [Signature] APPROVED BY: [Signature]	DATE: 12-22-60 ENGINEER: [Signature] 12 JAN 1960 556-2-5-22	SHEET NO.: 556-2-5-22 OF: 1-33	FIG. NO.: 556-2-5-22 OF: 1-33



THIS DRAWING IS TO BE CONSIDERED AS BUILT ONLY FOR THE FOLLOWING:

1. STAIN WELDED TO L.
2. STAIN WELDED TO L.
3. STAIN WELDED TO L.

- NOTE:
1. REBAR & WELDING STUDS SHALL BE SET IN PLACE WITH CEMENT TO FRAME WITH THERMOPLASTIC CEMENT PER MILITARY SPECIFICATION MIL-A-11548.
  2. LUBRICATE SLIDING SURFACES WITH GRAPHITE GREASE PER. FED. SPEC. VV-G-671.
  3. FOR ARGST. OF INTERLOCKING MECHANISM AND OTHER DETAILS SEE DWG. 2-S-22.
  4. FABRICATE ASSEMBLE AND FINISH SHOP.

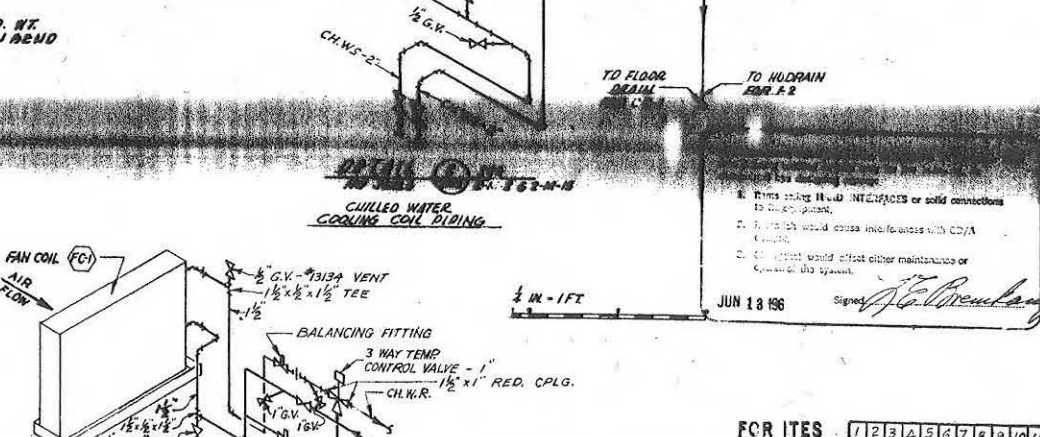
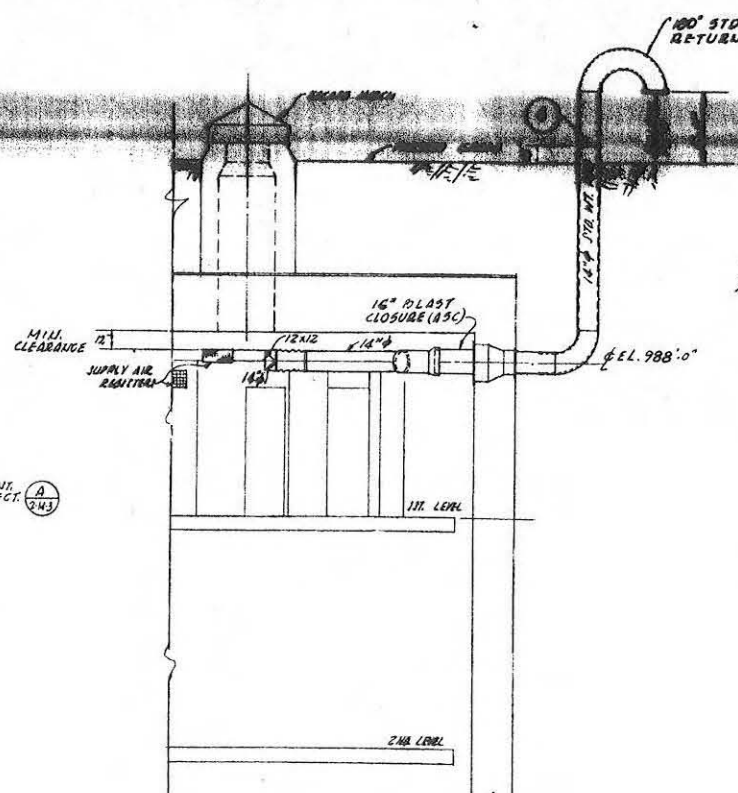
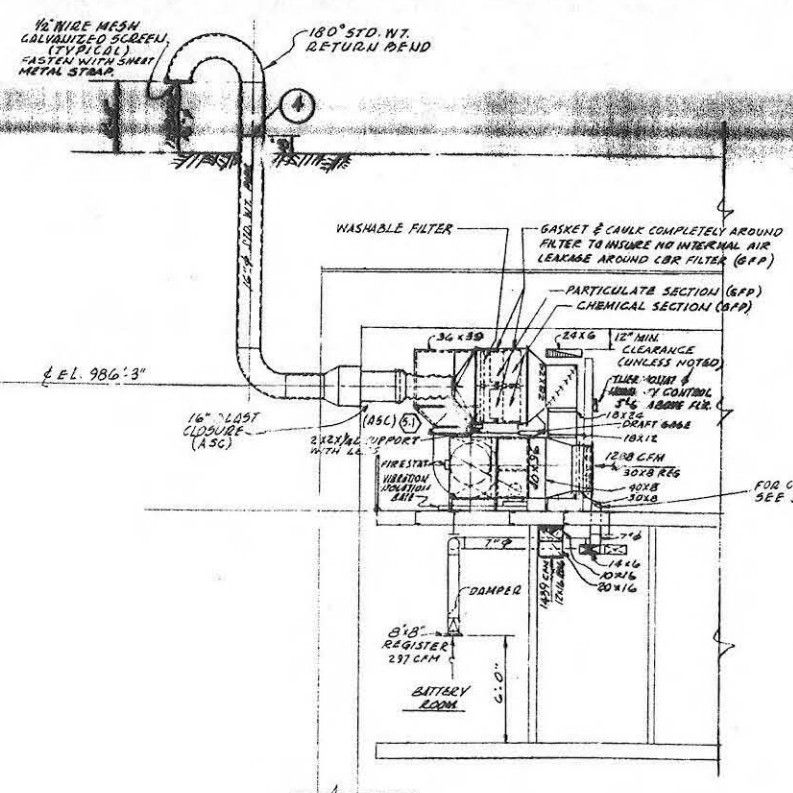
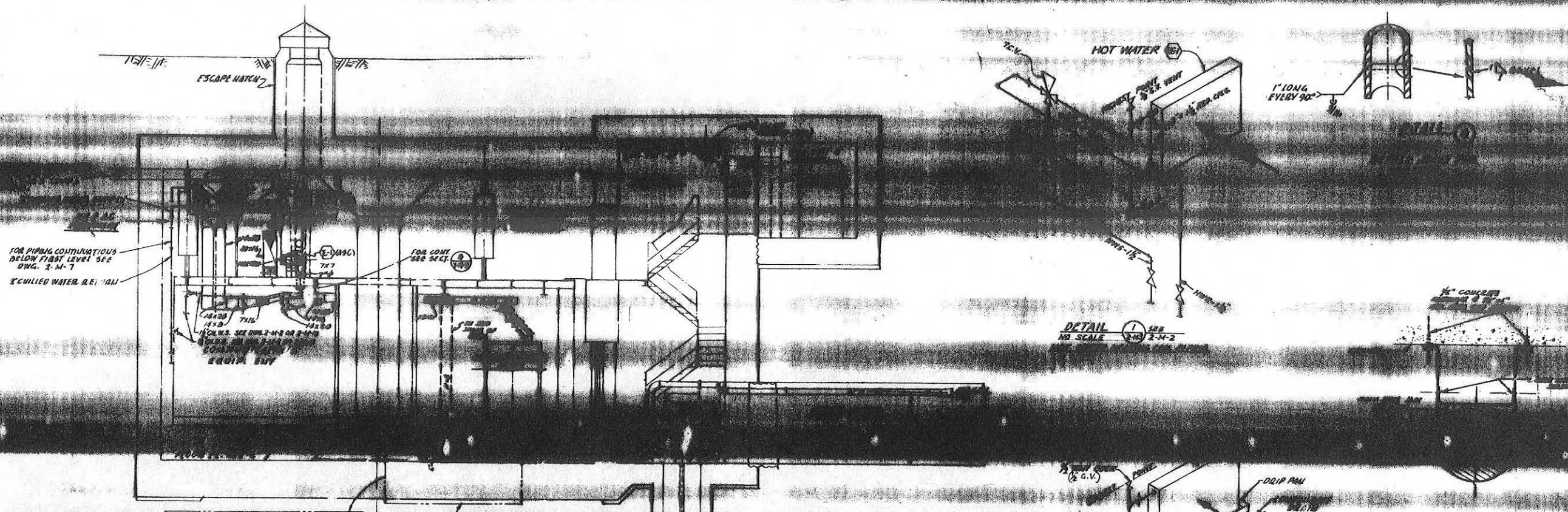


FOR SITES 112146071210112

1-29-63	OPERATIONS AS BUILT	30-18	R/S
1-12-62	REV. TO SHOW CONST. AS-BUILT CONDITION		CEBMD HR
5/3/60	ISSUED FOR PLATTSBURGH AFB		AFBMD W/P
REVISION	DATE	DESCRIPTION	AGENCY UNIT

<b>BECHTEL CORPORATION</b> ENGINEERS AND CONSTRUCTORS SAN FRANCISCO - LOS ANGELES - NEW YORK	<b>DEPARTMENT OF THE AIR FORCE</b> AIR FORCE BALLISTIC MISSILE DIVISION (ARMD) WRIGHT-PATTERSON AIR FORCE BASE OHIO	DATE: 1-13-60 DRAWN BY: JMS CHECKED BY: G.M.V. APPROVED BY: J.M.H. TITLE: 1-13-60 PROJECT: 1-13-60
		<b>WS-107A-1 OPERATIONAL BASE</b> UNITARY SILO LANCH CONTROL CENTER <b>BLAST DOOR DETAILS - SHT. 1</b>
13 JAN. 1960 356-72-9-8		1-19

THE MISSILE FISH OFFICE  
 OFFICE OF THE CHIEF OF ENGINEERS  
 APPROVED FOR CONSTRUCTION PLATTSBURGH  
 FOR THE COMPS OF INCLUDING  
 JAN 13 1960  
 [Signature]



FOR ITES 1 2 3 4 5 6 7 8 9 10 11

1. Items using H.L.D. INTERFACES or solid connections to the structure.

2. Items that would cause interference with COA Control.

3. CO Control would affect either maintenance or Control the system.

JUN 18 1960

REVISION	DATE	DESCRIPTION	BY	CHK
1-29-63		OPERATIONAL AS BUILT		SATAF
1-19-62		REVISED TO SHOW CONSTRUCTION AS-BUILT CONDITION		CEBMCQ N.H.
3-3-61		REV. SEC. 7, 8, DET. 2, REFIN. 12, M-15, ADDED DETAIL 15		AFBMD G.H.
9-8-60		MODIFIED DUCTWORK TO CLEAR CAPITOL ON 1 <sup>ST</sup> LEVEL		AFBMD RTE
6-2-60		REVISED CBR FILTERS FROM ASC TO GFP DESIGNATION		AFBMD CI
5-2-60		ISSUED FOR PLATTSBURGH AFB		AFBMD UFF

**BECHTEL CORPORATION**  
ENGINEERS AND CONSTRUCTORS  
SAN FRANCISCO - LOS ANGELES - NEW YORK

**DEPARTMENT OF THE AIR FORCE**  
AIR FORCE BALLISTIC MISSILE DIVISION (ARDD)  
SANTA MONICA, CALIFORNIA

**WS-17 A-1 OPERATIONAL BASE**  
UNITARY SILO  
LAUCH CONTROL CENTER

H. V. I. A. C. SECTIONS & DETS.

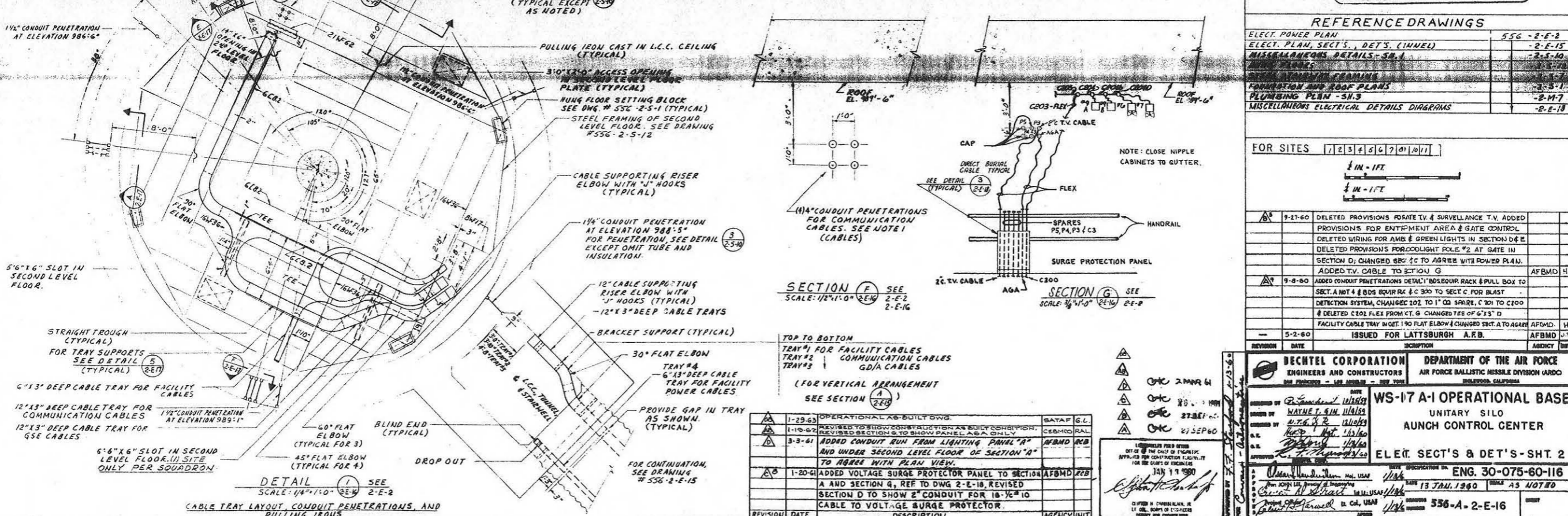
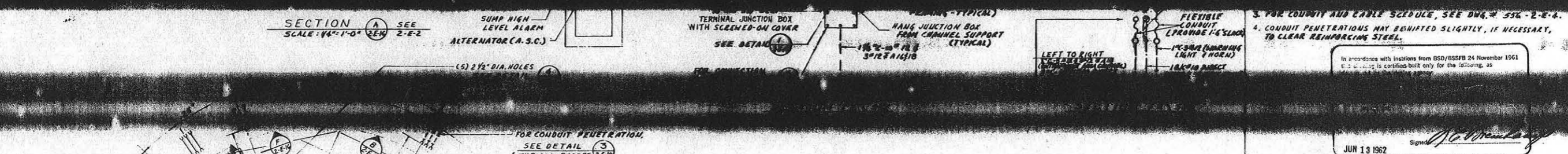
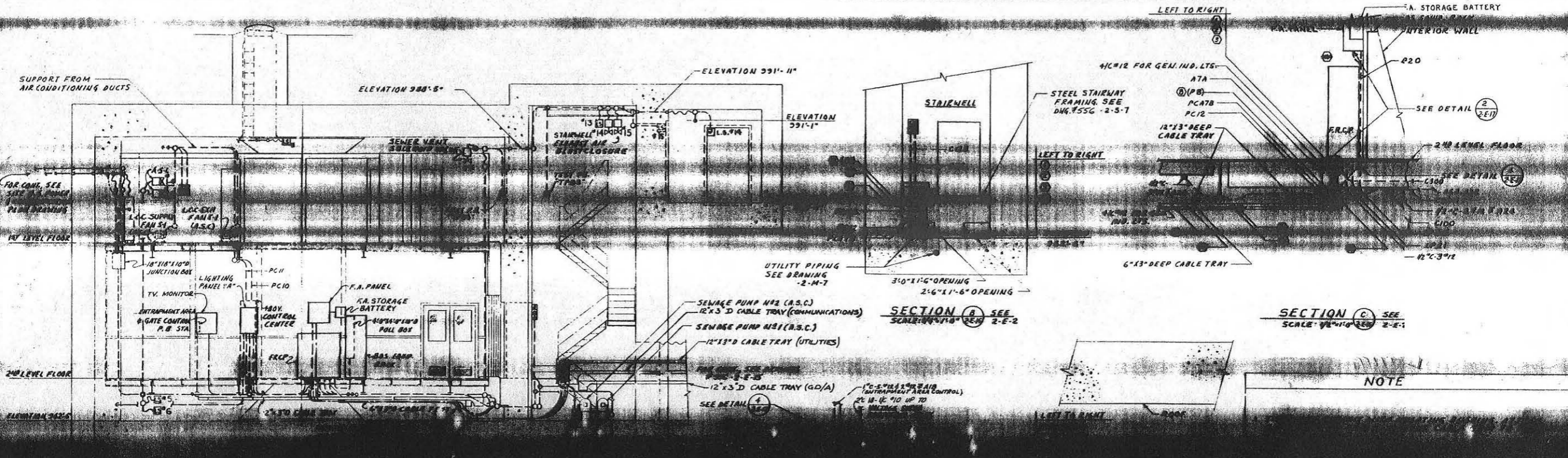
DATE: 10-28-59  
DRAWN BY: P.T. REG  
CHECKED BY: HGH  
APPROVED BY: [Signature]  
DATE: 12-7-59

556-A-2-M-3

SECTION 102 102  
2-M-3 & 2-M-15

SECTION 102 102  
2-M-2

DETAIL 5 SEE  
NO SCALE 2-M-2



**NOTE**

3. FOR CONDUIT AND CABLE SCHEDULE, SEE DWG. # 556-2-E-4.

4. CONDUIT PENETRATIONS MAY BEWENT SLIGHTLY, IF NECESSARY, TO CLEAR REINFORCING STEEL.

In accordance with instructions from BSD/BSSFB 24 November 1961 U.S. CONSTRUCTION IS CERTIFIED BUILT ONLY FOR THE FOLLOWING, AS

Signed: *[Signature]*

JUN 13 1962

**REFERENCE DRAWINGS**

ELECT. POWER PLAN	556-2-E-2
ELECT. PLAN, SECT'S, DET'S (INCL)	2-E-15
MISCELLANEOUS DETAILS-SB.1	2-E-10
FOUNDATION AND ROOF PLANS	2-5-1
PLUMBING PLAN-SH.3	2-M-7
MISCELLANEOUS ELECTRICAL DETAILS DIAGRAMS	2-E-18

**FOR SITES** [ 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 ]

1/2 IN - 1 FT

1/4 IN - 1 FT

REVISION	DATE	DESCRIPTION	AGENCY UNIT
9-27-60		DELETED PROVISIONS FORATE IV. & SURVEILLANCE T.V. ADDED PROVISIONS FOR ENTRENCHMENT AREA & GATE CONTROL. DELETED WIRING FOR AMB & GREEN LIGHTS IN SECTION D & E. DELETED PROVISIONS FOR COOLIGHT POLE #2 AT GATE IN SECTION D; CHANGED SEC. #C TO AGREE WITH POWER PLAN. ADDED TV. CABLE TO SECTION G.	AFBMD H.
9-8-60		ADDED CONDUIT PENETRATIONS DETAIL "D" BOREHOLE RACK & PULL BOX TO SECT. A INT. # & BGS EQUIP RACK & C 300 TO SECT. C. FOR BLAST DETECTION SYSTEM, CHANGED 202 TO 1" OD SPARE, C 201 TO C100. # DELETED C202 FLEX FROM CT. G. CHANGED TEE OF G13" D FACILITY CABLE TRAY IN DET. 190 FLAT ELBOW & CHANGED SECT. A TO AGREE WITH POWER PLAN.	AFBMD H.
5-2-60		ISSUED FOR LATTISBURGH A.F.B.	AFBMD J.

**BECHTEL CORPORATION**  
ENGINEERS AND CONSTRUCTORS

**DEPARTMENT OF THE AIR FORCE**  
AIR FORCE BALLISTIC MISSILE DIVISION (AFCM)  
MILLBURN, CALIFORNIA

**WS-17 A-1 OPERATIONAL BASE**  
UNITARY SILO  
LAUNCH CONTROL CENTER

**ELECT. SECT'S & DET'S-SHT. 2**  
ENG. 30-075-60-116

DATE 13 JAN 1960

556-A-2-E-16

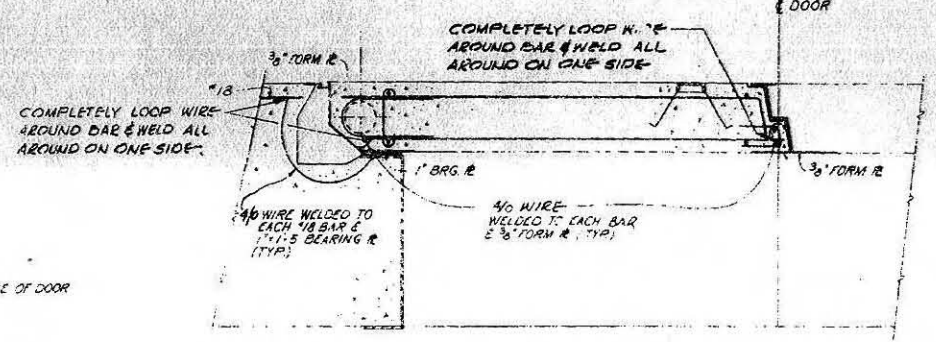
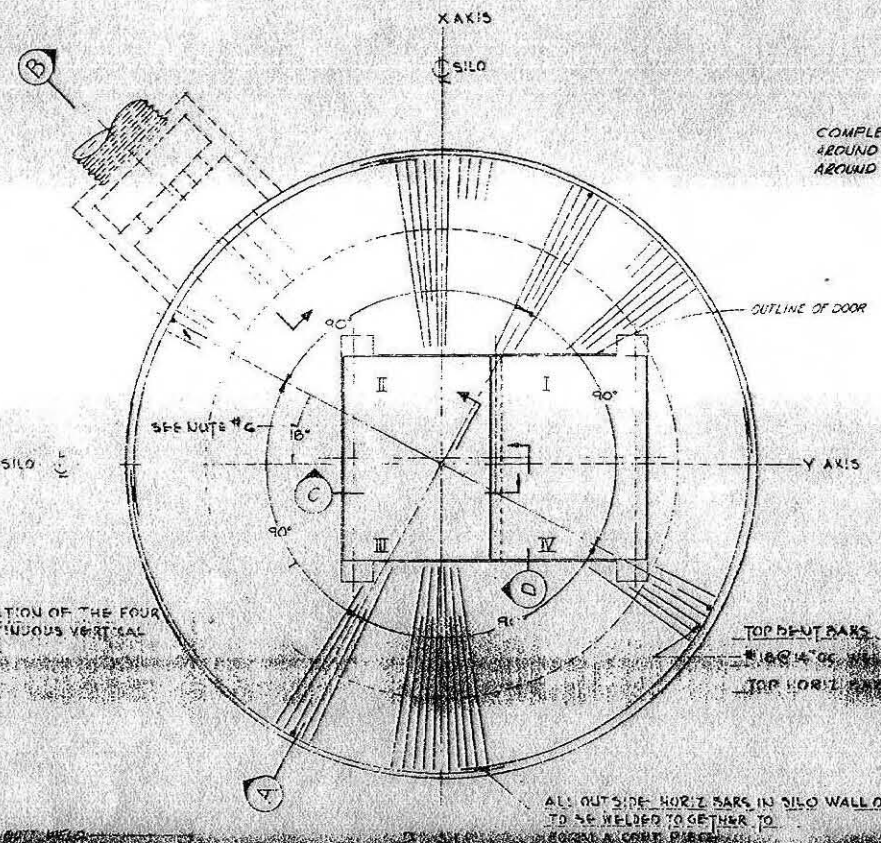
DATE 13 JAN 1960

SCALE AS NOTED

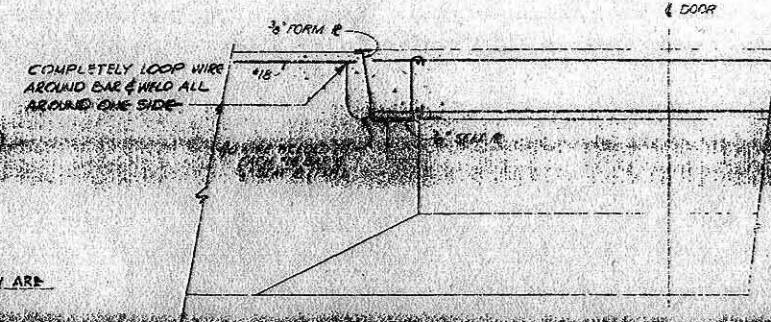
REVISION	DATE	DESCRIPTION	AGENCY UNIT
1-29-63		OPERATIONAL AS-BUILT DWG.	BATAP G.L.
1-19-62		REVISED TO SHOW CONSTRUCTION AS BUILT CONDITION. REVISED SECTION C TO SHOW PANEL AREA ONLY.	CEMCO RAL
3-3-61		ADDED CONDUIT RUN FROM LIGHTING PANEL "A" AND UNDER SECOND LEVEL FLOOR OF SECTION "A" TO AGREE WITH PLAN VIEW.	AFBMD AFB
1-20-61		ADDED VOLTAGE SURGE PROTECTOR PANEL TO SECTION A AND SECTION G. REF TO DWG 2-E-18, REVISED SECTION D TO SHOW 2" CONDUIT FOR 18-1/2" 10 CABLE TO VOLTAGE SURGE PROTECTOR.	AFBMD ZFB



- NOTES:**
1. USE LOW HYDROGEN ELECTRODE SPIES AWS E6015, E6016 OR E7015, E7016. NO PREHEAT REQUIRED.
  2. HORIZONTAL OR VERTICAL BARS IN PARALLEL LAP SPLICE: THE BARS SECURELY TOGETHER, BRINGING THEM INTO CLOSE CONTACT. THE WELD METAL SHALL BE DEPOSITED ON ONLY ONE SIDE (IN A FLAT OR UPHILL POSITION) LAYING DOWN AS MUCH WELD METAL AS POSSIBLE IN A SINGLE PASS; MINIMUM LENGTH 2 INCHES.
  3. HORIZONTAL BARS TO FOUR VERTICAL CONTINUOUS BARS IN SILO WALL:  
WELD METAL SHALL BE DEPOSITED ON EITHER SIDE OF THE VERTICAL BAR AND ACROSS THE TOP OF EACH OUTSIDE HORIZONTAL BAR, MAKING AN PC OF ABOUT 180°. THE ELECTRODE SHALL BE MANIPULATED IN SUCH A WAY TO DIRECT THE HEAT TO THE VERTICAL BAR AS MUCH AS POSSIBLE AND TO AVOID UNDERCUTTING OF THE JOINT.
  4. SILO CAP:  
THE SPLICE WELD OF THE #18 BARS SHALL BE FULL PENETRATION AS SHOWN IN THE SPECIFICATIONS AND NO FURTHER WELD IS REQUIRED.
  5. TUNNEL VESTIBULE:  
CONNECTION OF VESTIBULE JOELS TO OUTSIDE HORIZONTAL SILO WALL BARS TO BE AS IN DET #3. THE GROUND WIRE CONNECTIONS SHALL BE AS SHOWN IN THE SPECIFICATIONS.
  6. FROM SILO CAP TO SILO OVERHEAD DOOR & FROM DOOR LEAF TO DOOR LEAF:  
SECURELY WRAP WIRE AROUND #8 OR #14 BARS FOR COMPLETE CONTACT. WELD METAL SHALL BE DEPOSITED ON ONE SIDE OF WIRE IN SUCH A WAY AS TO DIRECT THE HEAT TO THE LARGER BARS AS MUCH AS POSSIBLE.

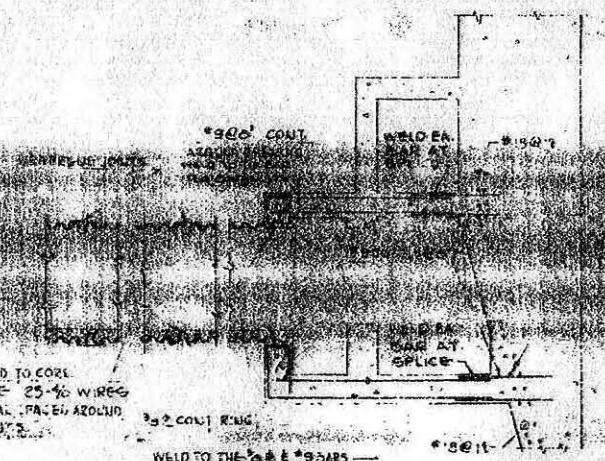


SECTION 1  
NO SCALE



- NOTES:**
1. WELD ONE OF THE VERTICAL BARS TO EACH OF THE VERTICAL BARS AT THE TOP OF SILO WALL.
  2. WELD EACH 40% OF OUTSIDE BAR TO THE FOUR CONTINUOUS VERTICAL BARS.
  3. EACH VERTICAL BARS AT TOP OF SILO TO BE WELDED TO THE TOP HORIZ. OUTSIDE BAR.
  4. FOR CONSTRUCTION CONVENIENCE, BARS IN EITHER THE INNER OR OUTER FACE OF THE SILO WALL MAY BE USED TO JOIN THE OTHER BARS.
  5. OTHER LOCATIONS FOR VERTICAL BARS AS SHOWN ON PLAN VIEW, MAY BE USED PROVIDED BARS ARE PLACED IN 4 QUADRANTS, 90° APART.

SECTION 2  
NO SCALE



SECTION 3  
NO SCALE

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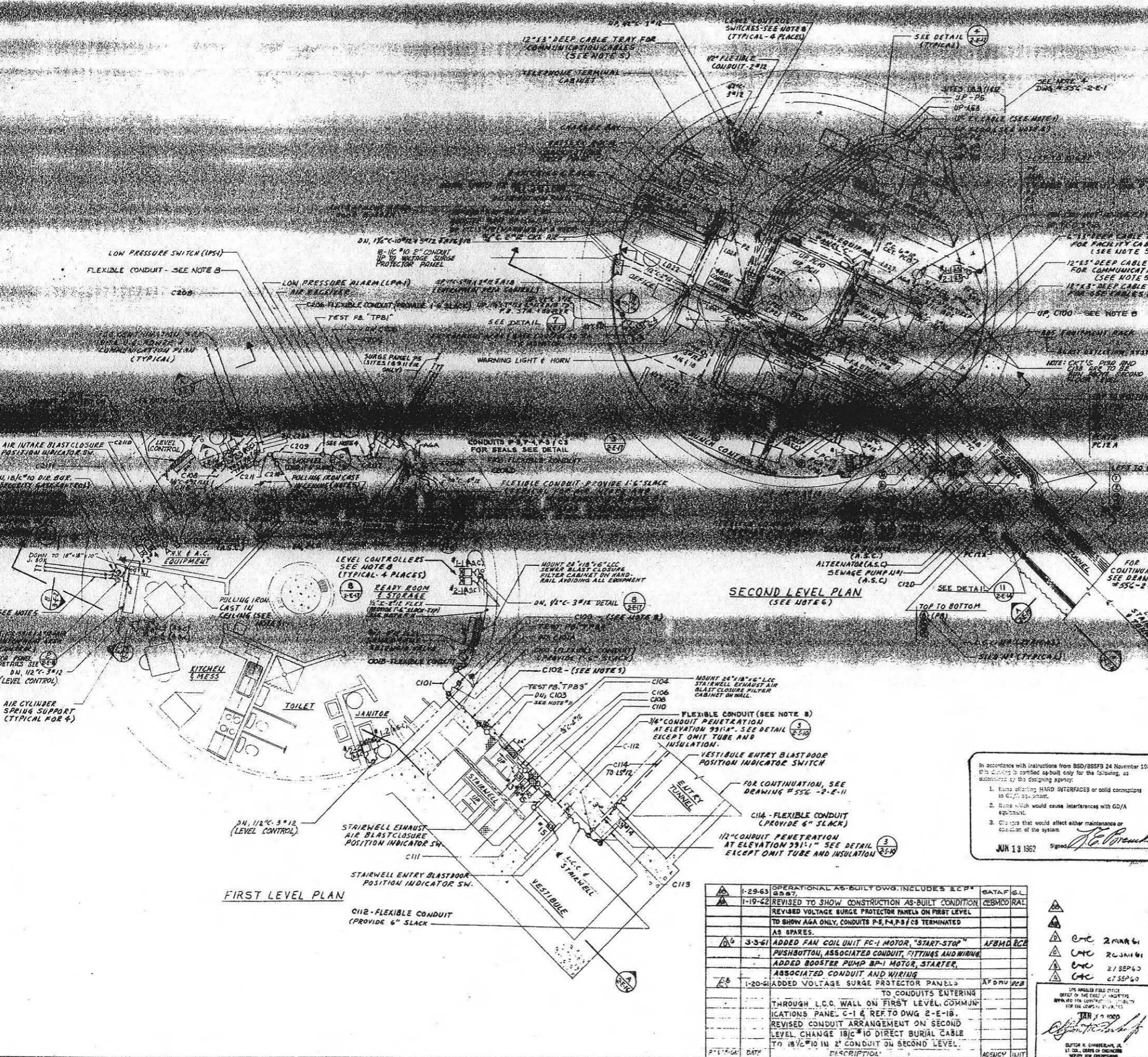
1. Items affecting the interfaces or solid connections to other equipment.
2. Items which will cause interference with other equipment.
3. Changes that will affect other maintenance or operation of the unit.

JUN 13 1962

<b>GENERAL INFORMATION</b> PROJECT: WS-17 A-1 OPERATIONAL BASE UNITARY SILO LAUNCHING SILO E.N. PULSE SCREEN	
DESIGNED BY: E. MYERS 2-15-59 CHECKED BY: E. CURTIS 2-15-59 DRAWN BY: J. H. HARRIS 2-11-59 SCALE: AS SHOWN DATE: 2-11-59	DRAWN BY: J. H. HARRIS 2-11-59 SCALE: AS SHOWN DATE: 2-11-59
TITLE: WS-17 A-1 OPERATIONAL BASE UNITARY SILO LAUNCHING SILO E.N. PULSE SCREEN	
DRAWN BY: J. H. HARRIS 2-11-59 SCALE: AS SHOWN DATE: 2-11-59	

REVISION NOTES

- (a) CHANGED GATE TV MONITOR & BATTERY CABLE TO TV MONITOR & T.V. CABLE. REVISED ROUTING OF T.V. CABLE.
- (b) CHANGED SECURITY GATE CONTROL TO ENTRANCE AREA. GATE CONTROL P.B. 850.
- (c) DELETED PROVISIONS FOR SURVEILLANCE TV PLACEMENT AT GATE & WIRING FOR NUMBER 2 WIRING LIGHTS.
- (d) REVISED GATE CONTROL WIRING.
- (e) ADDED WIRING FOR ENTRANCE AREA CONTROL.



**NOTE**

I. WIRING FOR TV CAMERA TO BE CLUSED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION.

II. GROUND FILTER CABINET TO STRUCTURAL STEEL WITH #6 BARE COPPER STRANDED GROUND W.E.

III. PULLING IRON EAST IN L.C.C. WALL UNDER SECOND LEVEL FLOOR, SEE DETAIL 1, DRAWING 556-2-E-16.

IV. UNLESS OTHERWISE NOTED, ALL CONDUIT SHALL BE RIGID AND SHALL BE RUN UNDER SECOND LEVEL FLOOR, AND SHALL BE RUN EAST IN L.C.C. WALL UNDER SECOND LEVEL FLOOR, AND SHALL BE RUN EAST IN L.C.C. WALL UNDER SECOND LEVEL FLOOR.

**REFERENCE DRAWINGS**

ELECT. SINGLE LINE DIAG.	556-2-E-1
ELECT. PLAN, SECT'S, DET'S (TUNNEL)	2-E-15
ELECT. SECT'S AND DET'S - SHY. 2	2-E-16

**FOR SITES**

REVISION	DATE	DESCRIPTION	AGENCY	INT.
9-27-60		SEE REVISION NOTE 1	AFBMD	TH
9-8-60		CHANGED HP OF SEWAGE PUMPS NO 1 & 2 FROM 3 TO 5 HP DELETED PROVISIONS FOR BLAST LIGHT DETECTOR ON 1st & 2nd LEVEL PLANS. ADD 4" O.D. X 10" D PULL BOX BBS EQUIP. RACK, LD 27 & C 30 TO 2nd LEVEL PLAN FOR BLAST DETECTION SYSTEM. CHANGED "TEE" OF 6" X 3" D FACILITY CABLE TRAY TO 90° ELBOW TO AGREE WITH DETAIL 1 DWG. 2-E-16	AFBMD	AFR
C-2-60		ISSUED FOR ATTSBURGH A.F.B.	AFBMD	

In accordance with instructions from BSD/BSSFB 24 November 1954 this drawing is certified as-built only for the following, as determined by the designing agency:

- Items affecting HARD INTERFACES or cold connections to G.O.A. equipment.
- Items which would cause interferences with G.O.A. equipment.
- Items that would affect either maintenance or operation of the system.

JUN 13 1962

DATE	DESCRIPTION	AGENCY	INT.
1-29-63	OPERATIONAL AS-BUILT DWG. INCLUDES ECP 0587.	SATAF	GL
1-19-62	REVISED TO SHOW CONSTRUCTION AS-BUILT CONDITION. REVISED VOLTAGE SURGE PROTECTOR PANELS ON FIRST LEVEL TO SHOW AGA ONLY, CONDUITS P-5, F-4, P-3/C8 TERMINATED AS SPARES.	CEBMD	RAL
3-3-61	ADDED FAN COIL UNIT FC-1 MOTOR, "START-STOP" PUSHBUTTON, ASSOCIATED CONDUIT, FITTINGS AND WIRING. ADDED BOOSTER PUMP BP-1 MOTOR, STARTER, ASSOCIATED CONDUIT AND WIRING.	AFBMD	RCE
1-20-61	ADDED VOLTAGE SURGE PROTECTOR PANELS TO CONDUITS ENTERING THROUGH L.C.C. WALL ON FIRST LEVEL COMMUNICATIONS PANEL C-1 & REF TO DWG 2-E-18. REVISED CONDUIT ARRANGEMENT ON SECOND LEVEL. CHANGE 18" X 10" DIRECT BURIAL CABLE TO 18" X 10" IN 2" CONDUIT ON SECOND LEVEL.	AFBMD	ROB

**BECHTEL CORPORATION**  
ENGINEERS AND CONSTRUCTORS  
SAN FRANCISCO - LOS ANGELES - NEW YORK

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

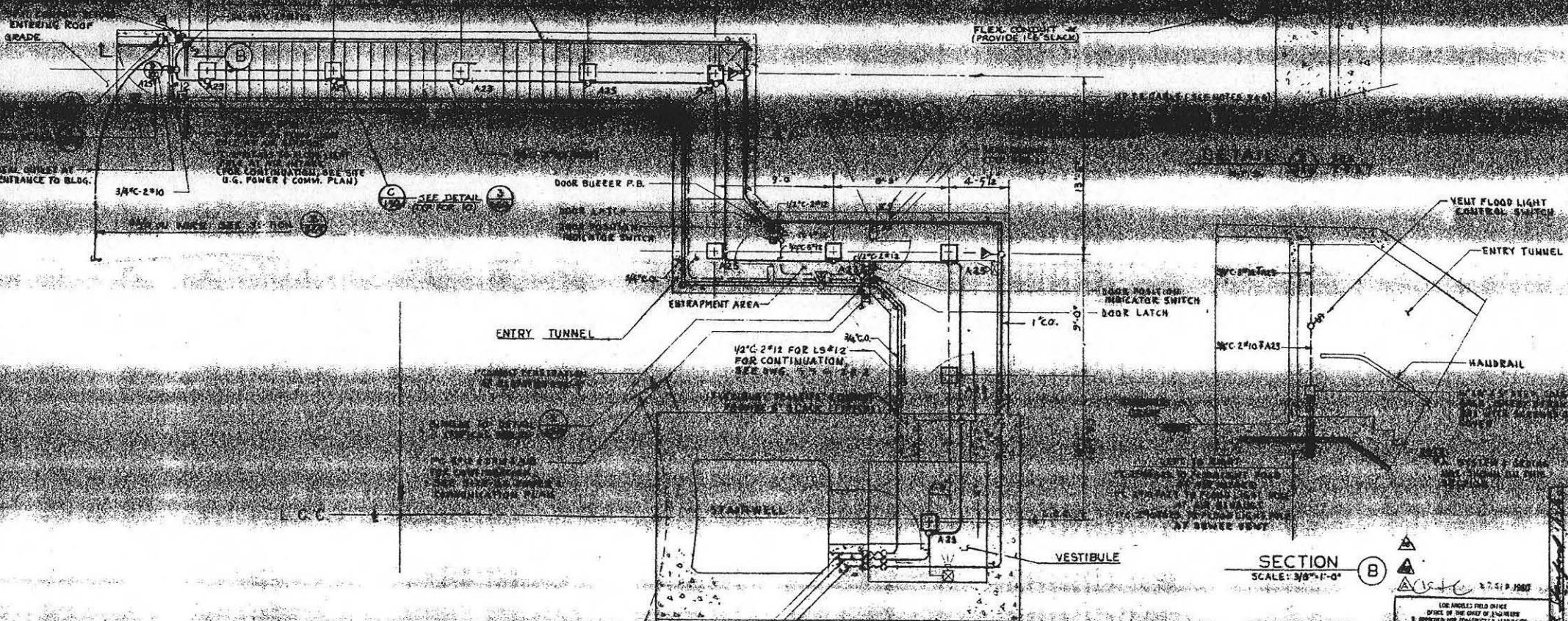
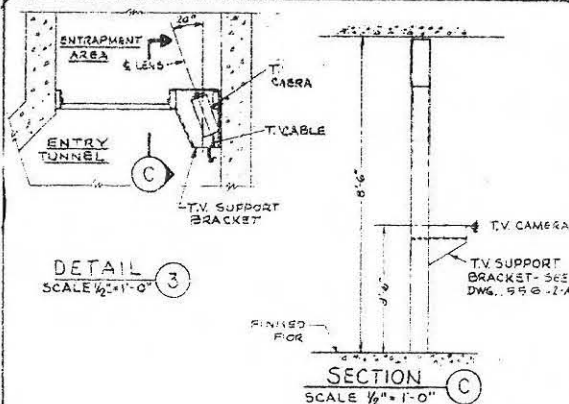
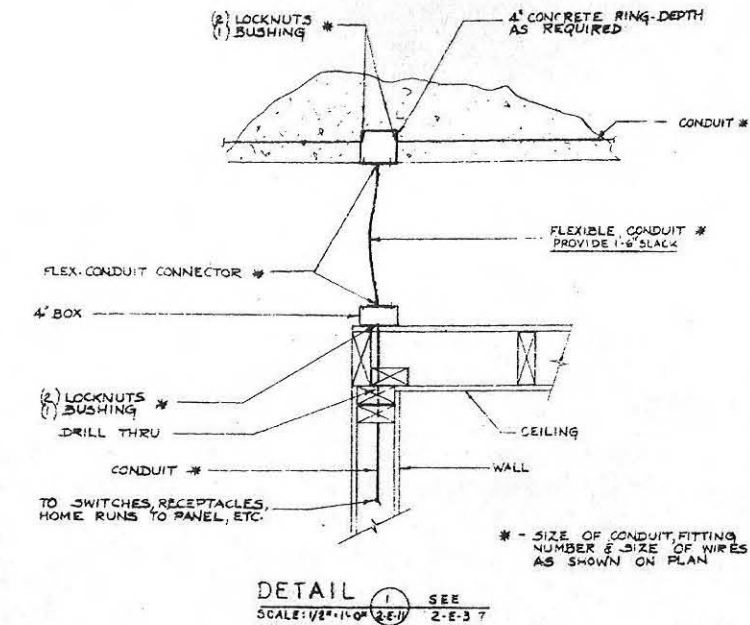
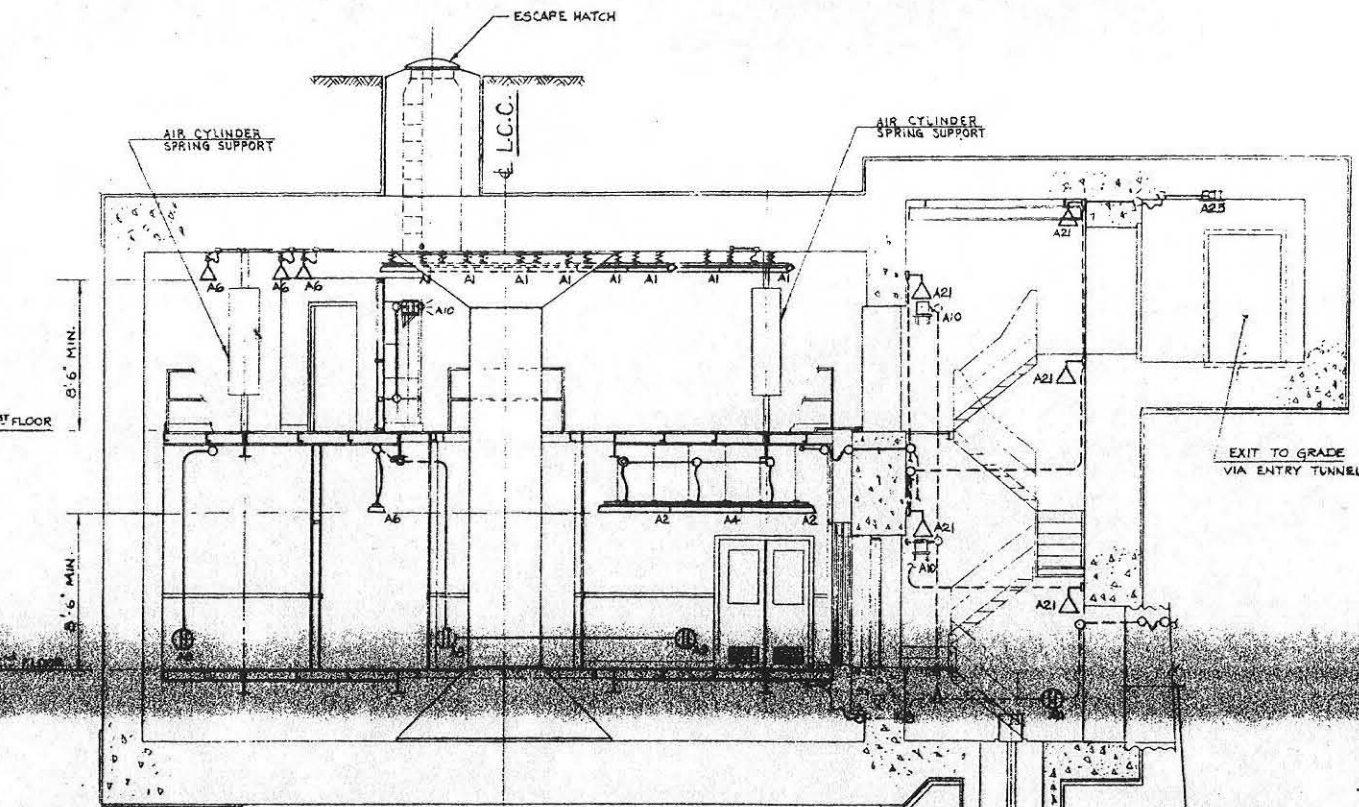
**WS-10 A-1 OPERATIONAL BASE**  
UNITARY SILO  
LUNCH CONTROL CENTER

**ELECT. POWER PLAN**

ENGINEERING NO. **ENG. 30-075-60-116**

DATE **19 JAN. 1960** SCALE **1/4" = 1'-0"**

PROJECT NO. **556-A-2-E-2** SHEET **1-58**



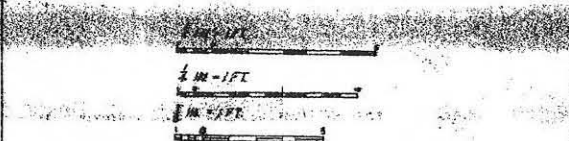
- NOTES**
- FOR SYMBOL LIST, LIGHTING FIXTURE SCHEDULE SEE DWG. 550-2-E-12
  - ALL CONDUIT RUNS SHOWN ARE DIAGRAMMATIC ONLY. ROUTES MAY BE ALTERED TO SUIT FIELD CONDITIONS.
  - TERMINATE CONDUIT WITH INSULATING BUSHING. ATTACH CABLE GRIP TO CABLE AND HANG CABLE GRIP TO TERMINATED CONDUIT. PROVIDE SLACK.

In accordance with fractions from BSD/SSSFB 24 November 1951 this drawing is used as-built only for the following, as indicated by a listing symbol:

1. Where shown in 1:1 INTERFACES or solid connections

**REFERENCE DRAWINGS**

ENTRY TUNNEL	2-A-5
...	...



FOR SITES 1 2 3 4 5 6 7 8 9 10 11 12

**SECTION B**  
SCALE: 3/8" = 1'-0"

LOS ANGELES FIELD OFFICE  
OFFICE OF THE CHIEF OF ENGINEERS  
& SPECIAL USE CONSTRUCTION'S MAINTENANCE  
AND THE CHIEF OF PROJECTS

JAN 13 1960

U.S. DEPARTMENT OF DEFENSE  
AIR FORCE

**PROJECT INFORMATION**

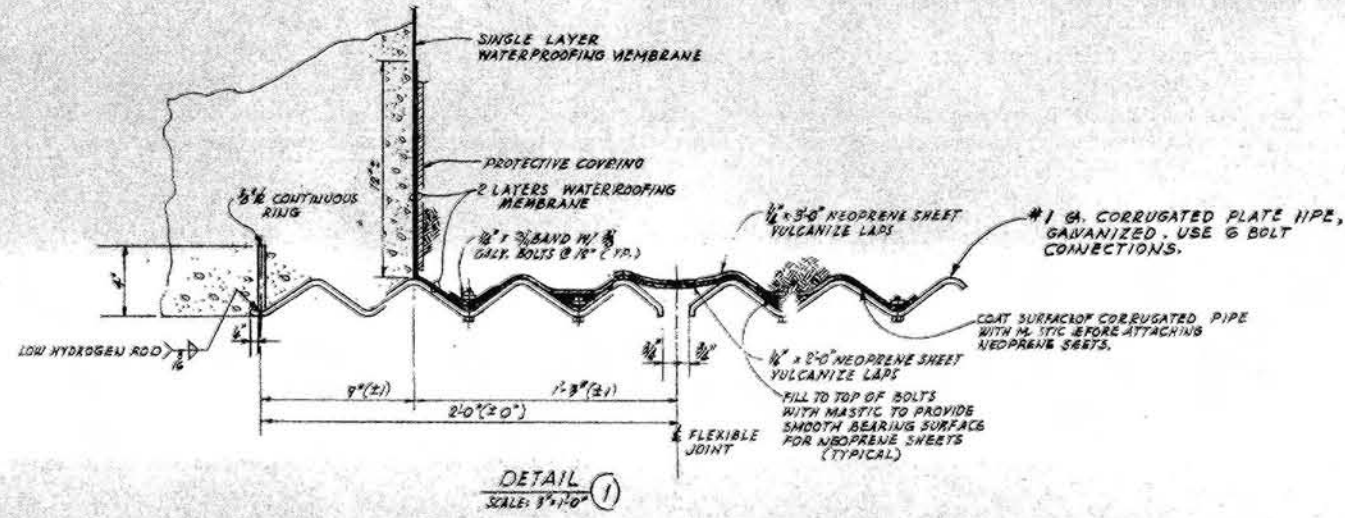
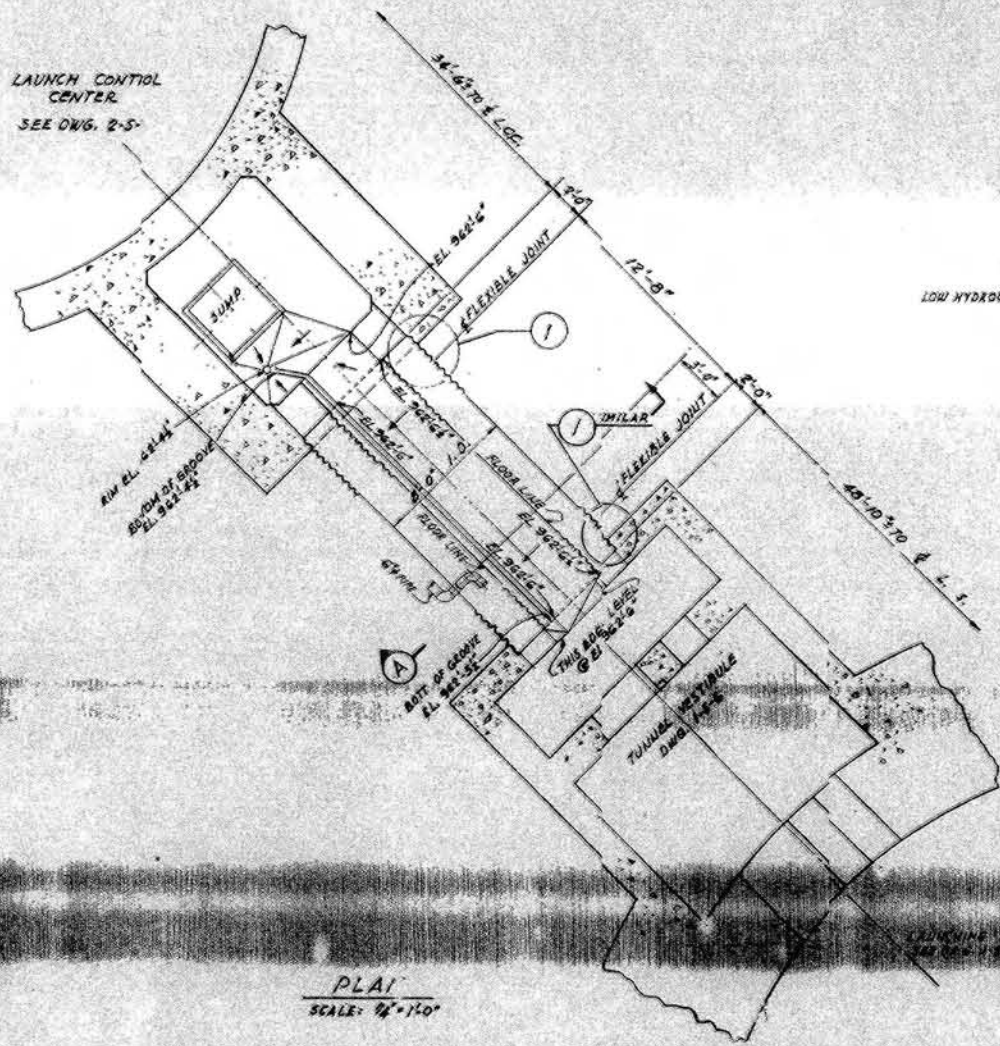
PROJECT: **WS-17 A-1 OPERATIONAL BASE**  
UNITARY SILO  
BLUNCH CONTROL CENTER

ELCT. SECT'S. & DET'S. - SHT. 1

DATE: 10/17/59  
DRAWN BY: [Signature]  
CHECKED BY: [Signature]  
DATE: 10/17/59

15 JAN 1960

550-2-E-11



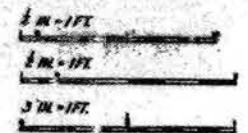
**NOTES**

- 1. ALL EXTERIOR SURFACES OF CORRUGATED PIPE TUNNEL SHALL BE COATED WITH MASTIC BEFORE BACKFILLING.
- 2. FOR SPECIAL BEDDING REQUIREMENTS SEE CIVIL DWG.

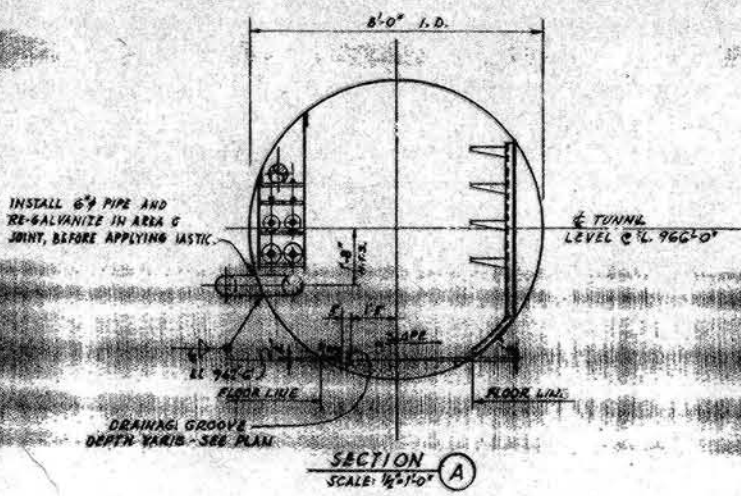
In accordance with instructions from DSD/DESD of November 1961  
and should be certified suitable only for the following, as  
stipulated by the drawing agency:

1. This is a starting point. INTERFACES or cold connections to the equipment.
2. Items which would create interference with CD/A.

JUN 1962



FOR SITES 1 2 3 4 6 6 7 8 9 11 2



NO.	DESCRIPTION	DATE
1	ISSUED	10-1-61
2	REVISED	10-1-61
3	REVISED	10-1-61
4	REVISED	10-1-61
5	REVISED	10-1-61
6	REVISED	10-1-61
7	REVISED	10-1-61
8	REVISED	10-1-61
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10	REVISED	10-1-61
11	REVISED	10-1-61
12	REVISED	10-1-61

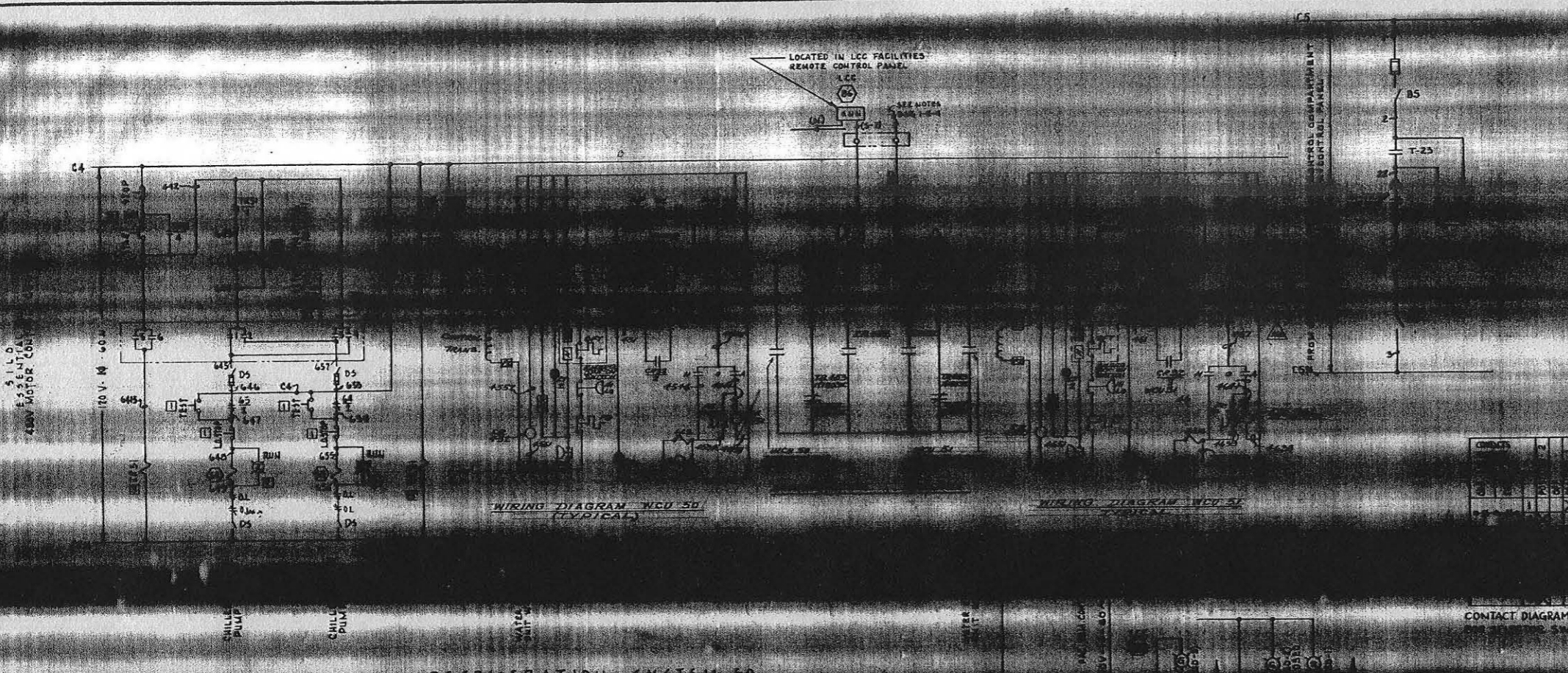
**SECRET** CORPORATION  
DEPARTMENT OF THE AIR FORCE  
AIR FORCE BULLETIN BOARD SYSTEMS  
SECURITY CLASSIFICATION

**WS-107 A-1 OPERATIONAL BASE**  
UNITARY SILO  
LAUNCH CONTROL CENTER  
UTILITY TUNNEL

DESIGNED BY	DATE	APPROVED BY	DATE
...	...	...	...
...	...	...	...

JAN 13 1962  
556-2-5-20  
1-52





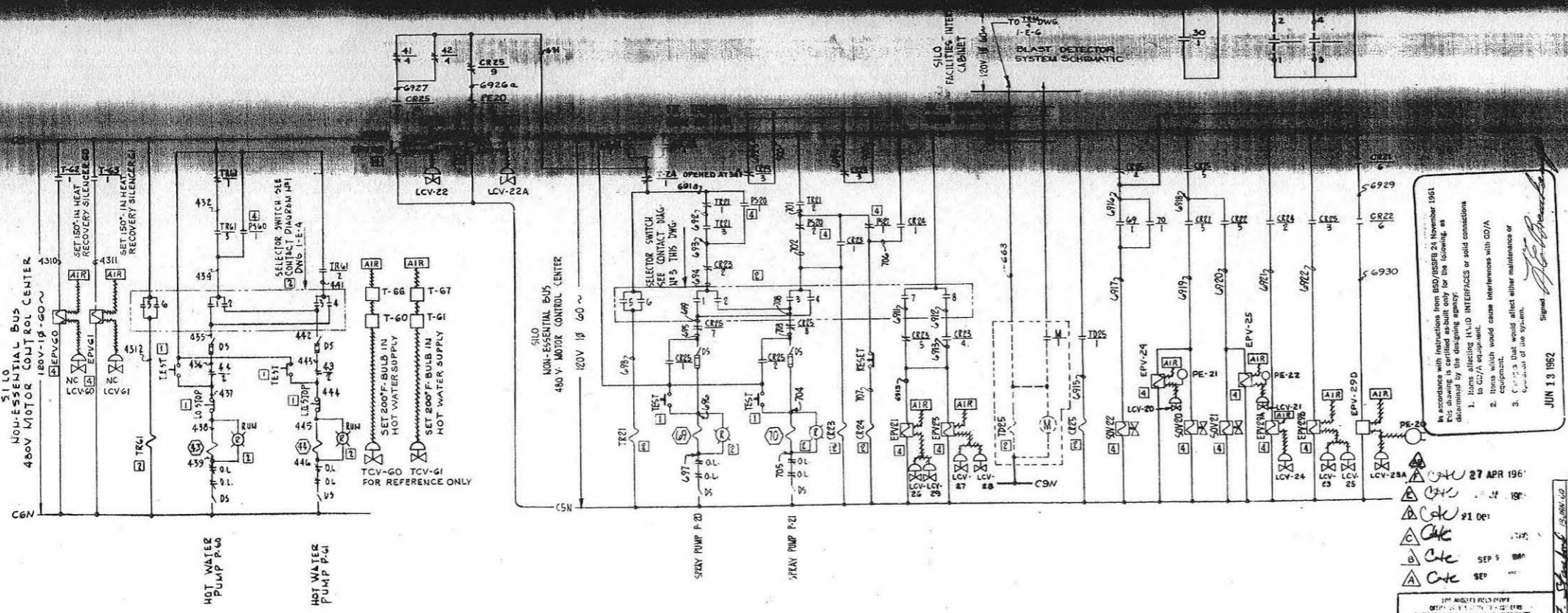
CONDUCT	1	2	3	4	5
1					
2					
3					
4					
5					

SYMBOLS - DEVICE LOCATIONS

- DEVICE LOCATED AT WCU
- DEVICE LOCATED AT UTILITIES

CONTACT DIAGRAM WCU 3

NOTES:



In accordance with instructions from ASD/BSR/24 November 1961 this drawing is certified as-built only for the following, as determined by the dispatching agency:

- Items affecting ILLUD INTERFACES or solid connections to O2/A equipment.
- Items which would cause interference with O2/A equipment.
- Equipment which would affect either maintenance or operation of the system.

Signature: *[Handwritten Signature]*  
JUN 13 1962

REV. NO.	DATE	DESCRIPTION
1-M-84		REV. & A.C. LEGEND & SYMBOLS
1-M-90		REV. & A.C. COOLING & HW WATER FLOW DIAGRAM
1-M-97		REV. & A.C. CHILLED WATER FLOW DIAGRAM
1-M-86		REV. & A.C. CONDITIONING FLOW DIAGRAM
1-E-60		ELECTRICAL SYMBOLS, FIXTURE SCHED., GENERAL NOTES & ABBREVIATIONS
1-E-14		FACILITIES TERMINAL CINET #12 WIRING DIAGRAM
1-E-19		FACILITIES TERMINAL CINET #11 WIRING DIAGRAM

REV. NO.	DATE	DESCRIPTION	SAC	RF
1-E-2		ESSENTIAL BUS-POWER SINGLE LINE DIAGRAM		
3-23-60		REVISED PROJECT HOT BATH		
1-29-60		OPERATIONAL AS BUILT DRAWING INCLUDES SCR'S # 6507, 6291, 6676, 6729, CHANGED TR4 TO TR4A.	SATAP	R.L.
1-19-60		REVISED TO SHOW CONSTRUCTION AS BUILT CONDITION.	GEDMCD	A.S.
4-27-61		ADDED N.C. CONTACT (25/9 AND WIRE 6926a, REWIRED CONTACT C21/G.	AFSC	W.B.
1-20-61		ADDED CONTROL RELAY SCHEDULE AND RELAYS CR 451, 452, 453, 461, 462, 463. REMOVED DPR 52 & PCV 50. REVISED INTERL WIRING OF WATER CHILLER UNITS. WCU-5451.	AFBMD	W.B.
10-21-60		DELETED ANNUNCIATOR FOR SPRAY PUMP AND SETTLING TANK MALFUNCTION	AFBMD	W.B.
10-7-60		DELETED MAINTAINED CONTACT ON-OFF SWITCHES, EPV-50, SOV-50, LCV-50, LCV, LIMIT SWITCHES LS7, LS8 & RED INDICATOR LIGHT ABOVE GRADE.	AFBMD	W.B.
9-8-60		REV. SUPPLY AIR SYSTEM TO RING A CONTROLS. ADDED AIR PIPING DIAGRAM. ADDED BYICE LOCATIONS WHERE REMOVED.	AFBMD	W.B.
6-22-60		DELETED PNEUM. CONTROLS 0-50, DPR 512 T50 TO SYSTEM 50	AFBMD	W.B.
5-2-60		ISSUED FOR PITTSBURGH A.F.B.	AFBMD	W.B.

**BECHTEL CORPORATION** DEPARTMENT OF THE AIR FORCE  
ENGINEERS AND CONSTRUCTORS AIR FORCE BALLISTIC MISSILE DIVISION (ARDC)  
SAN FRANCISCO - LOS ANGELES - NEW YORK HOLLYWOOD, CALIFORNIA

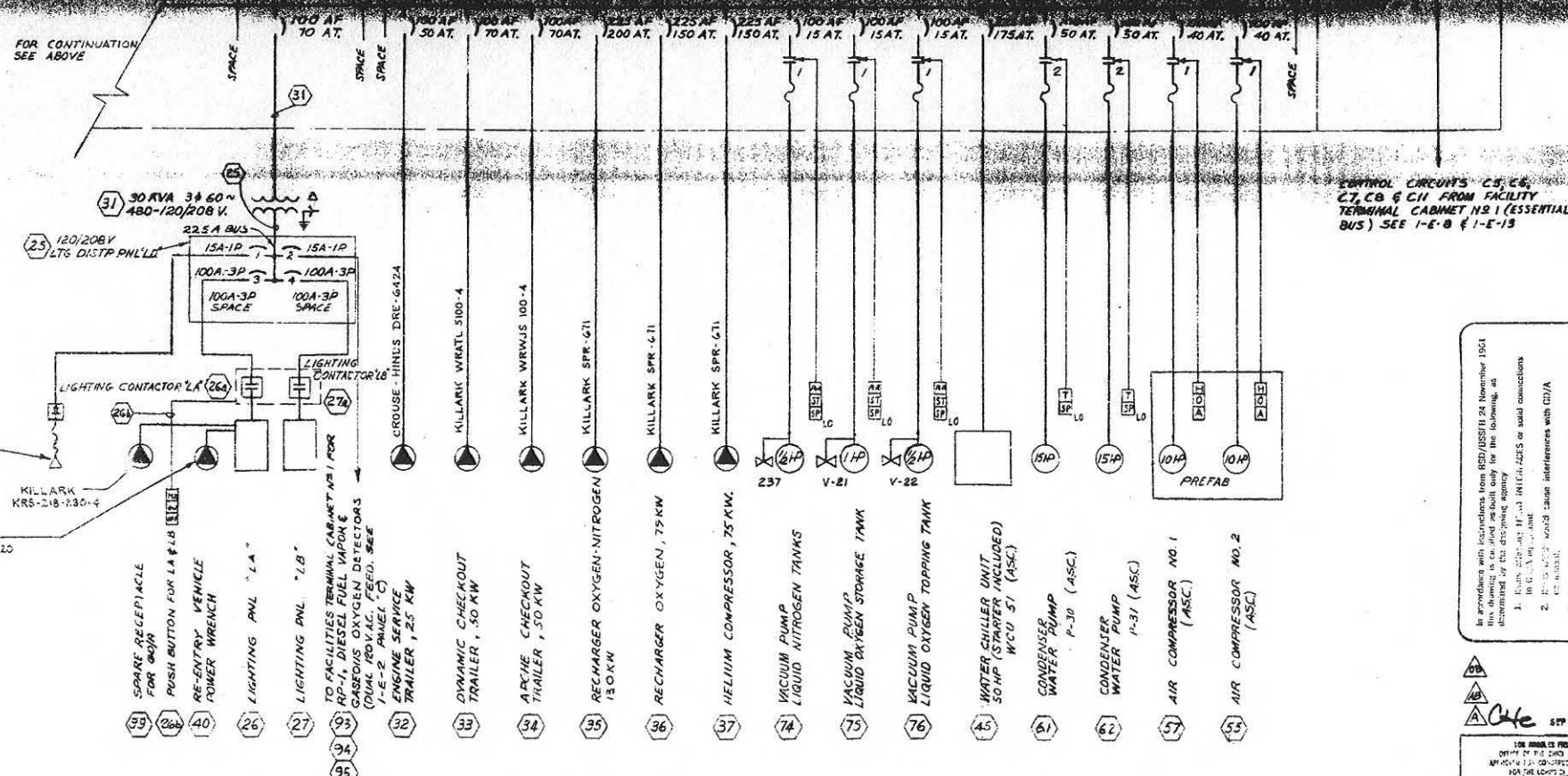
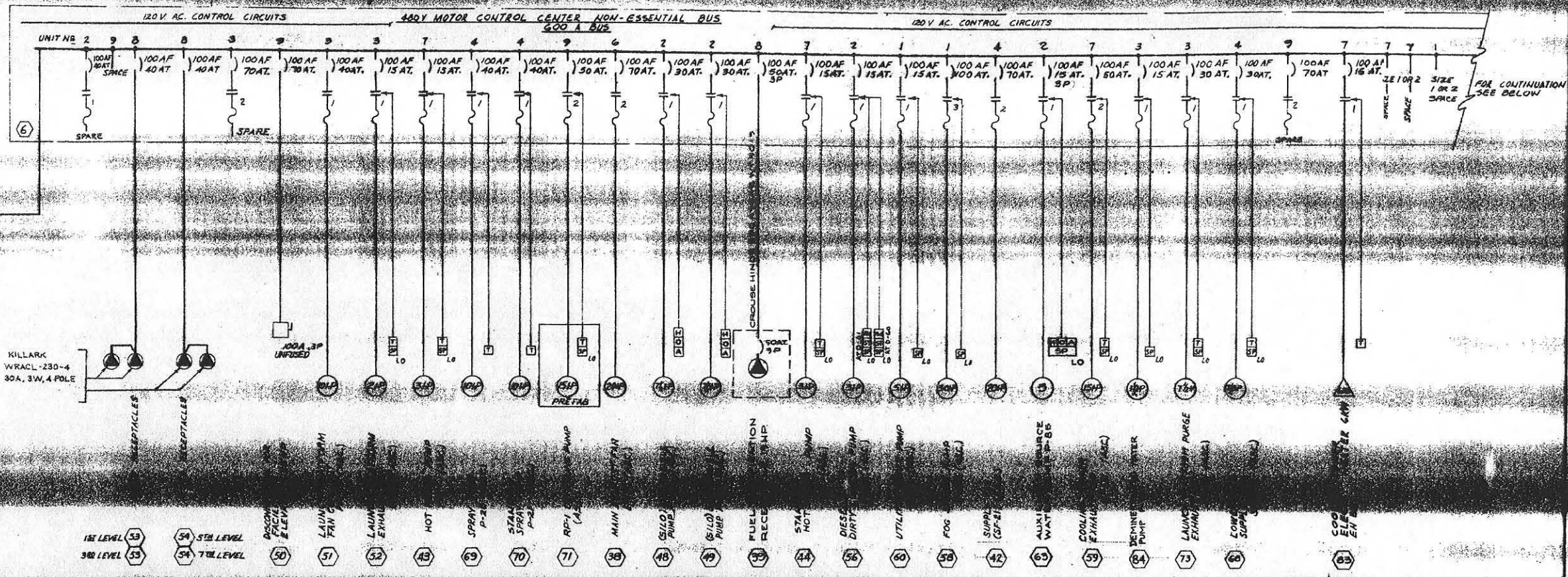
DESIGNED BY: *[Signature]* DATE: *[Date]*  
DRAWN BY: *[Signature]*  
CHECKED BY: *[Signature]*  
APPROVED BY: *[Signature]*

**WS-10'A-I OPERATIONAL BASE**  
UNITARY SILO  
LAUNCHING SILO  
CONTROL SCHEMATIC - HEATING,  
VENTILATING & A.C. - PART 2

ENG. 30-075-60-116  
13 JAN. 1960  
356-A-1-E-5  
2-88

DIESEL SYSTEM 60

SUPPLY AIR SYSTEM 20 (CONTINUED FROM DWG 1-E-4)



DRAWING NO.	TITLE
1-E-14	FACILITIES TERMINAL CABINET NO. 2 WIRING DIAGRAM
1-E-60	FLEC SYMBOLS, FACTIE SCHED. GENERAL NOTES & ABBR
1-E-4	CONTROL SCHEMATI HEATING VENT & AC PART 1
1-E-5	CONTROL SCHEMATI HEATING VENT & AC PART 2
1-E-6	CONTROL SCHEMATI ALARMS & MISC PART 1
1-E-7	CONTROL SCHEMATI ALARMS & MISC PART 2
1-E-8	ESSENTIAL MOTOR CONTROL CENTER WIRING PART 1
1-E-9	ESSENTIAL MOTOR CONTROL CENTER WIRING PART 2
1-E-10	ESSENTIAL MOTOR CONTROL CENTER WIRING PART 3
1-E-11	ESSENTIAL MOTOR CONTROL CENTER WIRING PART 4
1-E-12	WIRE AND CONDUIT SCHEDULE - PART 1
1-E-13	WIRE AND CONDUIT SCHEDULE - PART 2
1-E-2	ESSENTIAL BUS POWR-SINGLE LINE DIAGRAM

NOTES:

1. WIRING BETWEEN (ASC) ITEMS SHALL BE SUPPLIED & CONNECTED
2. ALL RECEPTACLES SHALL BE SPECIFIED OR EXACT EQUAL
3. ALL CIRCUIT BREAKERS SHALL BE 3 POLE UNLESS OTHERWISE NOTED

REVISION	DATE	DESCRIPTION	AGENCY INT.
1-29-63		OPERATIONAL AS BUILT DRANG INCLUDES ECP'S # 6453, SATAF R.L. 6242 R1, 6884	
4-10-62		REV TO SHOW CONSTRUCTION AS-BUILT CONDITION ADDED SPACES ON STING LINE DIAGRAM ITEMS 39, 34, 38, 36, 37, 39, 403 & 54 WERE 2-P RECEPTACLES. (CEB/MCO)	
9-8-60		CHANGED W.P. CIR. B.K.E. & PARTER SIZES; ADDED VALVES TO P&ID # 237, V-21, & V-22; ADDED EMS 260, 93, 94, & 95. CHANGED NOTE # 3.	
5-2-60		ISSUED FOR PLTSBURGH A.R.B.	AFBMD

CONTROL CIRCUITS C1, C2, C7, C8 & C11 FROM FACILITY TERMINAL CABINET NO. 1 (ESSENTIAL BUS) SEE 1-E-8 & 1-E-13

IN ACCORDANCE WITH INSTRUCTIONS FROM RFP/ISSUE 24 NOVEMBER 1961 THIS DRAWING IS TO BE BUILT ONLY FOR THE FOLLOWING, AS DETERMINED BY THE DESIGNING AGENCY:

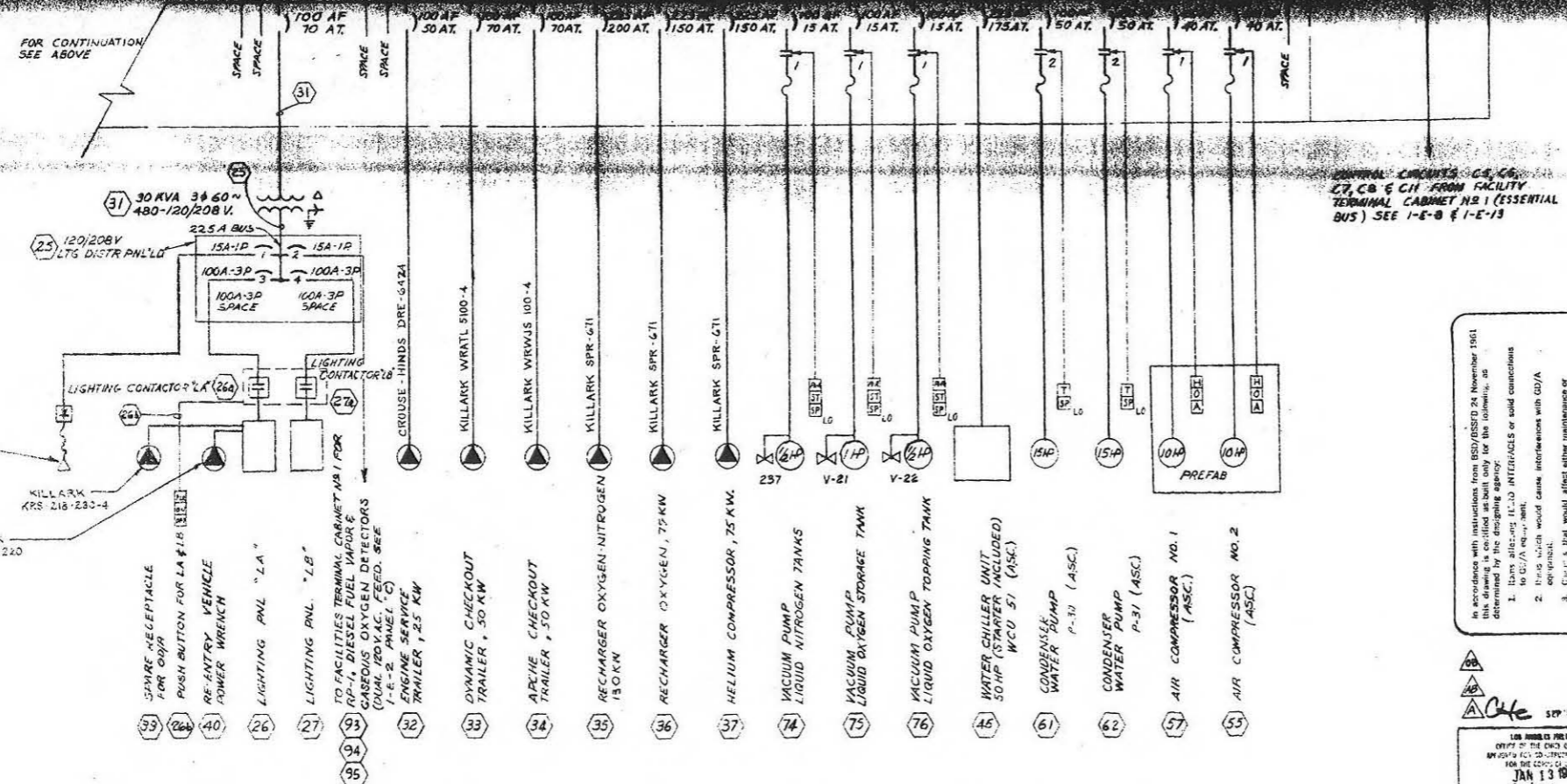
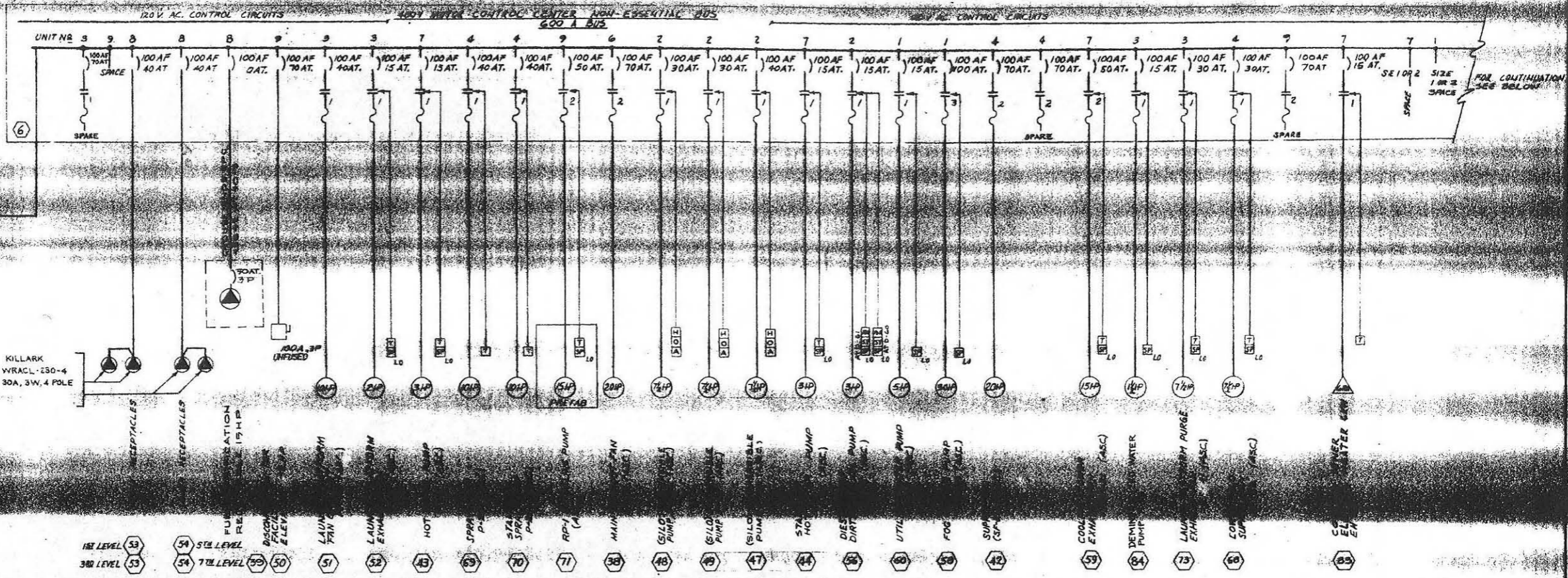
1. Items marked "ASC" shall include all cable and conduit connections.
2. Items marked "ASC" shall include all cable, conduit and conduit connections.
3. Items marked "ASC" shall include all cable, conduit and conduit connections.

JUN 13 1962

*[Signature]*

<b>BECHTEL CORPORATION</b> ENGINEERS AND CONSTRUCTORS SAN FRANCISCO - LOS ANGELES - NEW YORK		<b>DEPARTMENT OF THE AIR FORCE</b> AIR FORCE BALLISTIC MISSILE DIVISION (ARDC) HOLDFORD, CALIFORNIA	
DRAWN BY: <i>[Signature]</i> DATE: 14 DEC 59 CHECKED BY: <i>[Signature]</i> DATE: 14 DEC 59 APPR'D BY: <i>[Signature]</i> DATE: 13 DEC 60		<b>WS-107A-1 OPERATIONAL BASE</b> UNITARY SILO LAUNCHING SILO NON-ESSENTIAL BUS POWR - SINGLE LINE DIAGRAM	
PROJECT NO. 33-1160-100 DRAWING NO. <b>ENG. 30-075-60-116</b>		DATE: 15 JAN 1960 ISSUE: <b>556-C-1-E-3</b> SHEET: <b>2-86</b>	

5-116C



CONTROL CIRCUITS - GS, G6, G7, G8 & C11 FROM FACILITY TERMINAL CABINET NO. 1 (ESSENTIAL BUS) SEE I-E-8 & I-E-13

NO.	TITLE
I-E-10	PLC
I-E-60	ELEC SYMBOLS, FIXTURE SCHED, GENERAL NOTES & APPENDIX
I-E-4	CONTROL SCHEMATIC HEATING VENT & AC PART 1
I-E-5	CONTROL SCHEMATIC HEATING VENT & AC PART 2
I-E-6	CONTROL SCHEMATIC ALARMS & MISC PART 1
I-E-7	CONTROL SCHEMATIC ALARMS & MISC PART 2
I-E-8	ESSENTIAL MOTOR CONTROL CENTER WIRING PART 1
I-E-9	ESSENTIAL MOTOR CONTROL CENTER WIRING PART 2
I-E-11	NON-ESSENTIAL MOTOR CONTROL CENTER WIRING PART 1
I-E-11	NON-ESSENTIAL MOTOR CONTROL CENTER WIRING PART 2
I-E-20	WIRE BUS CONDUIT SCHEDULE - PART 1
I-E-19	WIRE BUS CONDUIT SCHEDULE - PART 2
I-E-2	ESSENTIAL BUS POWR-SINGLE LINE DIAGRAM
DRAWING NO.	TITLE

REFERENCE DRAWINGS

- NOTES:
1. WIRING BETWEEN (ASC) ITEMS SHALL BE SUPPLIED & CONNECTED
  2. ALL RECEPTACLES SHALL BE ? SPECIFIED OR EXACT EQUAL
  3. ALL CIRCUIT BREAKERS SHALL BE 3 POLE UNLESS OTHERWISE NOTED

REVISION	DATE	DESCRIPTION	AGENCY	INIT.
1-29-60		OPERATIONAL AS BUILT DRAWING INCLUDES ECP'S #6453, SATAF R.L.		
4-15-62		REVISED TO SHOW CONSTRUCTION AS BUILT CONDITION. ADDED SPACES ON SINGLE LINE DIAGRAM. ITEMS 33, 34, 35, 36, 37, 38, 40, 43 & 54 WERE C-H RECEPTACLES. CEBMCO		
9-8-60		CHANGED H.P. CIR. BKR. & W/TER SIZES; ADDED VALVES #237, V21, & V22; ADDED EMS 266, 93, 94, & 95. CHANGED NOTE #3		
5-2-60		ISSUED FOR PITTSBURGH A.F.B.	AFBMD	

In accordance with instructions from BSO/BSSE 24 November 1961 this drawing is certified as built only for the following, as determined by the designing agency:

1. Items affecting I-C-D INTERLOCKS or solid connections to G/A equipment.
2. Items which would cause interferences with G/A equipment.
3. Locations of the system.

JUN 13 1962

LOS ANGELES FIELD OFFICE  
OFFICE OF THE CHIEF OF POLICE  
APPROVED FOR THE CHIEF OF POLICE  
FOR THE COUNTY OF LOS ANGELES  
JAN 13 1960

**BECHTEL CORPORATION**  
ENGINEERS AND CONSTRUCTORS  
SAN FRANCISCO - LOS ANGELES - NEW YORK

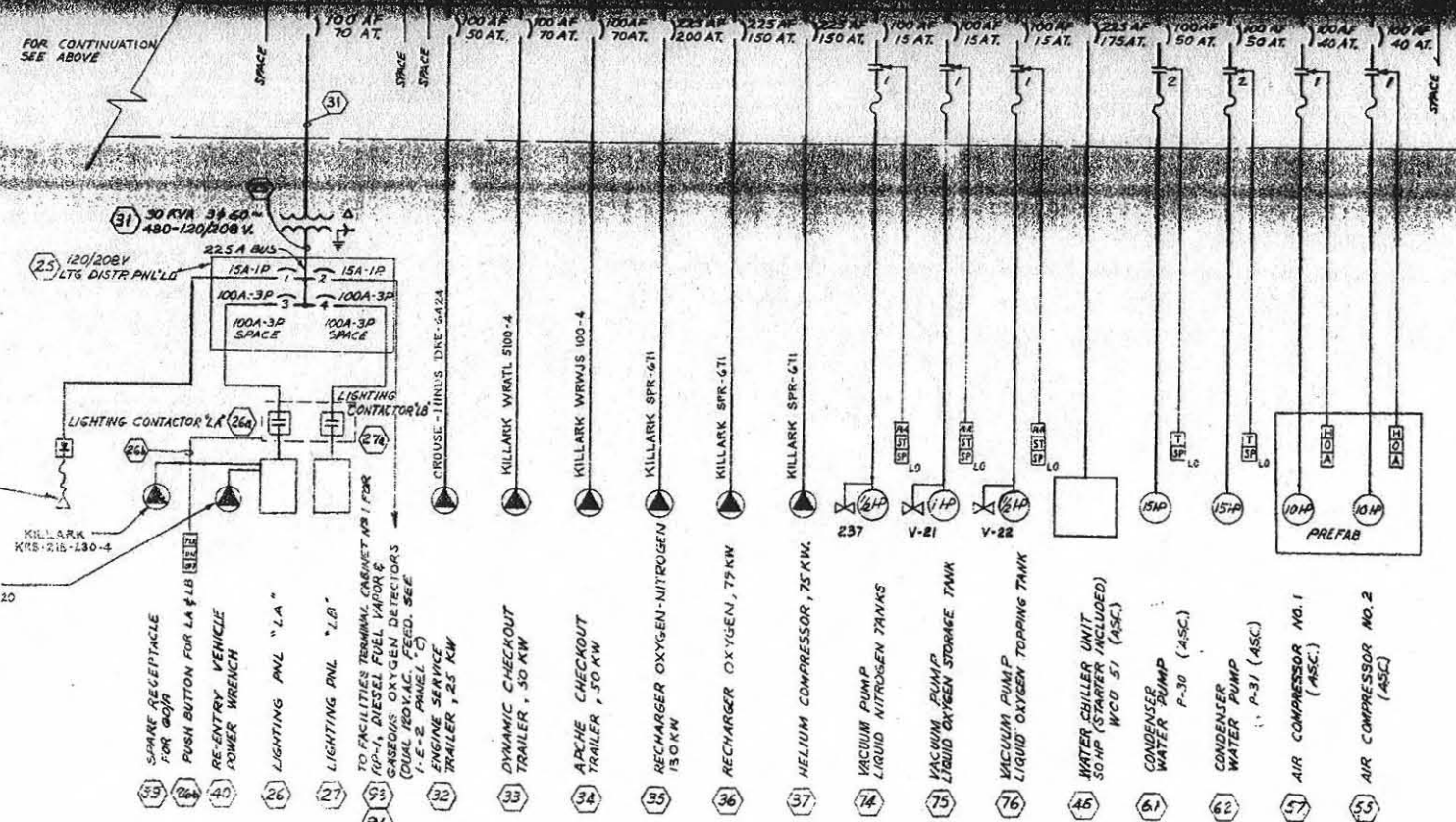
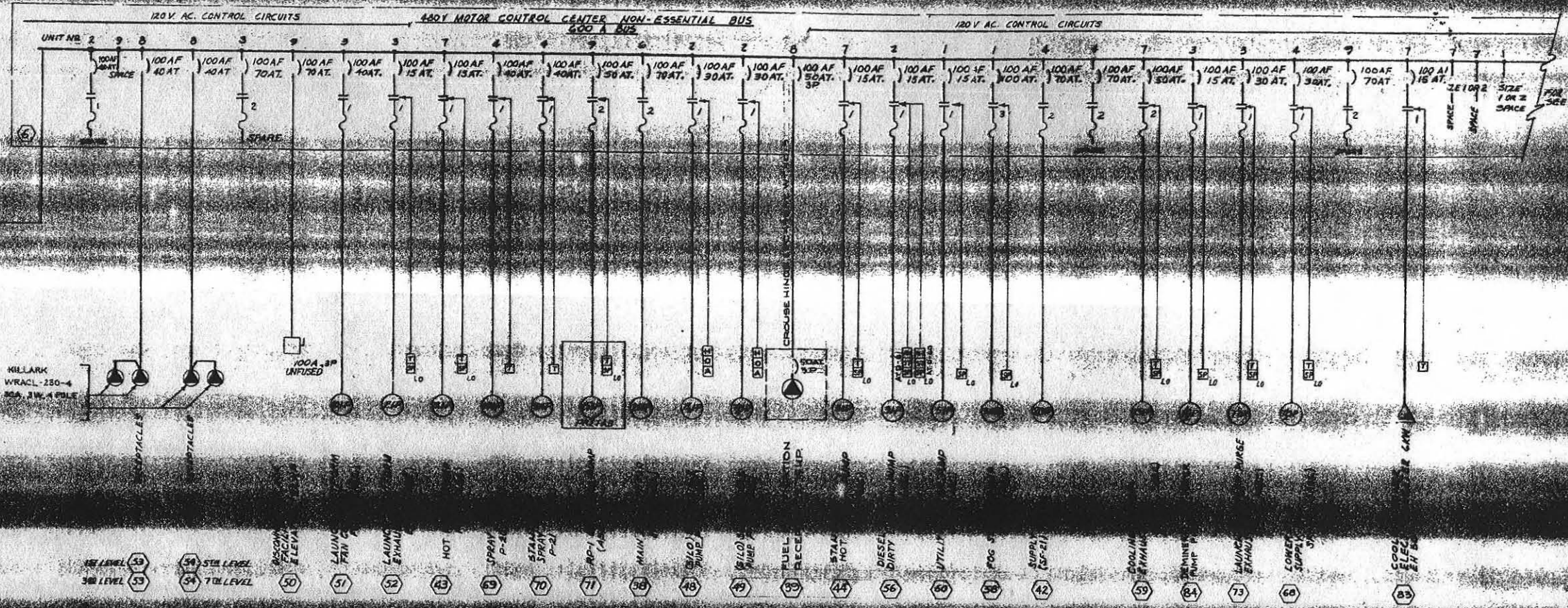
**DEPARTMENT OF THE AIR FORCE**  
AIR FORCE BALLISTIC MISSILE DIVISION (ARDC)  
WALWORTH, CALIFORNIA

**WS-107A-1 OPERATIONAL BASE**  
UNITARY SILO  
LAUNCHING SILO  
NON-ESSENTIAL BUS  
POWR - SINGLE LINE DIAGRAM

DATE: 14 DEC 59  
DESIGNED BY: E. HUNTER  
CHECKED BY: R.C.B. CAP  
APPROVED BY: [Signature]  
DATE: 13 JAN 1960

EXPIRATION DATE: 13 JAN 1960  
556-B-1-E-3  
2-86





CONTROL CIRCUITS, S-C, L.T.C.B. & C.H. FROM FACILITY TERMINAL CABINET NO. 1 (ESSENTIAL BUS) SEE I-E-8 & I-E-13

In accordance with instructions from HCU/ISS/11 24 November 1961 this drawing is contained in the only copy for the following, as determined by the shipping agency:

1. To be attached to the UNIFORMS or other connections
2. To be attached to the UNIFORMS or other connections
3. To be attached to the UNIFORMS or other connections

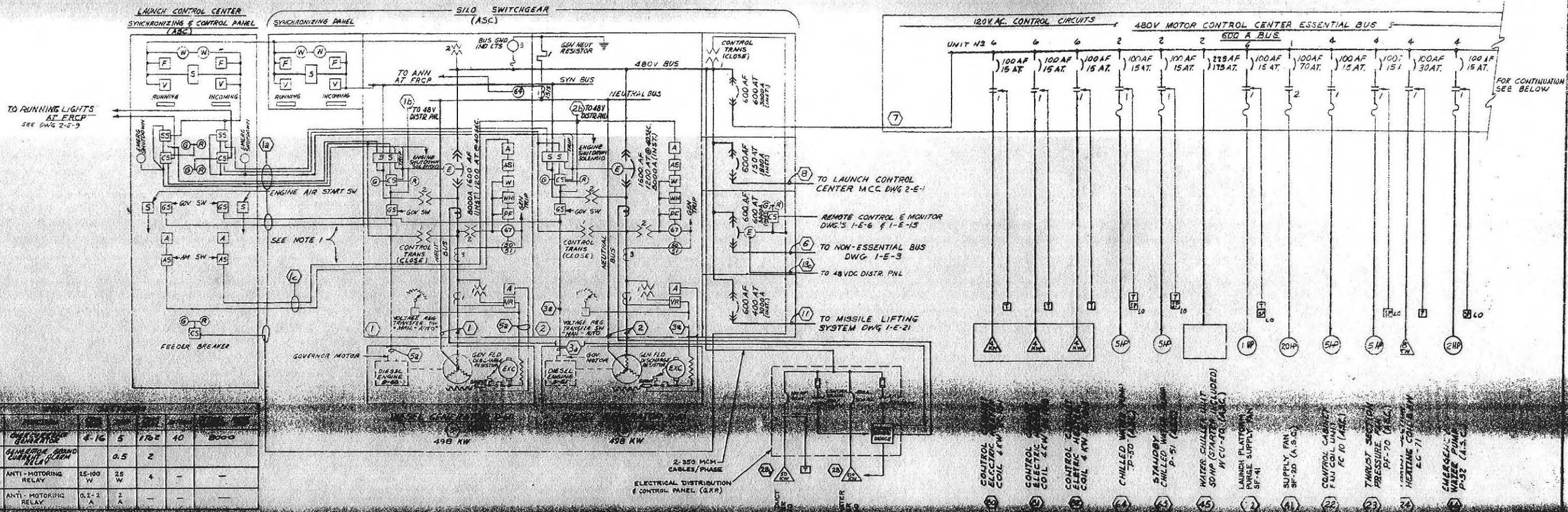
JUN 13 1962

DRAWING NO.	TITLE
I-E-13	FACILITIES TERMINAL CABINET NO. 2 WIRING DIAGRAM
I-E-60	ELEC. SYMBOLS, FIXTURE SCHED., GENERAL NOTES & ABBR.
I-E-4	CONTROL SCHEMATIC HEATING VENT & AC PART 1
I-E-5	CONTROL SCHEMATIC HEATING VENT & AC PART 2
I-E-6	CONTROL SCHEMATIC ALARMS & MISC. PART 1
I-E-7	CONTROL SCHEMATIC ALARMS & MISC. PART 2
I-E-8	ESSENTIAL MOTOR CONTROL CENTER WIRING PART 1
I-E-9	ESSENTIAL MOTOR CONTROL CENTER WIRING PART 2
I-E-10	NON-ESSENTIAL MOTOR CONTROL CENTER WIRING PART 1
I-E-11	NON-ESSENTIAL MOTOR CONTROL CENTER WIRING PART 2
I-E-20	WIRE AND CONDUIT SCHEDULE - PART 1
I-E-19	WIRE AND CONDUIT SCHEDULE - PART 2
I-E-2	ESSENTIAL BUS PNER-SINGLE LINE DIAGRAM

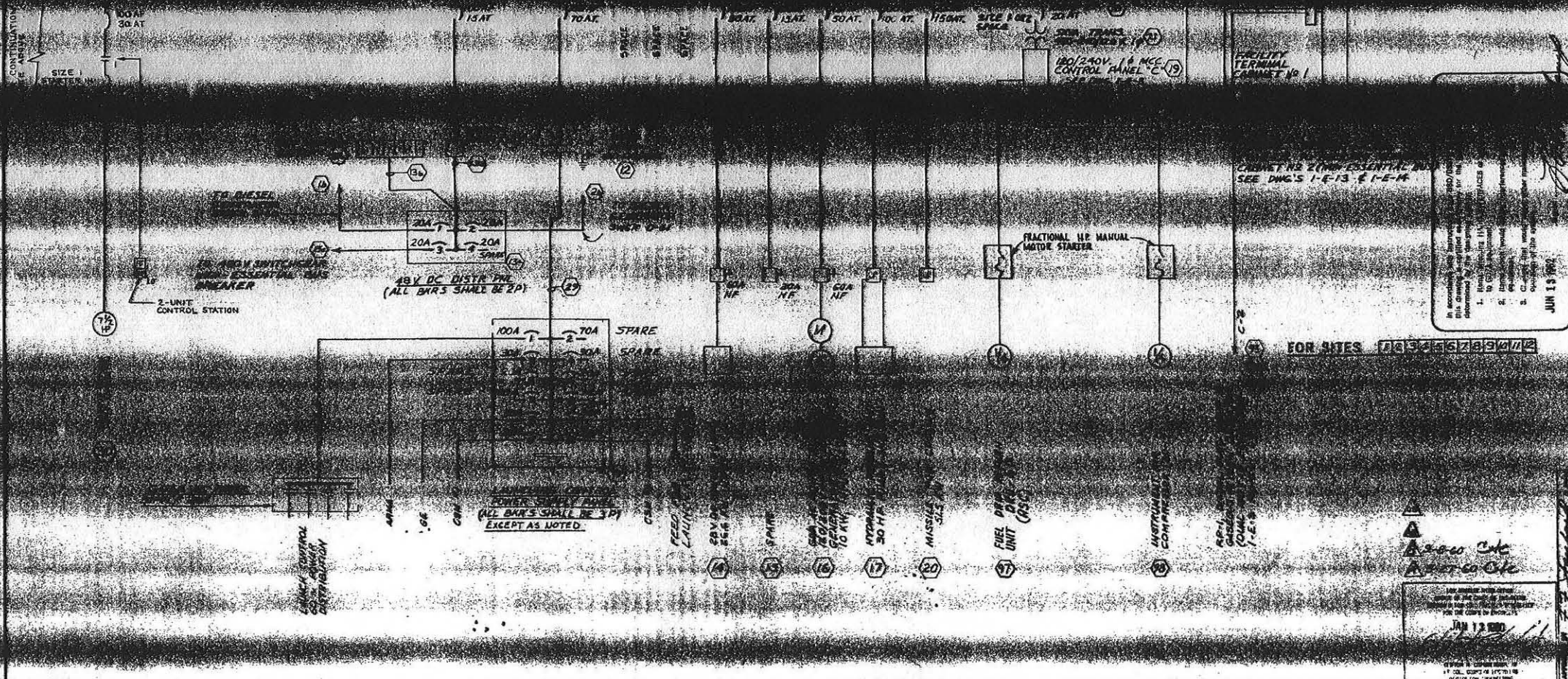
- NOTES:
1. WIRING BETWEEN (ASC) ITEMS SHALL BE SUPPLIED & CONNECTED
  2. ALL RECEPTACLES SHALL BE AS SPECIFIED OR EXACT EQUAL
  3. ALL CIRCUIT BREAKERS SHALL BE 3 POLE UNLESS OTHERWISE NOTED

REVISION	DATE	DESCRIPTION	DESIGNER	CHKD.
1	11-29-61	OPERATIONAL AS BUILT DWG INCLUDES ECP'S # 6453, SATAF R.L. G242.R1.		
2	4-13-62	SEE TO SHOW CONSTRUCTION AS-BUILT CONDITION. ADDED SPACES ON SINGLE LINE DIAGRAM. ITEMS 83, 94, 95, 96, 97, 99, 53 & 54 WERE C-H RECEPTACLES. DEEMCO		
3	19-8-60	CHANGED H.P. CIR. BKR. STARTER SIZES; ADDED VALVES AND # 237, V21, & V22; ADD ITEMS 265, 93, 94, & 95. CHANGED NOTE # 3.		
4	5-2-60	ISSUED FOR ATTSBURGH A.F.B.		

<b>BECHTEL CORPORATION</b> ENGINEERS AND CONSTRUCTORS SAN FRANCISCO - LOS ANGELES - NEW YORK	<b>DEPARTMENT OF THE AIR FORCE</b> AIR FORCE BALLISTIC MISSILE DIVISION (ARDB) BILDERMEYER, CALIFORNIA
DRAWN BY: <i>K. Hunter</i> RES (4 DEC 59) CHECKED BY: <i>E. Hunter</i> (4 DEC 59) DATE: 14 DEC 59 SCALE: 3/8" = 1" APPROVED: <i>[Signature]</i> (13 DEC 60)	<b>WS-1C A-1 OPERATIONAL BASE</b> UNITARY SILO LAUNCHING SILO NON-ESSENTIAL BUS PNER - SINGLE LINE DIAGRAM OPERATION NO. <b>ENG. 30-075-60-116</b> DATE: 13 JAN 1960 ISSUE: NONE NUMBER: <b>356-A-1-E-3</b> SHEET: <b>2-86</b>



ITEM NO.	DESCRIPTION	QTY	UNIT	REMARKS
54	GENERATOR	1	GEN	1000 KVA
64	ANTI-MOTING RELAY	2	REL	25-100 W
67	ANTI-MOTING RELAY	2	REL	0.2-2 A



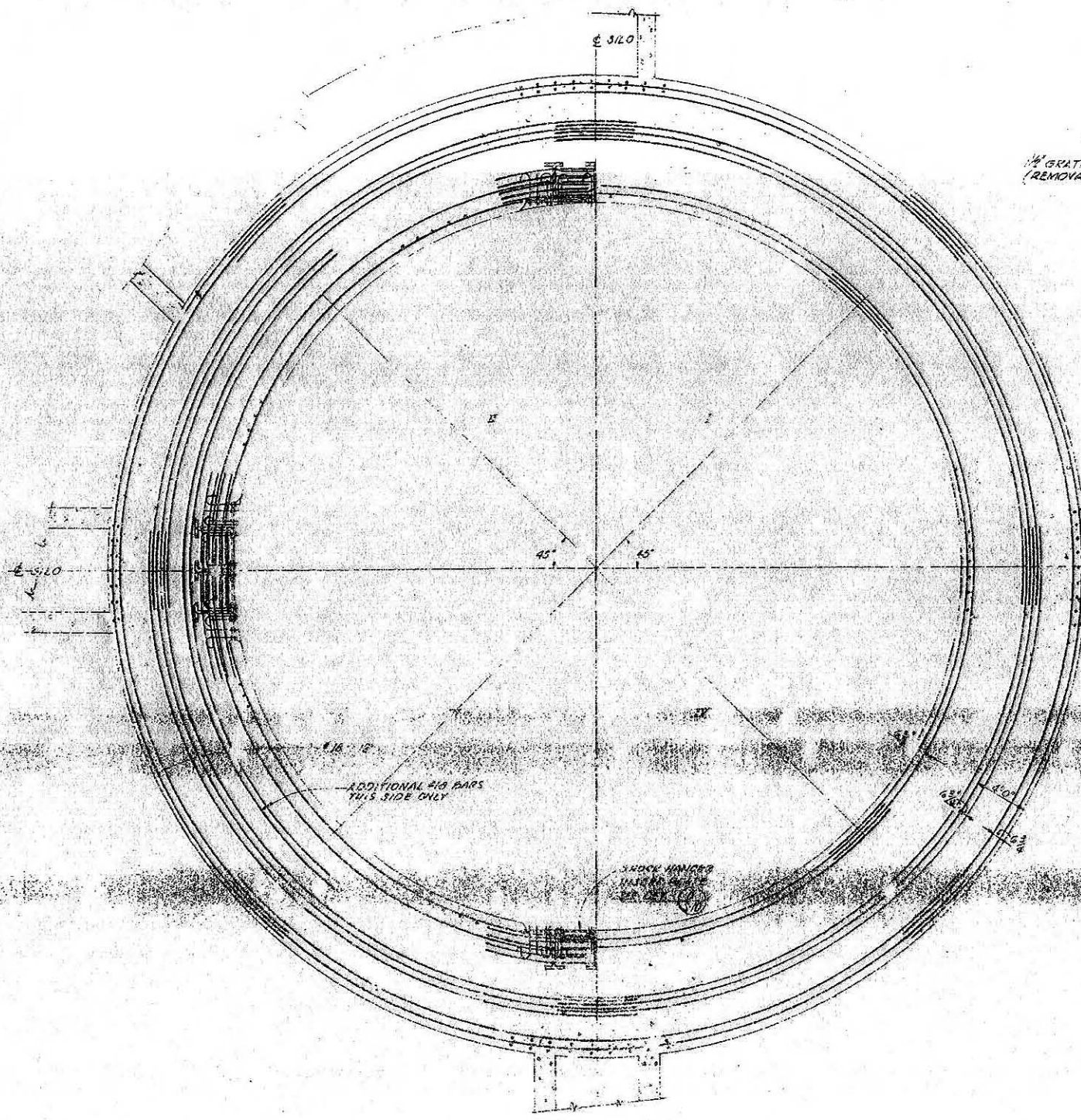
ITEM NO.	DESCRIPTION	QTY	UNIT	REMARKS
1-E-6	CONTROL SCHEMATIC HEATING VENTILATION & AIR PAGES	1	SCHEMATIC	
1-E-6	CONTROL SCHEMATIC LARMS & MISC. PART	1	SCHEMATIC	
1-E-7	CONTROL SCHEMATIC LARMS & MISC. PART	1	SCHEMATIC	
1-E-8	ESSENTIAL MOTOR CONTROL CENTER WIRING - PART 1	1	WIRING	
1-E-9	ESSENTIAL MOTOR CONTROL CENTER WIRING - PART 2	1	WIRING	

NOTES:  
 1- WIRING BETWEEN (ASC) ITEMS SHALL BE SUPPLIED & CONNECTED.  
 2- ALL CIRCUIT BREAKERS SHALL BE 3POLE UNLESS OTHERWISE NOTED.

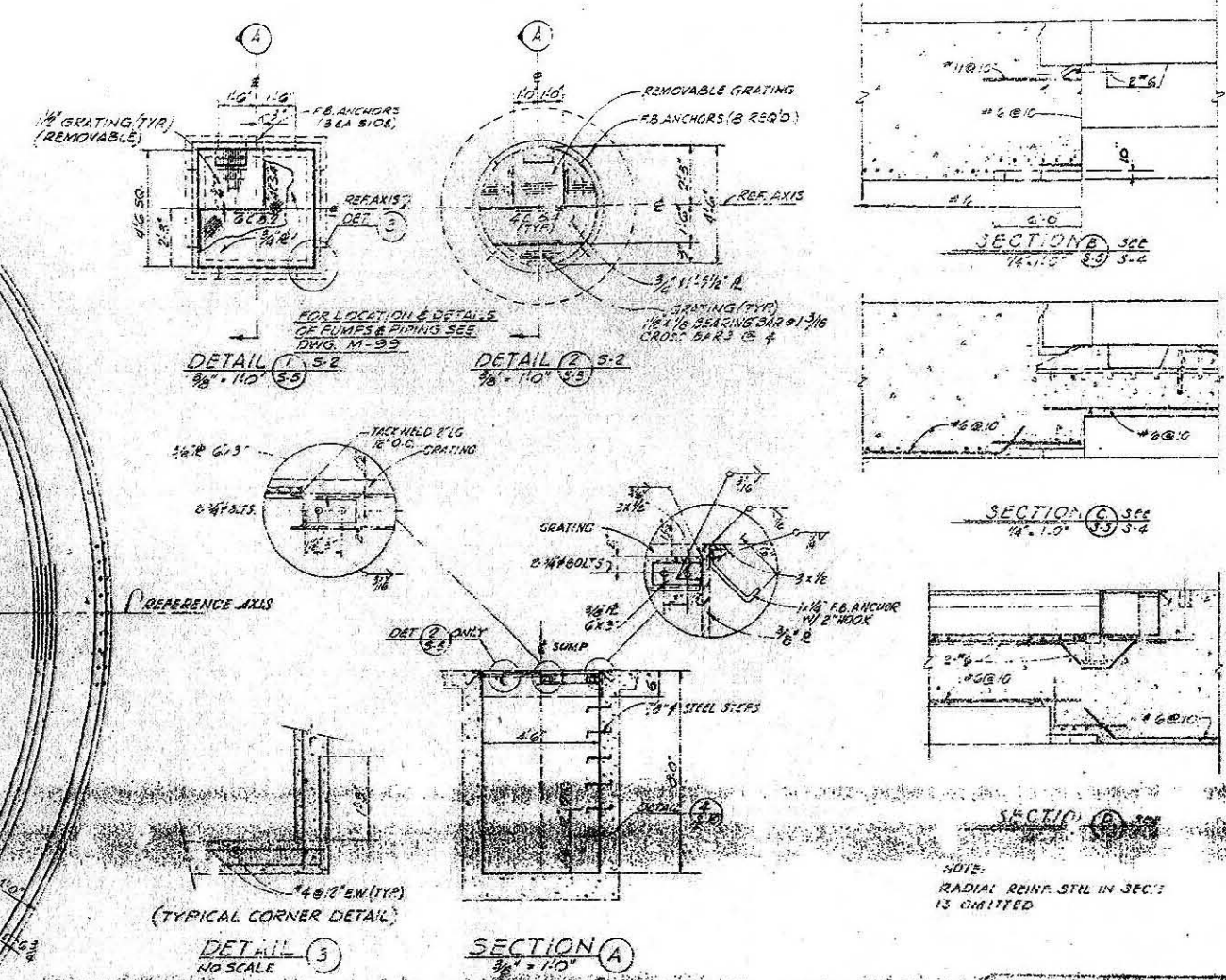
OPERATIONAL AS BUILT DRAWING INCLUDES ECP'S	DATE	BY
6453, SATAF		
6491, 6567, 6774, 6985		

**WS-107A-1 OPERATIONAL BASE**  
 UNITARY SILO LAUNCHING AND ESSENTIAL BUS POWER - SINGLE LINE

DATE: JUN 13 1962  
 DRAWING NO. 2-85



SECTION (E) SEE  
SCALE: 1/4" = 1'-0" 5-3 5-7



NOTE:  
RADIAL REINF. STIL IN SEC'S  
IS OMITTED

11-117

FOR SITE 1 2 3 4 5 6 7 8 9 10 11 12

1-29-63	REV. AS PER	
2-1-64	REV. TO SHOW CONST	
2-1-64	ABSOLUTE CONDIT	
2-1-64	ISSUED FOR PITTSBURGH AFB	

**ENGINEERS AND CONSTRUCTORS**

**DEPARTMENT OF THE AIR FORCE**

**WS-1C A-1 OPERATIONAL BASE**

**UNITARY SILO**

**LAUNCHING SILO**

**MISCCONC. SECTIONS & DETAILS**

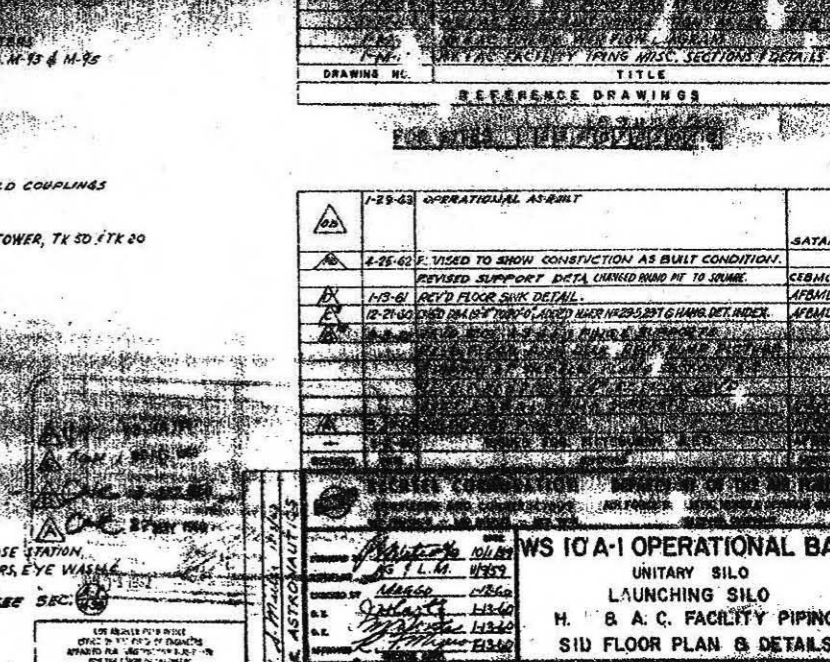
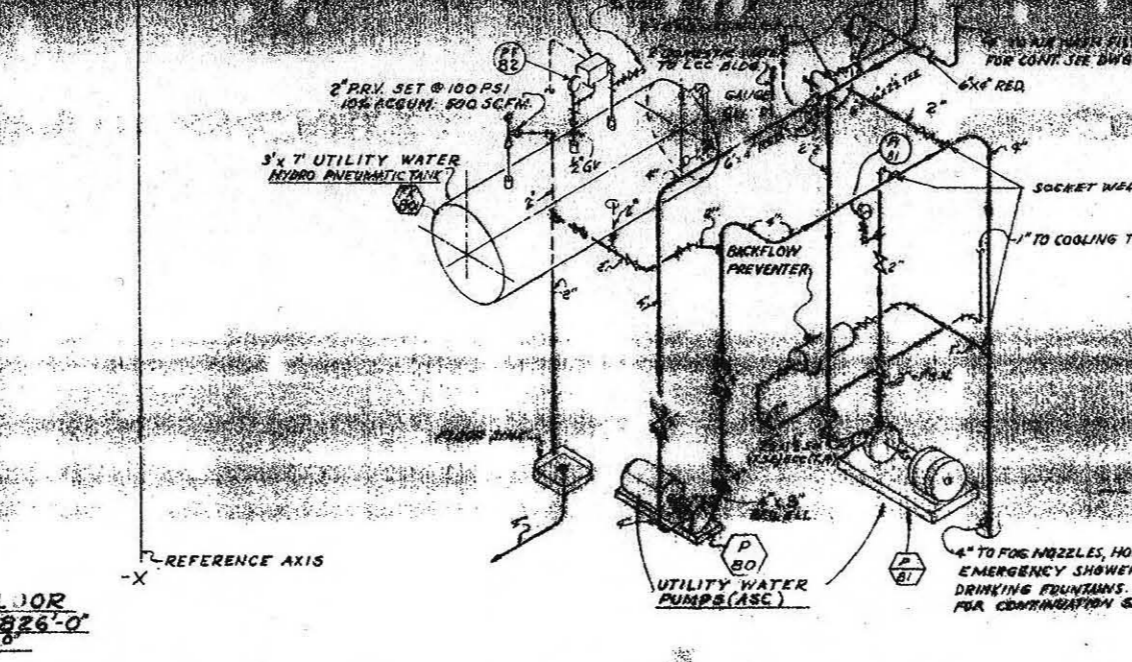
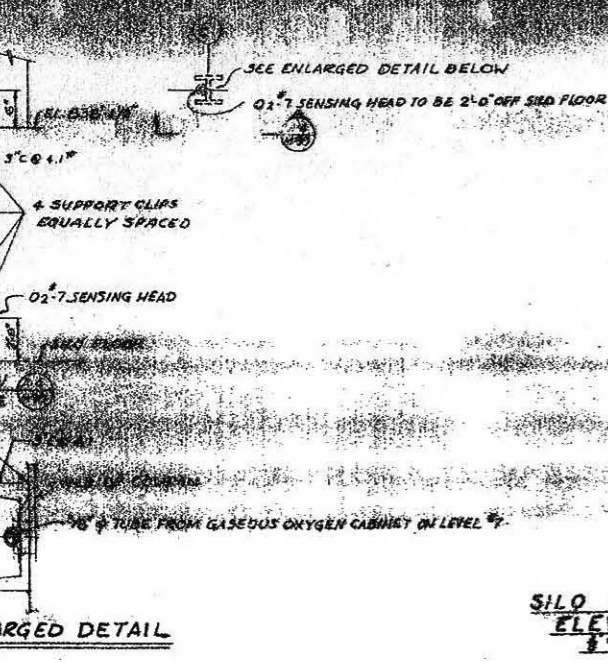
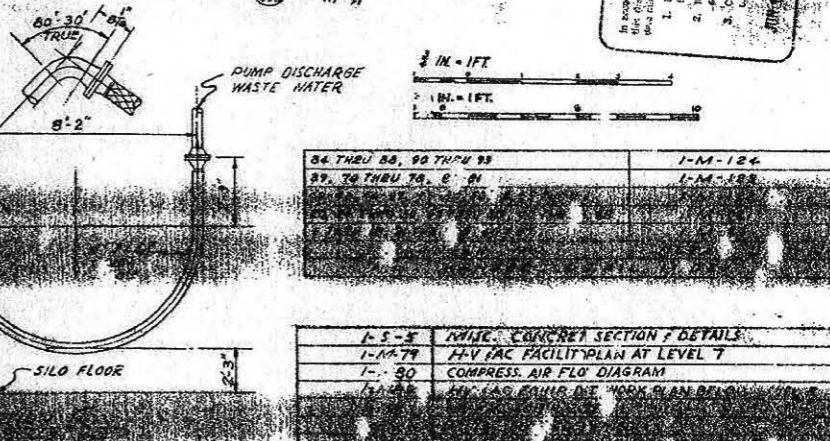
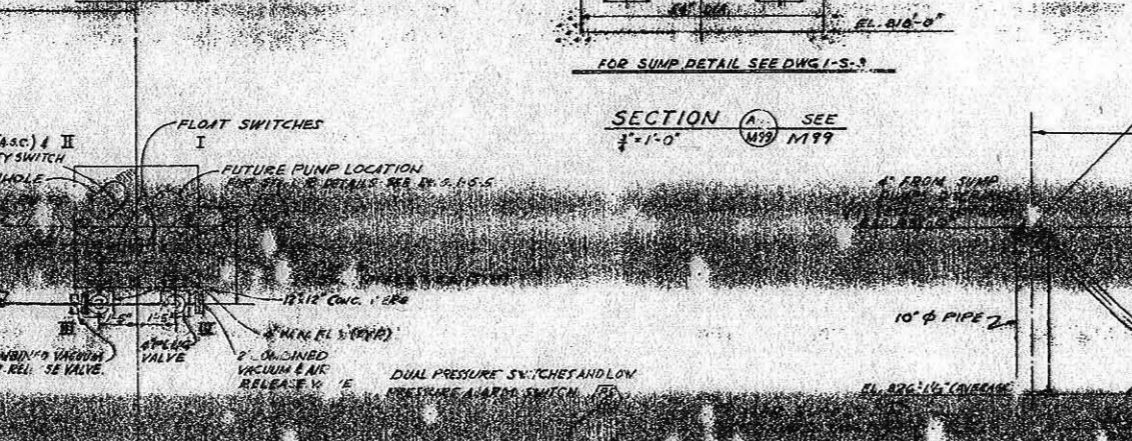
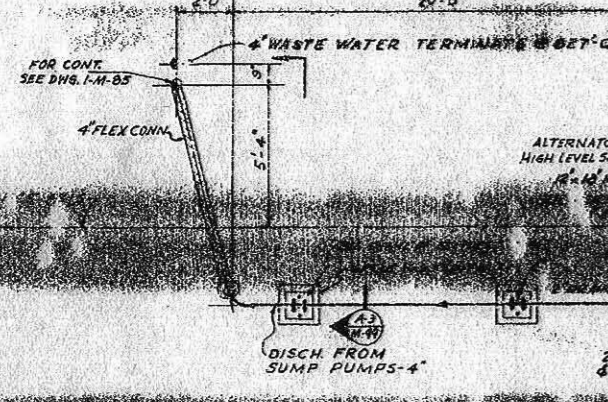
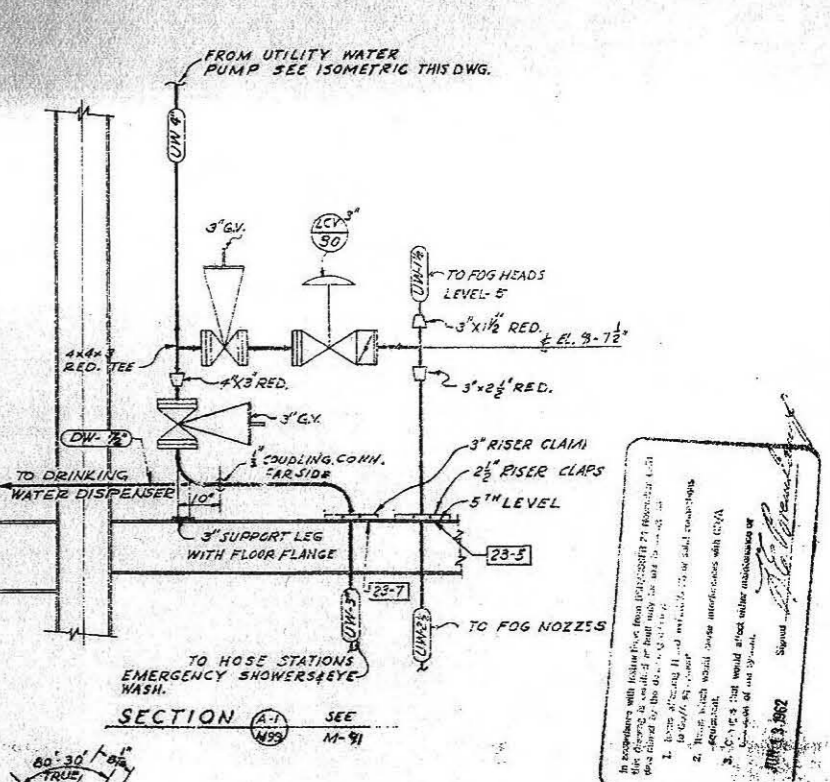
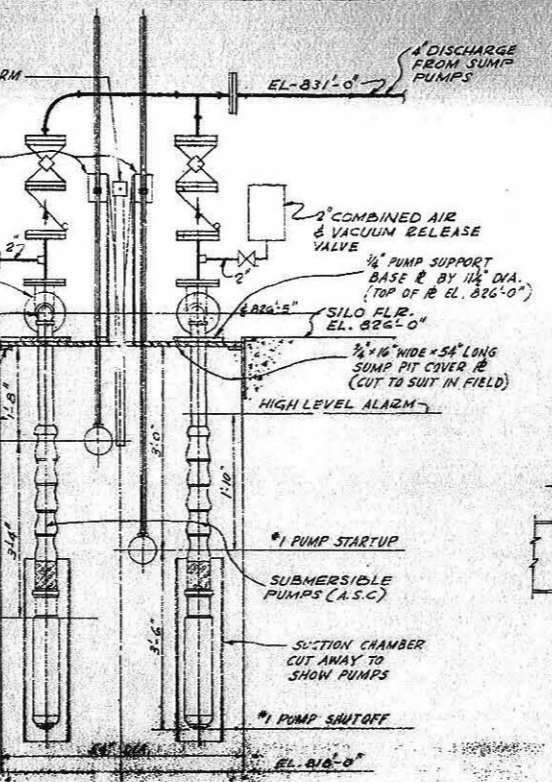
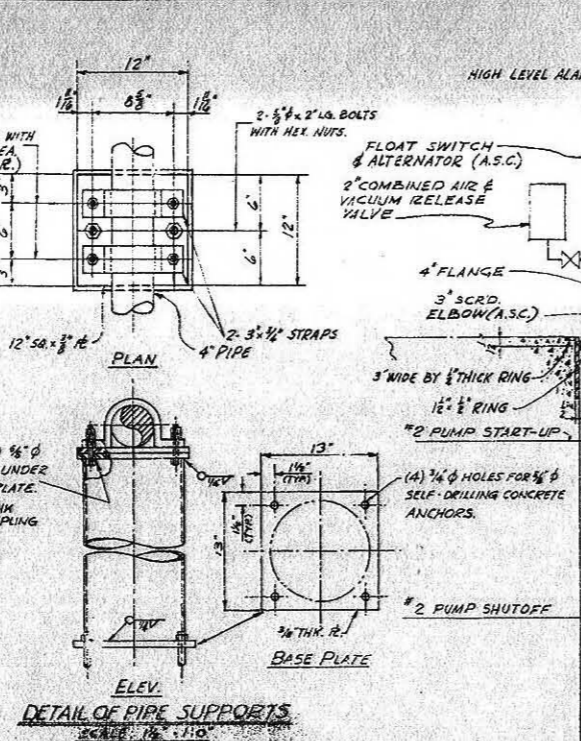
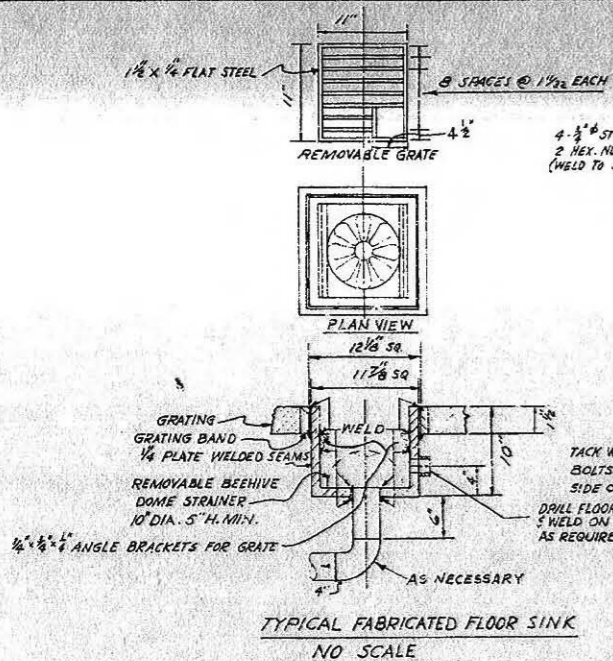
DATE: 11-1-59  
 DRAWN BY: KARACOZIAN D-559  
 CHECKED BY: METCAL  
 APPROVED BY: [Signature]

ENG. 30-075-60-116  
 18 JAN 1960  
 538 1-5-59  
 2-18

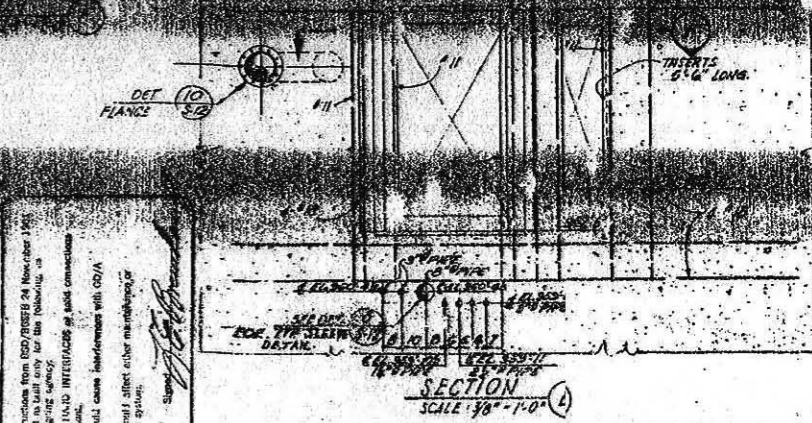
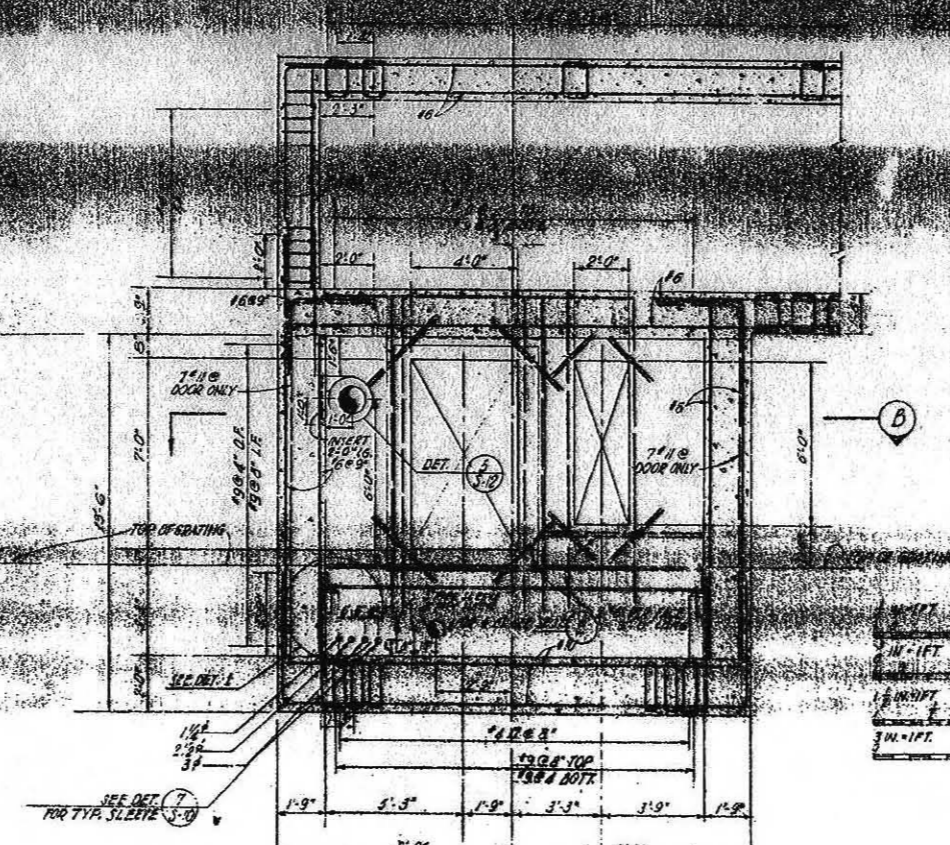
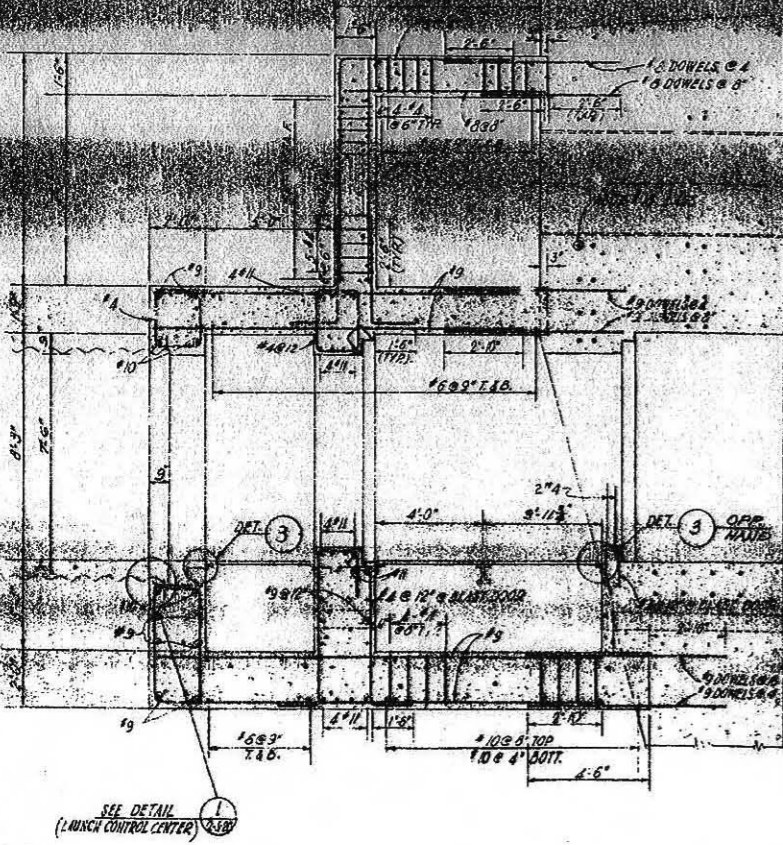
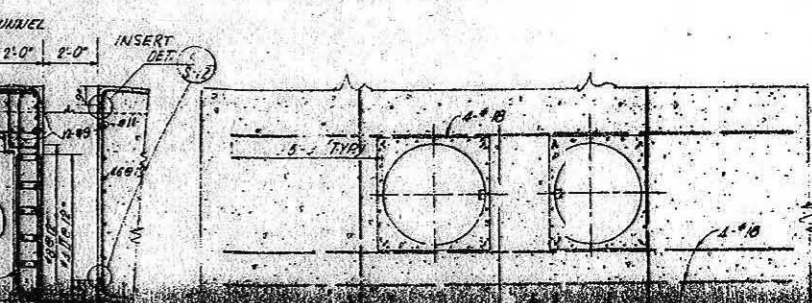
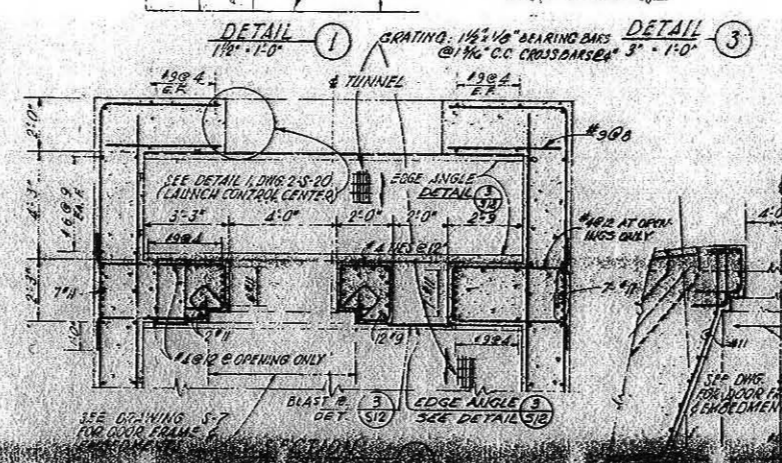
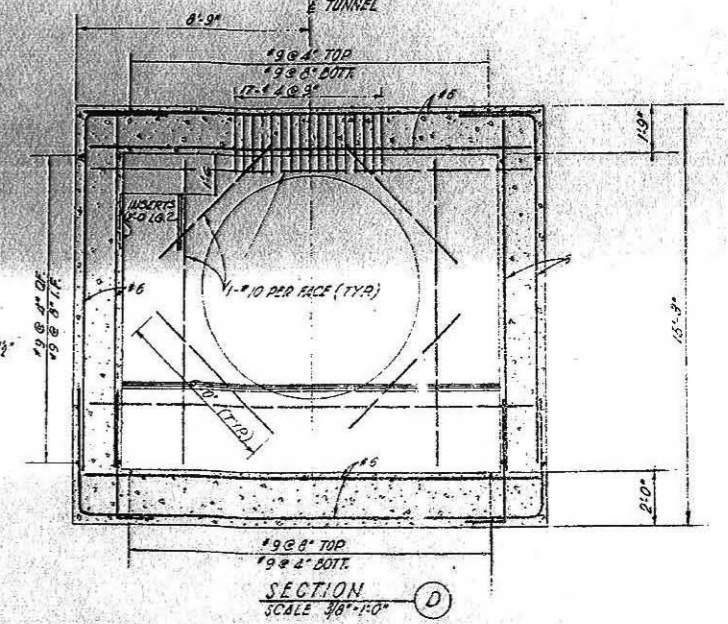
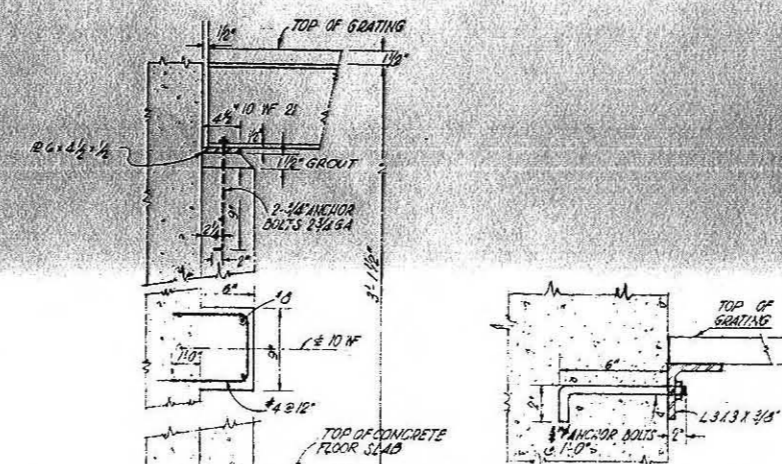
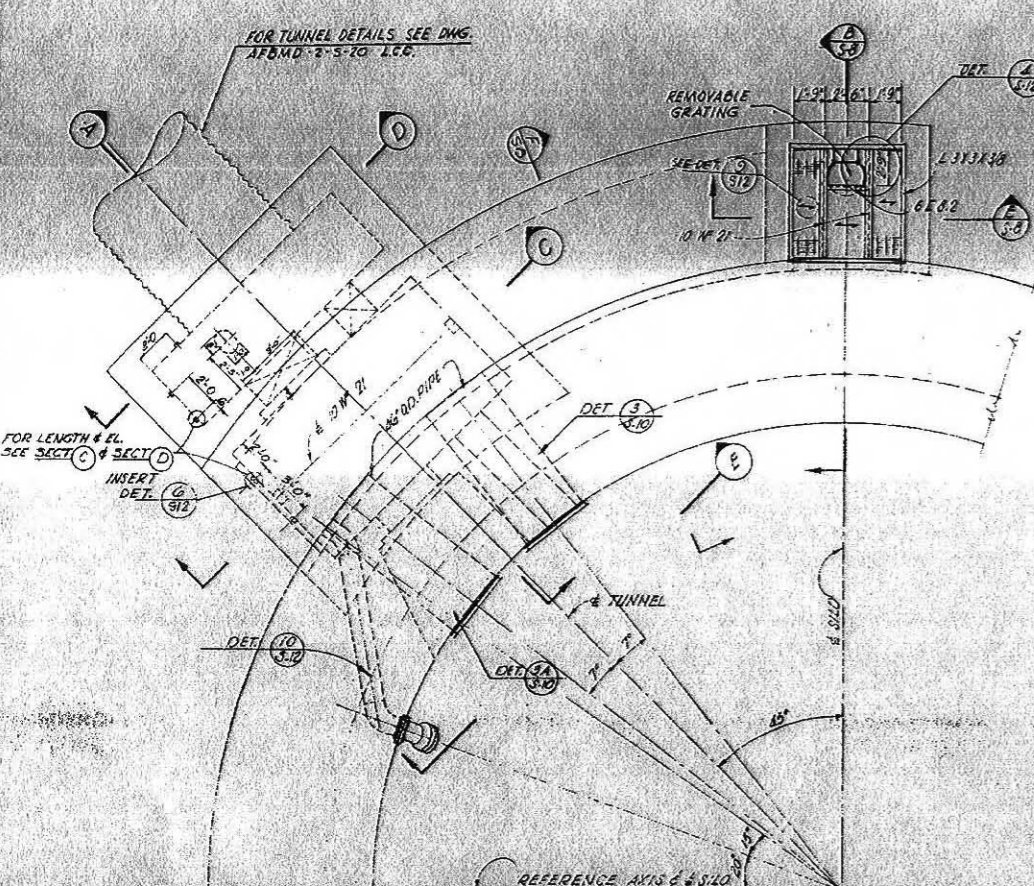
FOR AMBLES FILE OFFICE  
 OFFICE OF THE CHIEF OF ENGINEERS  
 AIR FORCE BALLISTIC MISSILE DIVISION  
 1700 W. BROAD ST. S.W.  
 ATLANTA, GA. 30336

JUN 18 1960





NO.	DATE	DESCRIPTION	BY	CHECKED																														
86	THEU 88, 98 THRU 99																																	
87	88 THRU 90, 91																																	
1-5-5	NAVIC. CONCRET SECTION 7 DETAILS																																	
1-11-79	NAV FAC FACILITY PLAN AT LEVEL 7																																	
1-1-80	COMPRESS. AIR FLO DIAGRAM																																	
1-1-80	NAV FAC FACILITY SPRING MISC. SECTIONS 7 DETAILS																																	
1-1-80	NAV FAC FACILITY SPRING MISC. SECTIONS 7 DETAILS																																	
DRAWING NO.		TITLE																																
		REFERENCE DRAWINGS																																
OPERATIONAL AS-BUILT																																		
1-29-63	OPERATIONAL AS-BUILT																																	
4-25-63	REVISED TO SHOW CONSTRUCTION AS BUILT CONDITION.																																	
	REVISED SUPPORT DATA CHANGED FROM PT TO SQUARE.																																	
1-13-61	REV'D FLOOR SINK DETAIL.																																	
12-21-60	CH'D 8/4 1/2" DIA. 2" O.D. LINED WATER HEADS, 2 1/2" DIA. DET. INDEX.																																	
<table border="1"> <tr> <td colspan="2"><b>WS 10 A-1 OPERATIONAL BASE</b></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">UNITARY SILO</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">LAUNCHING SILO</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">H. B. A. C. FACILITY PIPING</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">SIID FLOOR PLAN &amp; DETAILS</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">DRAWN BY: [Signature]</td> <td>DATE: 13 JAN 1960</td> <td>PROJECT: ENG. 30-075-60-116</td> <td>SCALE: AS SHOWN</td> </tr> </table>					<b>WS 10 A-1 OPERATIONAL BASE</b>					UNITARY SILO					LAUNCHING SILO					H. B. A. C. FACILITY PIPING					SIID FLOOR PLAN & DETAILS					DRAWN BY: [Signature]		DATE: 13 JAN 1960	PROJECT: ENG. 30-075-60-116	SCALE: AS SHOWN
<b>WS 10 A-1 OPERATIONAL BASE</b>																																		
UNITARY SILO																																		
LAUNCHING SILO																																		
H. B. A. C. FACILITY PIPING																																		
SIID FLOOR PLAN & DETAILS																																		
DRAWN BY: [Signature]		DATE: 13 JAN 1960	PROJECT: ENG. 30-075-60-116	SCALE: AS SHOWN																														



In accordance with instructions from RSD (RSD 2-5-10) the following is to be used for the design of the grating:

1. Grating shall be fabricated from 1 1/2\"/>

JUN 13 1962

FOR SITES 1 2 3 4 5 6 7 8 9 10 11 12

--	--	--	--	--	--	--	--	--	--	--	--

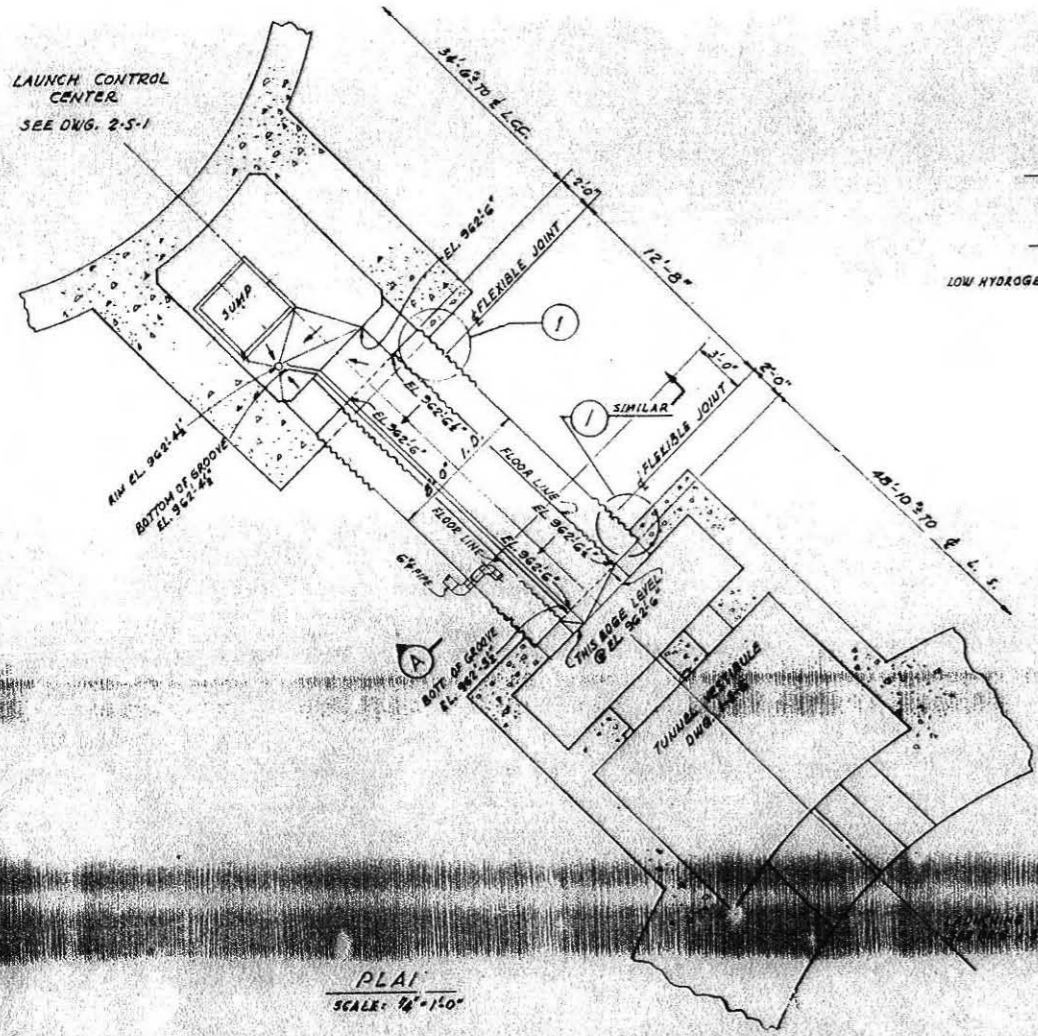
**BECHTEL CORP. CIVIL ENGINEERS AND ARCHITECTS**  
 1700 BROADWAY, SAN FRANCISCO, CALIF.

**WS-107A-1 OPERATIONAL BASE**  
 UNITARY SILO  
 LAUNCHING SILO  
 TUNNEL VESTIBULE & EXHAUST SHAFT  
 PLAN & SECTIONS

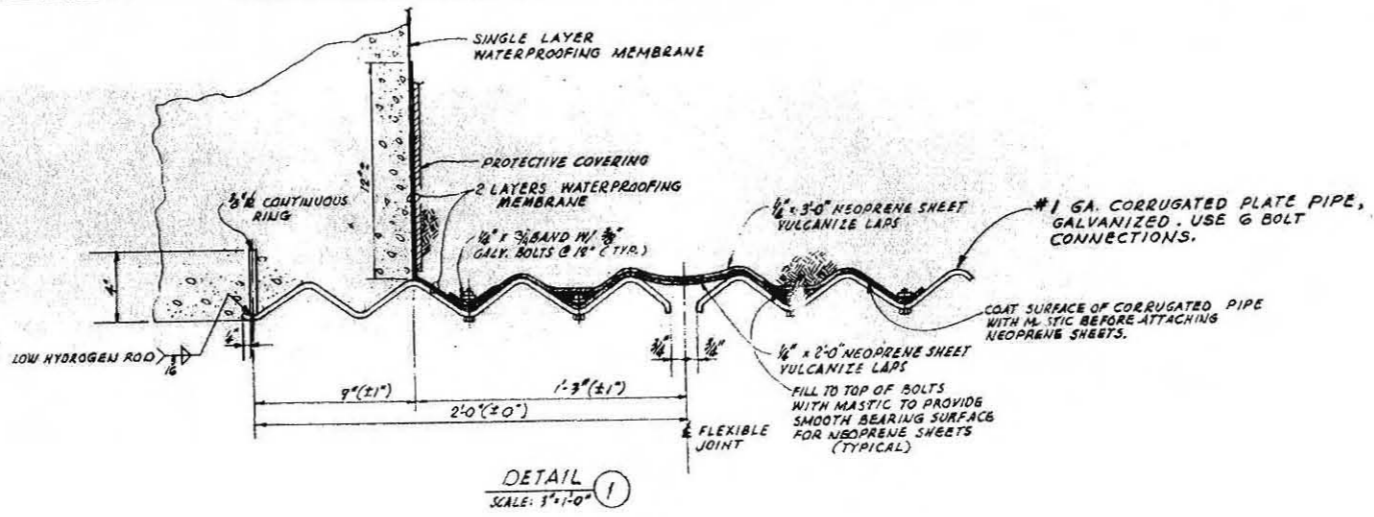
DESIGNED BY: K. SERIGUCHI 11-955  
 CHECKED BY: L. VANDERKAM 11-955  
 DRAWN BY: KARAGOUTH 11-955  
 DATE: 11/13/61  
 SCALE: AS SHOWN

JUN 13 1962

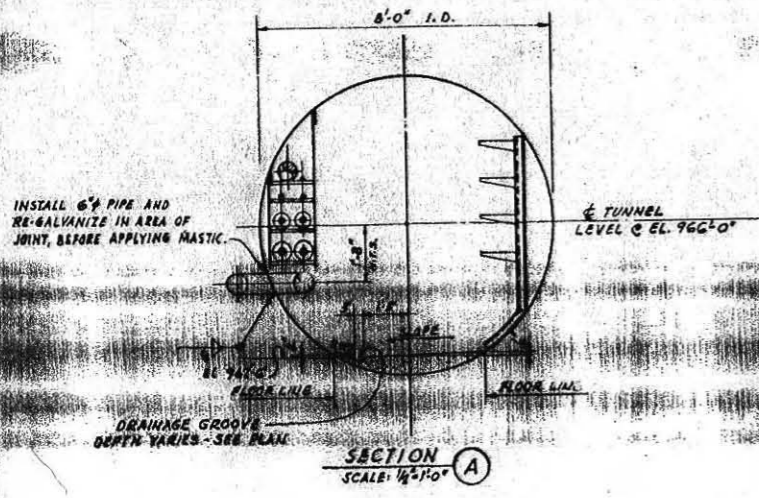
LAUNCH CONTROL CENTER  
SEE DWG. 2-S-1



PLA1  
SCALE: 1/4" = 1'-0"



DETAIL 1  
SCALE: 3" = 1'-0"



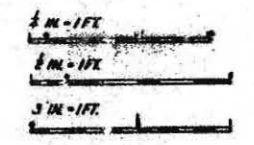
SECTION A  
SCALE: 1/4" = 1'-0"

NOTES

1. ALL EXTERIOR SURFACES OF CORRUGATED PIPE TUNNEL SHALL BE COATED WITH MASTIC OR TORCH-APPLIED MEMBRANE.
2. FOR SPECIAL FINISH REQUIREMENTS SEE CIVIL DWG.

In accordance with Instrate from BSO/BSFB 24 November 1961  
this drawing is certified valid only for the following, as  
dictated by the design agency:

1. Use of material in INTERFACES or solid connections  
to this equipment
2. Cases which would have interference with QD/A



FOR SITES 13466749 112

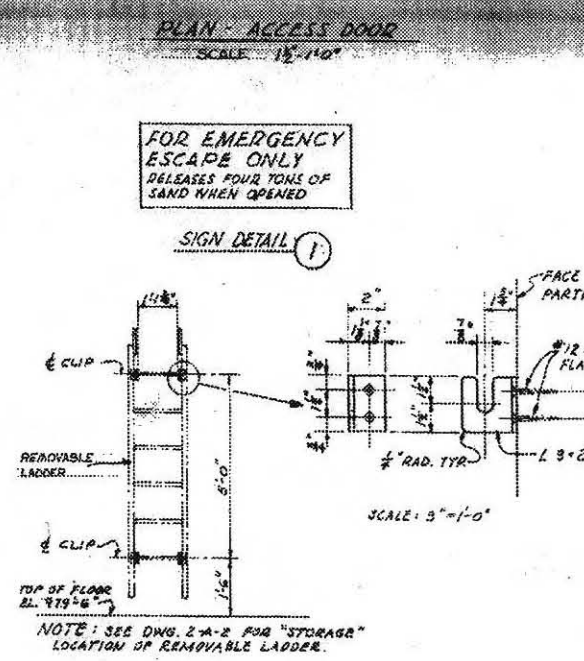
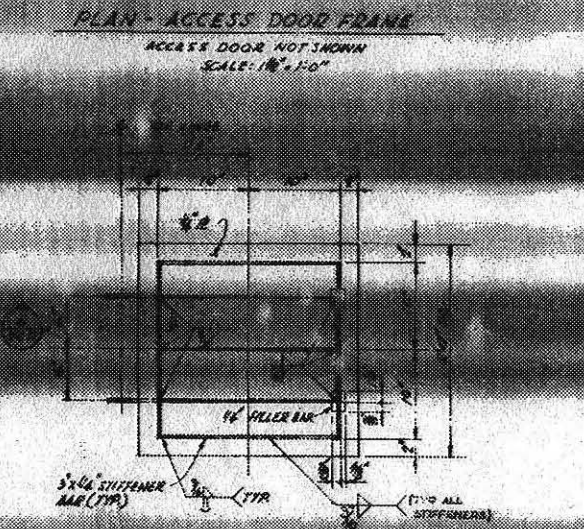
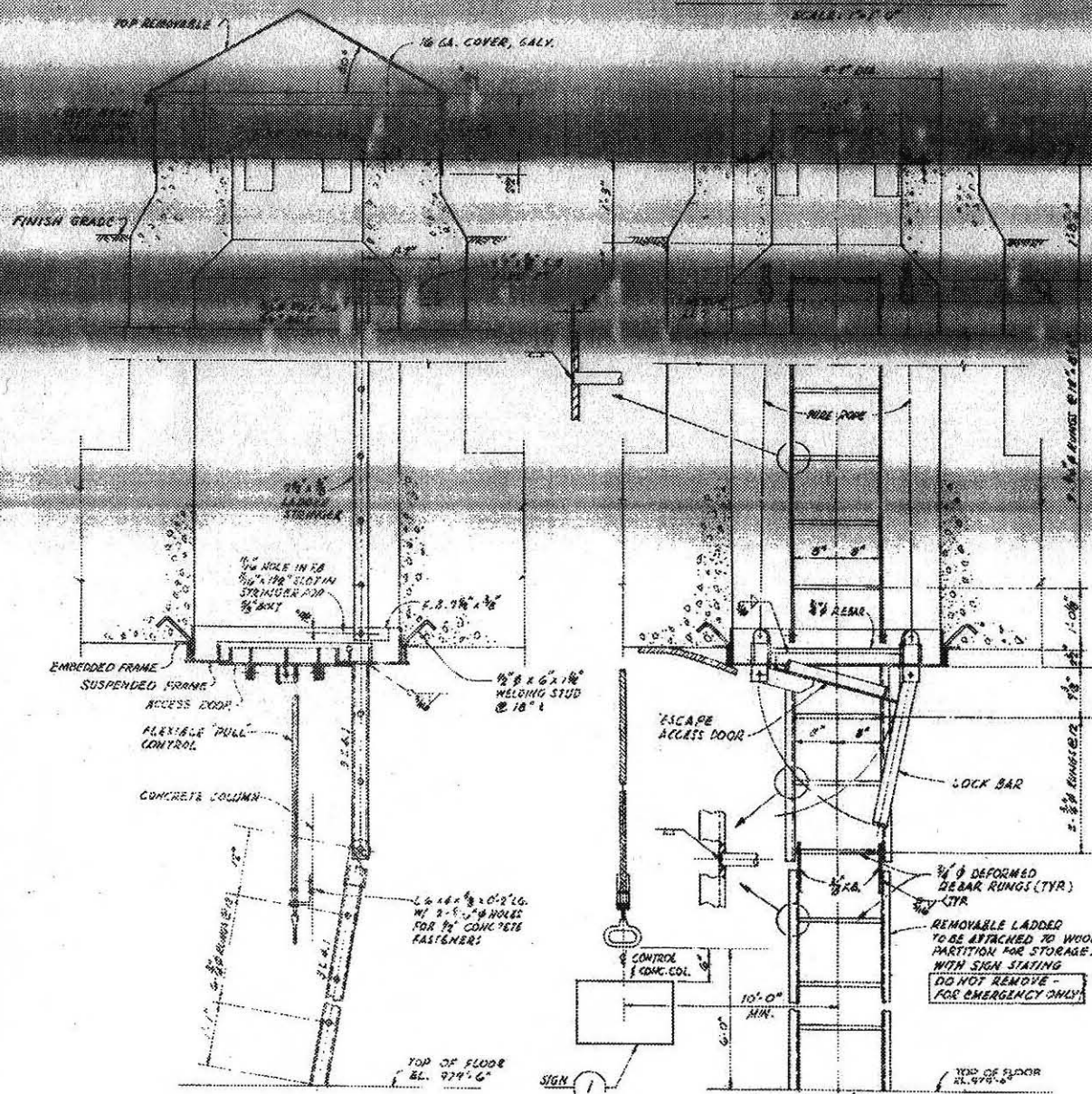
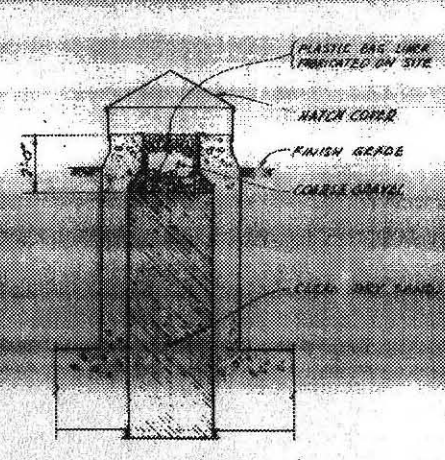
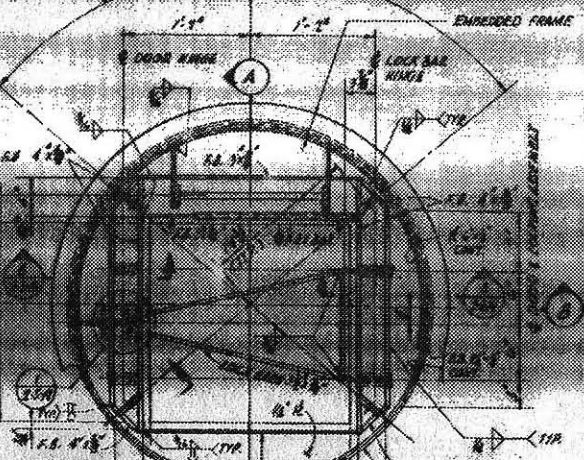
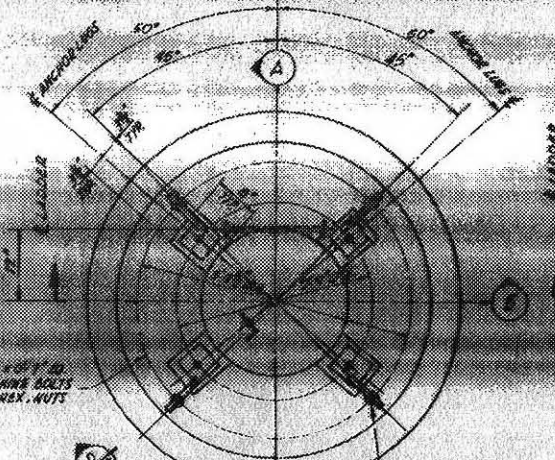
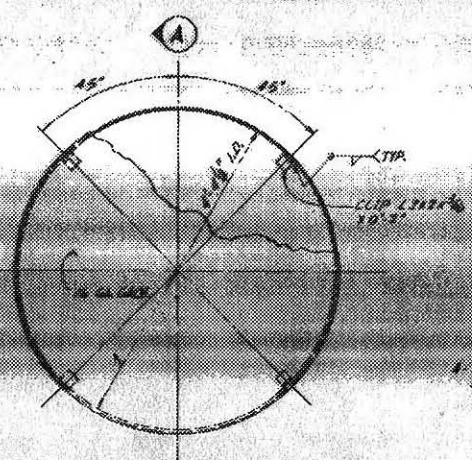
REV.	DESCRIPTION	DATE
1	ISSUED FOR CONSTRUCTION	12-1-57
2	REVISIONS	12-1-57
3	REVISIONS	12-6-57
4	REVISIONS	1-12-58
5	REVISIONS	1-12-58

RECEIVED CONTRACTS DEPARTMENT OF THE AIR FORCE  
ENGINEERING AND CONSTRUCTION CENTER  
13 JAN 1960

WS-10 A-1 OPERATIONAL BASE  
UNITARY SILO  
LUNCH CONTROL CENTER  
UTILITY TUNNEL

DATE: 13 JAN 1960  
DRAWN BY: [Signature]  
CHECKED BY: [Signature]  
SCALE: 1/4" = 1'-0"

ACME  
MAY 1960  
ALL RIGHTS RESERVED  
COPYRIGHT © 1960  
BY ACME  
JAN 1 8 1960



**NOTE**

1. ALL MATERIAL SHALL BE GALVANIZED STEEL FABRICATION EXCEPT THE

In accordance with instructions from A/BSBPS 24 November 1961 the drawing is identified as such only. Be following as distributed by the designing agency:

1. Do not attach "HOLD" INTERLOCKS or seal connections to this equipment.
2. Parts which would cause interference with CD/A equipment.
3. Do not use any material which is not specified in the drawing.

JAN 13 1960

3/8 IN. = 1 FT.  
 1/2 IN. = 1 FT.  
 1 IN. = 1 FT.  
 1 1/2 IN. = 1 FT.  
 3 IN. = 1 FT.

FOR SITES 1 2 3 4 5 6 7 8 9 10 11 12

REVISED	DATE	DESCRIPTION	AGENCY	INTL.
1-12-61	OPERATIONAL AS BUILT			
1-12-62	REV. TO SHOW CONST AS-BUILT CONDITION		CEB/MCO	HR
5/2/60	ISSUED FOR PLATTSMURGH AFB.		A/BSBPS	U/AF

**BECHTEL CORPORATION** ENGINEERS AND CONSTRUCTORS  
 SAN FRANCISCO - LOS ANGELES - NEW YORK

**DEPARTMENT OF THE AIR FORCE**  
 AIR FORCE BALLISTIC MISSILE DIVISION (AFBD)  
 BELLINGHAM, CALIFORNIA

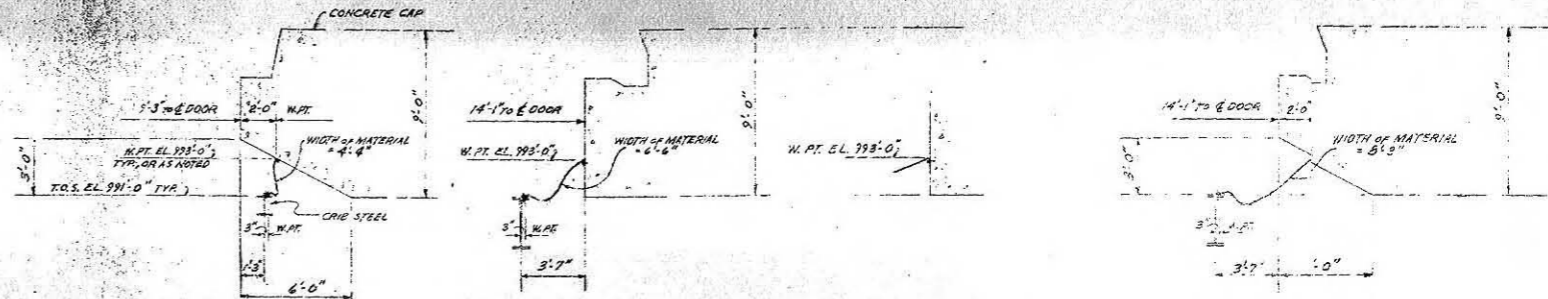
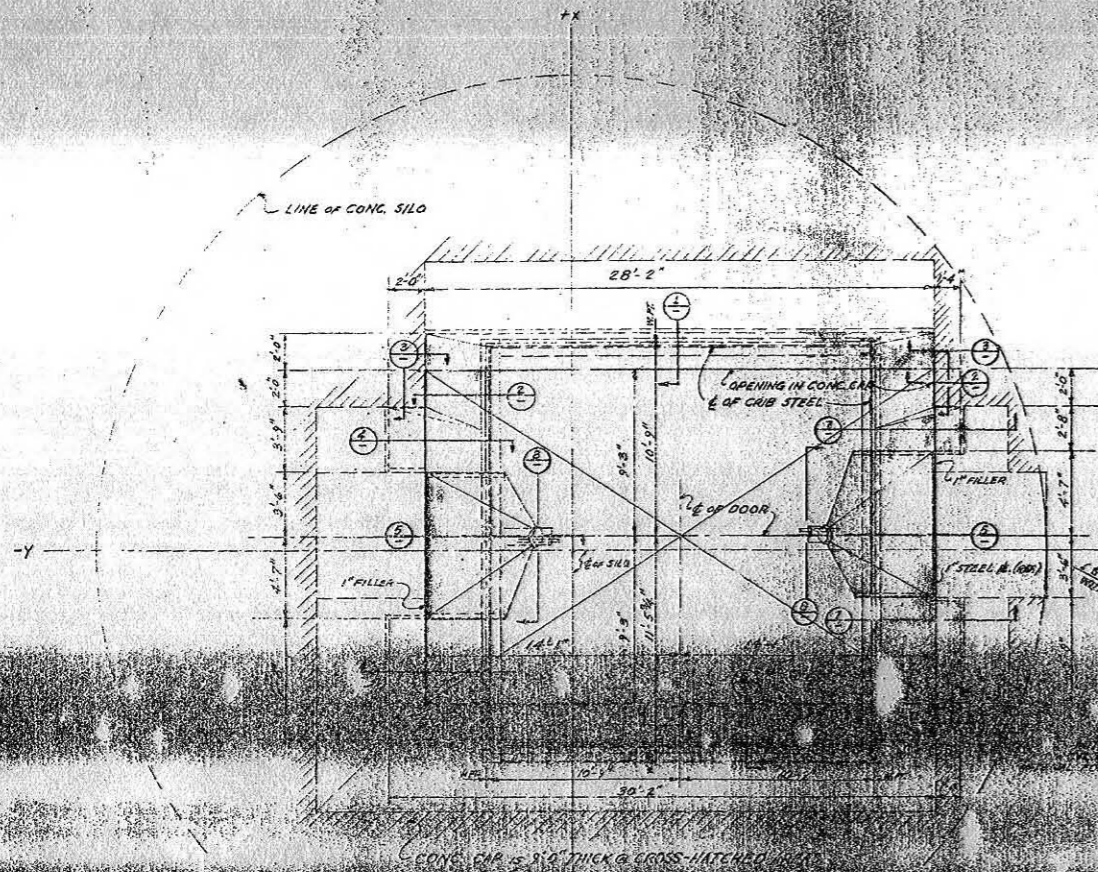
**WS-10 A-1 OPERATIONAL BASE**  
 UNITARY SILO  
 LUNCH CONTROL CENTER

**ESCAPE HATCH DETAILS-SHT. I**

DESIGNED BY: JMS 12-12-57  
 DRAWN BY: PCN 12-22-57  
 CHECKED BY: A.S. 12-22-57  
 DATE: JAN 13 1960  
 12 JAN 1960  
 336-259  
 1-20

LCC-87  
 D. O. SERIES  
 BRD INDEX NO. 5.01 THRU .111 PLATTSMURGH AFB





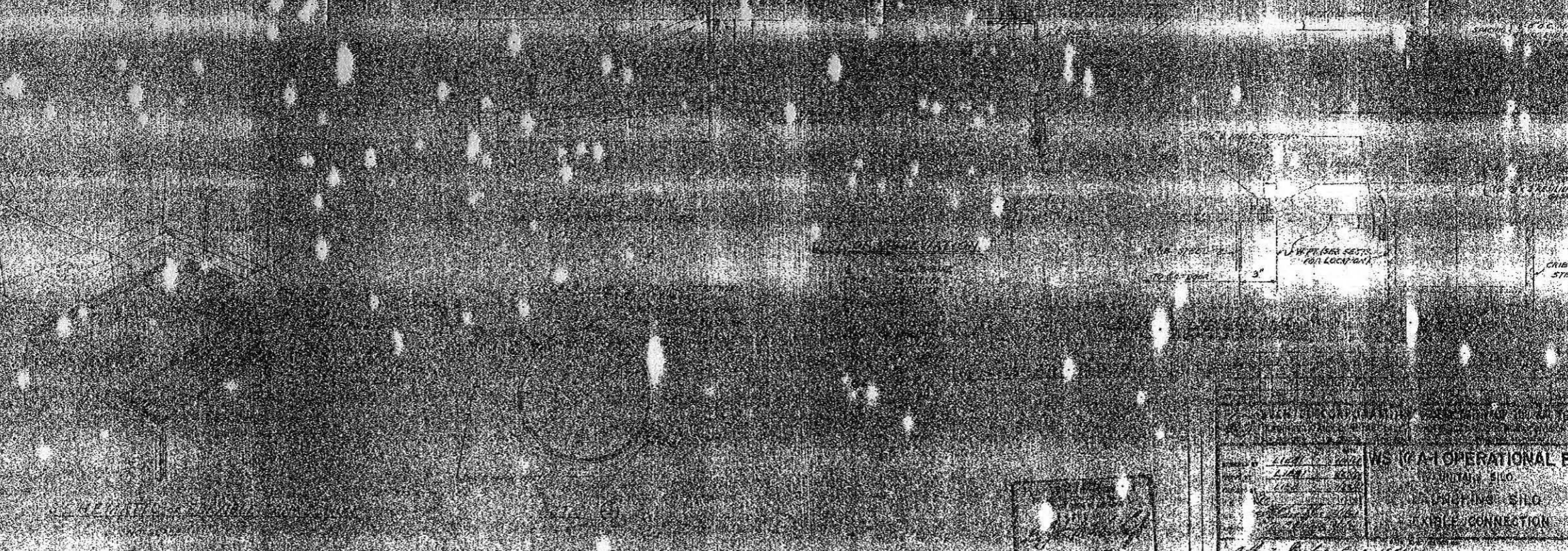
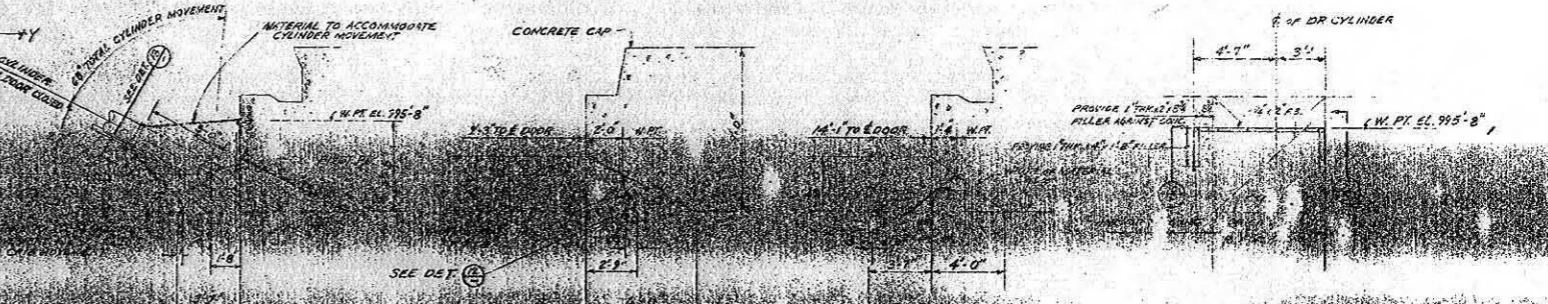
SECT. 1

SECT. 2

SECT. 3

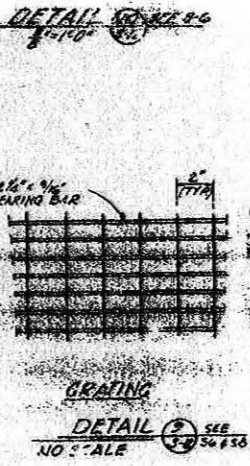
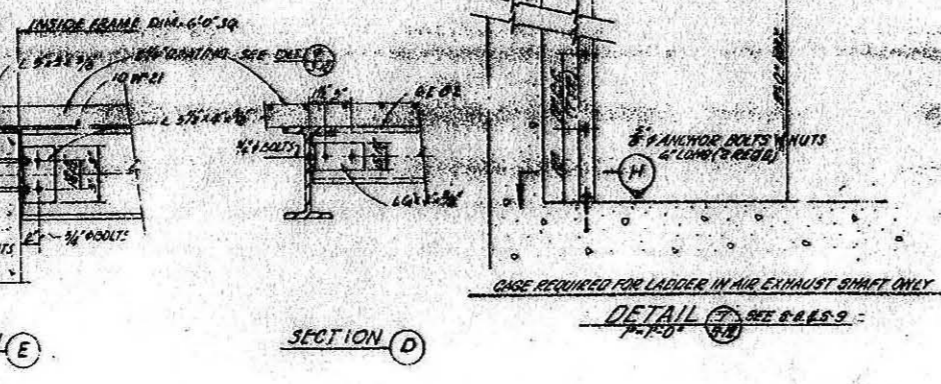
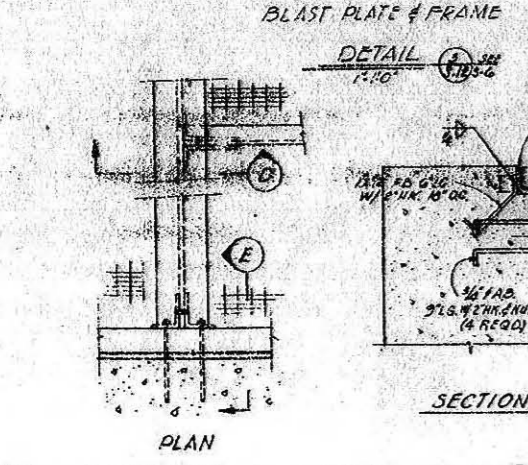
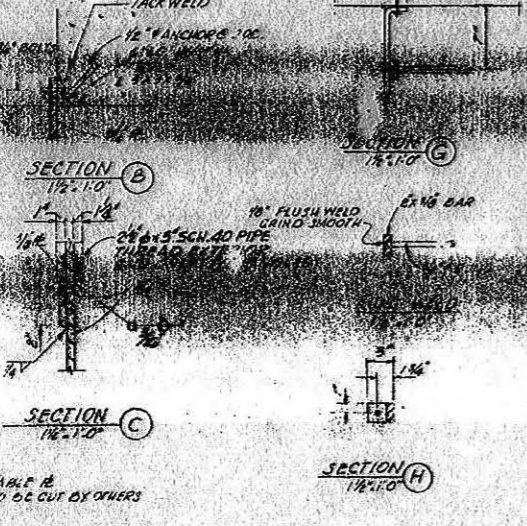
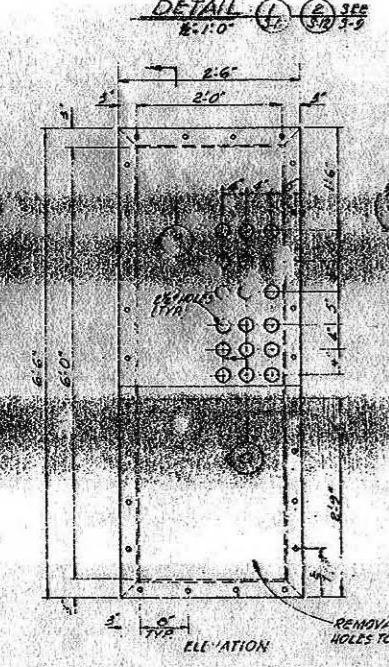
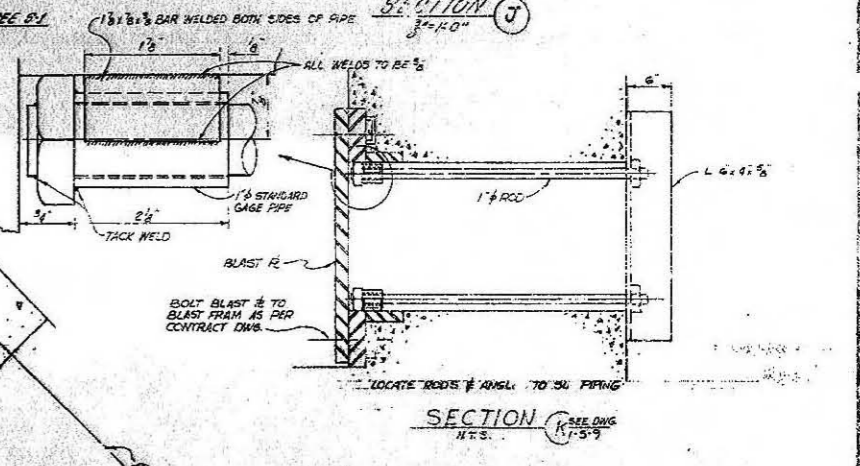
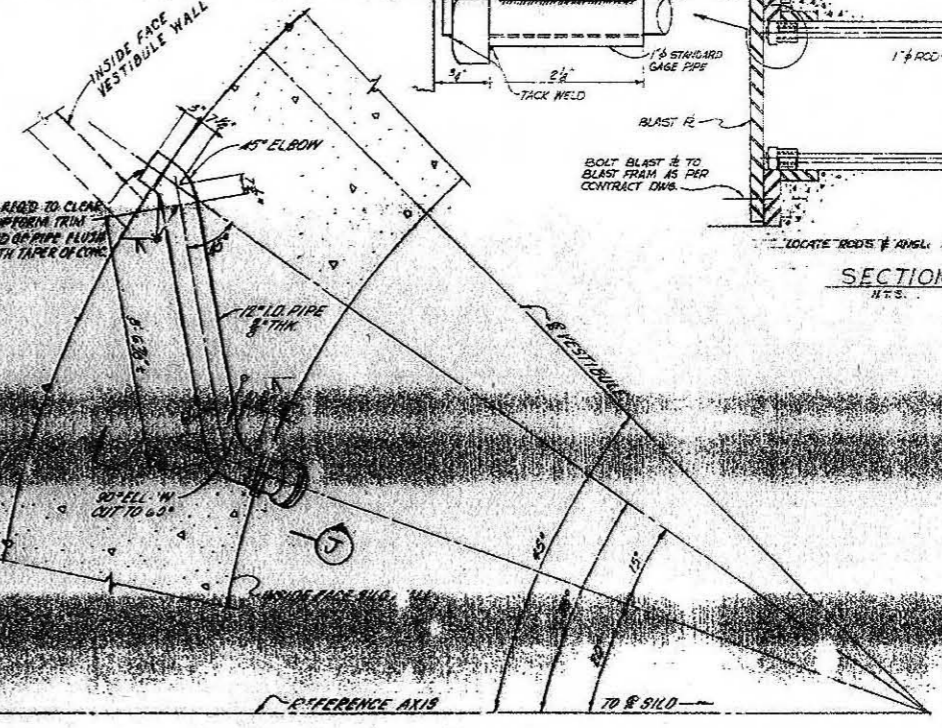
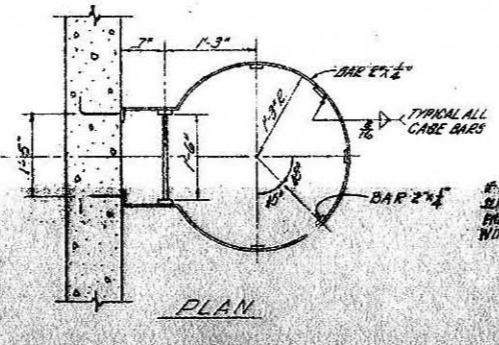
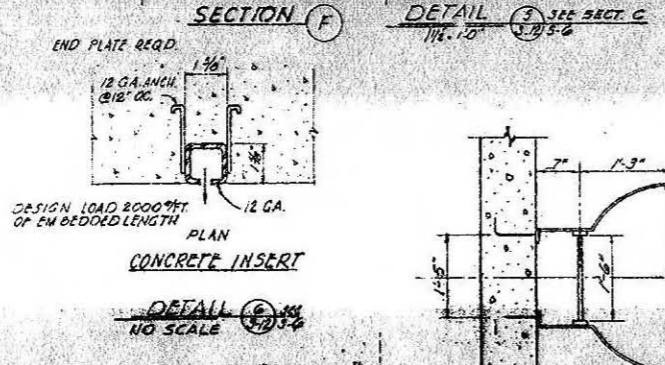
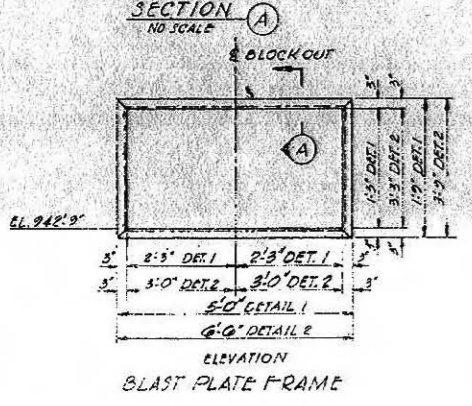
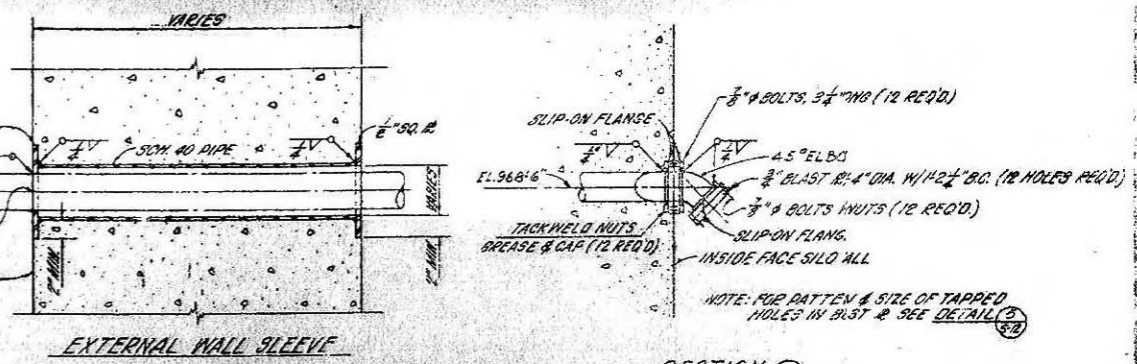
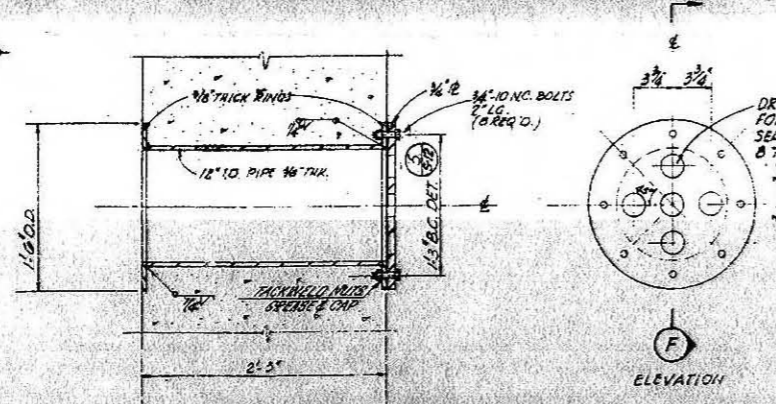
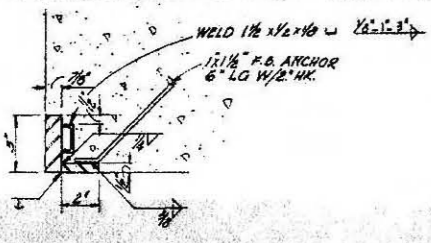
SECT. 4

S C A L E 1/4" = 1'-0"



NO.	DATE	BY	CHKD.
1	12/22	...	...
2	12/22	...	...
3	12/22	...	...
4	12/22	...	...

WS (A) OPERATIONAL BASIS  
 WITHIN SILO  
 WITHIN SILO  
 W/ABLE CONNECTION



REVISIONS	
1	AS SHOWN
2	FOR LITES
3	ISSUED FOR LAYERSBURG AFB
<b>BECHTEL CORPORATION</b> ENGINEERS AND ARCHITECTS 1700 BROADWAY SAN FRANCISCO, CALIF. 94109	
<b>DEPARTMENT OF THE ARMY</b> AIR FORCE DISTRICT OFFICE 1000 BROADWAY SAN FRANCISCO, CALIF. 94109	
DRAWN BY: S. J. GIBSON CHECKED BY: L. H. BROWN DESIGNED BY: KARAGIOZIAN DATE: JAN 13 1962	<b>WS-17 A I OPERATIONAL BASE</b> UNITARY SILO LAUNCHING SILO MIS. STEEL DETAILS SHEET 3
ENG. 30-075-69-118 536-A-1-S-12 2-17	

JAN 13 1962  
 5-2A

**GENERAL NOTES**  
**CONSTRUCTION JOINTS**

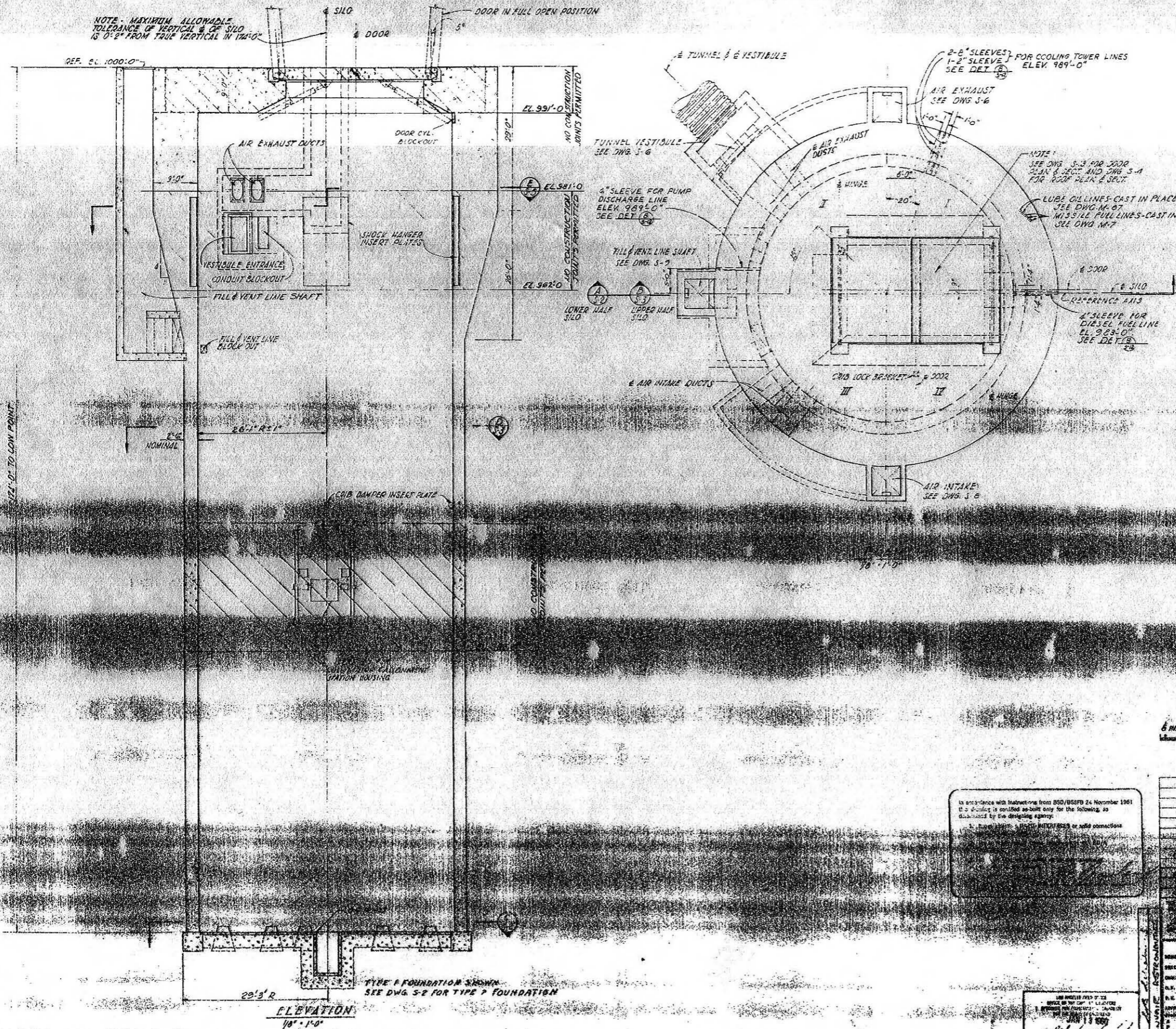
1. JOINTS SHALL BE LOCATED AS SHOWN ON DRAWING. SURFACES OF CONCRETE AT CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED & OTHERWISE ACCEPTABLE TO CONTRACTING OFFICER SO AS TO LEAVE A CLEAN SURFACE OF SOUND CONCRETE EXPOSED BEFORE PLACING SUBSEQUENT FOURS OF CONCRETE. IMMEDIATELY PRIOR TO PLACING THE NEXT FOUR OF CONCRETE, THE CLEANED AND WASHED SURFACE SHALL BE COATED WITH CEMENT MORTAR. REFER TO SPECS. FOR ADDITIONAL DETAILS. ADDITIONAL CONSTRUCTION JOINTS ARE PERMISSIBLE EXCEPT IN PLACES NOTED ON THE DRAWINGS. THE LOCATION OF ADDITIONAL CONSTRUCTION JOINTS SHALL BE APPROVED BY THE CONTRACTING OFFICER.

**REINFORCING STEEL-BUTT WELDED JOINTS**

2. REINFORCING STEEL TO BE JOINED IN THE FIELD BY EITHER THE THROTT WELDING PROCESS OR SHIELDED ARC WELDING METHOD.
3. THE SELECTION OF WELDING ELECTRODE WILL BE LIMITED TO THLOW HYDROGEN TYPE.
4. SPECIAL CARE WILL BE TAKEN TO PREVENT OVER EXPOSURE OF ELECTRODE TO MOISTURE AT ANY TIME.
5. FIELD APPLICATION DURING HIGH RELATIVE HUMIDITY (40% MAXIMUM OR TO MANUFACTURERS RECOMMENDATION) SHALL BE MINIMIZED TO 2 HOURS.
6. HERMETICALLY SEALED BOXES OR PACKAGES WILL BE USED IN THE FIELD FOR ELECTRODES. OPENED BOXES WILL BE RETURNED TO THE DRYING OVEN.

**GENERAL**

7. REFERENCE ELEVATION AT T.P. OF SILO EQUALS 1000'-0" FOR ACTUAL ELEVATION AND ORIENTATION OF REFERENCE AS SEE CIVIL DRAWINGS.
8. SEE ELECTRICAL MECHANICAL DRAWINGS FOR LOCATION OF EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
9. SPECIAL CARE SHALL BE TAKEN TO PREVENT OVER EXPOSURE OF ELECTRODE TO MOISTURE AT ANY TIME.
10. HERMETICALLY SEALED BOXES OR PACKAGES WILL BE USED IN THE FIELD FOR ELECTRODES. OPENED BOXES WILL BE RETURNED TO THE DRYING OVEN.
11. THE MINIMUM CONCRETE STRENGTH IN 28 DAYS SHALL BE 3750 P.S.I. EXCEPT FOR OVERHEAD CONCRETE.



6 RL - 1 PL  
FOR SITES 1 2 4 5 6 7 9 10 11 12

In accordance with instructions from BSO/BSSFB 24 November 1961 if a drawing is certified as-built only for the following as dictated by the designing agency:

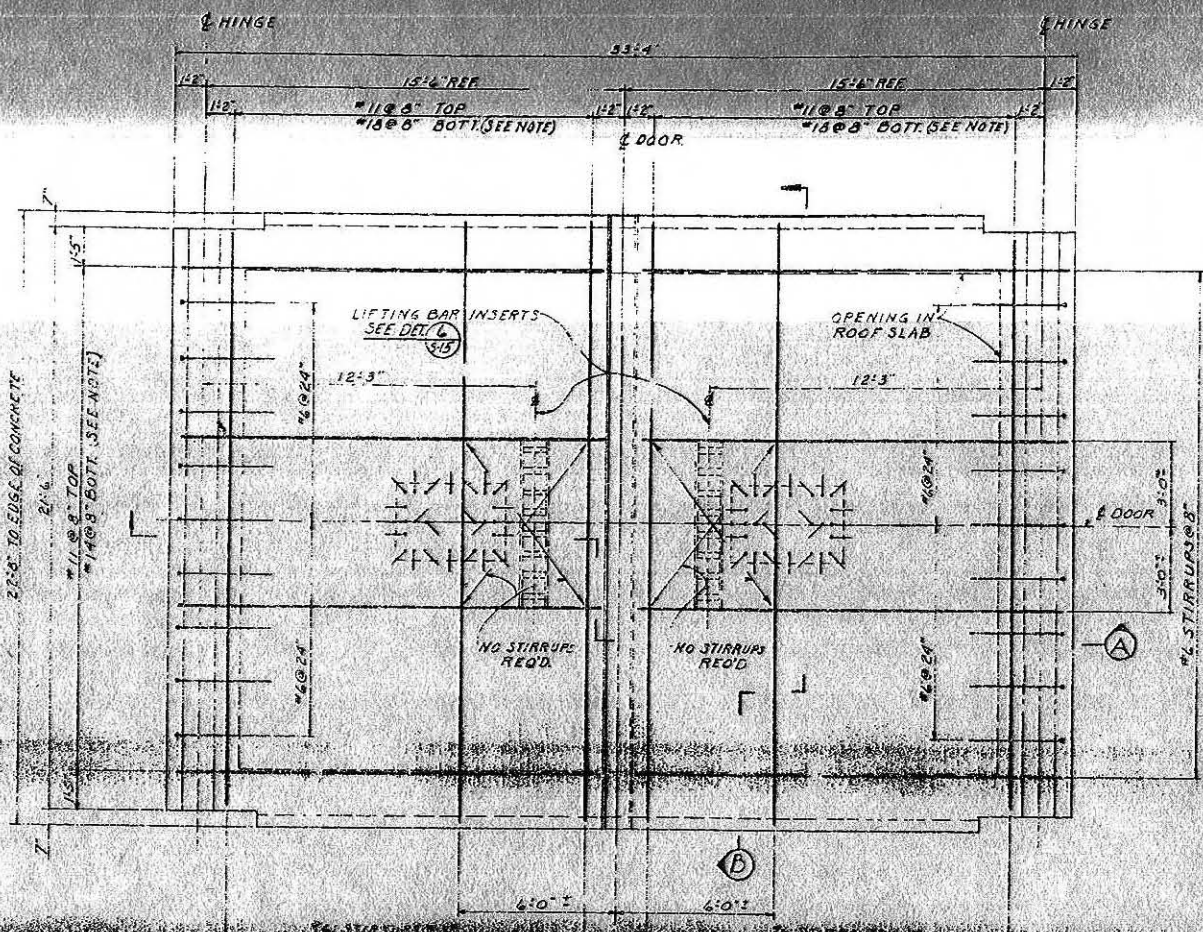
DESIGNED BY KARACONIAN 9-22-59	<b>WS-1C A-1 OPERATIONAL BASE</b> UNITARY SILO LAUNCHING SILO GENERAL PLAN & ELEVATION
CHECKED BY L. Tolpeltz 9-22-59	
DESIGNED BY KARACONIAN 10-9-59	ENG. 50-075-6015 12 JAN 1960
CHECKED BY L. Tolpeltz 10-9-59	
DATE JAN 13 1960	5-10

REF. ELEV. 1000'-0"

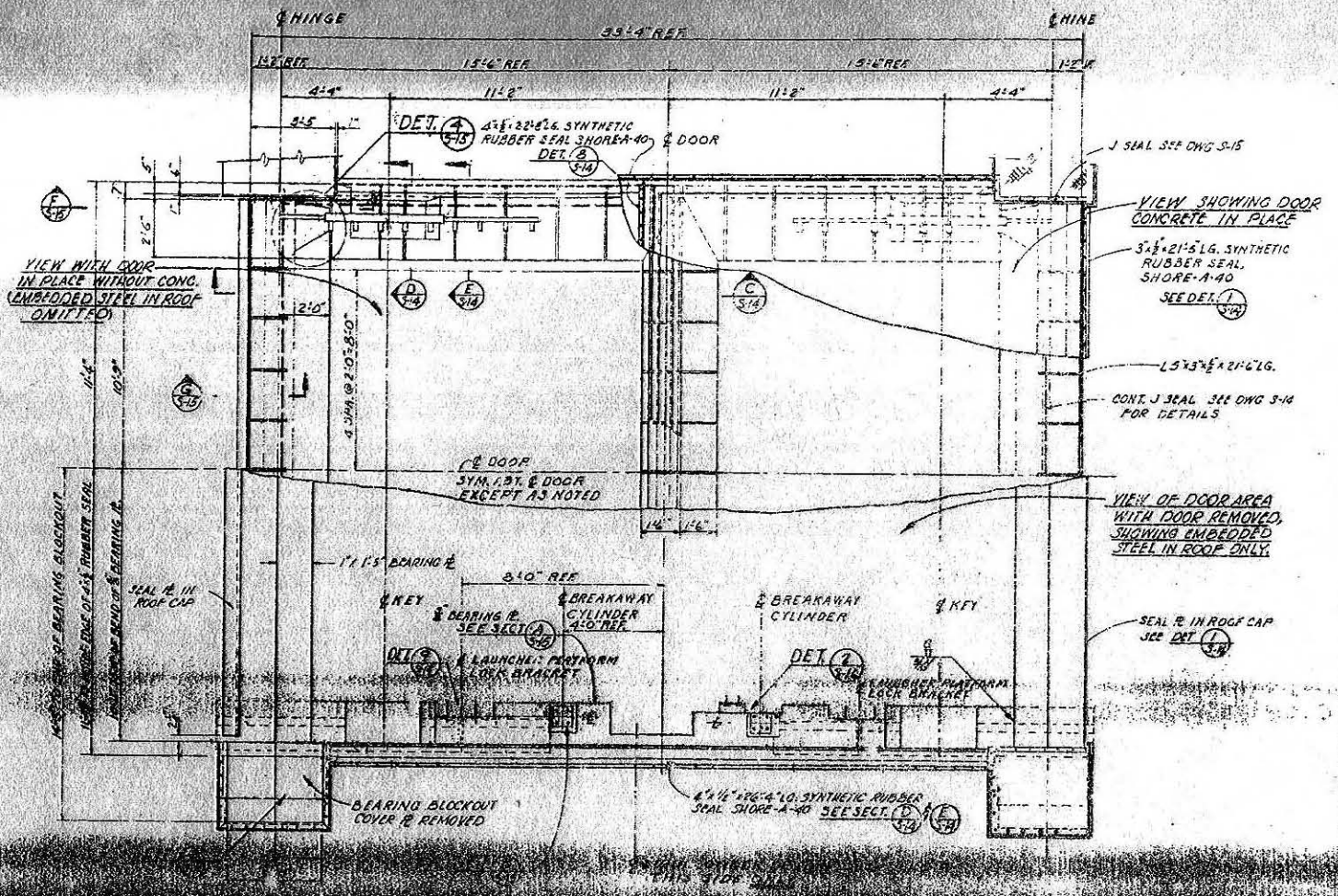
ELEVATION  
1/8" = 1'-0"

TYPE A FOUNDATION SHOWN  
SEE DWG. S-2 FOR TYPE B FOUNDATION

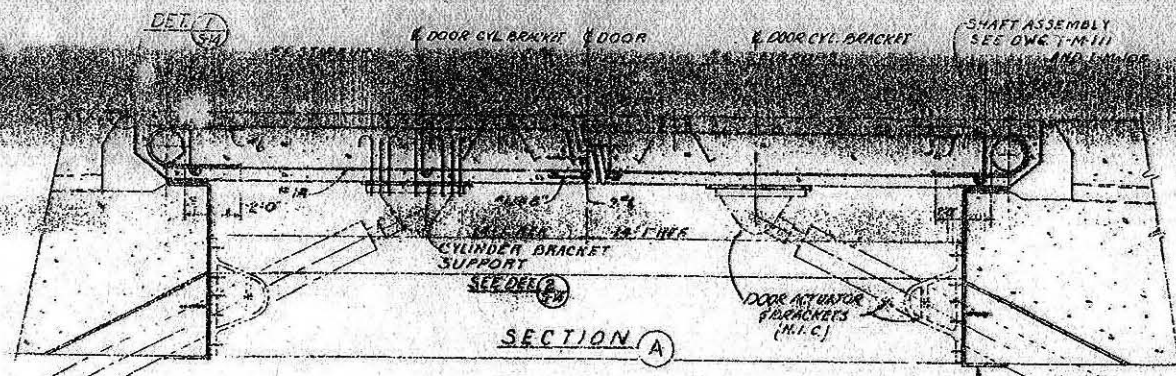
LOS ANGELES OFFICE OF THE  
OFFICE OF THE CHIEF ENGINEER  
FOR THE AIR FORCE  
JAN 13 1960



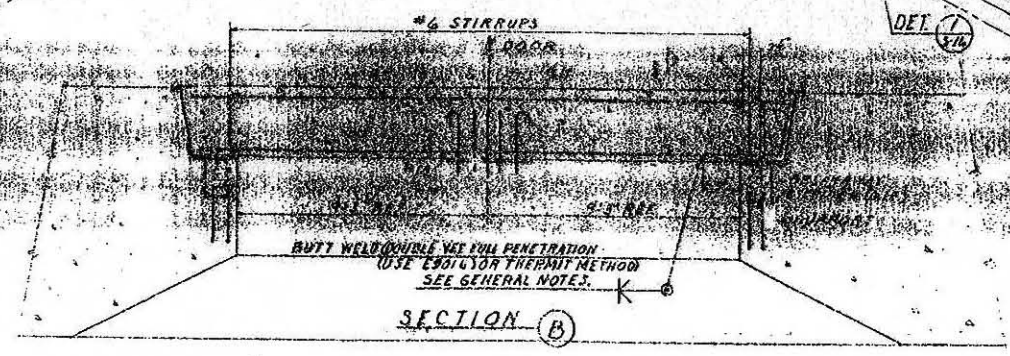
REINFORCING PLAN  
TOP & BOTTOM LAYERS



EMBEDDED STEEL PLAN



SECTION A



SECTION B

1. THE DOOR SLAB SHALL BE CAST IN PLACE FOLLOWING THE PROCEDURE OUTLINED BELOW.
2. THE DOOR CAN BE RAISED AFTER THE CONCRETE HAS ACQUIRED A STRENGTH OF 2000 P.S.I.
3. THE DOOR SLAB SHALL BE CAST IN PLACE FOLLOWING THE PROCEDURE OUTLINED BELOW.
4. THE STEEL FRAME FOR THE DOOR SHALL BE SET IN PLACE BEFORE THE ROOF SLAB IS PLACED.
5. THE SIDE PLATES SHALL BE GREASED TO ACT AS A FORM ON THE TWO SIDES OF THE DOOR.
6. THE HINGE INSTALLATION SHALL BE AS P-R DWG. 1-M-111.
7. AFTER PLACING THE STEEL BRACKETS AND REINFORCING STEEL THE DOOR SLAB SHALL BE POURED.
8. DOOR CAN BE CAST IN PLACE ONE LEAF AT A TIME TO MAINTAIN ACCESS TO SLAB.

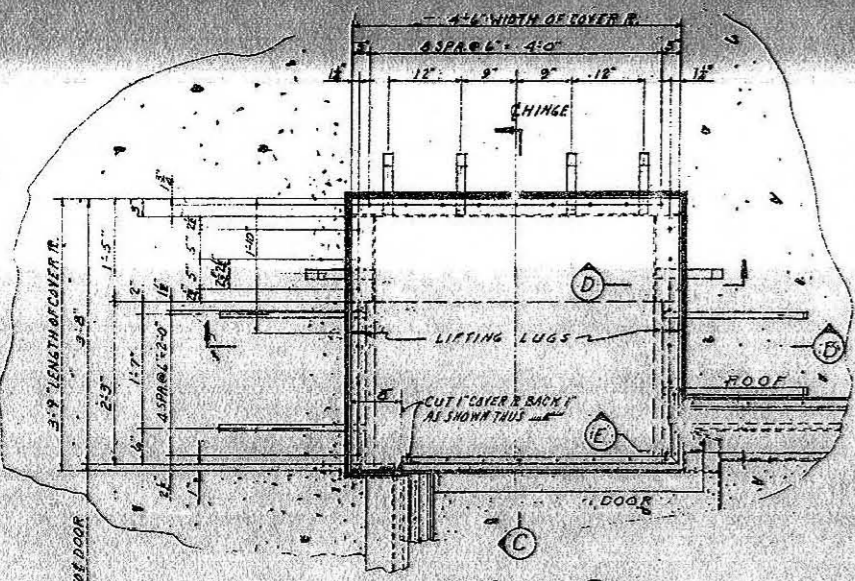
FOR SITES 1 3 4 5 6 7 8 9 10 11 12

JUN 13 1962

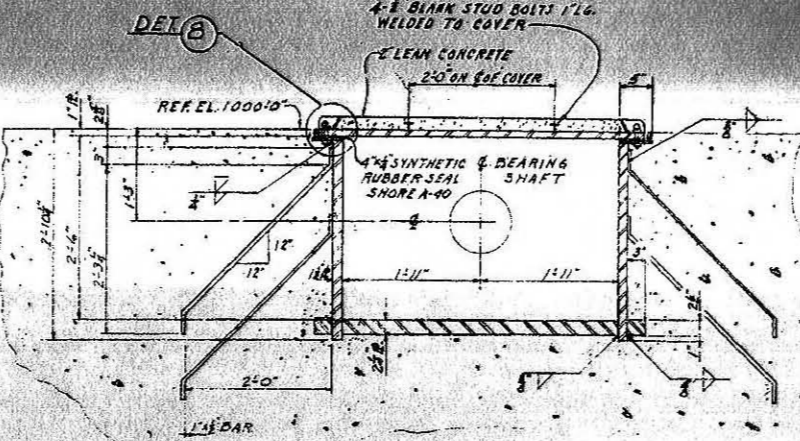
WS-10-A-1 OPERATIONAL BASE  
UNITS SILO  
LAUNCHING SILO  
OVERHEAD DOOR  
LAHS - A SECTIONS

ENG. 30-075-60-116

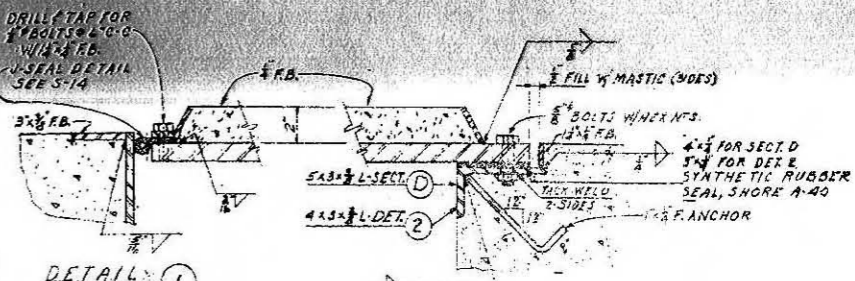
2-16



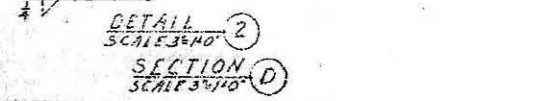
DETAIL (3) SEE SCALE 1\"/>



SECTION (B) SCALE 1\"/>

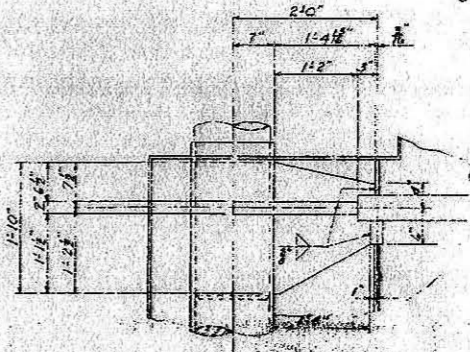


DETAIL (1) SCALE 3\"/>

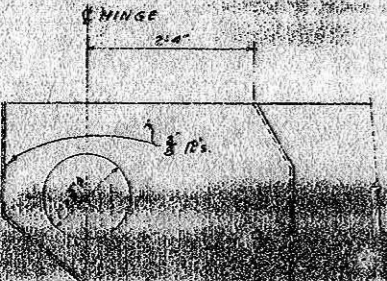


DETAIL (2) SCALE 3\"/>

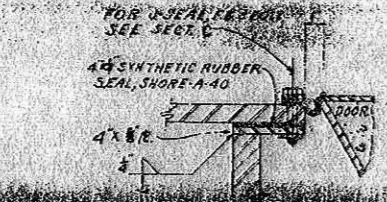
SECTION (D) SCALE 3\"/>



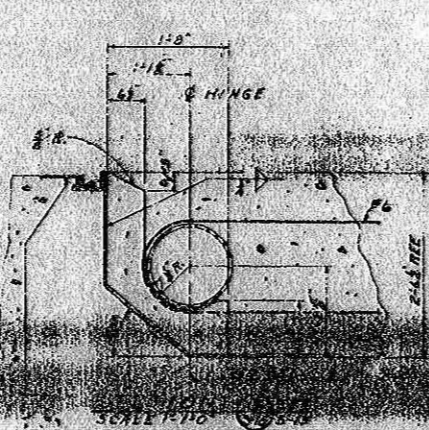
DETAIL (4) SEE SCALE 1\"/>



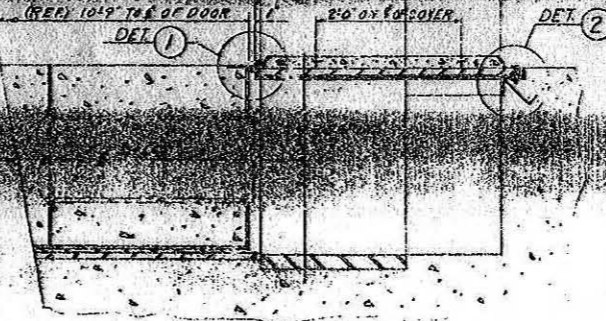
SECTION (F) SEE SCALE 1\"/>



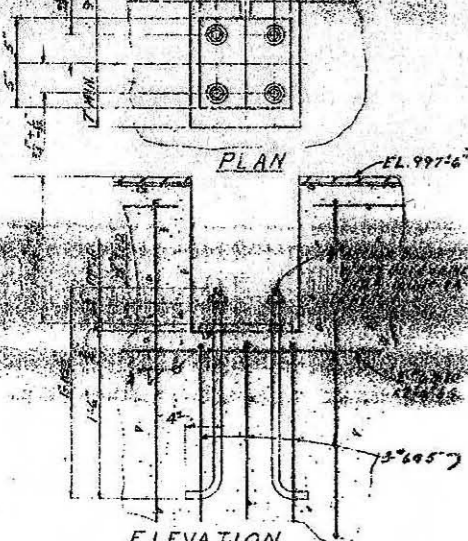
DETAIL (5) SEE SCALE 1\"/>



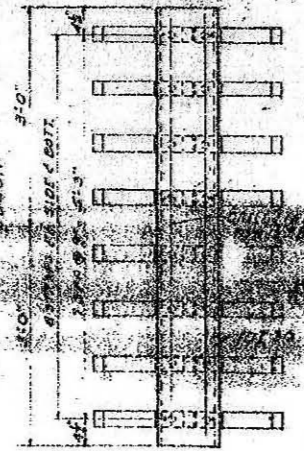
SECTION (A) SEE SCALE 1\"/>



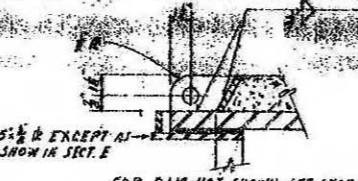
SECTION (C) SCALE 1\"/>



ELEVATION SCALE 1\"/>



DETAIL (6) SCALE 1\"/>



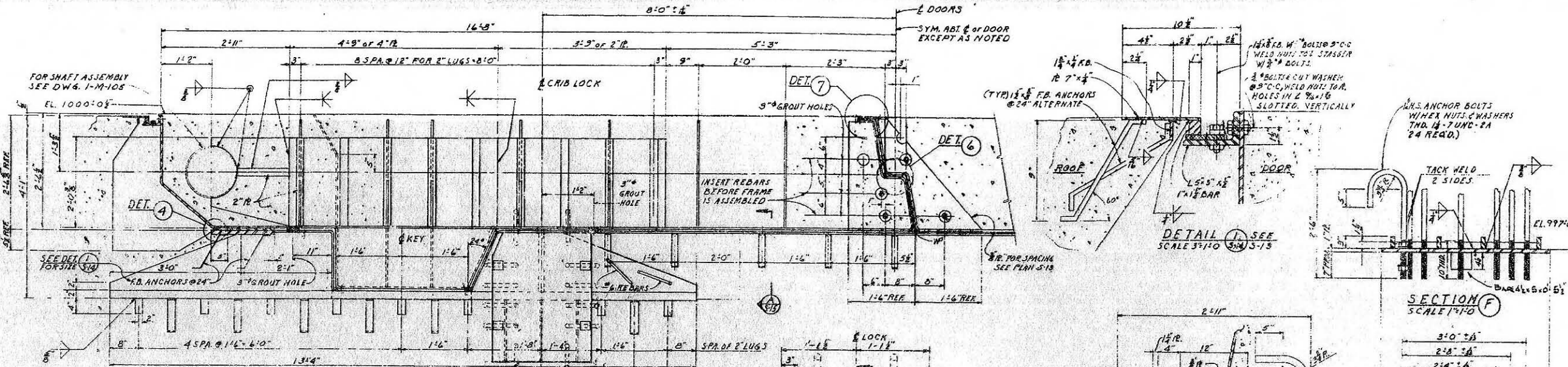
DETAIL (7) SCALE 1\"/>

JUN 1954  
*[Signature]*

FOR SITES [1][2][3][4][5][6][7][8][9][10][11][12]

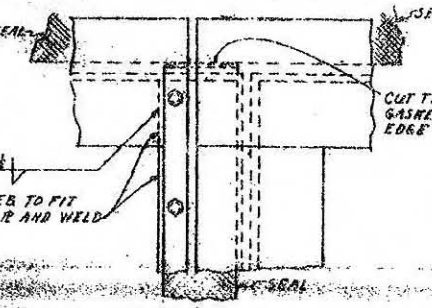
<b>ACME ENGINEERING CORPORATION</b> ENGINEERS AND ARCHITECTS 100 NORTH WASHINGTON ST., WASHINGTON, D.C. 1500 15TH ST. N.W., WASHINGTON, D.C.		<b>WS-10(A)-1 OPERATIONAL BASE</b> UNITARY SILO LAUNCHING SILO OVERHEAD DOOR SECTIONS & DETAILS SHEET-2 ENG. 30-078-80-116 DATE: JAN 1954 SCALE: NOTED	
DESIGNED BY: KARLOVIAN, I.R. CHECKED BY: SPEER, J.R. DRAWN BY: SEKIGUCHI, E.R. DATE: JAN 1954	DRILL STAR FOR 1/2\"/>		
5\"/>			

ACME  
 JUN 1954



Approved by [Signature] JUN 13 1962

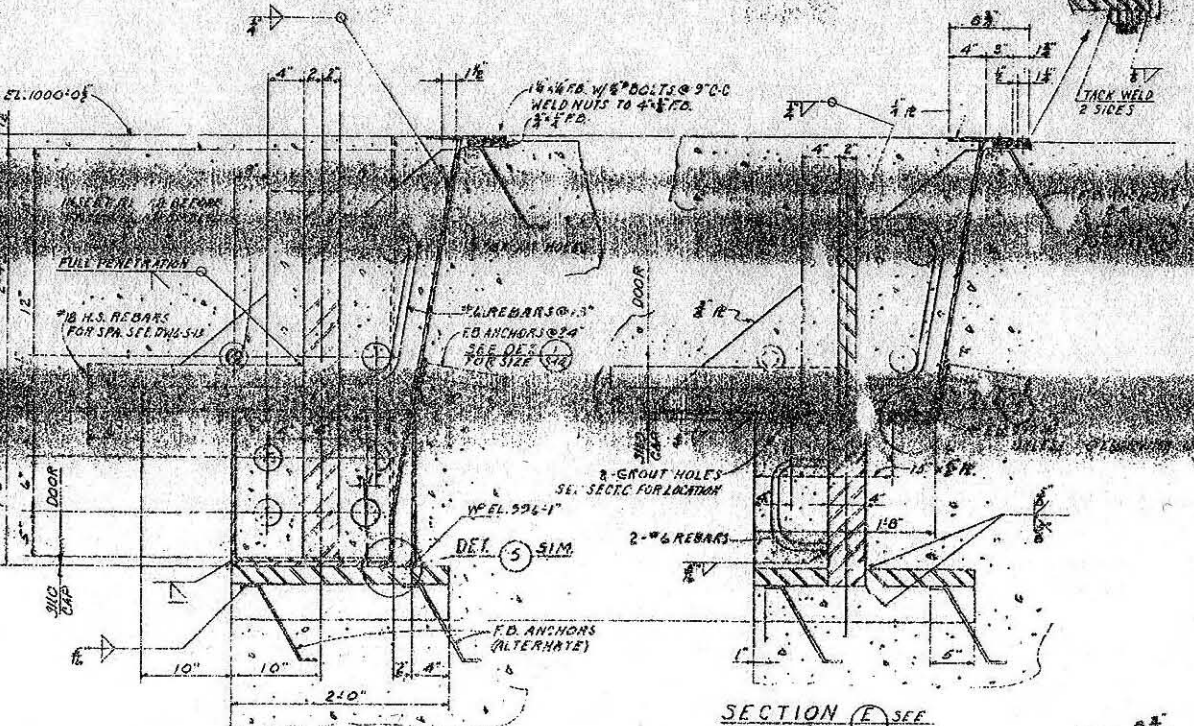
SYNTHETIC RUBBER SHORE-A-40



USE MINIMUM UNLESS SHOWN OTHERWISE

1/4" DIA.
1/2" DIA.
3/4" DIA.

FOR SITES 1 3 4 5 6 7 8 9 10 11 12



SECTION (D) SEE SCALE 1/4" = 1'-0" 5/16" = 1'-0"

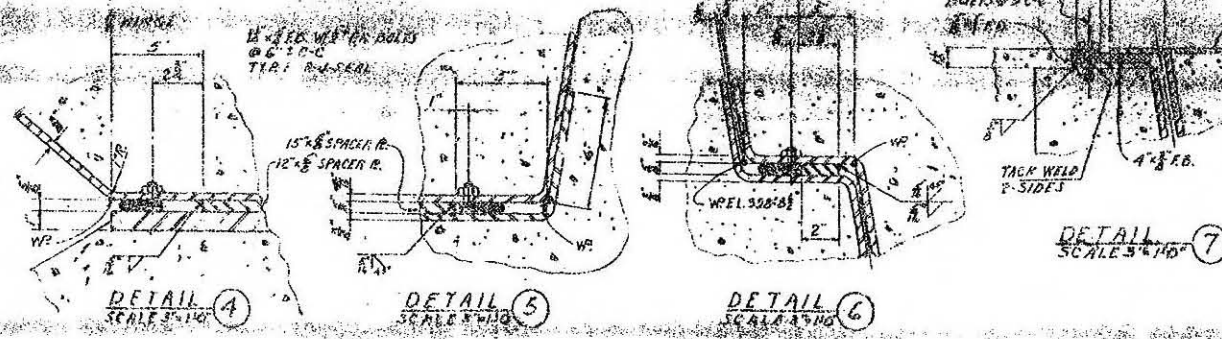
SECTION (E) SEE SCALE 1/4" = 1'-0" 5/16" = 1'-0"

OPERATIONS AS BUILT
REV. NO. 10/10/62
REV. NO. 10/10/62
REV. NO. 10/10/62
REV. NO. 10/10/62
REV. NO. 10/10/62
REV. NO. 10/10/62

**BECHTEL CORPORATION**  
ENGINEERS AND CONSTRUCTORS  
SAN FRANCISCO - LOS ANGELES - NEW YORK

**WS-10A-1 OPERATIONAL BASE**  
UNITARY SILO  
LAUNCHING SILO  
OVERHEAD DOOR.  
SECTIONS & DETAILS SHEET 1  
ENG. 30-078-60-116  
NOV 556-11-9-16  
2-19

**APPROVED:** [Signature] 17 JUN 1960  
[Signature] 17 JUN 1960  
[Signature] 17 JUN 1960

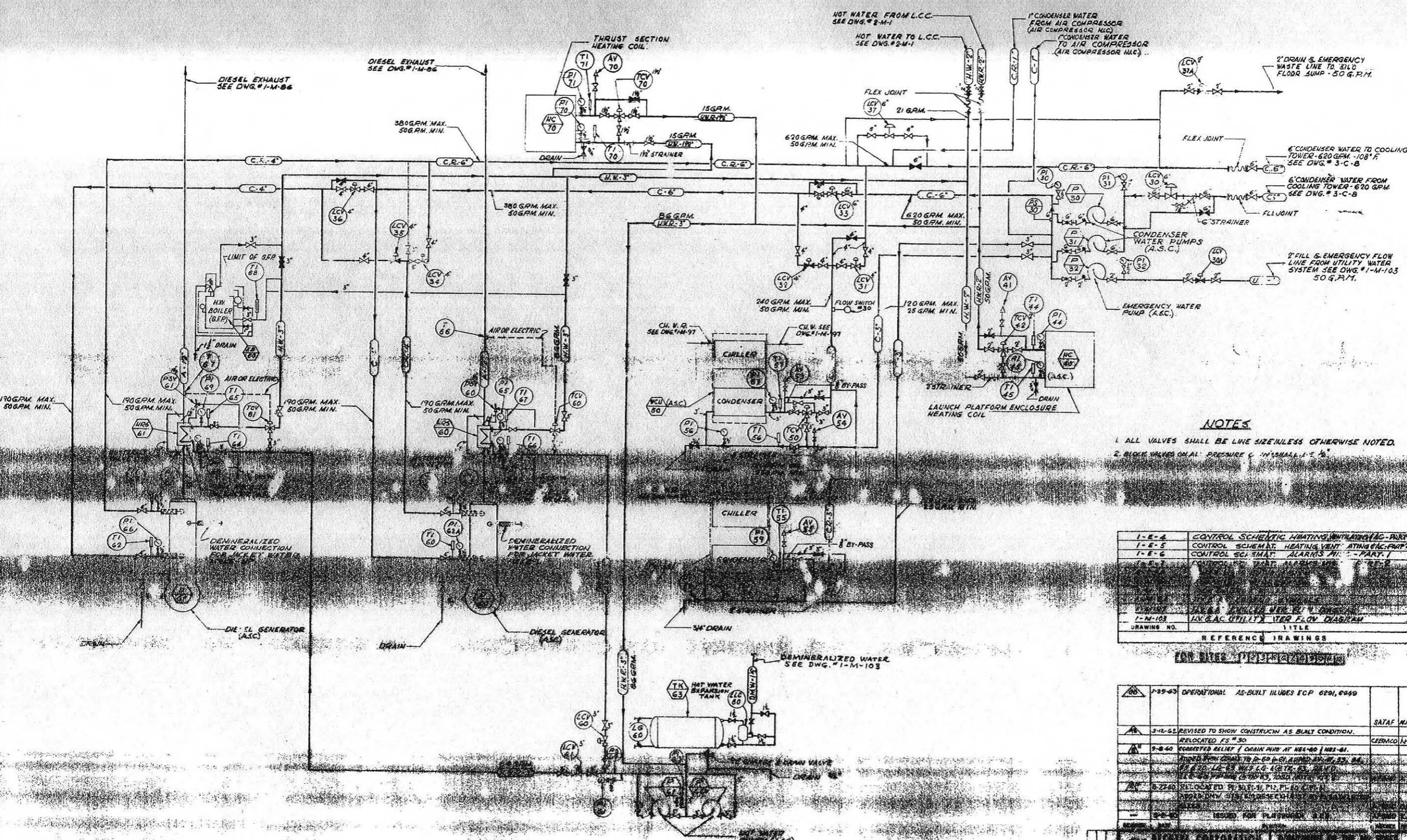


DETAIL 4 SCALE 3/4" = 1'-0"

DETAIL 5 SCALE 3/4" = 1'-0"

DETAIL 6 SCALE 3/4" = 1'-0"

DETAIL 7 SCALE 3/4" = 1'-0"



**NOTES**

- 1. ALL VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
- 2. BLOCK VALVES ON ALL PRESSURE C. SHALL BE 1/2\"/>

1-E-4	CONTROL SCHEMATIC HEATING UNIT LAUNCHING COIL - PART 1
1-E-5	CONTROL SCHEMATIC HEATING VENTING ENC. - PART 1
1-E-6	CONTROL SCHEMATIC ALARMS UNIT - PART 1
1-E-7	CONTROL SCHEMATIC ALARMS UNIT - PART 2
DRAWN BY: J. H. B. / CHECKED BY: J. H. B. / DATE: 11/15/60 DWG. NO.: 1-M-103 / REV. NO.: 1 / TITLE: H.V. & L.C. UTILITY WATER FLOW DIAGRAM DRAWING NO.: _____ / TITLE: _____	

NO.	DATE	DESCRIPTION	BY
88	1-25-63	OPERATIONAL AS-BUILT ILLUSTRATION FCP 6291, 6349	
89	3-12-62	REVISED TO SHOW CONSTRUCTION AS BUILT CONDITION. RELOCATED FS # 30.	SATAF / N.H.
90	9-8-60	MODIFIED RELIEF / DRAIN PUMP AT NES-60 / NES-61. ADDED DEMINERALIZED TO D-60 / D-61 / D-62 / D-63 / D-64 / D-65 / D-66 / D-67 / D-68 / D-69 / D-70 / D-71 / D-72 / D-73 / D-74 / D-75 / D-76 / D-77 / D-78 / D-79 / D-80 / D-81 / D-82 / D-83 / D-84 / D-85 / D-86 / D-87 / D-88 / D-89 / D-90 / D-91 / D-92 / D-93 / D-94 / D-95 / D-96 / D-97 / D-98 / D-99 / D-100 / D-101 / D-102 / D-103 / D-104 / D-105 / D-106 / D-107 / D-108 / D-109 / D-110 / D-111 / D-112 / D-113 / D-114 / D-115 / D-116 / D-117 / D-118 / D-119 / D-120 / D-121 / D-122 / D-123 / D-124 / D-125 / D-126 / D-127 / D-128 / D-129 / D-130 / D-131 / D-132 / D-133 / D-134 / D-135 / D-136 / D-137 / D-138 / D-139 / D-140 / D-141 / D-142 / D-143 / D-144 / D-145 / D-146 / D-147 / D-148 / D-149 / D-150 / D-151 / D-152 / D-153 / D-154 / D-155 / D-156 / D-157 / D-158 / D-159 / D-160 / D-161 / D-162 / D-163 / D-164 / D-165 / D-166 / D-167 / D-168 / D-169 / D-170 / D-171 / D-172 / D-173 / D-174 / D-175 / D-176 / D-177 / D-178 / D-179 / D-180 / D-181 / D-182 / D-183 / D-184 / D-185 / D-186 / D-187 / D-188 / D-189 / D-190 / D-191 / D-192 / D-193 / D-194 / D-195 / D-196 / D-197 / D-198 / D-199 / D-200 / D-201 / D-202 / D-203 / D-204 / D-205 / D-206 / D-207 / D-208 / D-209 / D-210 / D-211 / D-212 / D-213 / D-214 / D-215 / D-216 / D-217 / D-218 / D-219 / D-220 / D-221 / D-222 / D-223 / D-224 / D-225 / D-226 / D-227 / D-228 / D-229 / D-230 / D-231 / D-232 / D-233 / D-234 / D-235 / D-236 / D-237 / D-238 / D-239 / D-240 / D-241 / D-242 / D-243 / D-244 / D-245 / D-246 / D-247 / D-248 / D-249 / D-250 / D-251 / D-252 / D-253 / D-254 / D-255 / D-256 / D-257 / D-258 / D-259 / D-260 / D-261 / D-262 / D-263 / D-264 / D-265 / D-266 / D-267 / D-268 / D-269 / D-270 / D-271 / D-272 / D-273 / D-274 / D-275 / D-276 / D-277 / D-278 / D-279 / D-280 / D-281 / D-282 / D-283 / D-284 / D-285 / D-286 / D-287 / D-288 / D-289 / D-290 / D-291 / D-292 / D-293 / D-294 / D-295 / D-296 / D-297 / D-298 / D-299 / D-300 / D-301 / D-302 / D-303 / D-304 / D-305 / D-306 / D-307 / D-308 / D-309 / D-310 / D-311 / D-312 / D-313 / D-314 / D-315 / D-316 / D-317 / D-318 / D-319 / D-320 / D-321 / D-322 / D-323 / D-324 / D-325 / D-326 / D-327 / D-328 / D-329 / D-330 / D-331 / D-332 / D-333 / D-334 / D-335 / D-336 / D-337 / D-338 / D-339 / D-340 / D-341 / D-342 / D-343 / D-344 / D-345 / D-346 / D-347 / D-348 / D-349 / D-350 / D-351 / D-352 / D-353 / D-354 / D-355 / D-356 / D-357 / D-358 / D-359 / D-360 / D-361 / D-362 / D-363 / D-364 / D-365 / D-366 / D-367 / D-368 / D-369 / D-370 / D-371 / D-372 / D-373 / D-374 / D-375 / D-376 / D-377 / D-378 / D-379 / D-380 / D-381 / D-382 / D-383 / D-384 / D-385 / D-386 / D-387 / D-388 / D-389 / D-390 / D-391 / D-392 / D-393 / D-394 / D-395 / D-396 / D-397 / D-398 / D-399 / D-400 / D-401 / D-402 / D-403 / D-404 / D-405 / D-406 / D-407 / D-408 / D-409 / D-410 / D-411 / D-412 / D-413 / D-414 / D-415 / D-416 / D-417 / D-418 / D-419 / D-420 / D-421 / D-422 / D-423 / D-424 / D-425 / D-426 / D-427 / D-428 / D-429 / D-430 / D-431 / D-432 / D-433 / D-434 / D-435 / D-436 / 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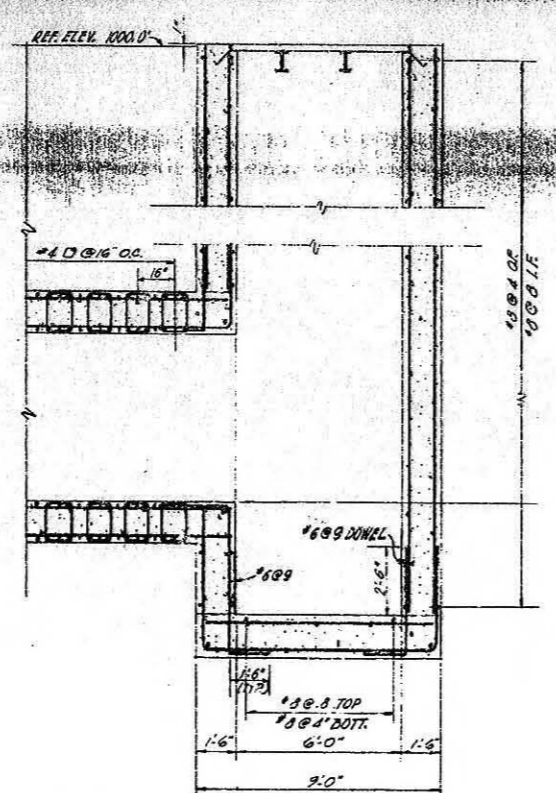
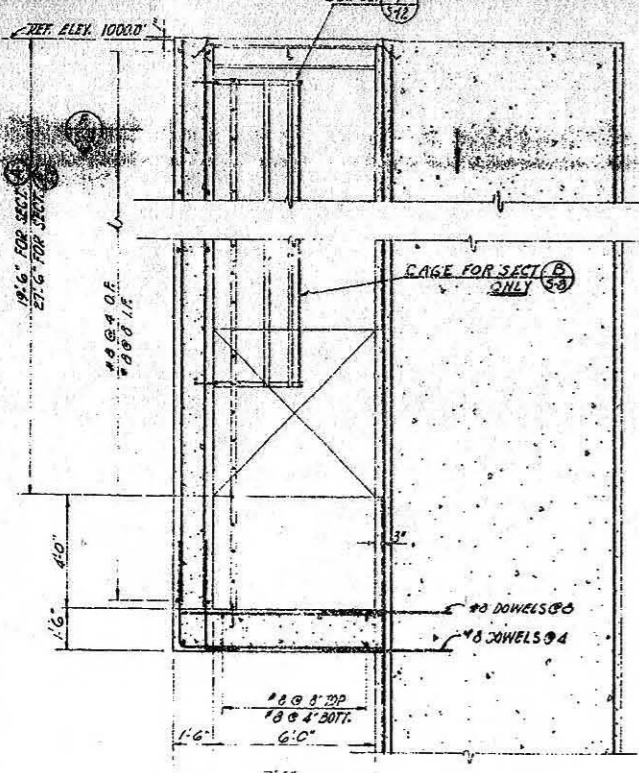
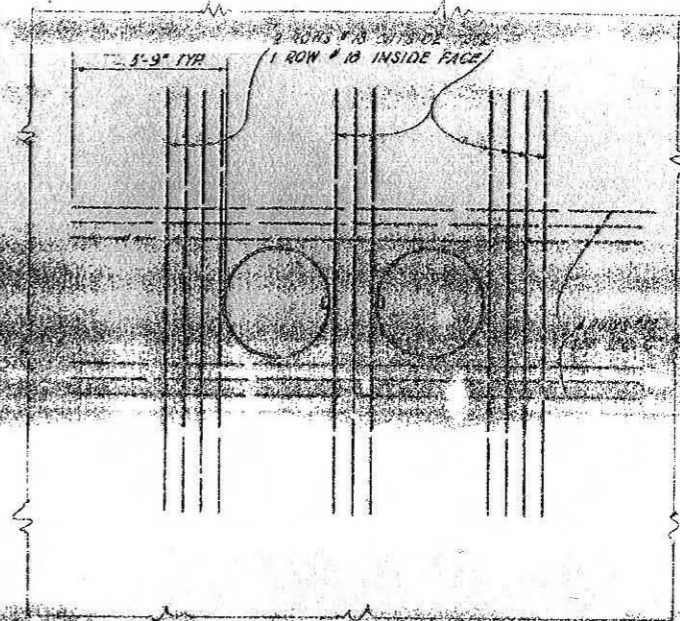
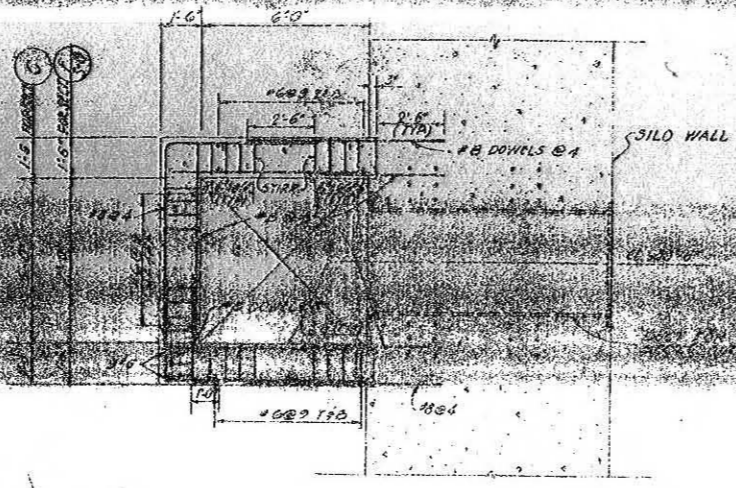
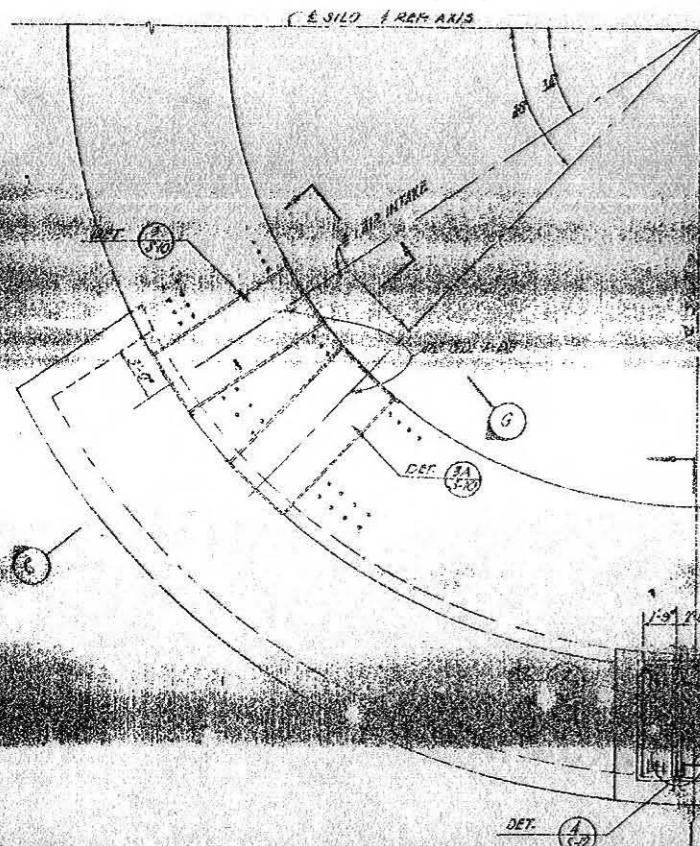
In accordance with instructions dated 25D/355FD 21 November 1951 this drawing is certified as built only for the building as shown on the drawing as of the date of this certification.

1. Items affecting M.I.D. interference or other conditions to G/A equipment.
2. Items which would create interferences with G/A equipment.
3. Changes that would affect other interferences or operations of the system.

DATE: 11/15/60  
 BY: J. H. B.  
 CHECKED BY: J. H. B.

CMC 3 SEP 1960  
 CMC 27 MAY 1960

DRAWN BY: J. H. B. CHECKED BY: J. H. B. DATE: 11/15/60	<b>WS 107-1 OPERATIONAL BASE</b> UNITARY SILO LAUNCHING SILO H. V. & L. C. COOLING & HOT WATER FLOW DIAGRAM ENG. 30-075-80-116 13 JAN 1960 NONE
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SECTION D  
SCALE: 3/4" = 1'-0"  
SECTION 1-2 SEE 5-6

SECTION A  
SCALE: 3/4" = 1'-0"  
SECTION 1-2 SEE 5-6

In accordance with Section 4050, 40510 of November 1991, this drawing is issued on a "no-cost" basis for the purpose of information only. It is not to be used for construction of any project without the written approval of the originator. This drawing is the property of the Department of the Air Force and its use for any other purpose without the written approval of the originator is prohibited. JUN 13 1962

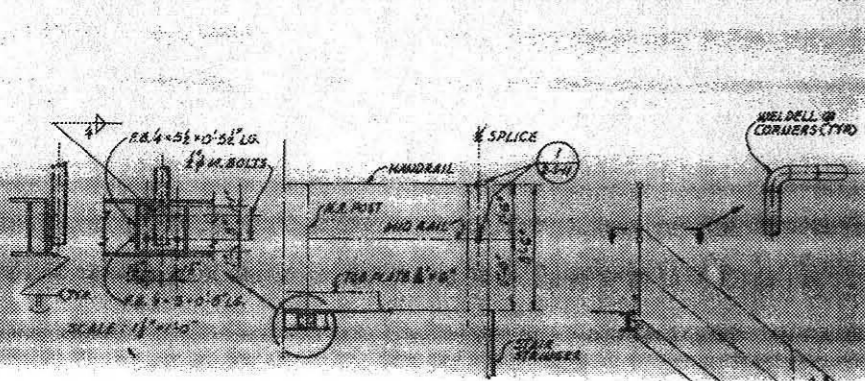


REVISION	DATE	DESCRIPTION	AGENCY UNIT
1-24-65		OPERATIONAL AS BUILT	SATAP 173
2-26-62		REV. TO SHOW CONSTR. AS-BUILT CONDITION	CEBMCO 142
5-2-60		ISSUED FOR PLAYSBURGH A.F.B.	AFBMD E.D.

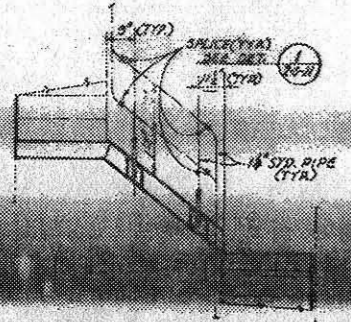
<b>BECHTEL CORPORATION</b> ENGINEERS AND CONSTRUCTORS SAN FRANCISCO - LOS ANGELES - NEW YORK	<b>DEPARTMENT OF THE AIR FORCE</b> AIR FORCE BALLISTIC MISSILE DIVISION (ARDC) MONTAGUE, CALIFORNIA
DESIGNED BY: E. SERIBERCH 12-11-57 DRAWN BY: L. KALOGIRAKIS 12-11-57 CHECKED BY: K. KALOGIRAKIS 12-11-57 A.E.T. APPROVED: W.D. COOK 1-15-60 DATE: 1-13-60	<b>WS-107   OPERATIONAL BASE</b> UNITARY SILO AIR INTAKE SHAFT LAN & SECTIONS DRAWING NO. <b>ENG. 30-075-60-116</b> JAN 1960 AS NOTED 556-1-1-9 2-13

LOS ANGELES FIELD OFFICE  
OFFICE OF THE CHIEF OF ENGINEERS  
ADVISED FOR CONSTRUCTION FACILITY  
FOR THE CORPS OF ENGINEERS  
JAN 13 1960  
CLYTON S. DANIELSON JR.  
LT. COL. CORPS OF ENGINEERS  
DEPT. AIR FORCE

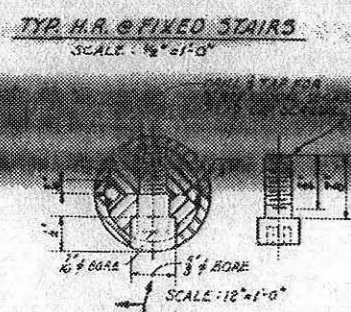




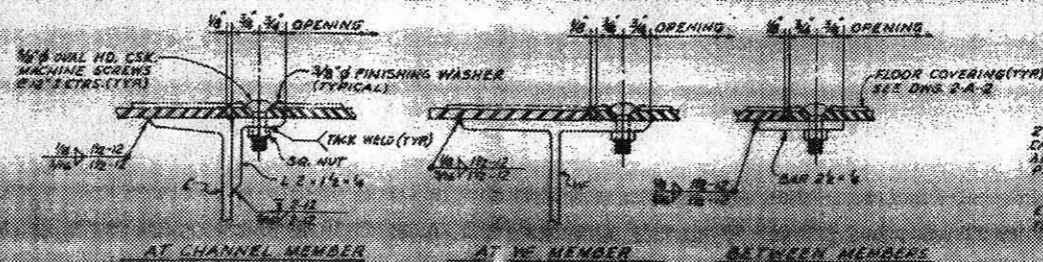
TYR HANDRAIL @ PLATFORM  
SCALE: 1/2" = 1'-0"



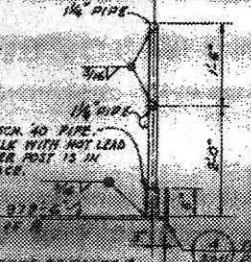
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SCALE: 1/2" = 1'-0"



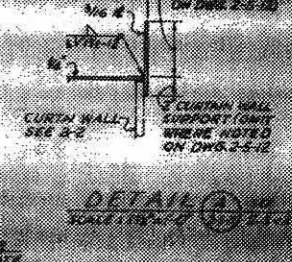
TYR H.R. @ FIXED STAIRS  
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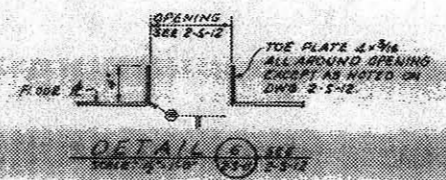
DETAIL (4) SEE  
SCALE: 1/2" = 1'-0"  
TYPICAL ACCESS OPENING SEAT DETAILS



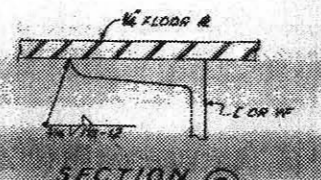
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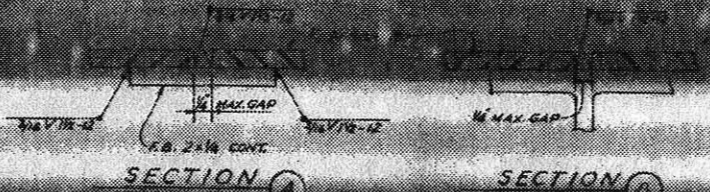
DETAIL (5) SEE  
SCALE: 1/2" = 1'-0"



DETAIL (6) SEE  
SCALE: 1/2" = 1'-0"

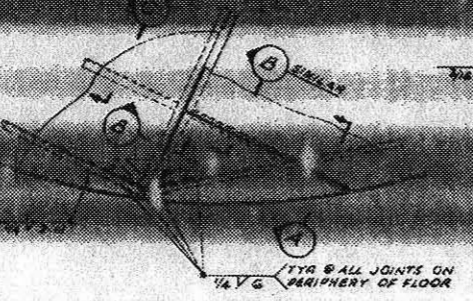


SECTION (C)  
SCALE: 1/2" = 1'-0"  
TYPICAL CONTINUOUS PLATE

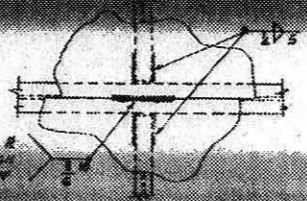


SECTION (A)  
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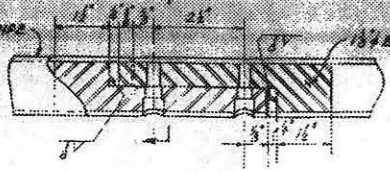
SECTION (B)  
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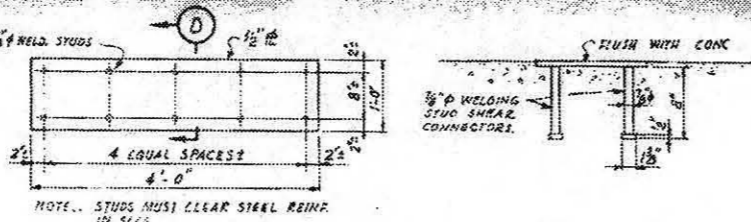
DETAIL (7) SEE  
SCALE: 1/2" = 1'-0"  
FLOOR PLATE CONNECTIONS  
TYPICAL FOR FIRST & SECOND LEVELS



WHEN FLOOR B SEAMS OCCUR ON CONTINUOUS PLATE

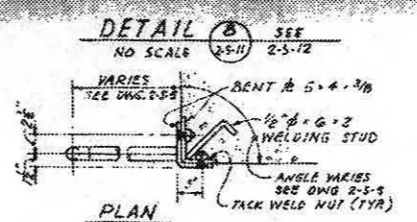


DETAIL (8) SEE  
SCALE: 1/2" = 1'-0"  
H.R. SPLICE DETAIL

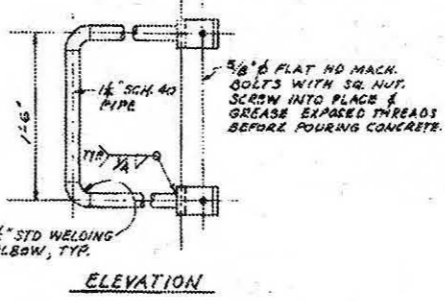


DETAIL (9) SEE  
SCALE: 1/2" = 1'-0"  
ANCHOR PLATE

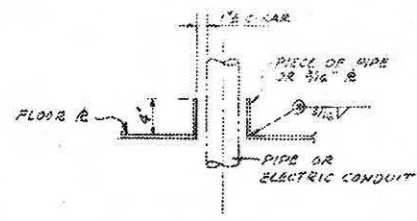
SECTION (D)  
SCALE: 1/2" = 1'-0"



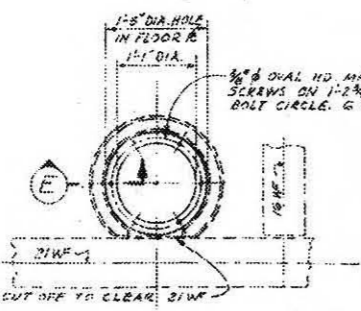
DETAIL (B) SEE  
NO SCALE  
2-5-11



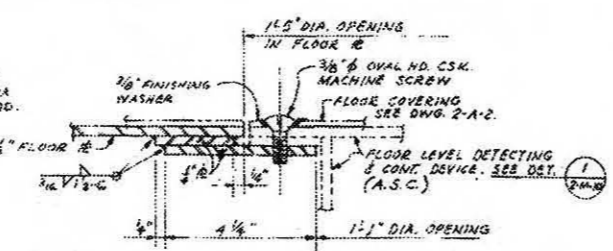
DETAIL (12) SEE  
SCALE: 1/2" = 1'-0"  
TYPICAL GUARDRAIL



DETAIL (10) SEE  
SCALE: 1/2" = 1'-0"



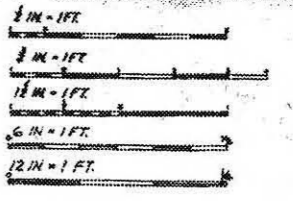
DETAIL (11) SEE  
SCALE: 1" = 1'-0"  
SEAT FOR FLOOR LEVEL DETECTING & CONTROL DEVICE.



SECTION (E)  
SCALE: 1/2" = 1'-0"

1. Check all drawings for errors and omissions, or deviations by the design agency.  
2. Items which would cause interference with O&A equipment.  
3. Items which would affect all maintenance or overhaul of the system.

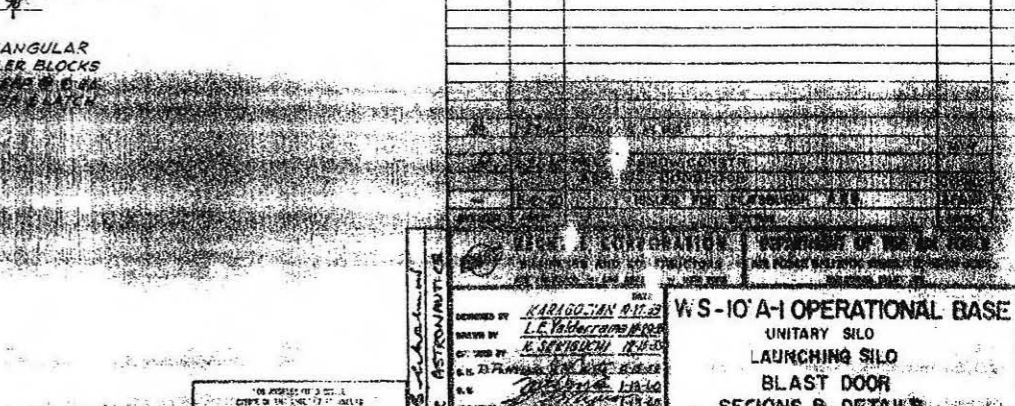
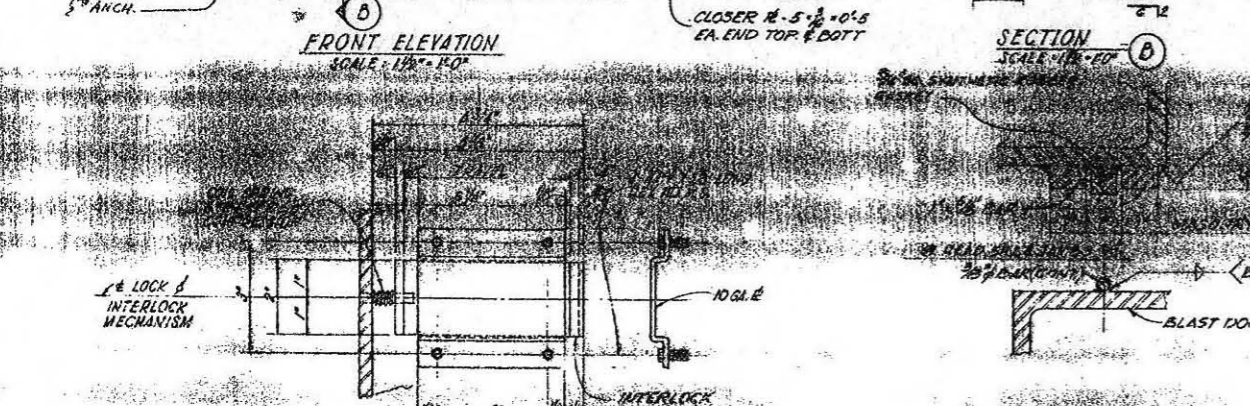
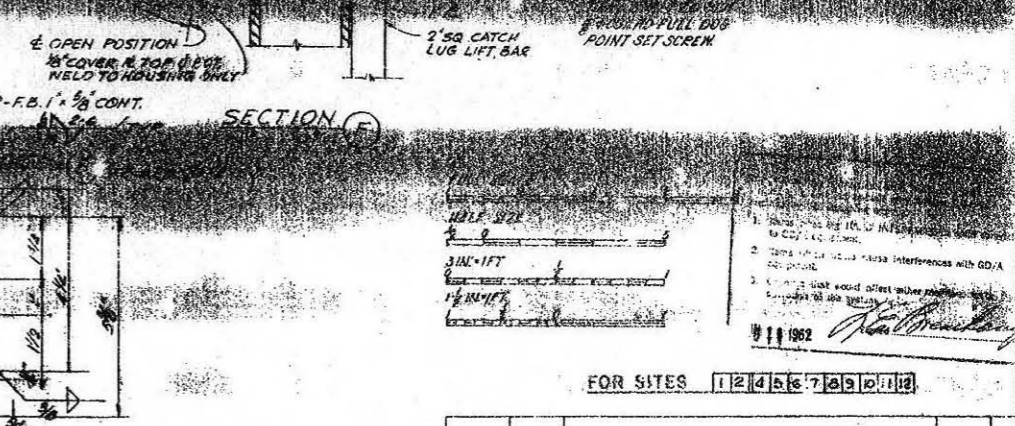
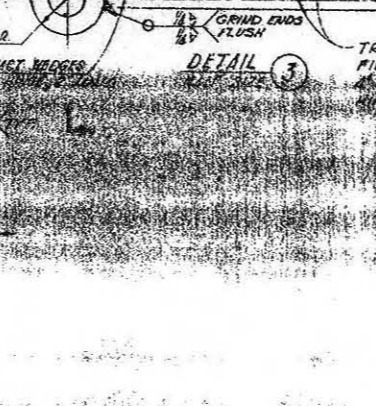
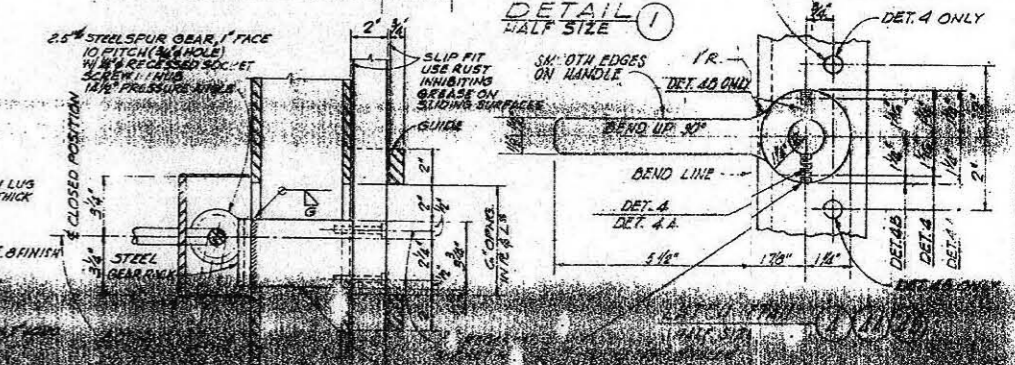
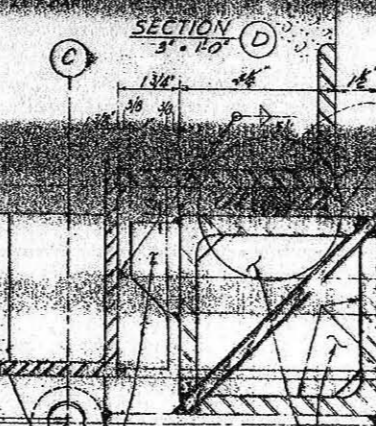
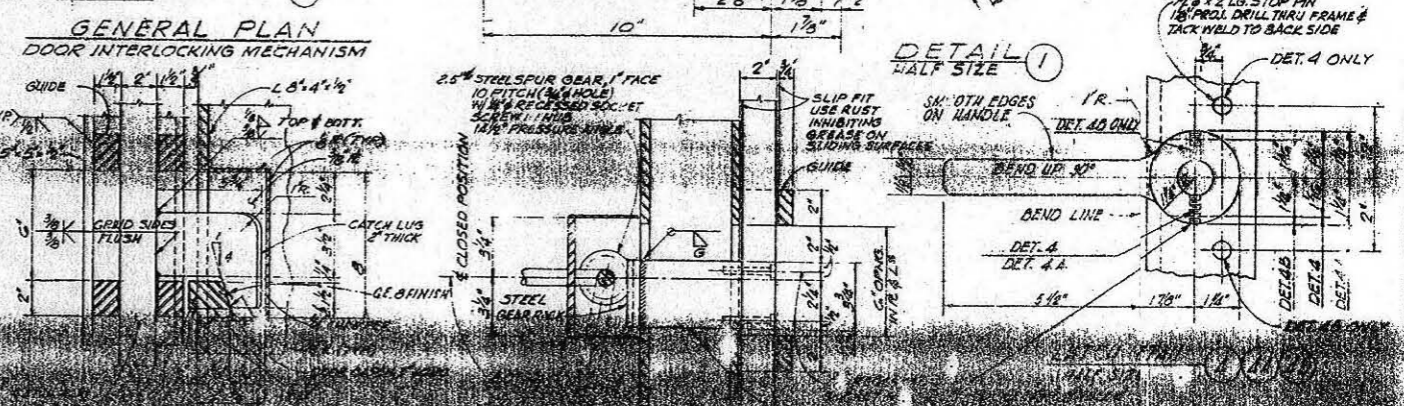
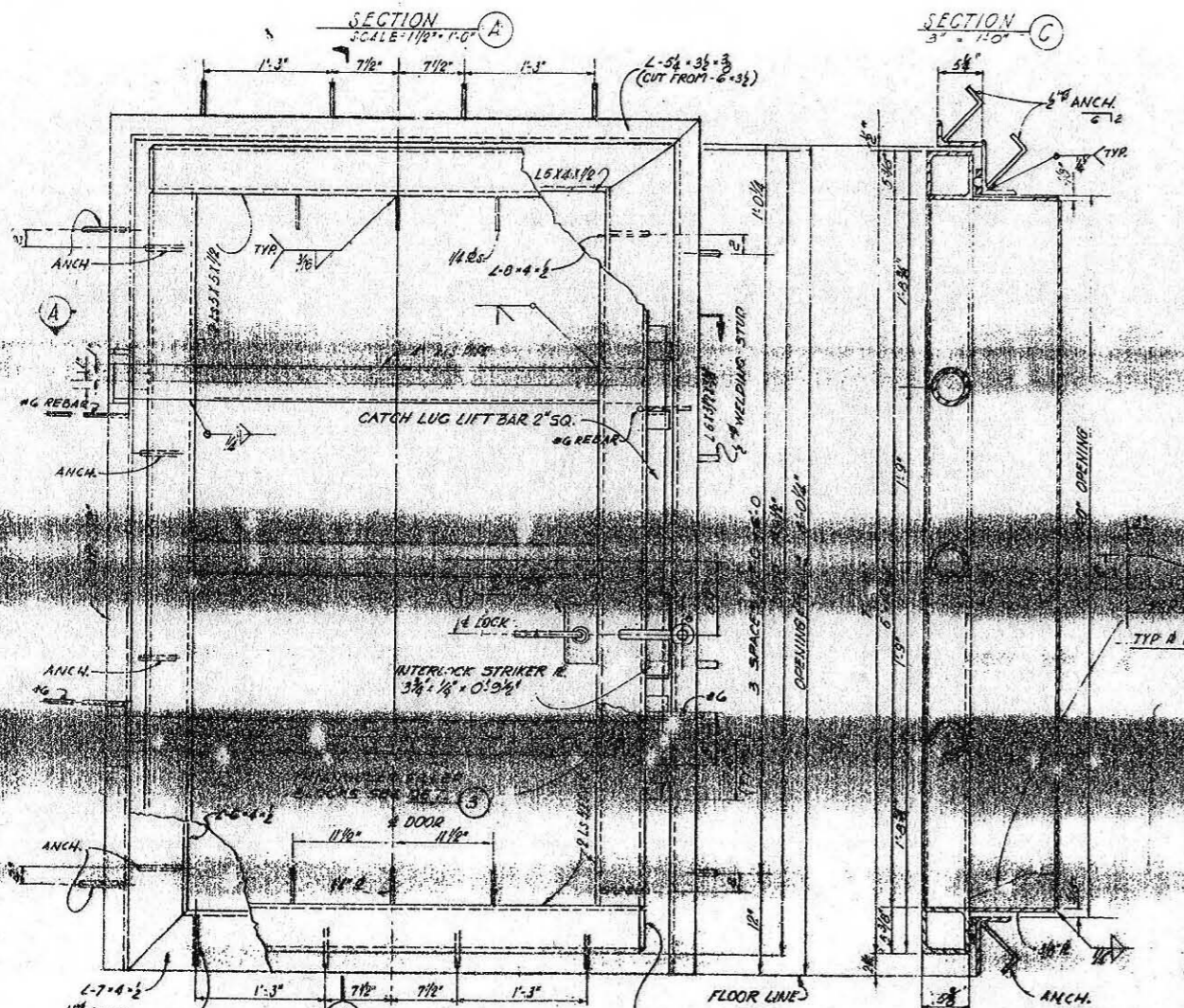
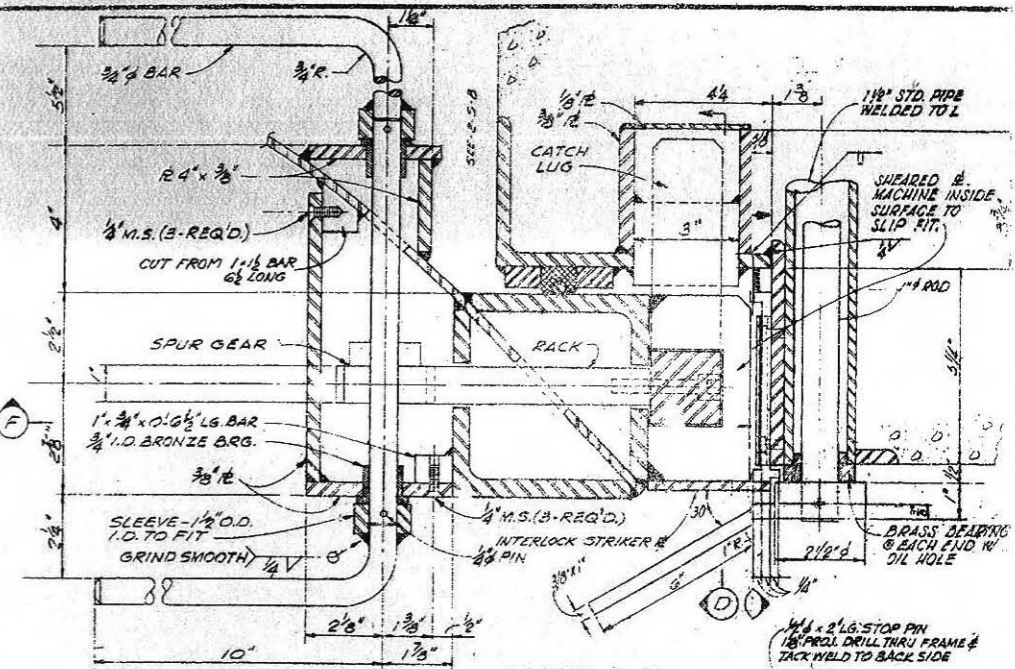
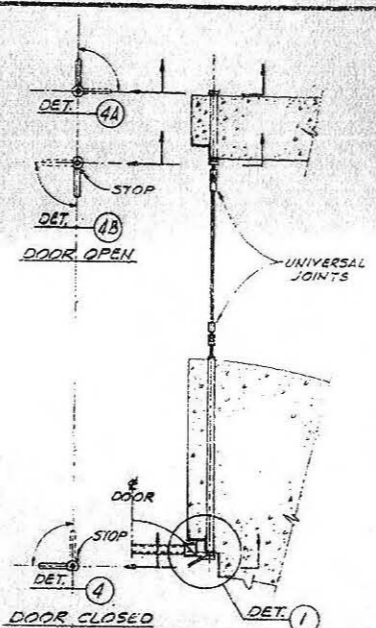
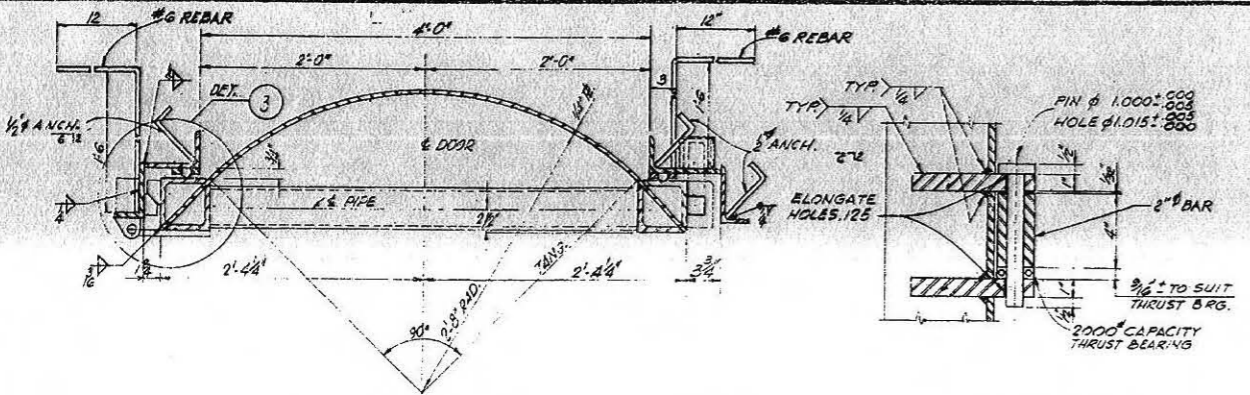
JAN 13 1961



FOR SITES 1 2 3 4 5 6 7 8 9 10 11 12

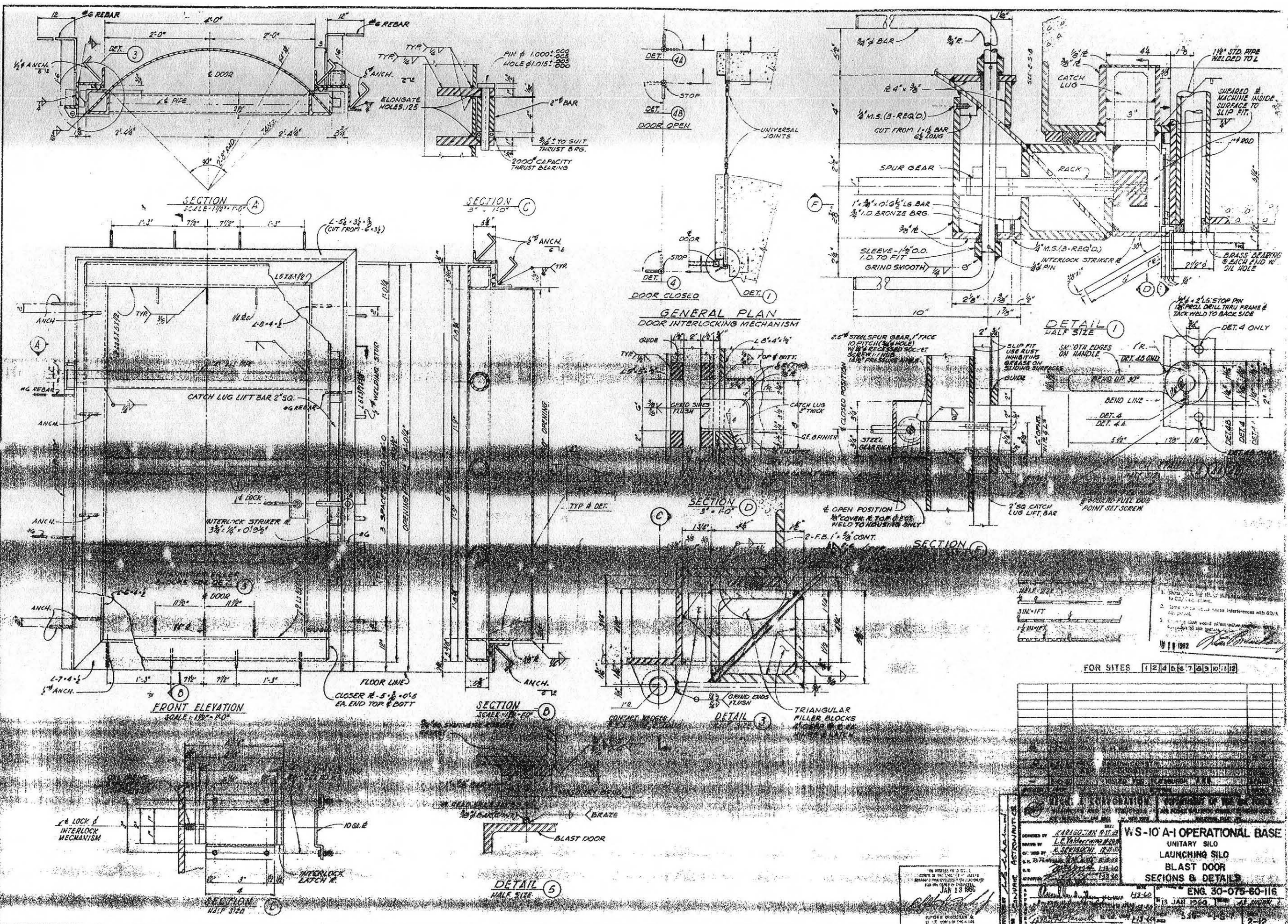
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2-12-64	REV. TO SHOW CONSTR AB-BUILT CONDITION	DATE	12-4-59
5/2/60	ISSUED FOR PLATTSBURGH A.F.B.	DATE	11-23-59
DESIGNED BY	ENGINEERS AND ARCHITECTS	DATE	1-13-59
DRAWN BY		DATE	1-13-59
CHECKED BY		DATE	1-13-59
IN CHARGE		DATE	1-13-59
APPROVED		DATE	1-13-59
BECHTEL CORPORATION		DEPARTMENT OF THE AIR FORCE	
ENGINEERS AND ARCHITECTS		AIR FORCE BALLISTIC MISSILE DIVISION (AMDO)	
3000 CENTRE STREET, EL PASO, TEXAS 75046		WILLOW GROVE, CALIFORNIA	
WS-107A-1 OPERATIONAL BASE			
UNITARY SILO			
LAUNCH CONTROL CENTER			
MISCELLANEOUS DETAILS - SHT. 2			
DATE	13-JAN-1960	SCALE	AS NOTED
NO.	556	REV.	2-9-11
BY		APP'D	1-22

LCC-39 O. SERIES



- FOR SITES 1 2 4 6 7 9 10 11
1. [Illegible]
  2. [Illegible]
  3. [Illegible]

W-S-10'A-1 OPERATIONAL BASE	
UNITARY SILO	
LAUNCHING SILO	
BLAST DOOR	
SECTIONS & DETAILS	
ENGINEER	ENG. 30-075-60-116
DATE	13 JAN 1960
BY	3-16
CH. 1	2-12



FOR SITES 1246790112

1. This drawing is to be used for the design and construction of the door interlocking mechanism for the blast door of the W-10 A-1 Operational Base. It is to be used in conjunction with the other drawings in this set.

2. The door interlocking mechanism is to be designed and constructed in accordance with the requirements of the specification and the drawings in this set.

3. The door interlocking mechanism is to be designed and constructed in a manner that will ensure the safe and reliable operation of the blast door under all conditions of use.

4. The door interlocking mechanism is to be designed and constructed in a manner that will ensure the safe and reliable operation of the blast door under all conditions of use.

5. The door interlocking mechanism is to be designed and constructed in a manner that will ensure the safe and reliable operation of the blast door under all conditions of use.

6. The door interlocking mechanism is to be designed and constructed in a manner that will ensure the safe and reliable operation of the blast door under all conditions of use.

7. The door interlocking mechanism is to be designed and constructed in a manner that will ensure the safe and reliable operation of the blast door under all conditions of use.

8. The door interlocking mechanism is to be designed and constructed in a manner that will ensure the safe and reliable operation of the blast door under all conditions of use.

9. The door interlocking mechanism is to be designed and constructed in a manner that will ensure the safe and reliable operation of the blast door under all conditions of use.

10. The door interlocking mechanism is to be designed and constructed in a manner that will ensure the safe and reliable operation of the blast door under all conditions of use.

**W-10 A-1 OPERATIONAL BASE**  
UNITARY SILO  
LAUNCHING SILO  
BLAST DOOR  
SECTIONS & DETAILS

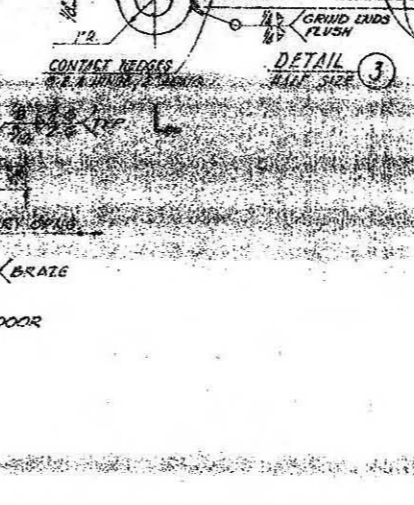
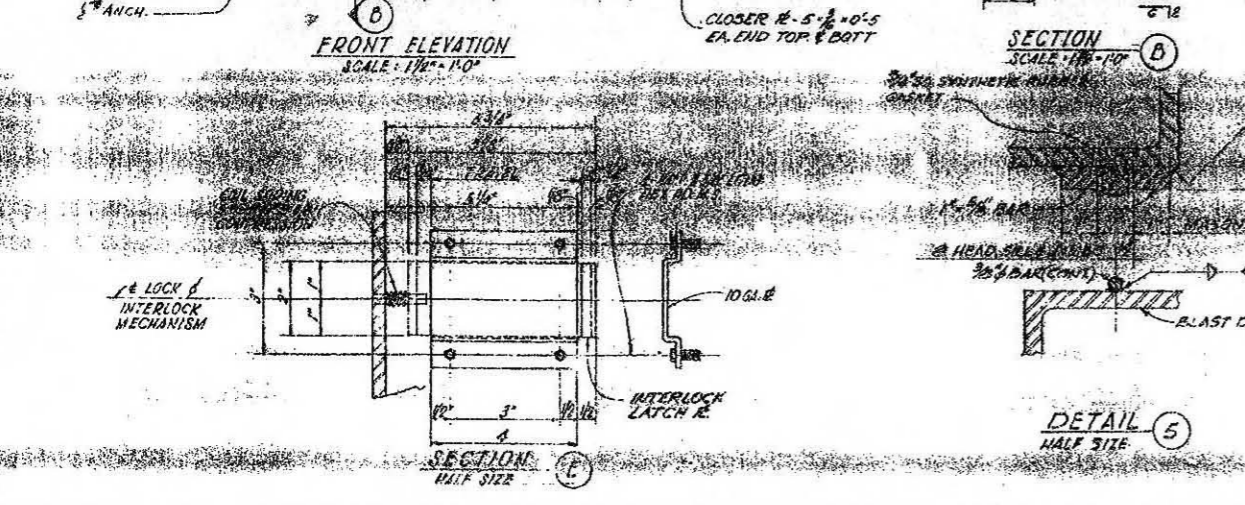
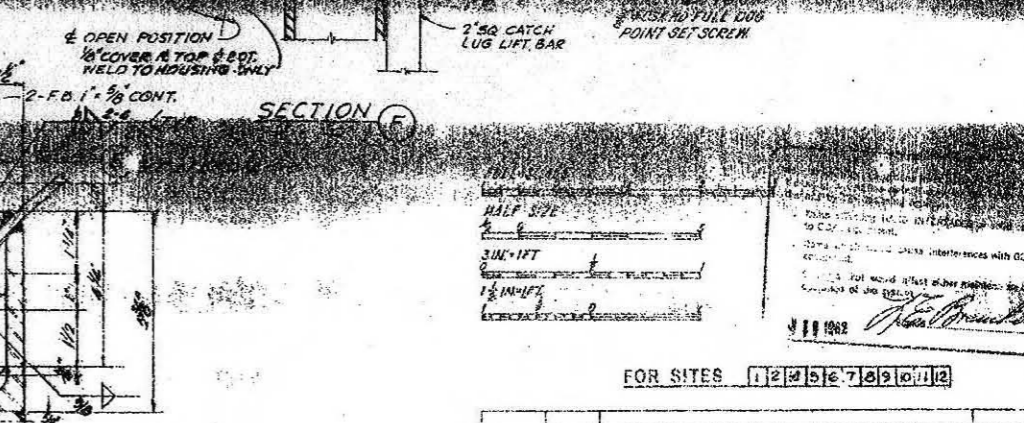
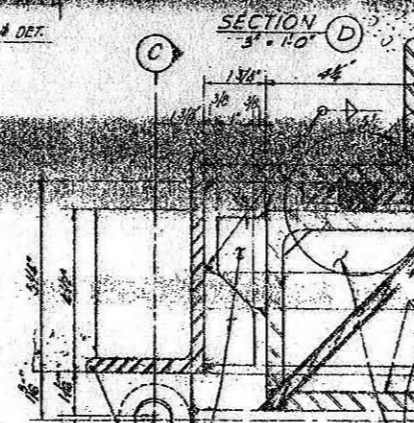
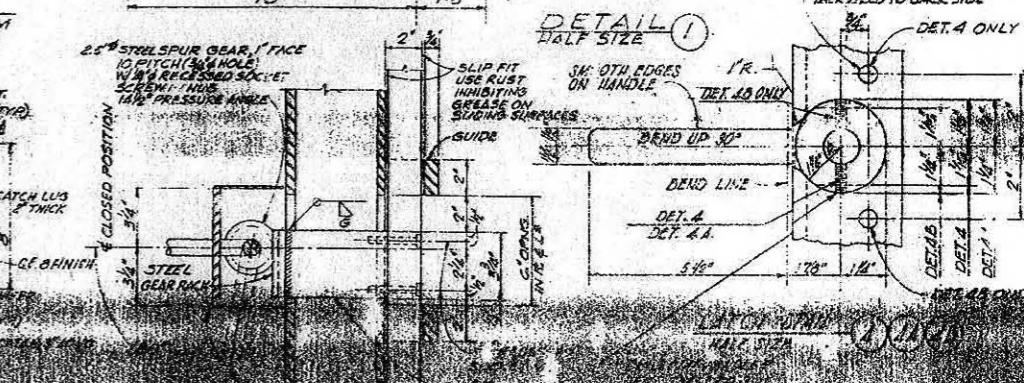
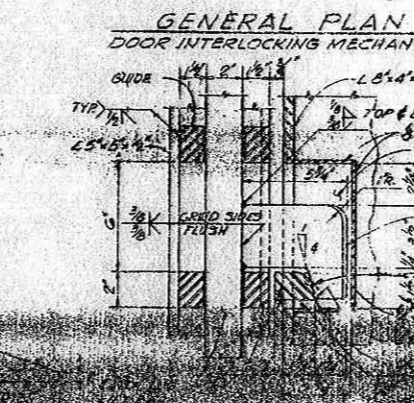
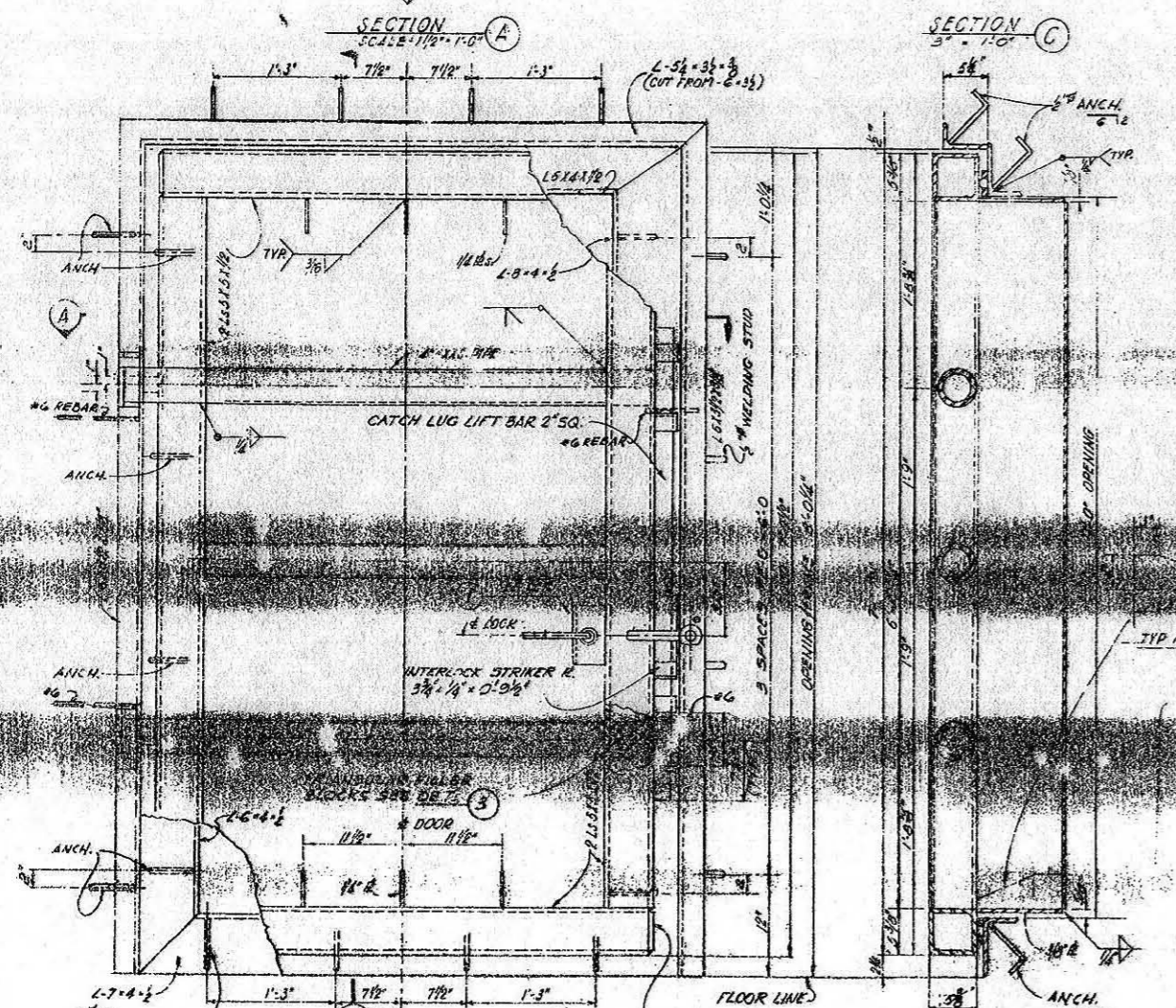
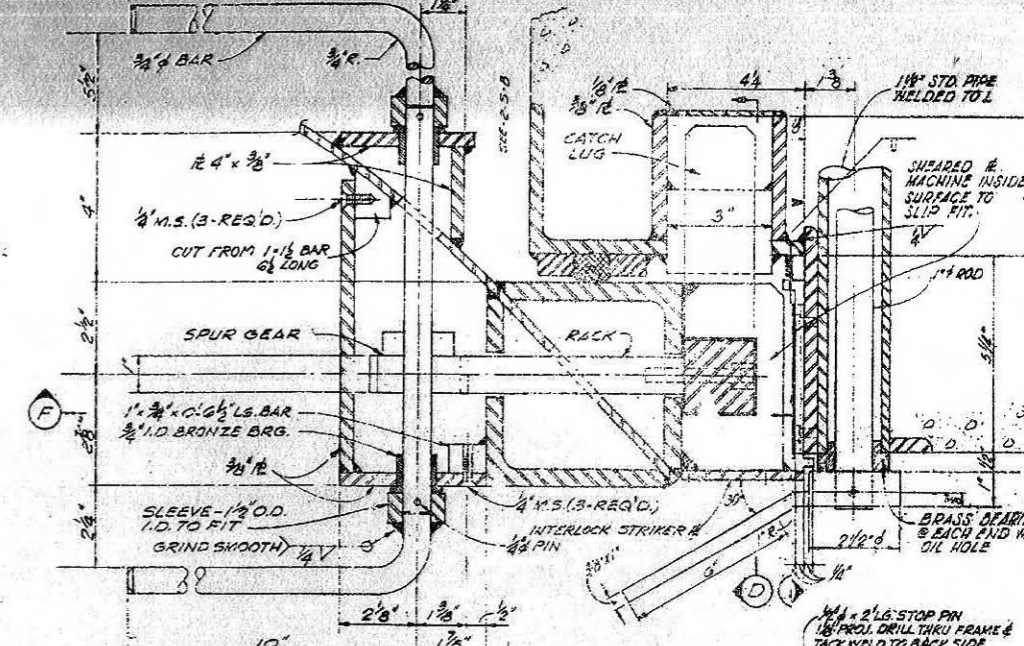
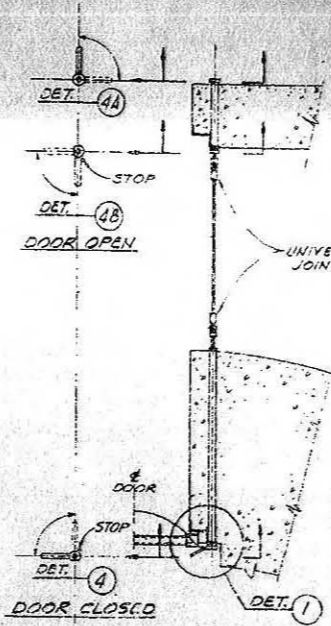
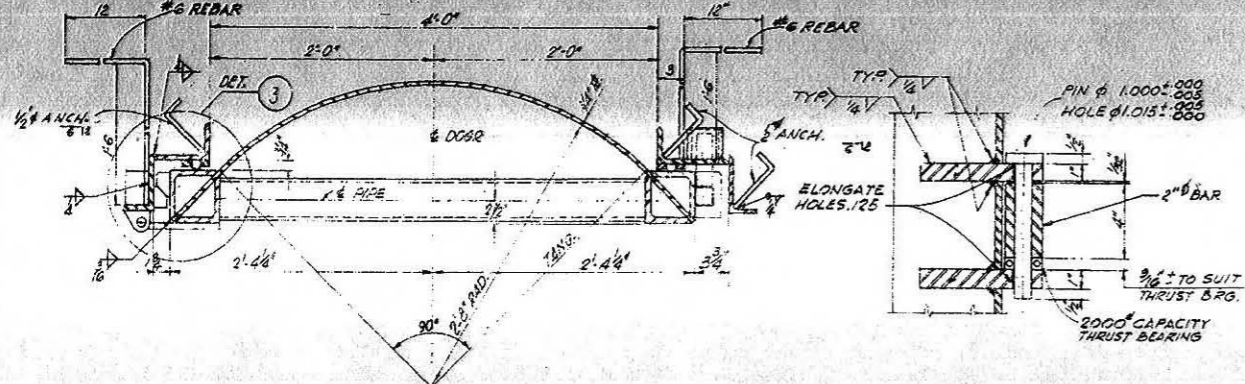
ENGINEERING NO. 30-075-60-116

DATE: 13 JAN 1962

DESIGNED BY: KARIGORIAN, R. J.  
CHECKED BY: L. E. PETERSON  
APPROVED BY: R. J. KARIGORIAN

SCALE: 1/2" = 1'-0"

1-12



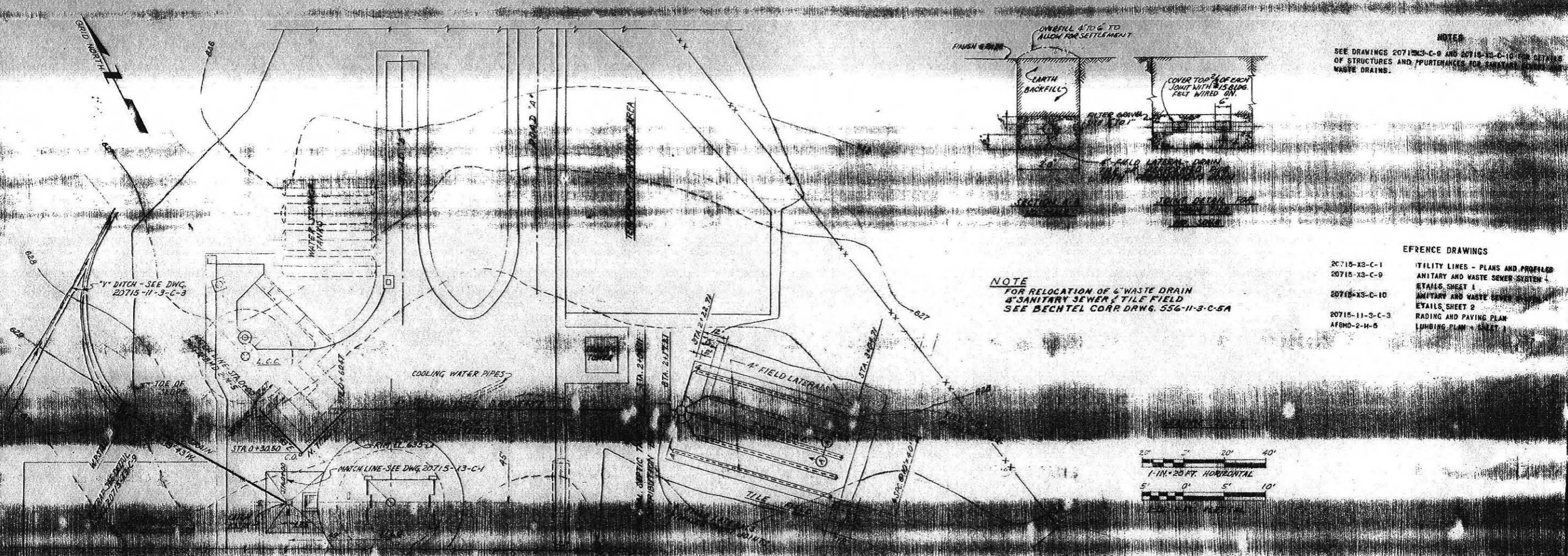
FOR SITES 1 2 3 4 5 6 7 8 9 10 11 12

W-S-107A-1 OPERATIONAL BASE  
UNITARY SILO  
ANCHURING SILO  
BLAST DOOR  
SECTIONS & DETAILS

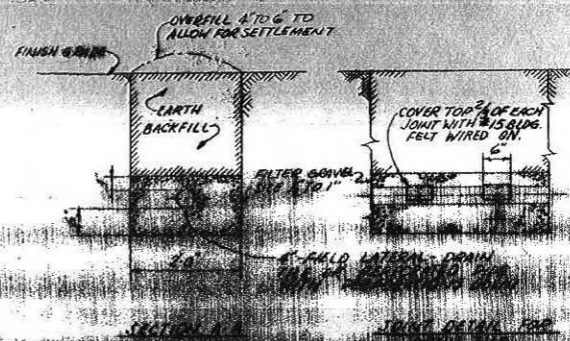
ENG. 30-075-60-116  
JAN 13 1960

W.S. PARAGONIAN  
L.E. FALGOUTS  
A.S. RICHMOND

1-12

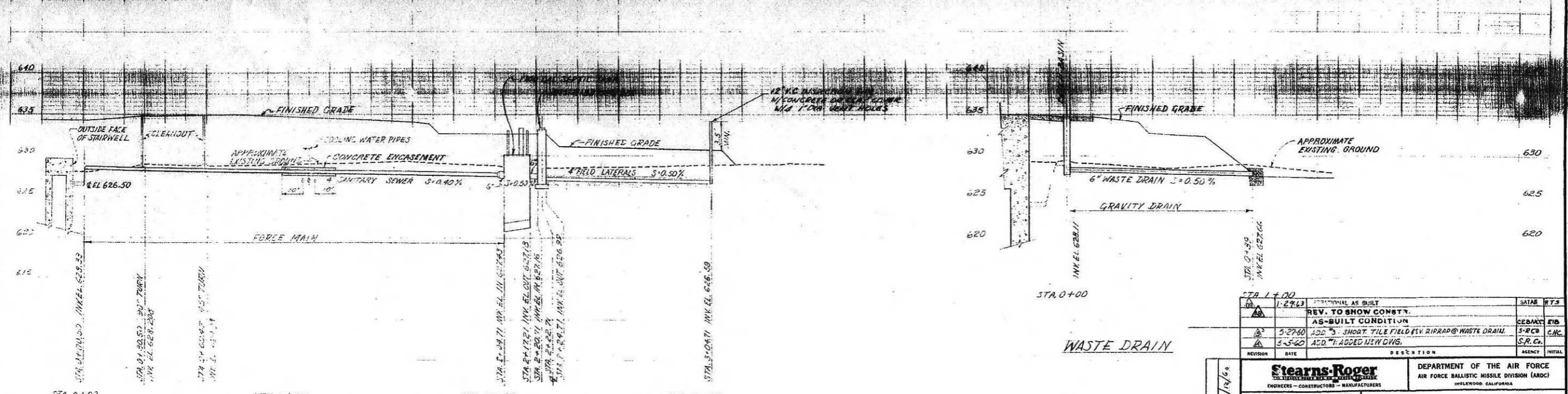


NOTES  
 SEE DRAWINGS 20715-11-3-C-9 AND 20715-11-3-C-10 FOR DETAILS OF STRUCTURES AND PERTINANCES FOR RELOCATION OF WASTE DRAINS.



NOTE  
 FOR RELOCATION OF 4\"/>

- REFERENCE DRAWINGS
- 20715-X3-C-1 UTILITY LINES - PLANS AND PROFILES
  - 20715-X3-C-9 SANITARY AND WASTE SEWER SYSTEM - DETAILS SHEET 1
  - 20715-X3-C-10 SANITARY AND WASTE SEWER SYSTEM - DETAILS SHEET 2
  - 20715-11-3-C-3 RADING AND PAVING PLAN
  - AFDM-2-11-5 LUMING PLAN - SHEET 1



SANITARY SEWER

WASTE DRAIN

REVISION	DATE	DESCRIPTION	AGENCY	INITIAL
1	1-29-63	CONSTRUCTION AS BUILT	SATAS	RTS
2		REV. TO SHOW CONSTR. AS-BUILT CONDITION		
3	5-27-60	ADD 3\"/>	CEBACC	ETB
4	5-5-60	ADD 7\"/>	S.R.C.	C.H.K.

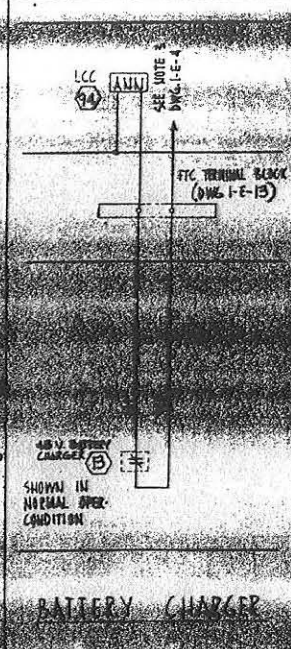
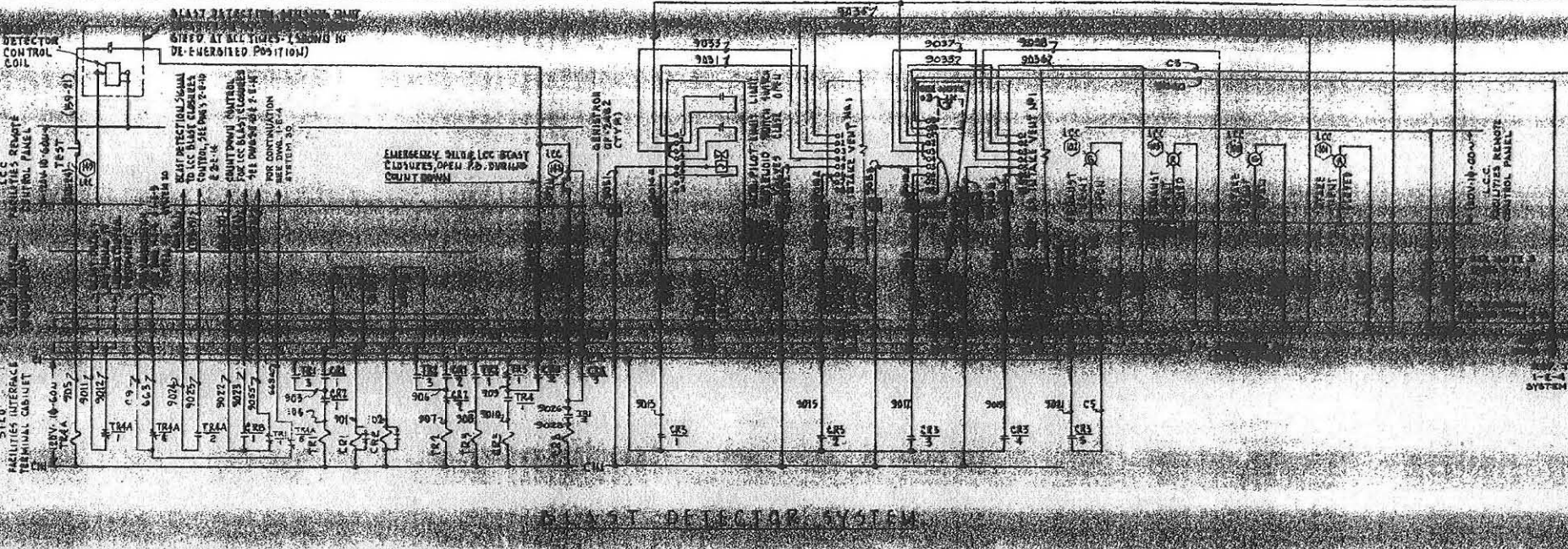
**Stearns-Roger**  
 ENGINEERS - CONSTRUCTORS - MANUFACTURERS

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

WS-10A-1 OPERATIONAL BASE  
 UNITARY SILO  
 PLATTBURGH A.F.B., NEW YORK  
 SITE #7  
 SANITARY & WASTE SEWER SYSTEM  
 PLAN AND PROFILE

DESIGNED BY: E.L. Decker 5-25-60  
 DRAWN BY: V. VILA 4-6-60  
 CHECKED BY: C.L. Decker 5-4-60  
 SUBMITTED BY: [Signature] 5-12-60

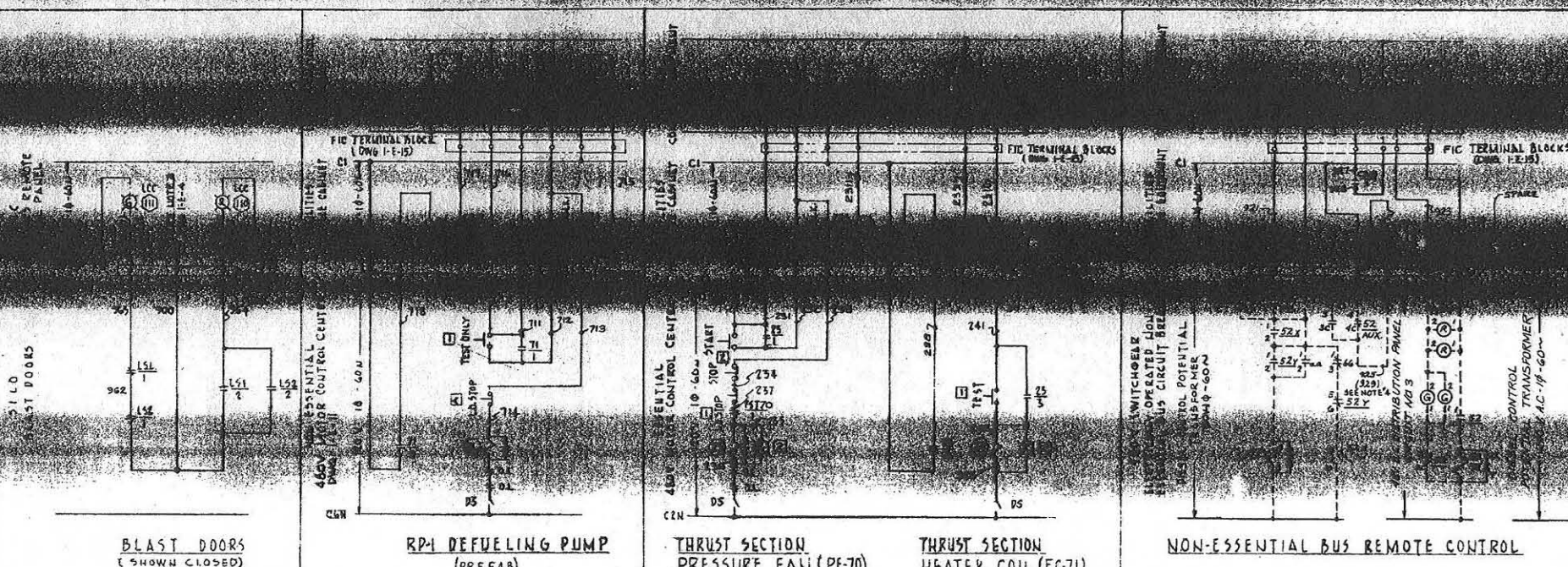
DATE: MAY 12 1960  
 SCALE: AS NOTED  
 DRAWING NO.: 20715-11-3-C-5  
 SHEET: 3-102



**BLAST DETECTOR SYSTEM**

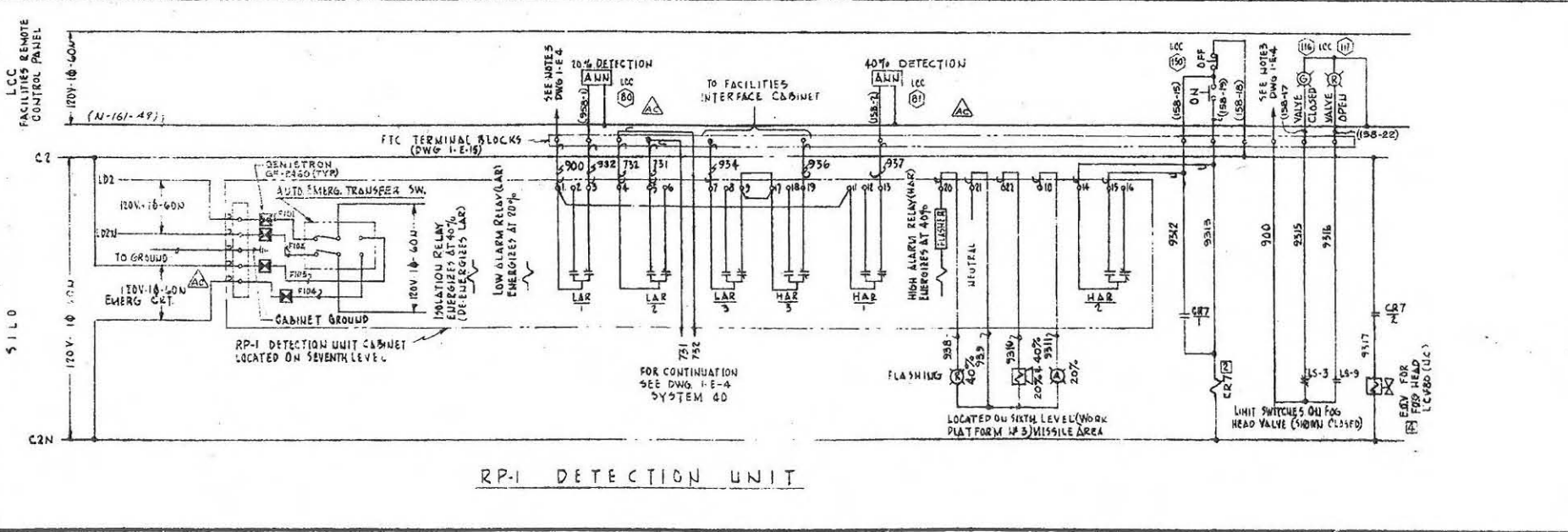
**BATTERY CHARGER**

NOTE - DEVICE LOCATED IN HOT CONTROL CENTER UN  
 [Symbol] DEVICE LOCATED AT UNIT



NOTE - FOR RELAY SCHEDULE SEE DWG. I-E-7

DRAWING NO.	TITLE
I-M-84	H.V. & A.C. LEGEND & SYMBOLS
I-M-88	H.V. & A.C. COOLING & HOT WATER FLOW DIAGRAM
I-M-87	H.V. & A.C. CHILLED WATER FLOW DIAGRAM
I-M-86	AIR CONDITIONING FLOW DIAGRAM
I-E-15	FACILITIES INTERFACE (BINET) WIRING DIAGRAM
I-E-14	FACILITIES TERMINAL (BINET) WIRING DIAGRAM
I-E-13	FACILITIES TERMINAL (BINET) WIRING DIAGRAM
I-E-12	NON-ESSENTIAL BUS POWER-SINGLE LINE DIAGRAM
I-E-2	ESSENTIAL BUS POWER-SINGLE LINE DIAGRAM

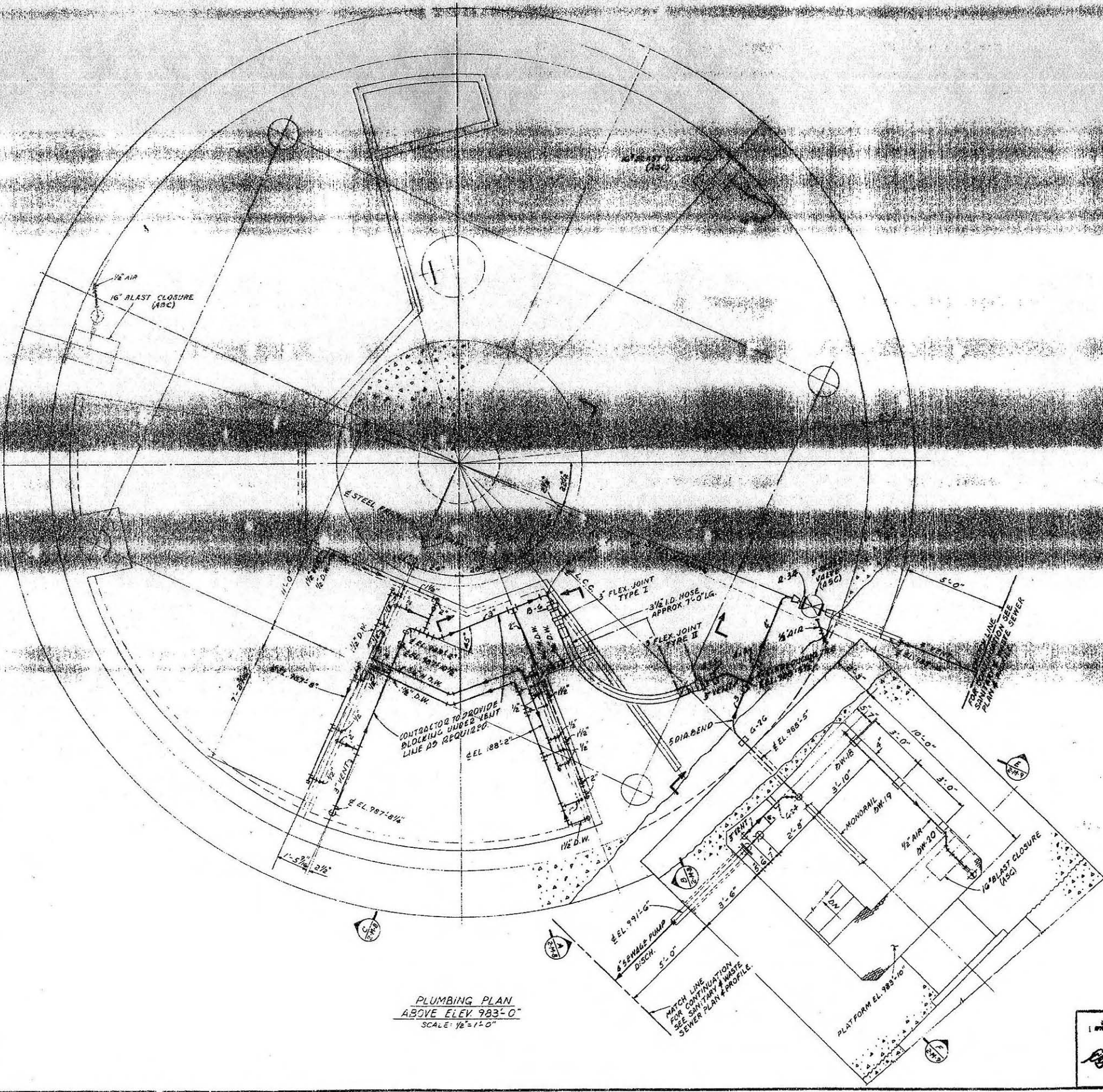


In accordance with instructions from AFSD (RESERVED) 24 November 1953 this drawing is certified accurate only for the following, as determined by the designing agency:  
 1. Areas affecting HAND INTERFACES or solid conductors to C/A equipment.  
 2. Items which would cause interferences with C/A equipment.  
 3. Changes that would affect either maintenance or operation of the system.

Signed: *[Signature]*  
 JUN 13 1962

REVISION	DATE	DESCRIPTION	APPROVED BY
1-29-60		OPERATIONAL AS BUILT DRAWING CLUES ECP # 6587, 6579, SATAF R.L.	
4-13-62		CHANGED WIRE # 711 TO 712, 9370 932.	
4-27-61		ADDED TERMINALS 9410 EXHAUST VENT NO. 1	
9-8-60		ADDED CONDUCTOR 784 FOR DETECTOR SYSTEM (RP-1) DETECTION UNIT INDICATED I.C. UNIT TERM. BLOCK CONNECTIONS FOR RP-1 DEFUELING PUMP & THRUST SECTION PRESSURE PAN PFD.	
5-2-60		ISSUED FOR PLATBURGH AFB.	

<b>BECHTEL CORPORATION</b> ENGINEERS AND CONSTRUCTORS		<b>DEPARTMENT OF THE AIR FORCE</b> 1. FORCE BALLISTIC MISSILE DIVISION (AFBMD)	
DRAWN BY: <i>[Signature]</i>		DATE: 27 APR 1961	
CHECKED BY: <i>[Signature]</i>		DATE: 13 APR 1961	
APPROVED BY: <i>[Signature]</i>		DATE: 13 APR 1961	
PROJECT: WS-107 A OPERATIONAL BASE		ENGINEERING: ENG. 30-075-60-116	
SUBJECT: UNITS SILO LAUNCHING SILO		SCALE: NONE	
PART 1		DRAWING NO: 556-A-1-E-6	
		PAGE: 2-89	



PLUMBING PLAN  
 ABOVE ELEV. 983'-0"  
 SCALE: 1/2" = 1'-0"

In accordance with instructions from D/BSS/28 84 November 1961  
 this drawing is revised to show construction as-built condition  
 and to show the following changes:  
 1. All piping to be installed in accordance with the as-built condition.  
 2. All piping to be installed in accordance with the as-built condition.  
 3. All piping to be installed in accordance with the as-built condition.  
 JUN 13 1962  
 SIGNED: *J. G. Vorensky*

1/2" IN. = 1 FT.

FOR SITES 1 2 3 4 5 7 8 9 10 11 12

NO.	1-29-63	OPERATIONAL AS BUILT	SAT/AF	W.H.
NO.	1-19-62	REVISED TO SHOW CONSTRUCTION AS-BUILT CONDITION	FBMCO	W.H.
NO.	5/2/60	ISSUED FOR PLATTSBURGH A.F.B.	AFBMD	JFW
REVISION	DATE	DESCRIPTION	AGENCY	INT.

**BECHTEL CORPORATION** ENGINEERS AND CONSTRUCTORS  
 480 PLAZA - SAN FRANCISCO, CALIF. 4  
 1000 AVENUE OF THE STARS - WASHINGTON, D.C. 20004

**DEPARTMENT OF THE AIR FORCE**  
 AIR FORCE BALLISTIC MISSILE DIVISION (ARDC)  
 2700 AVENUE OF THE STARS - WASHINGTON, D.C. 20340

**WS-10' A-1 OPERATIONAL BASE**  
 UNITARY SILO  
 LAUCH CONTROL CENTER  
 PUMBING PLAN - SHT. I

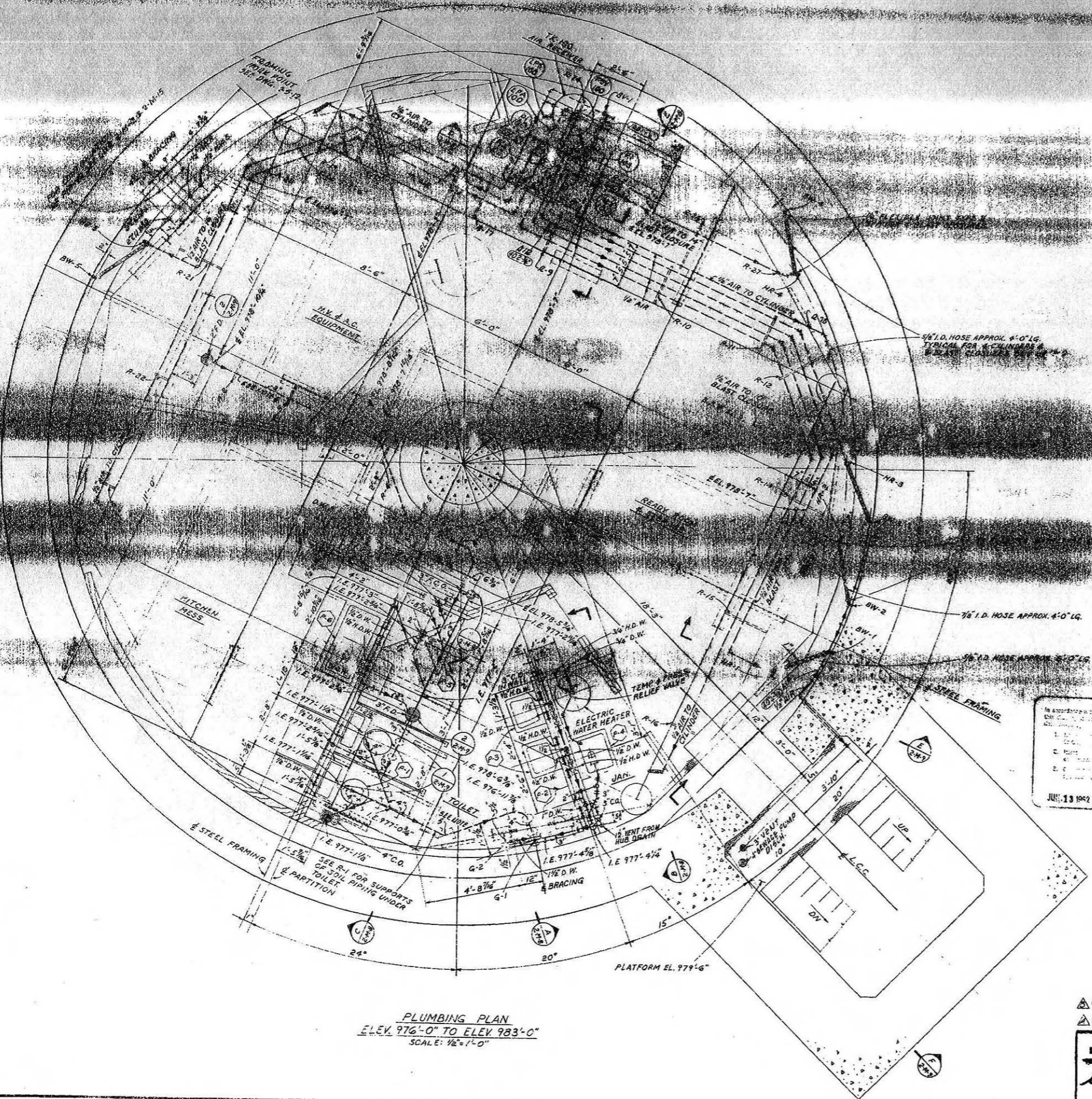
DATE: 10-19-63  
 DRAWN BY: VGF  
 CHECKED BY: SPM  
 DATE: 1-13-60  
 DATE: 1-13-60

CONTRACT NO. 143-60  
 DATE: 19 JAN 1960  
 SCALE: 1/2" = 1'-0"  
 SHEET: 556 - 2-M-5  
 OF: 1-48

APPROVED BY: *J. G. Vorensky*  
 DATE: JAN 13 1960

FOR COAST GUARD AERONAUTICS

FOR THE DIRECTOR  
 OFFICE OF THE CHIEF OF ENGINEERS  
 AIR FORCE BALLISTIC MISSILE DIVISION  
 2700 AVENUE OF THE STARS  
 WASHINGTON, D.C. 20340  
 JAN 13 1960  
 SIGNED: *J. G. Vorensky*  
 SIGNED & SUBMITTED BY  
 LT. COL. JOHN W. BROWN  
 CHIEF OF ENGINEERS



**PLUMBING FIXTURE SCHEDULE**

ITEM	DESCRIPTION	TRAP	WASTE	VENT	D.W.	W.W.	RE. MARK
P-1	WATER CLOSET		4"	2"	1/2"		2
P-2	SINK		2"	2"	1/2"		1
P-3	SINK		2"	2"	1/2"		1
P-4	SERVICE SINK		3"	3"	2"	1/2"	1
P-5	SHOWER		2"	2"	2"	1/2"	1

**LEGEND**

H.D.W. HOT DOMESTIC WATER  
 D.W. DOMESTIC WATER  
 F.C.O. FLOOD CLEAN OUT  
 C.O. CLEAN OUT

**GENERAL NOTE**

1. ELECTRIC WATER HEATER SHALL HAVE A CAPACITY OF 50 GALS. WITH A RECOVERY RATE OF 12 G.P.H. @ 100°F RISE. TWO THERMOSTATICALLY CONTROLLED HEATING ELEMENTS ARE REQUIRED @ 3 K.W. TOTAL, 220V. 1 PHASE.

2. ALL PIPING SHALL BE INSTALLED TO REMAIN UNLESS OTHERWISE NOTED.

3. ALL HOSE SHALL BE IN THE TUBES UNLESS OTHERWISE NOTED. WITH MINIMUM 50' OF HOSE TO BE INSTALLED TO ALL. FOR 1" HOSE ON TAP 2" VERTICAL ADDITIONAL LENGTH OF EACH HOSE BEFORE INSTALLATION SHALL BE 18 FT. APPROX.

4. FOR PIPE SUPPORTS & IDENTIFICATION OF H.D. D.W., ETC. SEE DWG. 2-M-11, 12 & 13.

5. ALL SEWER & FLOOD DRAIN PIPES BELOW 1ST LEVEL (ELEV. 979'-6") SHALL BE WRAPPED WITH ONE LAYER OF WOOL FELT PIPE COVERING PER FED. SPEC. HH-1-567 TO PREVENT CONDENSATION.

In accordance with instructions from B5D/25275 24 November 1962, this drawing is to be used only for the installation of plumbing fixtures.

1. All work shall be in accordance with the specifications and standards of the Department of the Air Force, AFM 1-103, and the Department of Defense, DD Form 157, 1-60.

2. All work shall be in accordance with the specifications and standards of the Department of the Air Force, AFM 1-103, and the Department of Defense, DD Form 157, 1-60.

JUL 13 1962

**FOR SITE** 13456789011

1/4" = 1 FT

REVISION	DATE	DESCRIPTION	AGENCY INT.
1-29-63		OPERATIONAL AS BUILT	
1-19-62		REVISED TO SHOW CONSTRUCTION AS-BUILT CONDITION:	SATAF THH
		REV'D 1" VENT FROM HUB DRAIN EL. 976'-4" WAS 377'-6"	CERMC/M.H.
3-3-51		ADDED 1" VENT FROM HUB DRAIN.	AFBMD G.H.
5-2-50		DELETED PCV-101 AND ASSOCIATING. ADDED PI-103.	AFBMD GP
5-2-60		ISSUED FOR PLATTSBURGH A.F.B.	AFBMD U.F.H.

**BECHTEL CORPORATION**  
 ENGINEERS AND CONSTRUCTORS  
 SAN FRANCISCO - LOS ANGELES - NEW YORK

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

**WS-1073-1 OPERATIONAL BASE**  
 UNITARY SILO  
 LAUNCH CONTROL CENTER

**PLUMBING PLAN - SHT. 2**

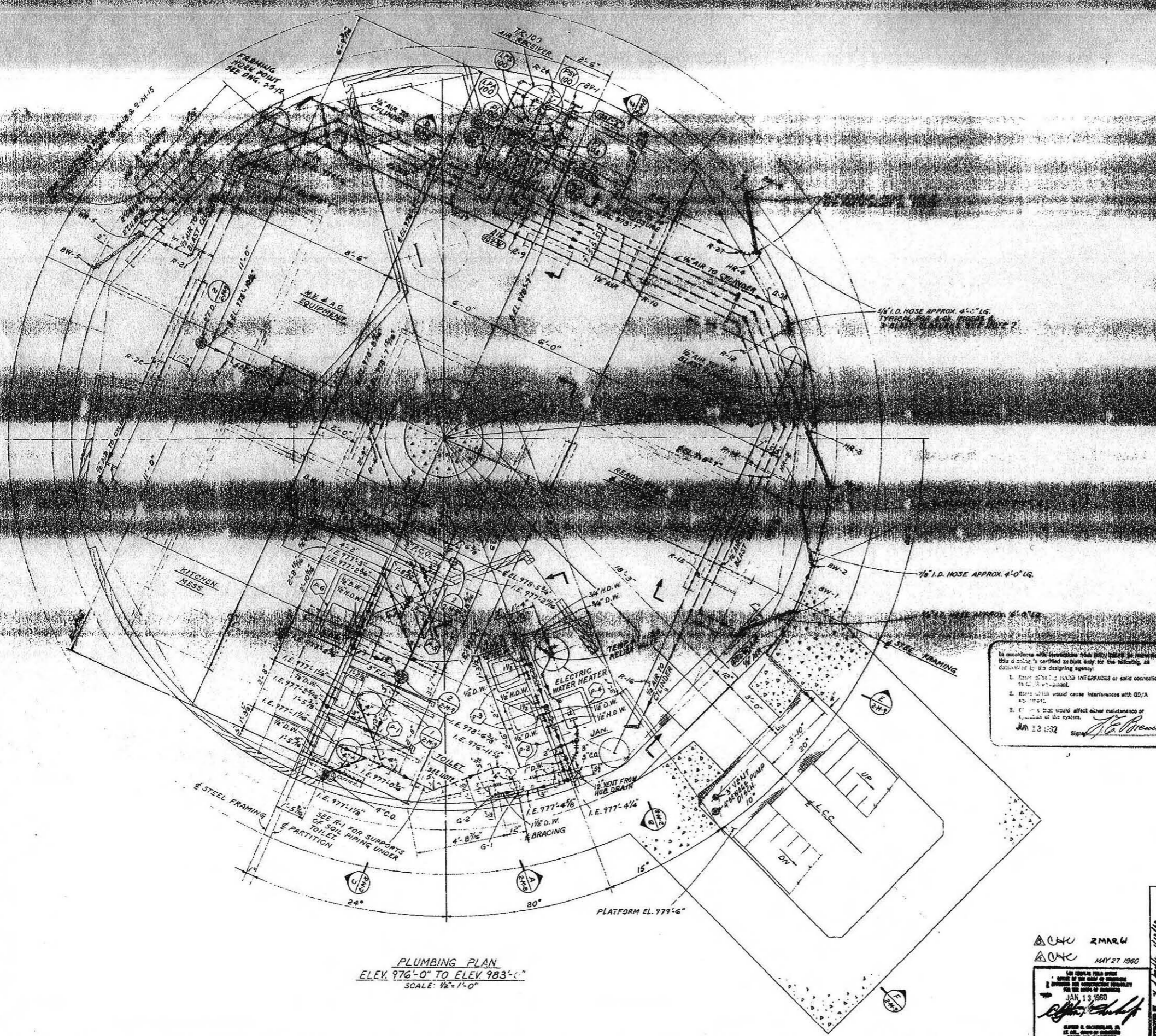
DESIGNED BY: VGF DATE: 10-2-59  
 CHECKED BY: VGF DATE: 11-3-59  
 CHECKED BY: PM DATE: 12-18-59  
 A.E. DATE: 1-12-60  
 A.E. DATE: 1-12-60

FOR CONVAIR ASTROSTATICS

15 JAN 1960  
 556-A - 2-M-6  
 1-49

**PLUMBING PLAN**  
 ELEV. 976'-0" TO ELEV. 983'-0"  
 SCALE: 1/2" = 1'-0"





**PLUMBING FIXTURE SCHEDULE**

NO.	DESCRIPTION	TRAP	VENT	W. IN.	H. IN.	REMARKS
P-1	WATER CLOSET	4"	2 1/2"	3"	2"	
P-2	URINAL					
P-3	LABORATORY	1/2"	1/2"	1/2"	1/2"	
P-4	SERVICE SINK	3"	3"	2"	2"	1/2"
P-5	SHOWER	2"	2"	2"	3"	1/2"

**LEGEND**

H.D.W.	HOT DOMESTIC WATER
D.W.	DOMESTIC WATER
F.C.O.	FLOOR CLEAN OUT
C.O.	CLEAN OUT

- GENERAL NOTES**
- ELECTRIC WATER HEATER SHALL HAVE A CAPACITY OF 50 GALS. WITH A RECOVERY RATE OF 12 G.P.H. @ 100°F RISE. TWO THERMOSTATICALLY CONTROLLED HEATING ELEMENTS ARE REQUIRED @ 3 K.W. TOTAL, 220V., 1Ø SUPPLY.
  - FURNISH 1/2" DIA. WOOD BURNER TO BE INSTALLED TO BELOW THE HEATER TO ALLOW FOR THE EXHAUST.
  - NUMBER HOSE IN THE TUNNEL AND THE HOSE SHALL BE WITH A MINIMUM 5' & BETWEEN SUPPORTS OF 6' TO ALLOW FOR 1" HORIZONTAL SUPPORT ADDITIONAL LENGTH OF EACH HOSE BEFORE INSTALLATION SHALL BE 18 FT APPROX.
  - FOR PIPE SUPPORTS & IDENTIFICATION OF H.R. DN, ETC. SEE DWGS. 2-M-N, 12 & 13.
  - ALL SEWER & FLOOR DRAIN PIPES BELOW 1ST LEVEL (ELEV. 979'-6") SHALL BE WRAPPED WITH ONE LAYER OF WOOL FELT PIPE COVERING FED. SPEC. HH-1-567 TO PREVENT CONDENSATION.

In accordance with the provisions of the (102) Uniform Code of Laws, this drawing is certified as-built only for the following, as dictated by the designing agency:

- Changes affecting HAZARD INTERFACES or solid connections to the equipment.
- Items which would cause interference with O&A equipment.
- Changes which would affect either maintenance or operation of the system.

JAN 13 1962 *[Signature]*

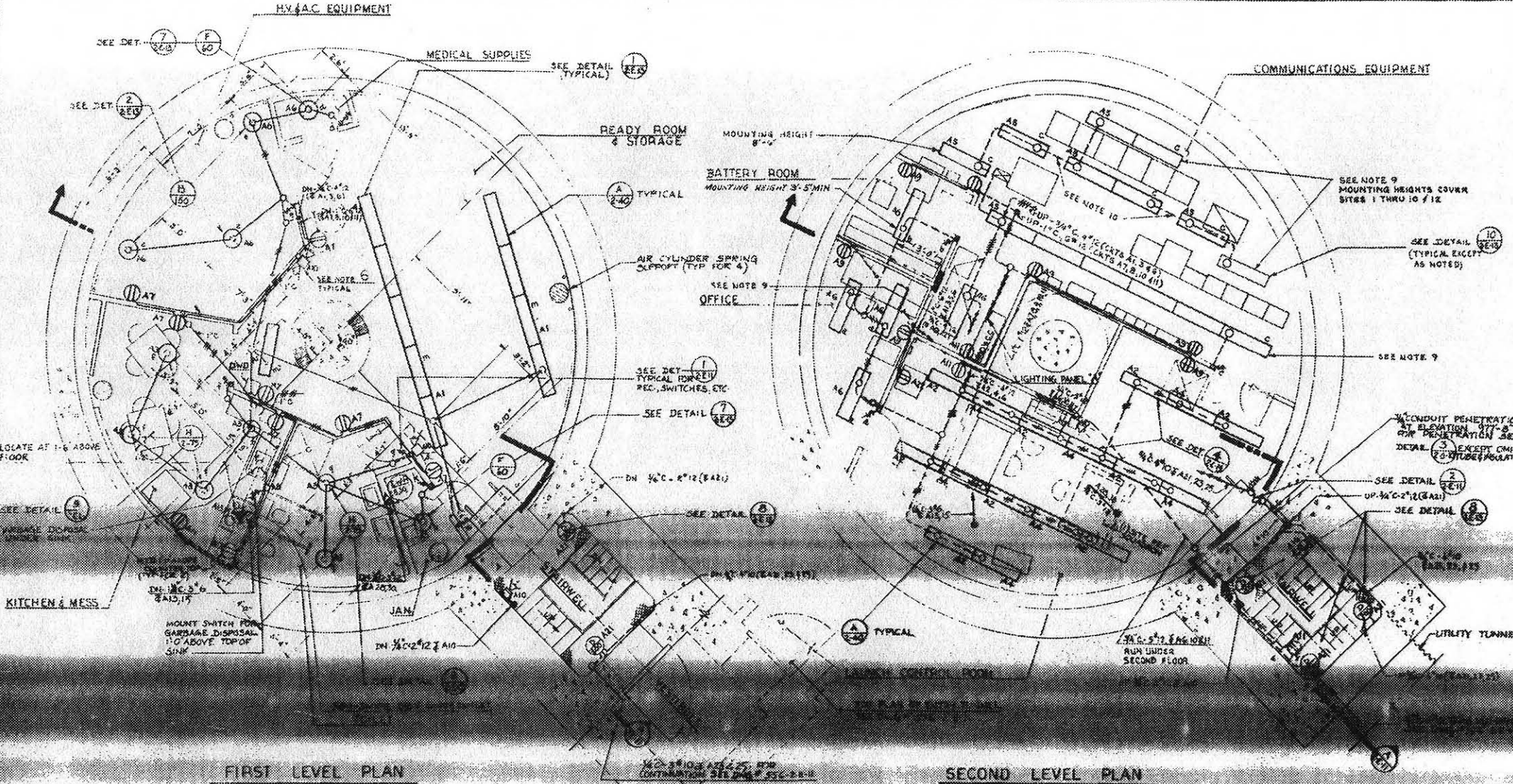
FOR SITES  1/2

REVISION	DATE	DESCRIPTION	AGENCY INT.
1-29-63		OPERATIONAL AS BUILT	SATAF W.H.
1-19-62		REVISED TO SHOW CONSTRUCTION AS-BUILT CONDITION	
		REV'D 1/2" VENT FROM HUB DN IN EL. 977'-5 1/2" WAS 977'-6"	CEB/MCO W-H
3-3-61		ADDED 1 1/2" VENT FROM HUDRAIN.	AFBMD G.H.
6-2-60		DELETED PCV-101 AND ASSOCIATING. ADDED PI-103.	AFBMD CP
5-2-60		ISSUED FOR PLATTSBURGH A.F.B.	AFBMD J.P.P.

<b>BECHTEL CORPORATION</b>		<b>DEPARTMENT OF THE AIR FORCE</b>	
ENGINEERS AND CONSTRUCTORS SAN FRANCISCO - LOS ANGELES - NEW YORK		AIR FORCE BALLISTIC MISSILE DIVISION (ARDC) WALTONVILLE, CALIFORNIA	
<b>WS-107-1 OPERATIONAL BASE</b>			
<b>UNITARY SILO</b>			
<b>LAUNCH CONTROL CENTER</b>			
<b>PLUMBING PLAN - SHT. 2</b>			
DESIGNED BY <i>VGF</i>	DATE <i>10-8-59</i>	SCALE <i>1/2" = 1'-0"</i>	
DRAWN BY <i>VGF</i>	DATE <i>11-3-59</i>	NO. <i>556-B - 2-M-6</i>	
CHECKED BY <i>DM</i>	DATE <i>12-14-59</i>	SHEET <i>1-49</i>	
APPROVED BY <i>[Signature]</i>		DATE <i>12-14-59</i>	

D. J. SERIES      BMD INDEX TO SHEETS THROUGH 11      PLATTSBURGH A.F.B.

**PLUMBING PLAN**  
ELEV. 976'-0" TO ELEV. 983'-0"  
SCALE: 1/2" = 1'-0"



FIRST LEVEL PLAN

SECOND LEVEL PLAN

- NOTES**
- 1 - FOR SYMBOL LIST, LIGHTING FIXTURE SCHEDULE SEE DWG. # 556-2-E-12
  - 2 - ALL CONDUIT RUNS SHOWN ARE DIAGRAMMATIC ONLY. ROUTES MAY BE ALTERED TO SUIT FIELD CONDITIONS
  - 3 - FOR EXACT LOCATION OF JTS & A.C. EQUIPMENT SEE DWG. # 556-2-E-2
  - 4 - FOR CONDUIT RIMS WITH DIGIT 10, IS 1/2" SEE DWG. # 556-2-E-2
  - 5 - FOR EQUIPMENT NOT IDENTIFIED SEE DWG. # 556-2-A-2
  - 6 - BATTERY OPERATED EMERGENCY LAMP CONTRACTOR TO PROVIDE MOUNTING PLATFORM 7'0" ABOVE FINISHED FLOOR
  - 7 - FLOOR MOUNTED EQUIPMENT SHALL BE BOLTED OR WELDED TO FLOOR. IF WALL MOUNTED SUPPLEMENT IS SUPPLIED THE WALL SHALL BE STRENGTHENED TO MINIMIZE VIBRATION OF EQUIPMENT.

**REFERENCE DRAWINGS**

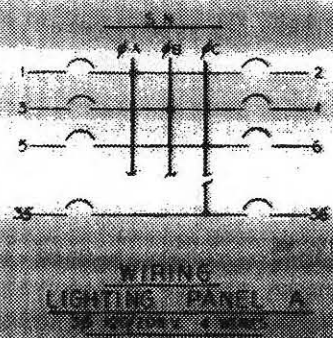
ELECTRICAL SECTIONS & DETAILS - 556-2-E-1	556-2-E-2
...	...

**FOR SITES**

1-20-62	REVISIONS FOR CONSTRUCTION BUILT CONDITION	DATE	BY
1-19-62	REVISIONS FOR CONSTRUCTION BUILT CONDITION	DATE	BY
...	...	...	...

**LIGHTING PANEL 'A' SCHEDULE**

CIRC NO	MARK SIZE	DESCRIPTION	LTG. RATING	REC. RATING	LEG. A	LEG. B	LEG. C
1	20A	LTG. READY ROOM	10	1000			
2		LUNCH CONTROL ROOM	5	500			
3		KITCHEN & MESS, TOILET	1	100		360	
4		LUNCH CONTROL ROOM	7	700			
5		COMMUNICATIONS EQUIPMENT	10	1000			1400
6		BATTERY RM OFFICE, COMM. STATION	11	1100			1410
7		RECP. FIRST FLOOR LEVEL	8	800			
8		GARBAGE DISPOSAL - KITCHEN & MESS	1	100			
9		COMM. STATION OFFICE, BATTERY & LUNCH CONTROL	7	700			
10		EMERGENCY LAMP	7	350			
11		LUNCH CONTROL ROOM, STATION, COMM. STATION	5	500			
12	30A	BOOSTER PUMP (B.P.) IN BATTERY ROOM					1100
13	30A	RECP. ELEC. STATION, KITCHEN & MESS					
14	20A	SPARE					
15	20A	SPARE					
16	20A	SPARE					
17	20A	SPARE					
18	20A	SPARE					
19	20A	SPARE					
20	20A	SPARE					
21	20A	SPARE					
22	20A	SPARE					
23	20A	SPARE					
24	20A	SPARE					
25	20A	SPARE					
26	20A	SPARE					
27	20A	SPARE					
28	20A	SPARE					
29	20A	SPARE					
30	20A	SPARE					
31	20A	SPARE					
32	20A	SPARE					
TOTAL			24050	7600	9110	7340	



In accordance with instructions from ASD/ASST 24 November 1951...  
 REVISIONS FOR CONSTRUCTION BUILT CONDITION  
 DATE: 1-19-62  
 BY: [Signature]

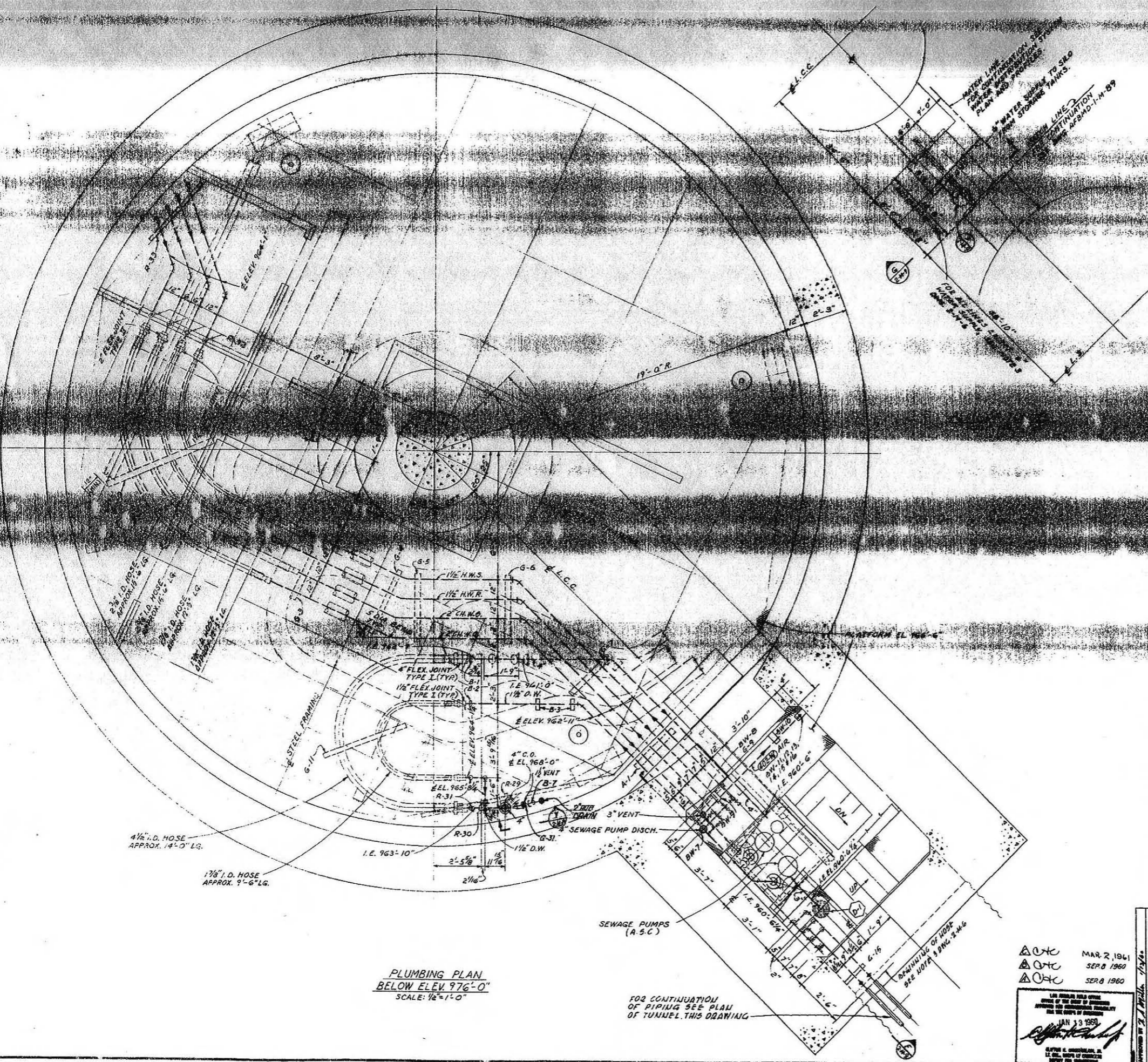
**BECHTEL CORPORATION**  
 ENGINEERS AND CONSTRUCTORS  
 AIR FORCE BALLISTIC MISSILE COMMAND

**WS-10 A-1 OPERATIONAL BASE**  
 UNITARY SILO  
 LUNCH CONTROL CENTER

**ELECT. LIGHTING PLAN**  
 CONSTRUCTION NO. ENG. 30-075-60-116  
 SHEET NO. 556-B-2-E-3

DATE: 8-15-57  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 APPROVED BY: [Signature]

LCC-633



In accordance with instructions from BSO/SSSF 24 November 1951 this drawing is to be used only for the following: as shown on the drawing.

1. This drawing is not to be used for construction of solid connections.
2. Items which duplicate interlocks with GDA.
3. Items which duplicate interlocks with GDA.

1/1/60

FOR SITES: 1 2 3 4 6 7 8 9 10 11 12



REVISION	DATE	DESCRIPTION	AGENCY UNIT
1-29-63		OPERATIONAL AS BUILT	
1-19-62		REVISED TO SHOW CONSTRUCTION AS-BUILT CONDITION: ADDED (1) B-3 HGR & VALVES; ELETED G-8; RELOCATED G-7	SATAE N.H.
3-3-61		ADDED 2\"/>	AFBMD W.H.
9-8-60		REVISED OUTLINE OF 6\"/>	AFBMD S.H.
5-27-60		REVISED HOSE DIMENSIONS NOTE FOR TUNNEL.	AFBMD W.H.
5-2-60		ISSUED FOR PLATTSBURG A.F.B.	AFBMD W.H.

PLUMBING PLAN  
BELOW ELEV. 976'-0"  
SCALE: 1/2" = 1'-0"

FOR CONTINUATION OF PIPING SEE PLAN OF TUNNEL THIS DRAWING

△ OTC MAR 2, 1961  
 △ OTC SEP 8, 1960  
 △ OTC SEP 8, 1960

THE CONVAIR RETROAUTICS  
 1333 S. GARDEN ST.  
 ANAHEIM, CALIF. 92805  
 (714) 771-1111

**BECHTEL CORPORATION**  
ENGINEERS AND CONSTRUCTORS  
SAN FRANCISCO - LOS ANGELES - NEW YORK

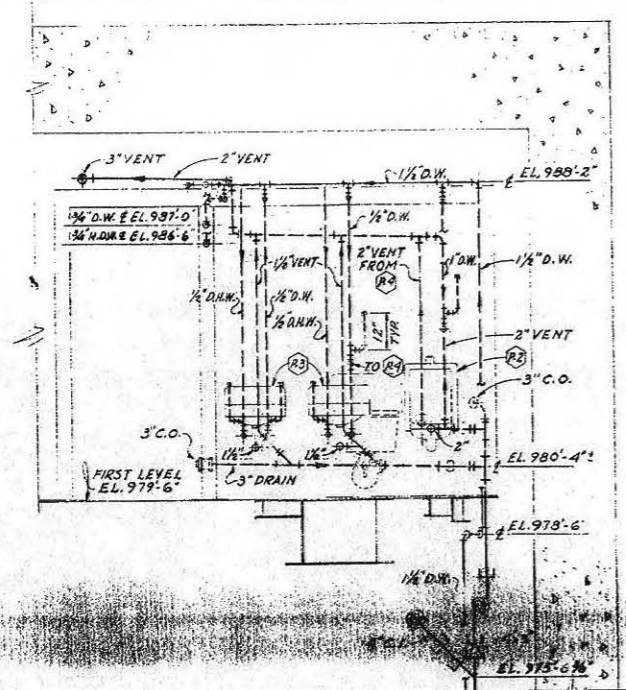
**DEPARTMENT OF THE AIR FORCE**  
AIR FORCE - BALLISTIC MISSILE DIVISION (ARDB)  
WILLOW GROVE, CALIFORNIA

**WS-107A-1 OPERATIONAL BASE**  
UNITARY SILO  
LAUNCH CONTROL CENTER

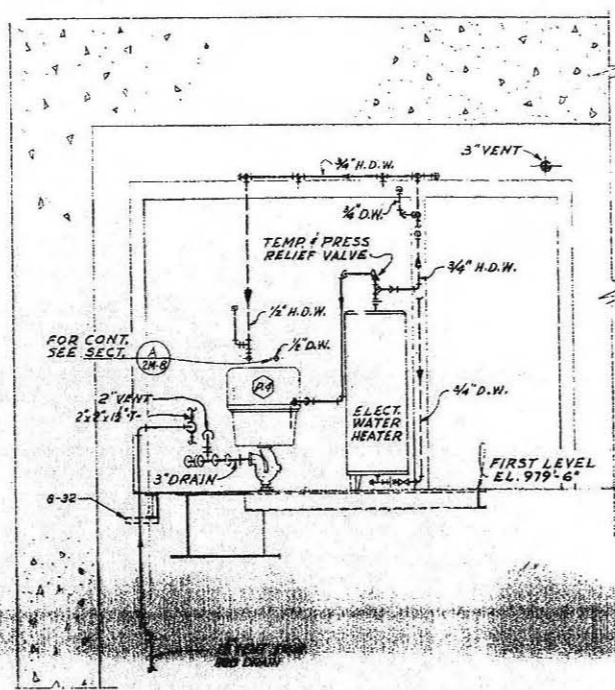
PLUMBING PLAN - SHT. 3

DATE: 10-10-59  
 DRAWN BY: V.G.F. 11-10-59  
 CHECKED BY: J.M. 12-22-59  
 DATE: 1-11-60  
 APPROVED BY: [Signature] 1-11-60

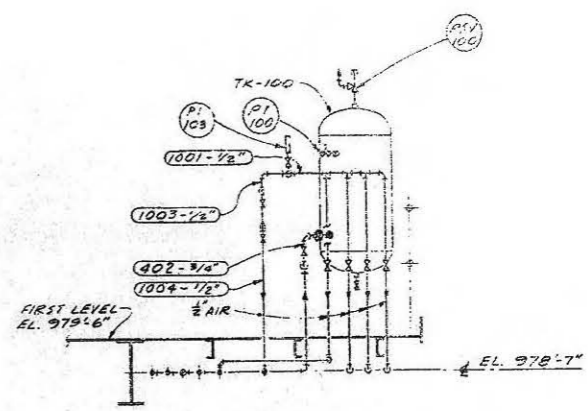
ISSUED FOR: 15, JAN, 1960  
 SCALE: AS NOTED  
 DRAWING NO: 556-A - 2-M-7  
 SHEET: 1-50



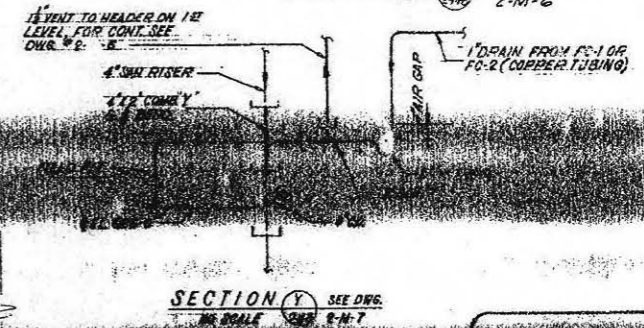
PARTIAL SECTION A SEE 2-M-5 & 2-M-6



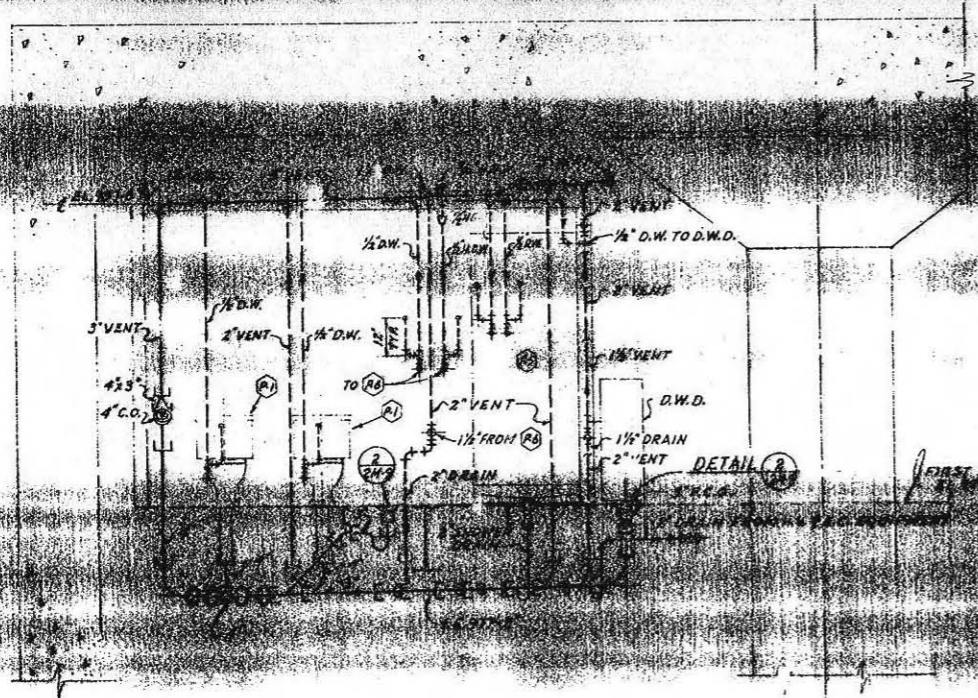
PARTIAL SECTION B SEE 2-M-5 & 2-M-6



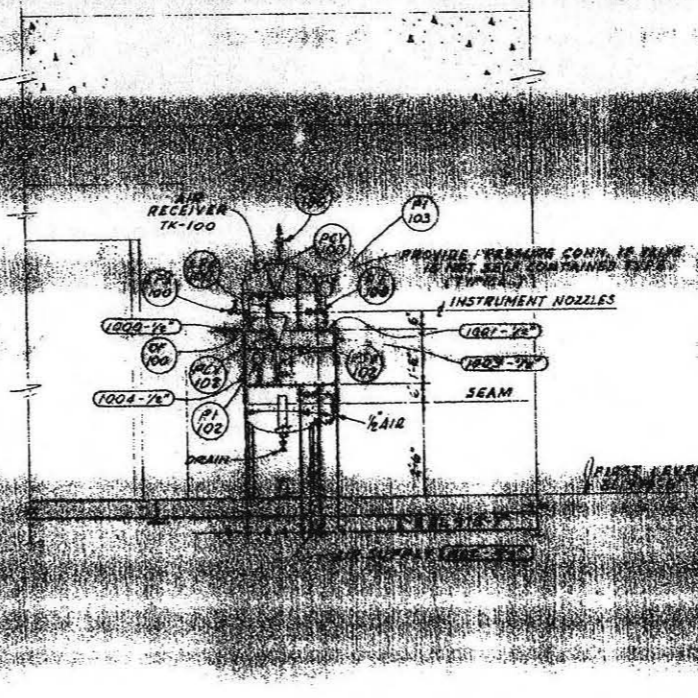
SECTION E SEE 2-M-6



SECTION Y SEE DWG 2-M-7



PARTIAL SECTION C SEE 2-M-5 & 2-M-6



PARTIAL SECTION D SEE 2-M-6

3. Check for proper structure, maintenance or condition of the system.

*The Boeing Company*

FOR SITE [ ]

1/2" = 1'-0"

REVISED DRAWING	DATE	BY	REASON
1-29-63 OPERATIONAL AS-BUILT			

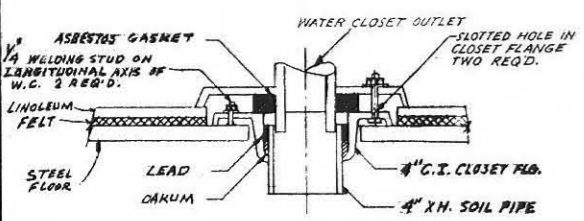
WS-107A-1 OPERATIONAL BASE  
UNITARY SILO  
LAUNCH CONTROL CENTER  
PUMPING SECTIONS

556-A-2-M-8

1-51

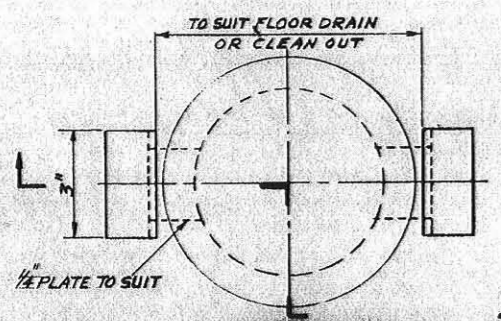
MAR 2 1961  
MAY 27 1960  
JAN 13 1960

U.S. GOVERNMENT PRINTING OFFICE: 1955 O 556-A-2-M-8

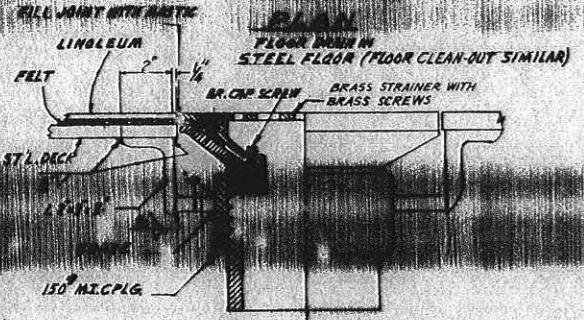


FLOOR MOUNTED WATER CLOSET

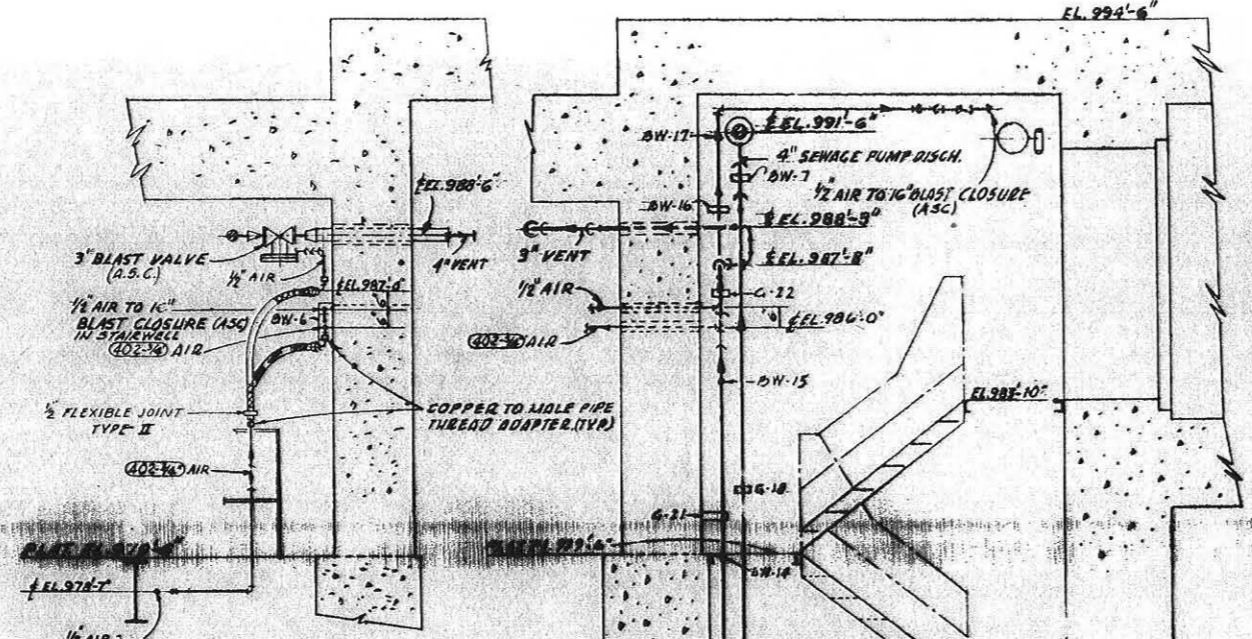
DETAIL 1 SEE 2-M-6  
NO SCALE



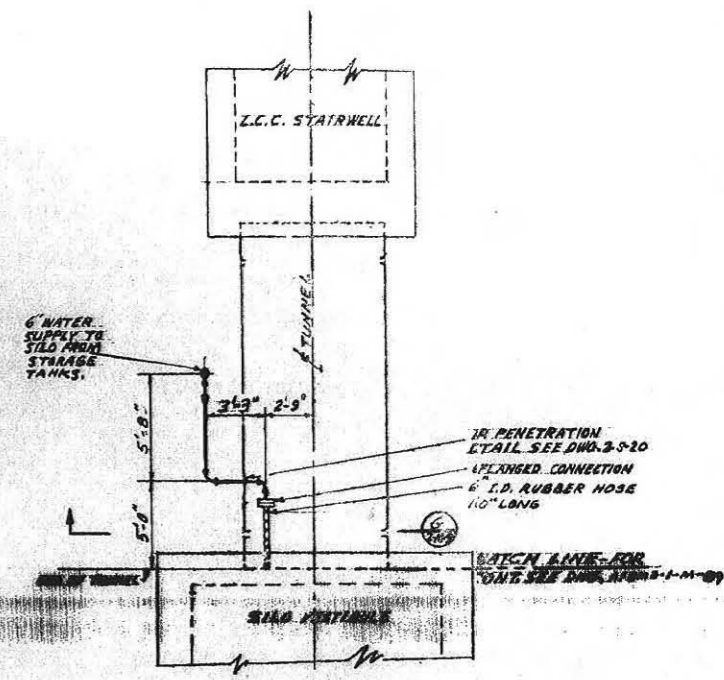
DETAIL 2 SEE 2-M-6



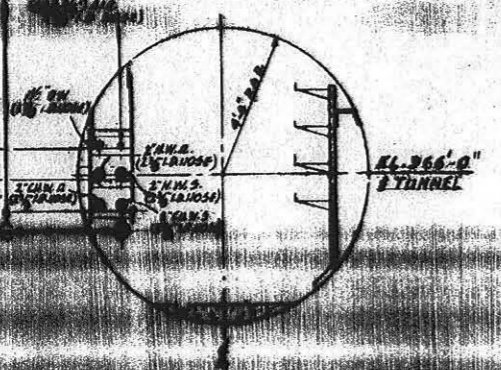
SECTION A



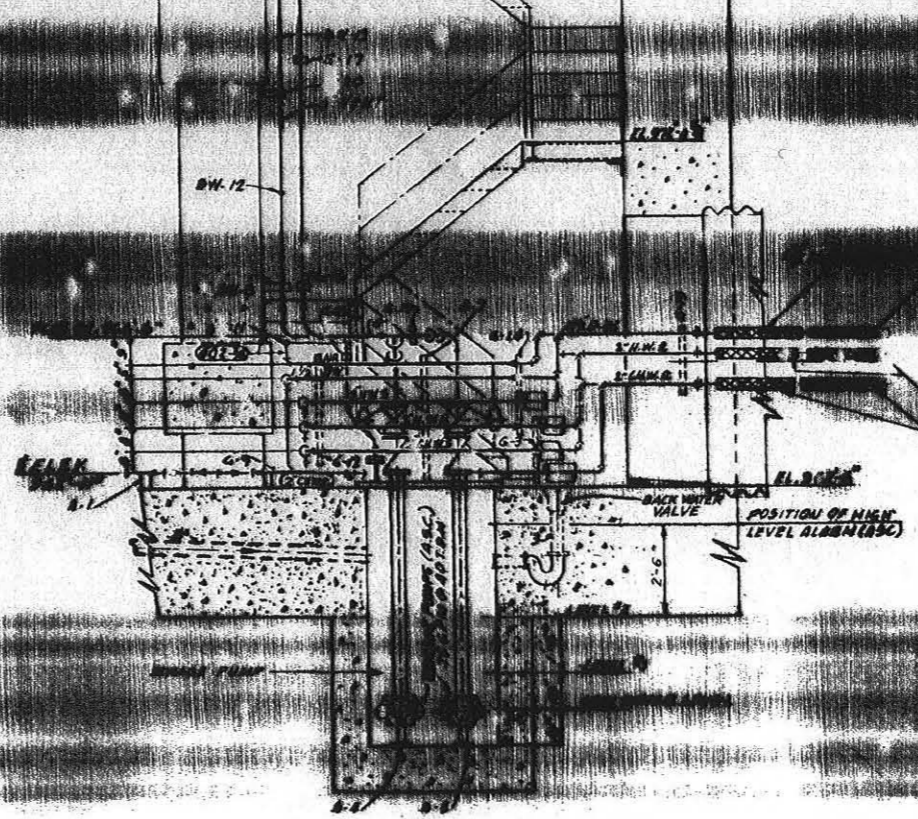
SECTION 4 SEE 2-M-7



DETAIL 3 SEE 2-M-7  
SCALE: 1/2\"/>



SECTION 5 SEE 2-M-7  
SCALE: 1/2\"/>



SECTION E SEE 2-M-7  
SCALE: 1/2\"/>

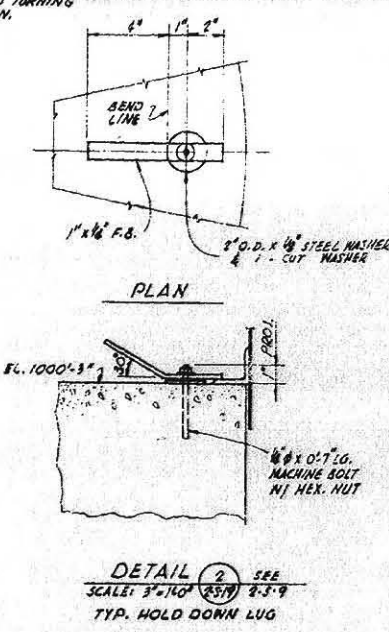
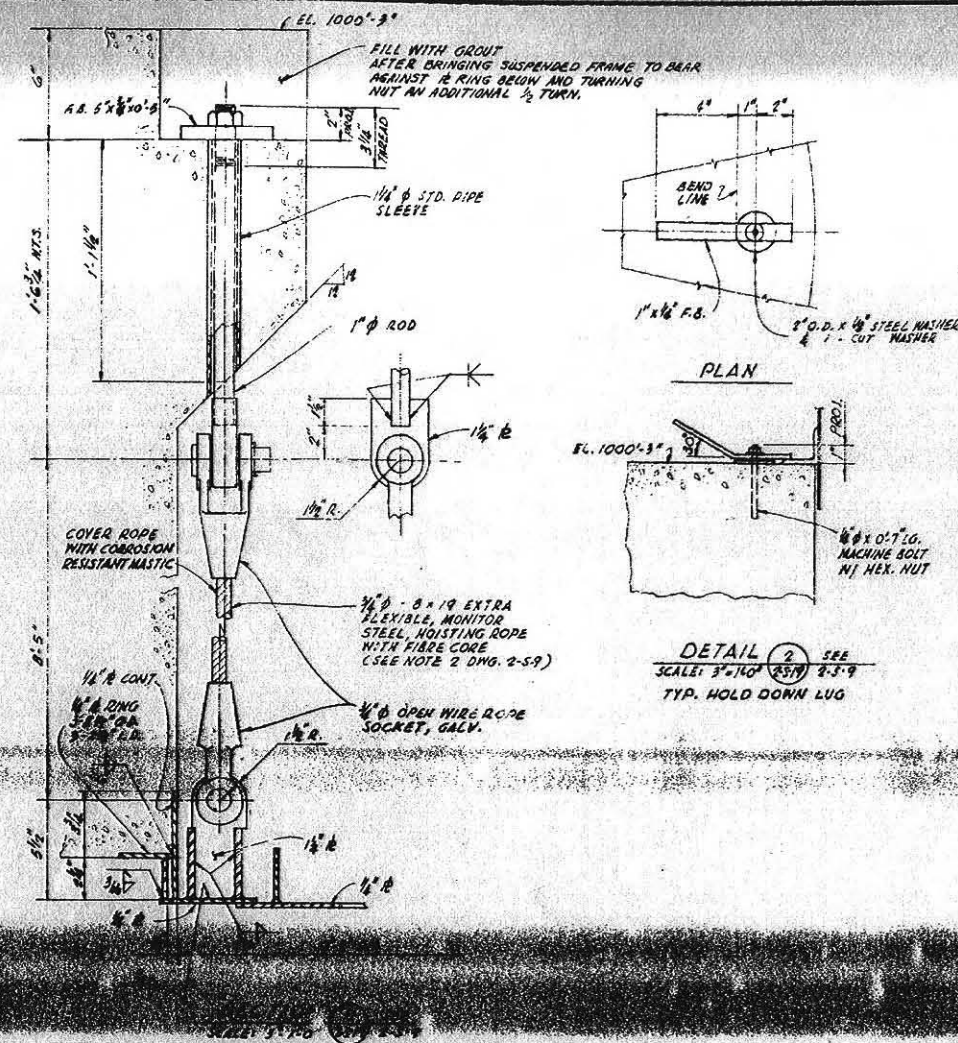
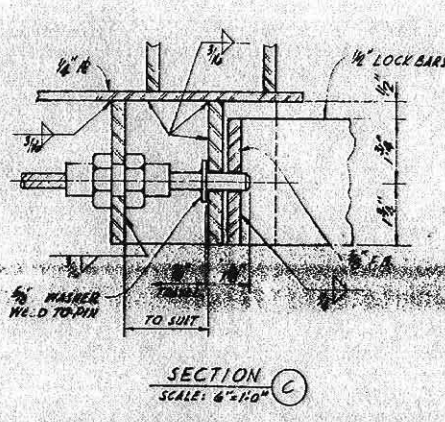
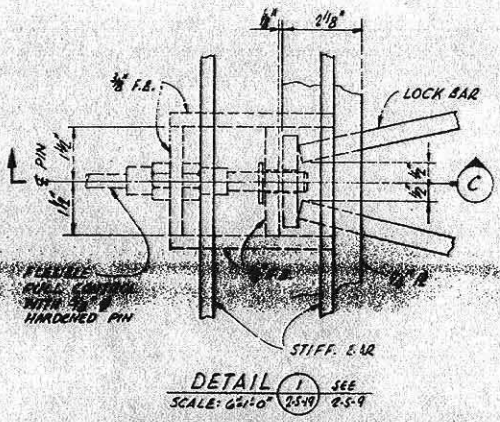
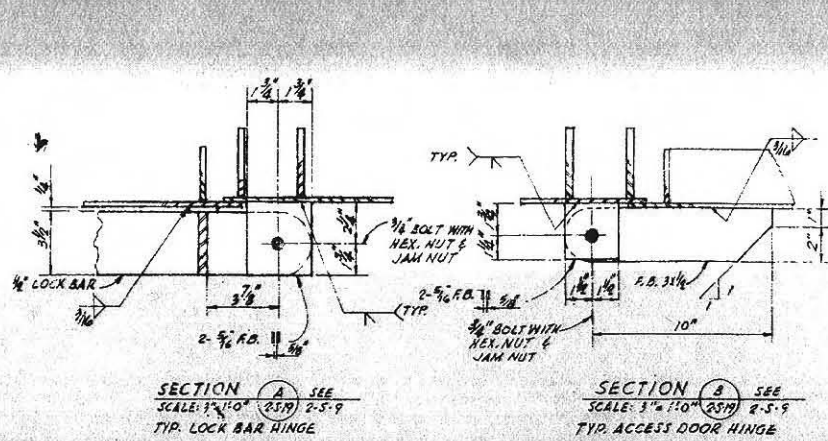
FOR SI 18 12 14 17 19 21

3. Check that work does not affect other maintenance or operation of the silo.

Signed: *[Signature]*  
JUN 13 1960

DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
<b>WS-10 A-1 OPERATIONAL BASE</b> UNITARY SILO LUNCH CONTROL CENTER PUMPS SECT'S & DETS.	
JUN 13 1960 556-2-M-3	



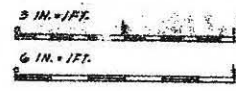


**NOTES**

1. FOR ESCAPE HATCH ARRANGEMENT AND DETAILS NOT SHOWN, SEE DWG. 2-5-9.

In accordance with instructions in 300/33876 24 November 1961 this drawing is certified as-built for the following, as distributed by the designing agency:

1. Refer to existing HVID INTERFACES or solid connections to GEA equipment.



**FOR SITE REPRESENTATIVE**

DATE	12-12-57	BY	JMS
DATE	12-8-57	BY	GGM
DATE	12-7-57	BY	SE
DATE	1-13-58	BY	JMS
DATE	1-13-58	BY	JMS

**WS-107A-1 OPERATIONAL BASE**

UNITARY SI LO  
 LANCH CONTROL CENTER

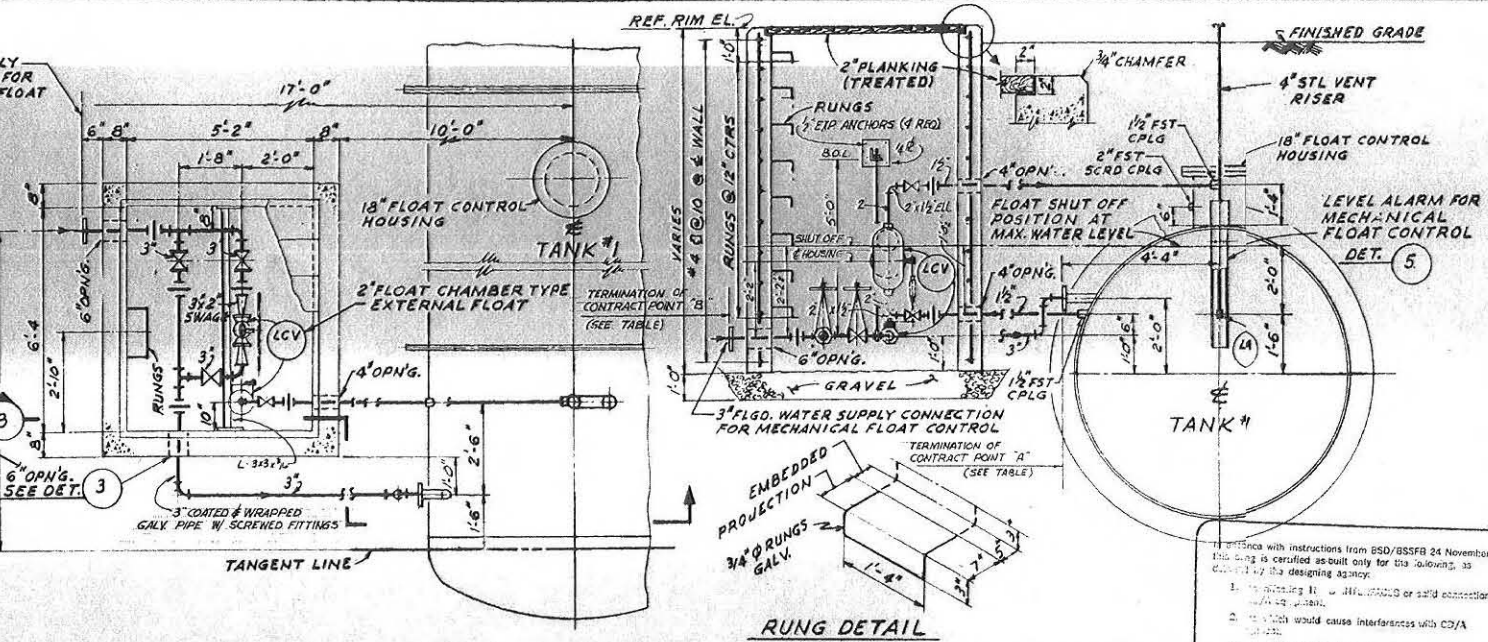
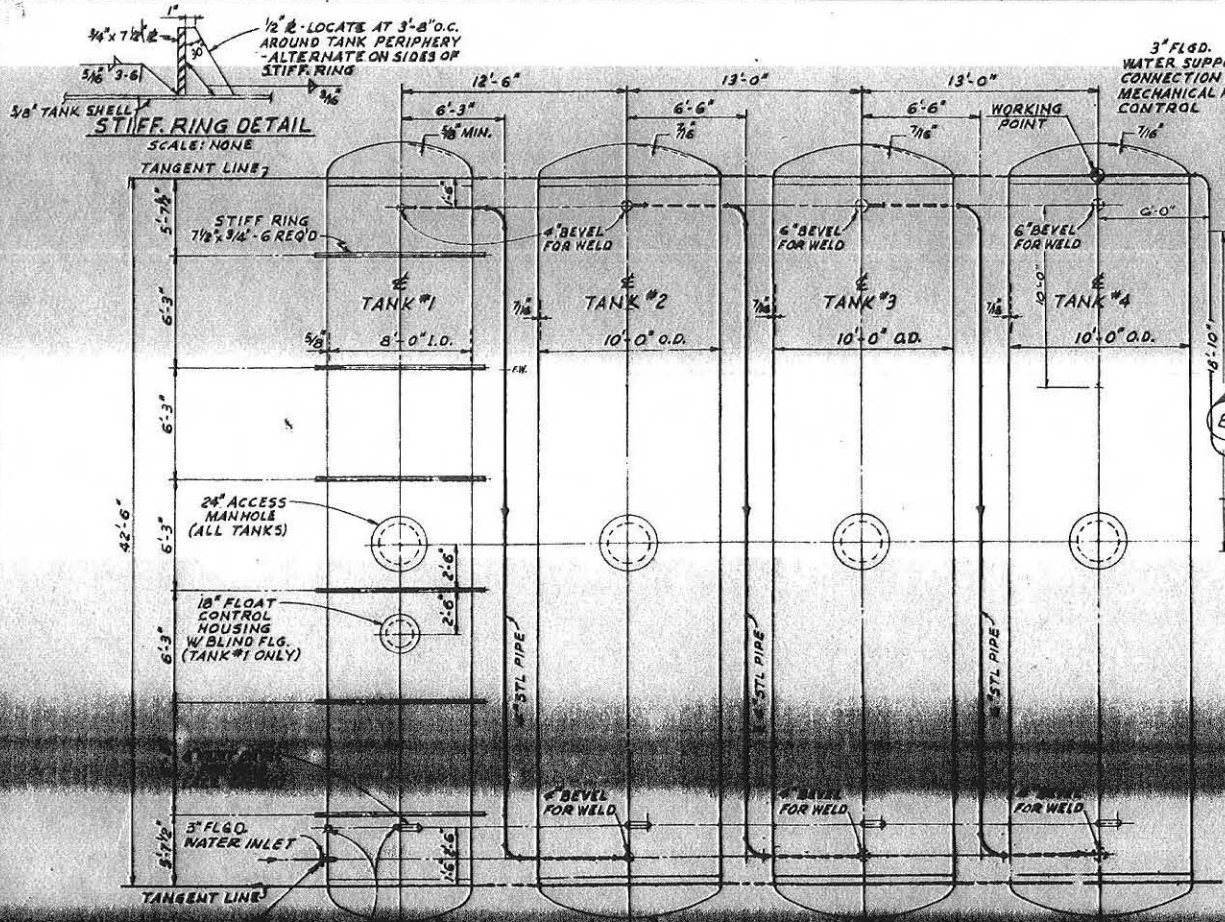
ESCAPE HATCH DETAILS - SH. 2

**ENG**

13 JAN 1968  
 330-107A-2-3-10

JAN 1968

1-30



PLAN  
SCALE: 1/2" = 1'-0"

SECTION  
SCALE: 1/2" = 1'-0"

MECHANICAL FLOAT CONTROL DETAIL

RUNG DETAIL  
SCALE: NONE

Reference with instructions from BSD/BSSFB 24 November 1963. This drawing is certified as-built only for the following: as constructed by the designing agency.

1. All piping shall be 1/2" minimum diameter or shall conform to the specifications of the design agency.

2. All materials, details and fabrication of tanks shall conform to the specifications.

3. Tanks shall be coated inside and outside per specifications.

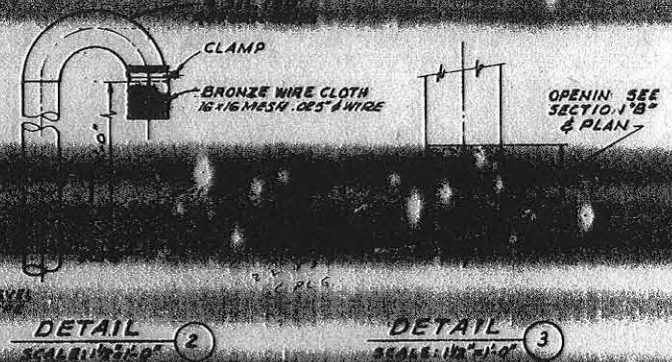
4. Concrete shall be Class B.

5. Capacity of tanks at low level alarm elevation is 30,000 gallons.

JUN 1982

GENERAL NOTES

- USE MECHANICAL FLOAT CONTROL SYSTEM.
- (a) GRAVITY WATER SUPPLY.
- (b) PUMPS EQUIPPED WITH EXPANSION TANK & PRESSURE CONTROLS.
- ALL MATERIALS, DETAILS AND FABRICATION OF TANKS SHALL CONFORM TO THE SPECIFICATIONS.
- TANKS TO BE COATED INSIDE AND OUTSIDE PER SPECIFICATIONS.
- CONCRETE SHALL BE CLASS B.
- CAPACITY OF TANKS AT LOW LEVEL ALARM ELEVATION IS 30,000 GALLONS.

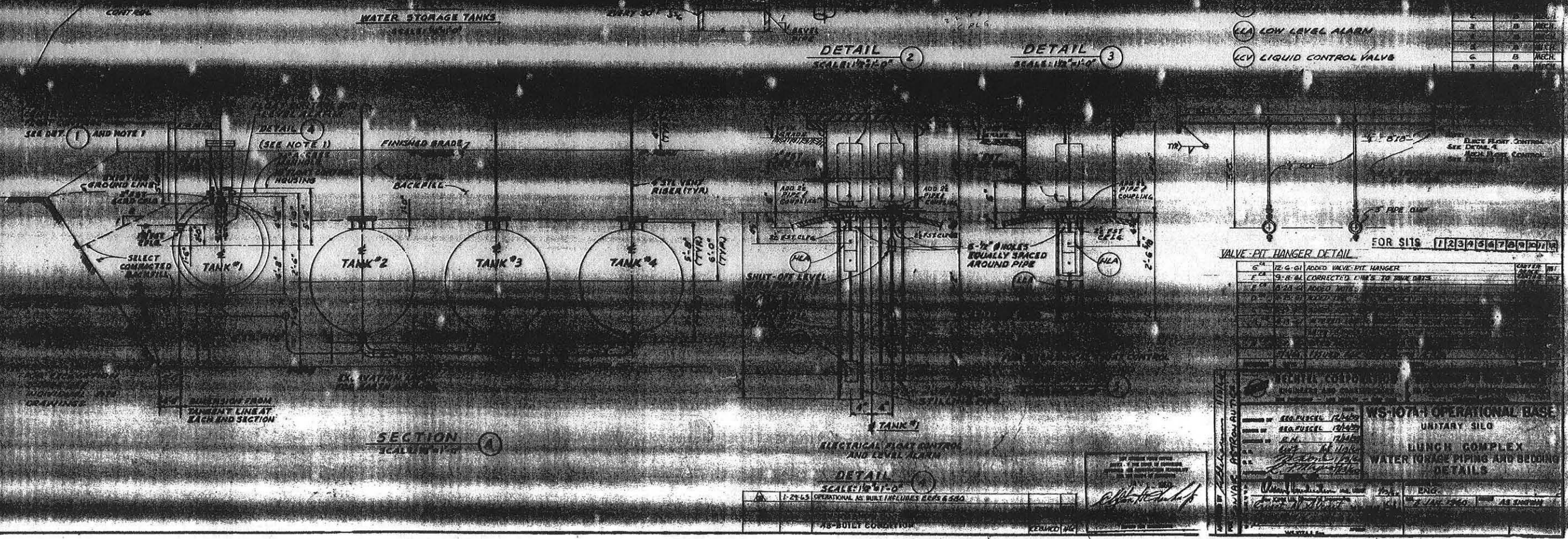


DETAIL 2  
SCALE: 1/2" = 1'-0"

DETAIL 3  
SCALE: 1/2" = 1'-0"

1	1	1	MECH.
2	1	1	MECH.
3	1	1	MECH.
4	1	1	MECH.
5	1	1	MECH.
6	1	1	MECH.
7	1	1	MECH.

LLA LOW LEVEL ALARM  
LCV LIQUID CONTROL VALVE



SECTION A  
SCALE: 1/2" = 1'-0"

DETAIL  
SCALE: 1/2" = 1'-0"

VALVE PIT HANGER DETAIL  
FOR SITS 11234567891011

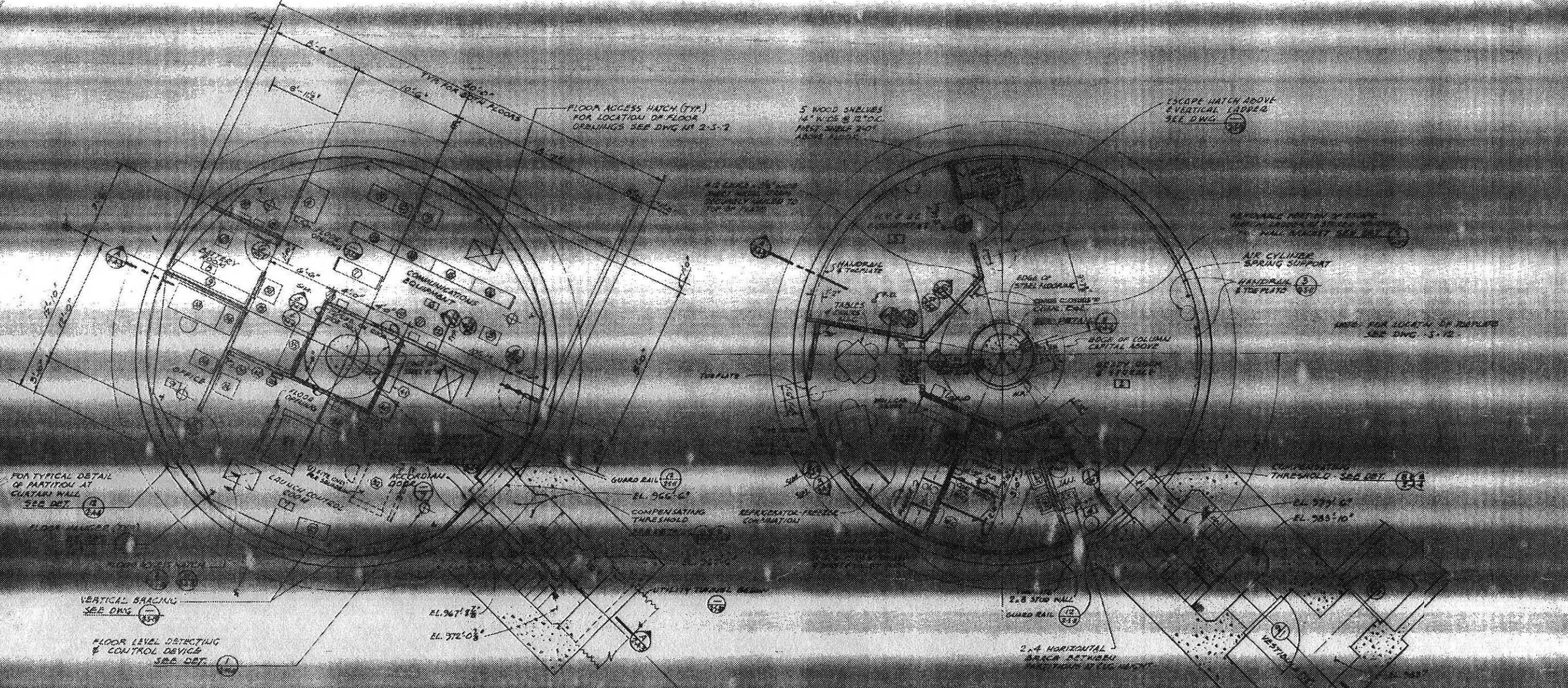
REV	DATE	DESCRIPTION	BY
G-1	12-6-61	ADDED VALVE PIT HANGER	...
F-1	9-8-61	CORRECTED DIMS TO TRUE DIMS	...
E-1	8-24-61	ADDED DIMS	...
D-1	8-24-61	ADDED DIMS	...
C-1	8-24-61	ADDED DIMS	...
B-1	8-24-61	ADDED DIMS	...
A-1	8-24-61	ADDED DIMS	...

WS-1074 OPERATIONAL BASE  
UNITARY SILO  
BUNCH COMPLEX  
WATER STORAGE PIPING AND BEDDING  
DETAILS

DATE: 7 JUN 1960  
BY: [Signature]  
ENG: [Signature]

AS SHOWN

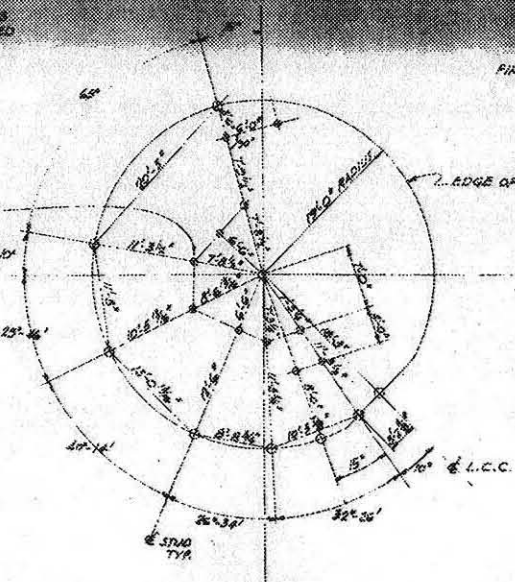




**2ND LEVEL**  
FINISHED FLOOR ELEVATION 966'6"

**1ST LEVEL**  
FINISHED FLOOR ELEVATION 979'6"

**NOTE:** FROM STANDARD EQUIPMENT APPARATUS AND APPLIANCES SHALL BE SECURELY ATTACHED TO WALLS OR FLOOR TO PREVENT MOVEMENT UNDER SHOCK CONDITIONS.



**SCHEMATIC PLAN - LOCATION OF WORK POINTS FOR WOOD STUD PARTITIONS - 1ST LEVEL**  
NO SCALE

In accordance with instructions from BSO/BSOFS 24 November 1964 this structure certified as-built only for the following conditions:  
1. TO ACCORDING MAND INTERFERENCES or wood connections  
2. WHICH WOULD CAUSE INTERFERENCE WITH CD/A  
3. WHICH WOULD AFFECT OTHER INSTALLATIONS or  
4. WHICH WOULD AFFECT OTHER INSTALLATIONS or

JUN 13 1966  
*H. O. Broadway*

FOR SITES 12 14 16 17 18 19 20 21

REVISION	DATE	DESCRIPTION	BY	CHKD
1-27-63		OPERATIONAL AS BUILT		
2-12-62		REV. TO SHOW CONSTR AS-BUILT CONDITION		
3-27-60		DELETED ITEM #25 & ADDED ITEM #41 ON 2ND LEVEL PLAN		
5-8-60		ADDED ITEMS #40 & #41 FOR BRASS BRACKETING STC		
6-2-60		CORRECTED CHAIR RISE INSTALLER LOCATION OF WORK POINTS		
8-2-60		ISSUES FOR PLATT'S BUREAU, A.F.B.		

APPROVED BY: *[Signature]* 27 SEP 1960  
 CHECKED BY: *[Signature]* 27 SEP 1960  
 DESIGNED BY: *[Signature]* 27 SEP 1960

FOR THE DIRECTOR OF THE AIR FORCE  
 ENGINEERS AND ARCHITECTS  
 15 SEP 1960

**BECHTEL CORPORATION** ENGINEERS AND CONSTRUCTORS  
 4800 SAN FRANCISCO - SAN FRANCISCO, CALIF. 94121

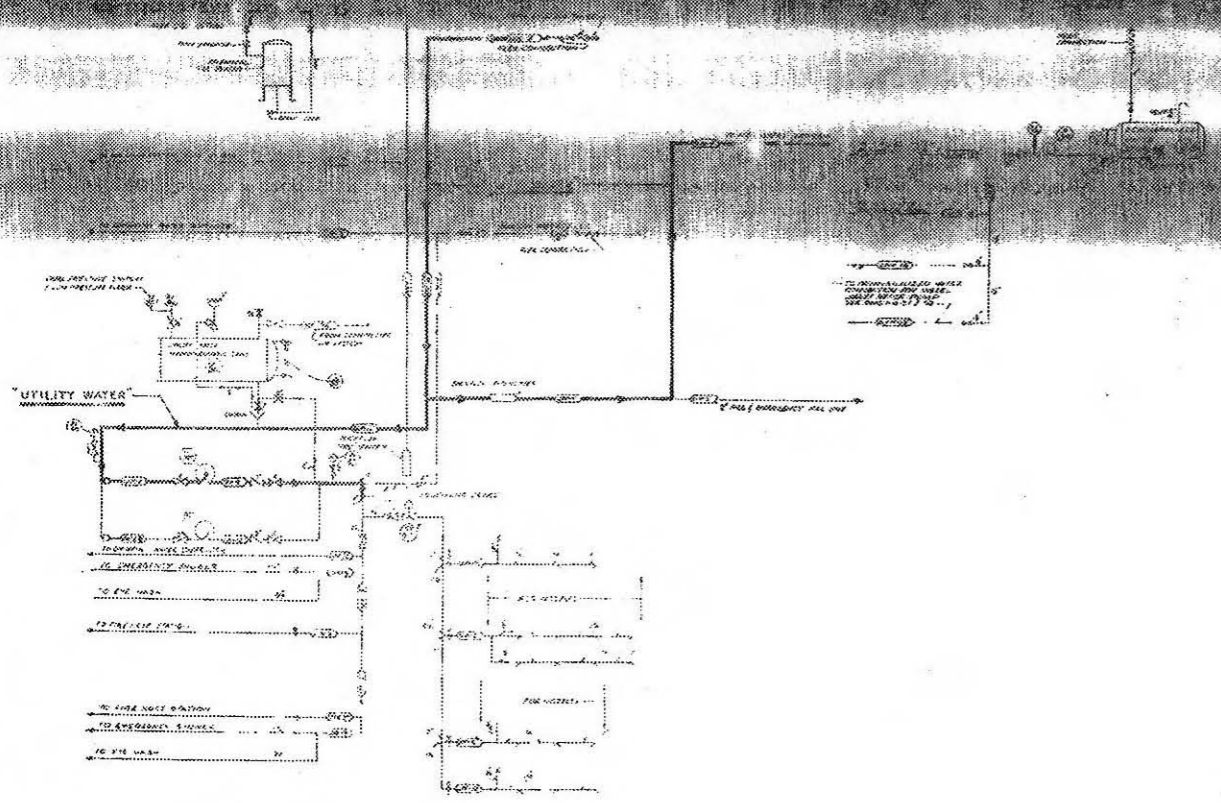
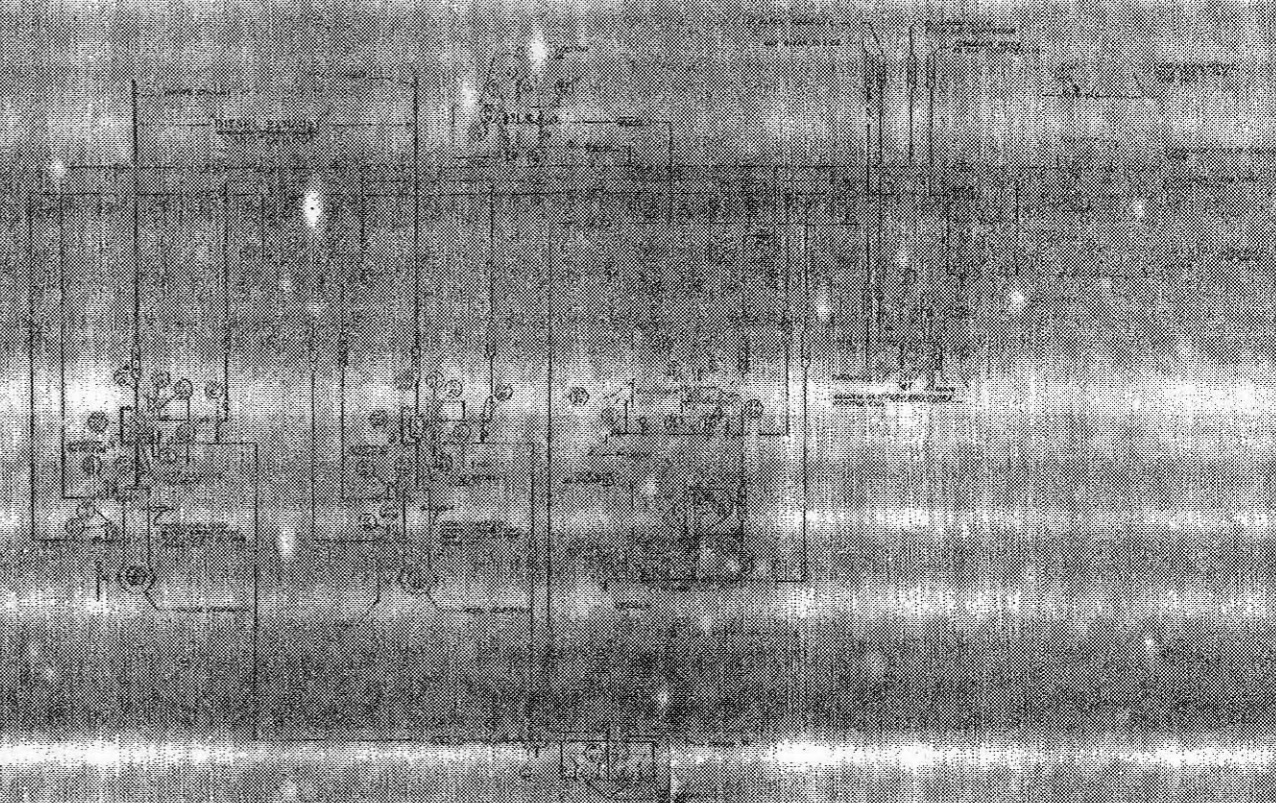
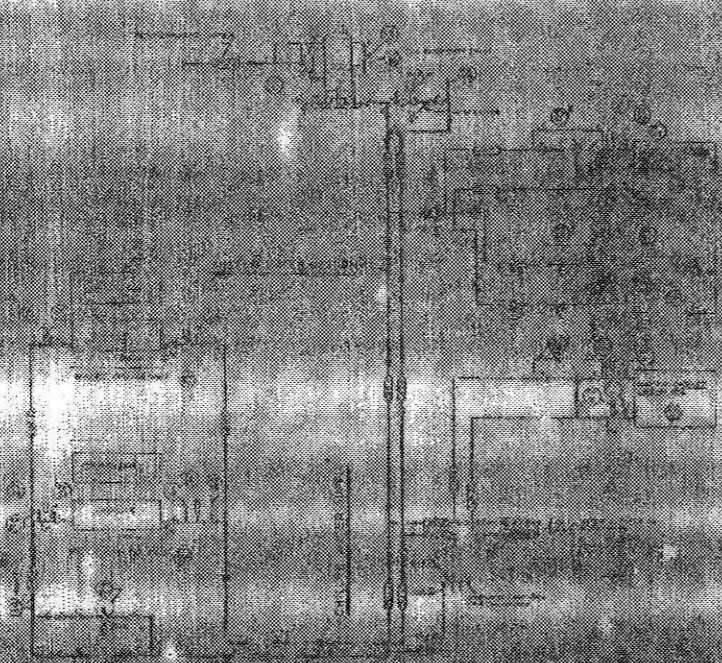
**DEPARTMENT OF THE AIR FORCE**  
 AIR FORCE BALLISTIC MISSILE DIVISION (AFBMD)  
 HUNTSVILLE, ALABAMA

**WS-10A-1 OPERATIONAL BASE**  
 UNITARY SILEO  
 LAUNCH CONTROL CENTER

**FLOOR PLANS**

DATE: 13 JUL 1960  
 DRAWING NO: 558-2-A-2  
 SHEET: 1-8

1. The piping in this drawing and piping shown on other drawings of this station shall be coordinated with the piping shown on the drawings of the station and shown on the drawings of the piping in other drawings of the station.
2. The piping in this drawing shall be coordinated with the piping shown on the drawings of the station and shown on the drawings of the piping in other drawings of the station.
3. The piping in this drawing shall be coordinated with the piping shown on the drawings of the station and shown on the drawings of the piping in other drawings of the station.
4. The piping in this drawing shall be coordinated with the piping shown on the drawings of the station and shown on the drawings of the piping in other drawings of the station.
5. The piping in this drawing shall be coordinated with the piping shown on the drawings of the station and shown on the drawings of the piping in other drawings of the station.



REVISED TO SHOW CONSTRUCTION AS BUILT FOR CHANGE  
 AB-BUILT CONDITION (DATE 10/27/66)  
 ISSUED FOR PLATTSBURGH AFB

JUN 13 1967  
 [Signature]

FOR SITES: [7] [8] [9] [10] [11] [12]

NO.	1-27-63	REVISIONS AS BUILT	SATAP	P/T
REV.	1-27-63	REV. TO SHOW CONSTR. AS BUILT FOR CHANGE		
REVISION	DATE	DESCRIPTION	AGENCY	INIT.
		AB-BUILT CONDITION (DATE 10/27/66)		
		ISSUED FOR PLATTSBURGH AFB		
<b>BECHTEL CORPORATION</b> ENGINEERS AND CONSTRUCTORS SAN FRANCISCO, CALIF. 94103 NEW YORK			<b>DEPARTMENT OF THE AIR FORCE</b> AIR FORCE BALLISTIC MISSILE DIVISION (ARDC) REDONDA BEACH, CALIFORNIA	
DESIGNED BY	LICB	DATE	WS-107A-1 OPERATIONAL BASE	
DRAWN BY	LICB	DATE	MISCELLANEOUS PIPING	
CHECKED BY	LICB	DATE	IDENTIFICATION	
D.E.	LICB	DATE		
APPROVED BY	[Signature]	DATE		
APPROVED BY		DATE	7 JULY 1967	
		SCALE	AS SHOWN	
		NO.	556-1-A-24	

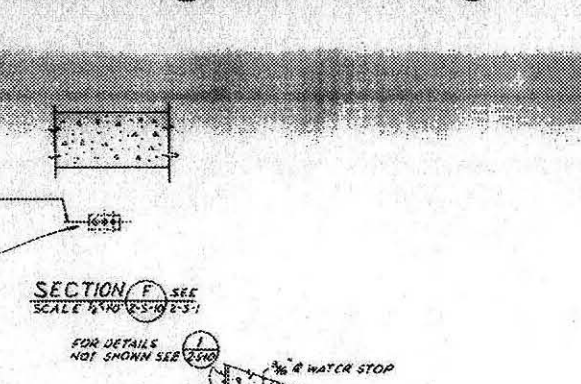
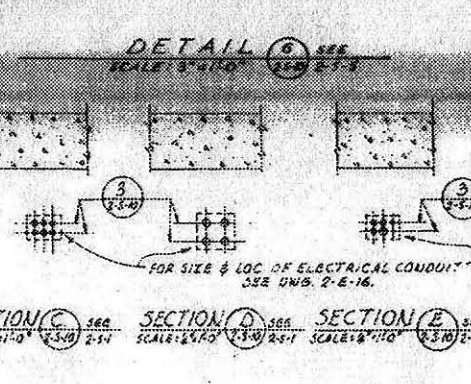
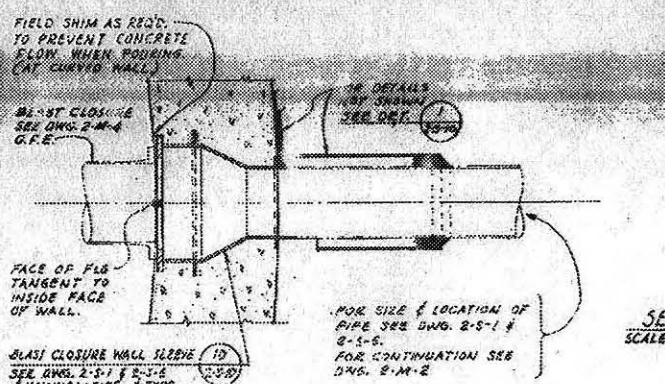
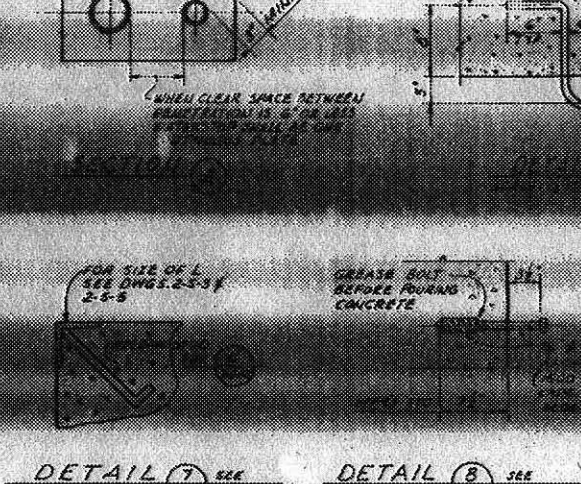
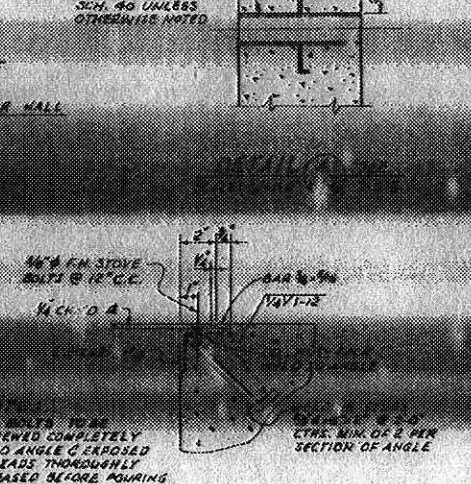
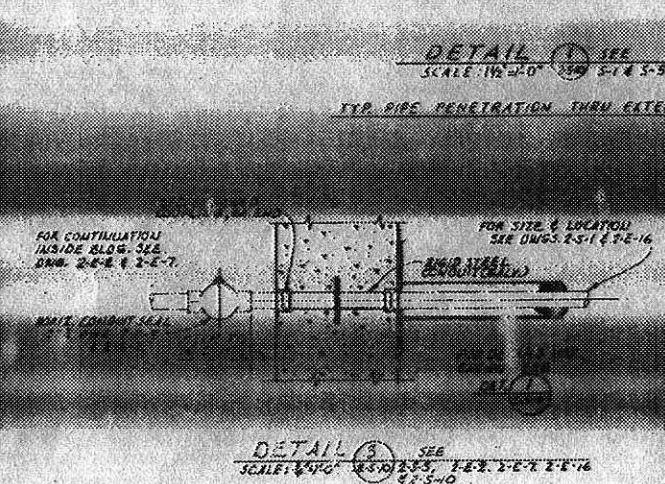
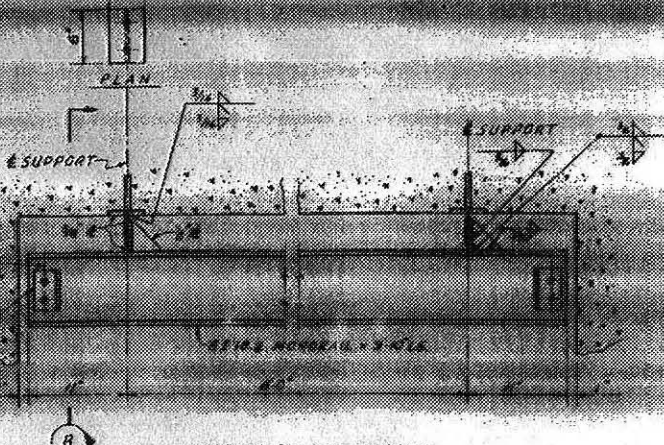
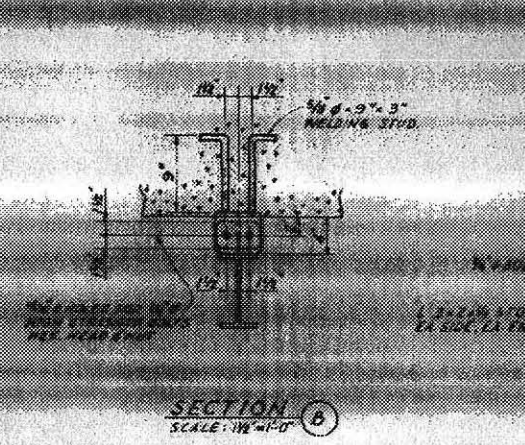
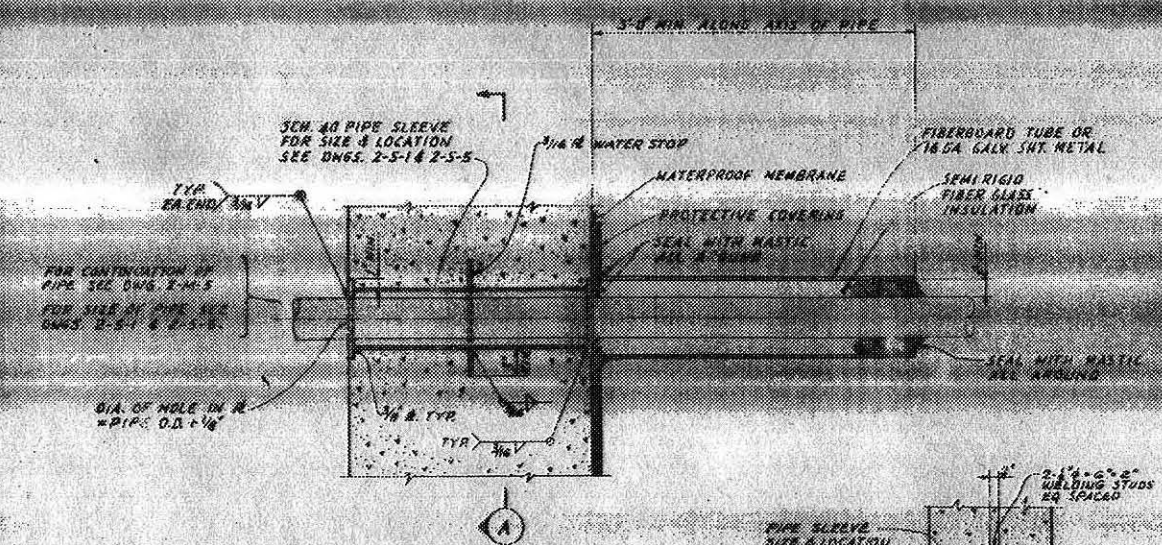
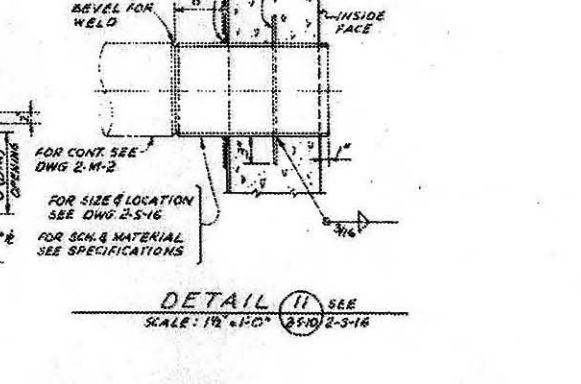
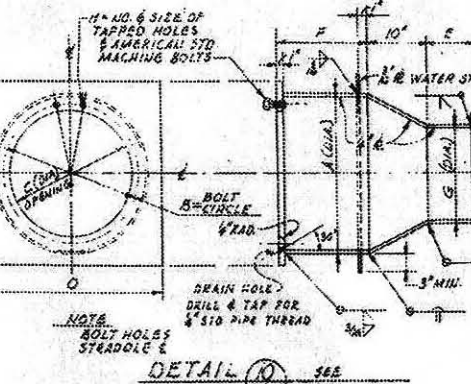


TABLE OF DIMENSIONS FOR BLAST CLOSURE WALL SLEEVE

TYPE	INDIVIDUAL SIZE	A	B	C	D	E	F	G	H	J
A	10"	2'-0"	1'-9"	1'-6"	2'-0"	8"	10"	1'-4"	1'-0"	1'-2"
B	10"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
C	10"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"

SEE DET. 10



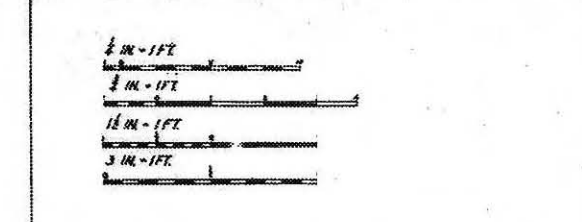
**NOTES**

- ALL SKEWED PIPE & CONDUIT DETAILS SHOWN ON THIS SHEET SHALL BE TACK WELDED AFTER ASSEMBLY.
- REPAIR DAMAGED ZINC EDGING ON GALVANIZED PIPES & CONDUITS AFTER WELDING.

In accordance with instructions from D/BSNFS 24 November 1961 this drawing is certified as built only the following, as dictated by the issuing agency:

1. Work showing N. D. DETAILS or work connections to be as shown.
2. Work which would cause interference with CO/A.

DATE: 12-13-62



FOR SITES 11374516749112

REVISION	DATE	DESCRIPTION	BY	CHKD
1	1-29-63	OPERATIONAL AS BUILT		
2	1-12-64	REV. TO SHOW CONST. AS-BUILT CONDITIO		
3	9-8-60	ADDED SHEET TO PREVIOUS DWGMENTS. FOR BLAST		
4	8-2-60	ISSUED FOR PLATTERUGH A.P.B.		

**BECHTEL CORPORATION** DEPARTMENT OF THE AIR FORCE  
ENGINEERS AND CONSTRUCTORS AIR FORCE BALLISTIC MISSILE DIVISION (ANDCO)  
3400 AVENUE - LOS ANGELES - 12, CALIF. PASADENA, CALIFORNIA

**WS-IC A-1 OPERATIONAL BASE**  
UNITARY SILO  
LAUGH CONTROL CENTER  
MISCELLANEOUS DETAILS-SHT. I

DESIGNED BY: L.H.M. (E.S.M.) 12-13-62  
CHECKED BY: C.S.M. 12-13-62  
DATE: 12-13-62  
SCALE: 1/2" = 1'-0" DWG. 2-5-10

APPROVED BY: [Signature] 12-13-62

DATE: 13 JAN. 1963

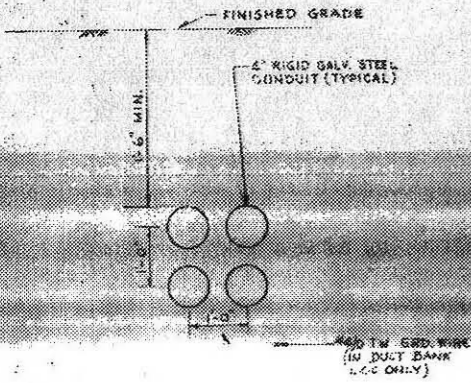
556-2-5-10 1-21

LCC-38

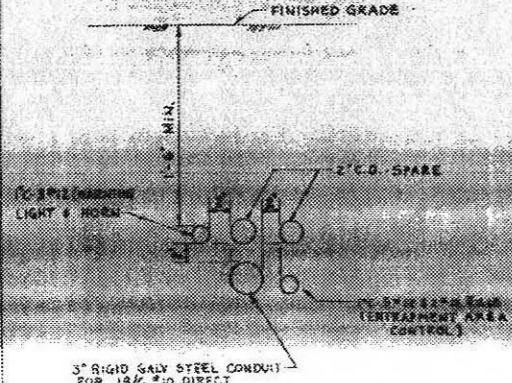
D. O. SERIES

BAND INDEX NO. 1, 501 THEN 111

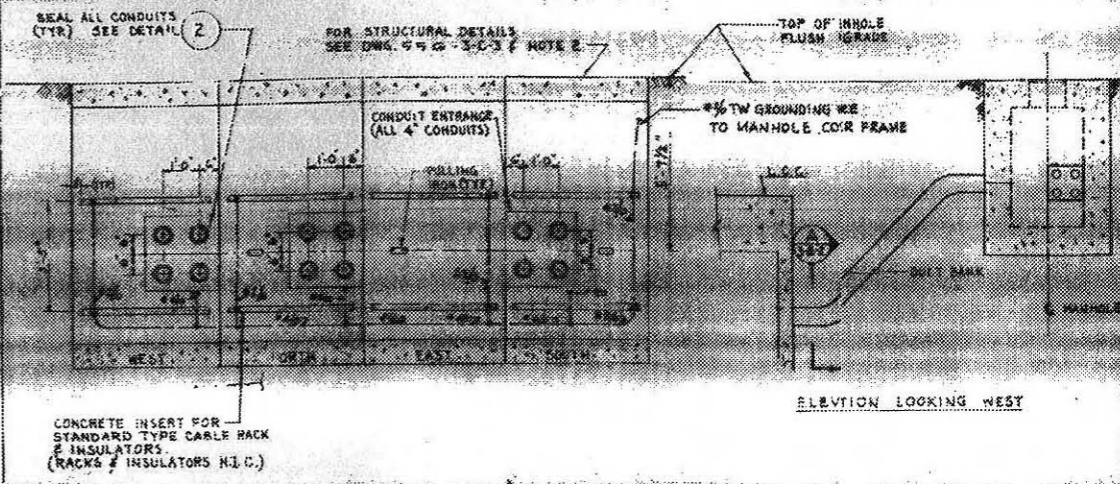
PL ATTACHED A.C.A.



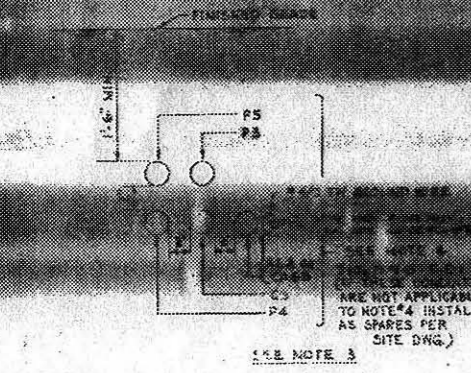
SECTION A SEE 2-E-2



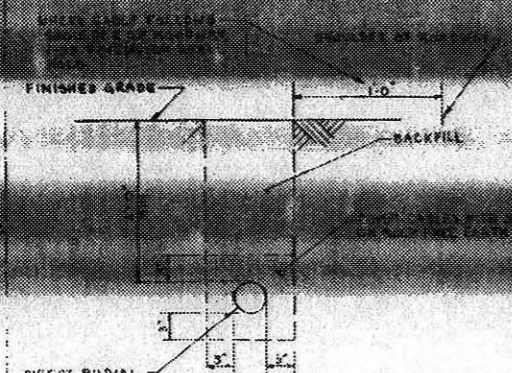
SECTION B SEE 2-E-2



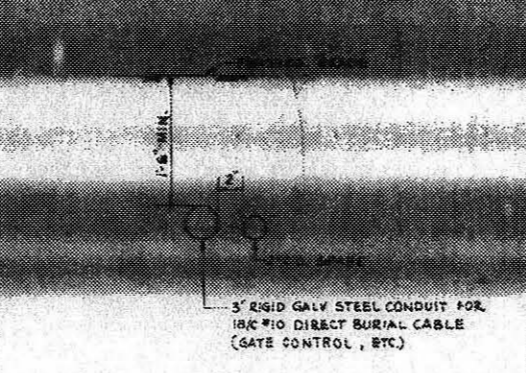
COMMUNICATION MANHOLE DETAIL



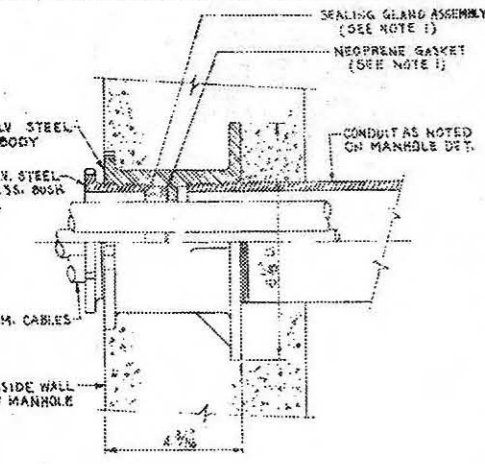
SECTION C SEE 2-E-2



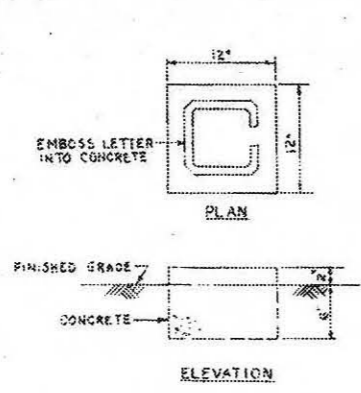
SECTION D SEE 2-E-2



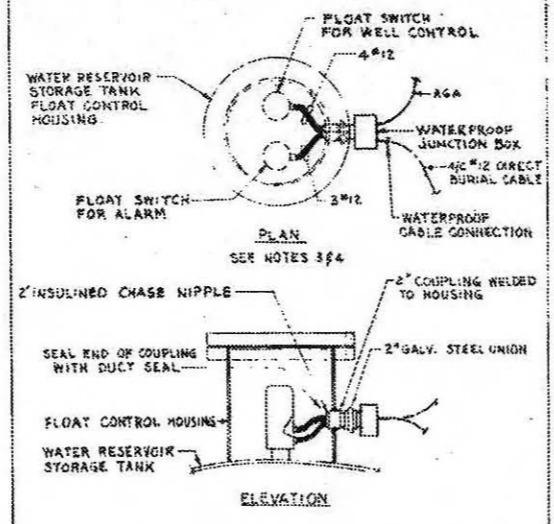
SECTION E SEE 2-E-2



COMMUNICATION MANHOLE WALL ENTRANCE SEAL



CABLE MARKER DETAIL



WATER RESERVOIR STORAGE TANK ALARM & CONTROL CONNECTION

NOTES

1. THE SEALING GLAND ASSEMBLY GASKET WILL BE FURNISHED (UNLESS OTHERWISE SPECIFIED). WHEN CABLES ARE INSTALLED THE SEALING GLAND GASKET WILL BE DELETED BY THE INSTALLER.
2. FOR ELEMENTARY WIRING DIAGRAM, SEE DWG. 59-G-2-E-14.

REFERENCED DRAWINGS

ELECTRICAL POWER PLAN	2-E-2
ELECTRICAL SINGLE LINE DIAGRAM	2-E-1

REVISIONS

NO.	DATE	DESCRIPTION
1	1-29-63	OPERATIONAL AS-BUILT DWG. INCLUDED E.P.R. & S.E.C.
2	1-10-63	REQUIRED TO SHOW EXISTING AS BUILT CONDITIONS
3	9-29-60	REVISIONS TO SHOW EXISTING AS BUILT CONDITIONS
4	9-8-60	DELETED BLAST DETECTION DETAIL, SEE 5
5	6-17-60	CHANGED 'SPACE' IN SECTION 'B' TO '3/2 E.P.R.'
6	5-2-60	ISSUED FOR PLATTSBURGH A.F.B.

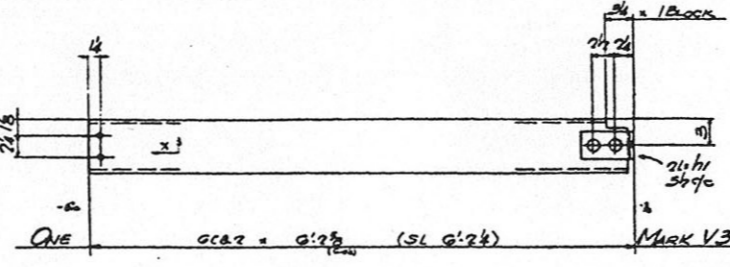
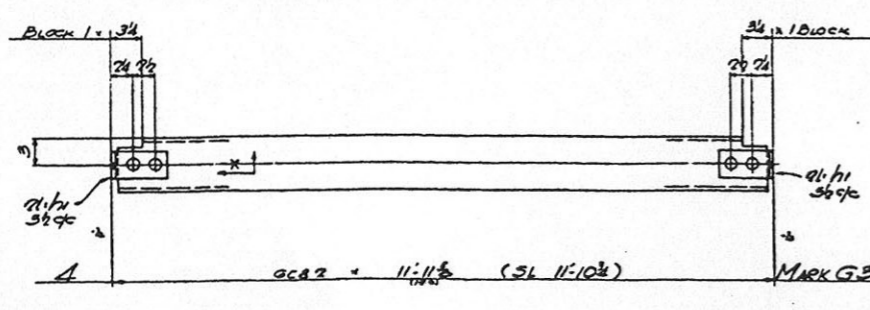
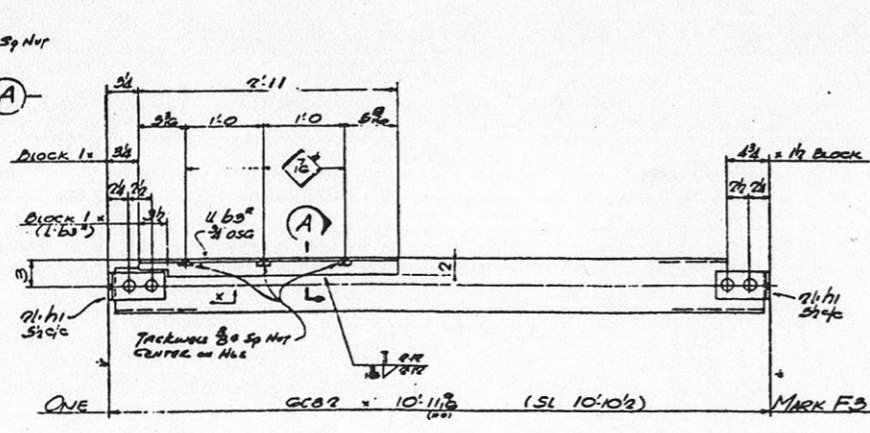
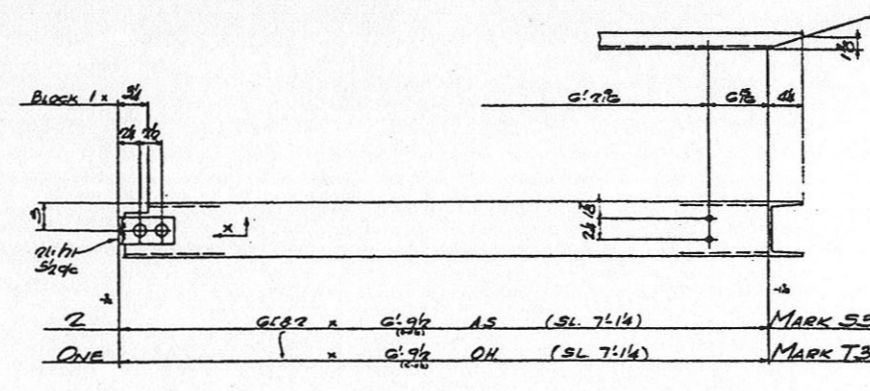
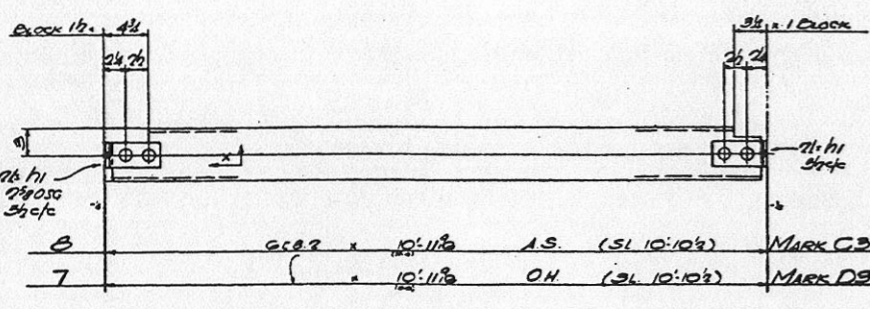
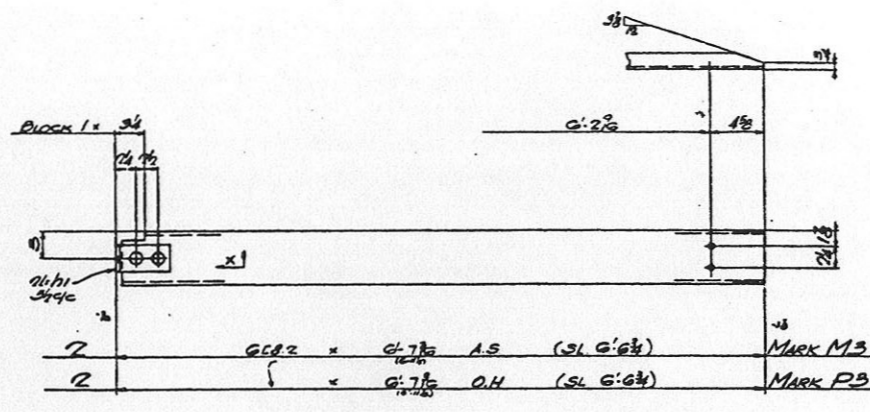
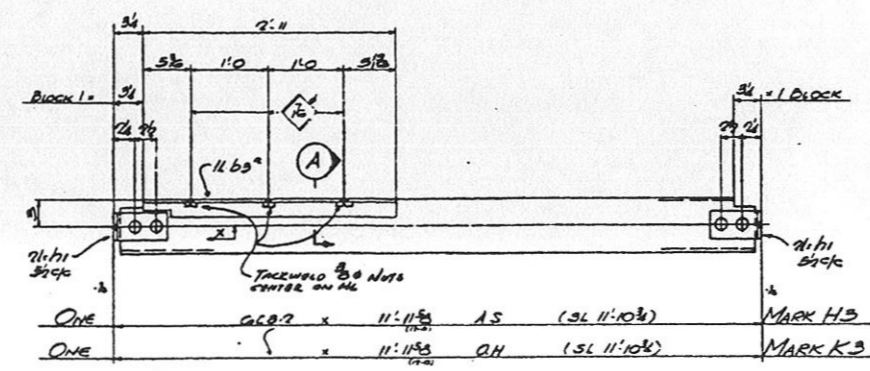
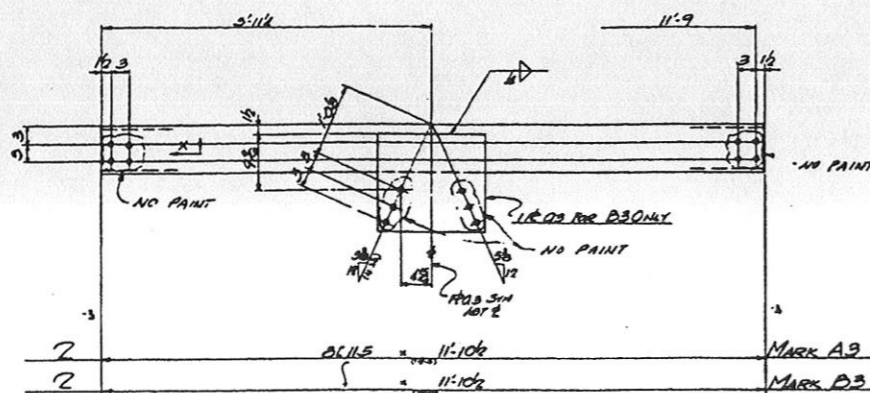
JUN 13 1962

FOR SITES

REVISION	DATE	DESCRIPTION	APPROVED BY
1	1-29-63	OPERATIONAL AS-BUILT DWG. INCLUDED E.P.R. & S.E.C.	DATA/F.S.L.
2	1-10-63	REQUIRED TO SHOW EXISTING AS BUILT CONDITIONS	GENERAL
3	9-29-60	REVISIONS TO SHOW EXISTING AS BUILT CONDITIONS	AF&M/UC
4	9-8-60	DELETED BLAST DETECTION DETAIL, SEE 5	AF&M/SBC
5	6-17-60	CHANGED 'SPACE' IN SECTION 'B' TO '3/2 E.P.R.'	AF&M/SWB
6	5-2-60	ISSUED FOR PLATTSBURGH A.F.B.	AF&M/STV

<b>BECHTEL CORPORATION</b> ENGINEERS AND CONSTRUCTORS SAN FRANCISCO - LOS ANGELES - NEW YORK		<b>DEPARTMENT OF THE AIR FORCE</b> AIR FORCE BALLISTIC MISSILE DIVISION (ARDC) PLATTSBURGH, MD 20686	
DATE: 12/15/59	BY: [Signature]	<b>WS-10 A-1 OPERATIONAL BASE</b>	
DESIGNED BY: H.E. MARRIOTT	DATE: 12/15/59	UNITARY SILO	
CHECKED BY: [Signature]	DATE: 12/15/59	SITE ELECTRICAL	
APPROVED BY: [Signature]	DATE: 12/15/59	U.G. OWNER & COMMUNICATIONS	
DATE: 12/15/59	BY: [Signature]	SECTIONS & DETAILS SHT. 1	
DATE: 12/15/59	BY: [Signature]	DATE: 13 JAN 1960	SCALE: NONE
DATE: 12/15/59	BY: [Signature]	PROJECT NO: 556-A-3-E-2	FIG NO: 1-75

NO OF	SECTION	LEADLINE	MARK	REMARKS	THICK	WINDY
2	GC11.8	11 10 1/2	A3			
2		11 10 1/2	D3			
2	GC8.2	10 10 1/2	C3			
7		10 10 1/2	D3			
1		10 10 1/2	F3			
4		11 10 1/2	G3			
1		11 10 1/2	H3			
1		11 10 1/2	K3			
2		6 8 1/2	M3	PRIME		
2		6 8 1/2	P3			
2		7 1 1/2	S3			
1		7 1 1/2	T3			
1		6 7 1/2	V3			
10A	1.6 x .4 x .3	3	H1			
2	R 1.6 x .3	1	S3	D3		
2	L 2 x .7 x .4	2	H	D3		
10A	4/8 RIBS			STOP		
9	3/4 x 5/8 NUT					
12	1/4 x 1/2 WELD			STOP		
2						
2						
FIELD BOLTS: ADD 5/10						
12	3/4 x 1/2 BOLTS	21	1/2 x 1/2	A323		
24	3/4 x 1/2 WASHERS (PLAT)			A323		
9	3/4 x 1/2 MACH. SCREWS	1	1/2 x 1/2	D3		



FOR SITES 1 2 3 4 5 6 7 8 9 10 11 12

- NOTE:
1. ALL HOLES ARE FOR HIGH STRENGTH FIELD BOLTS EXCEPT HOLES "A".
  2. NO PAINT WITHIN 1" OF ALL OPEN HOLES EXCEPT HOLES "A".
  3. HOLES FOR HIGH STRENGTH FIELD BOLTS TO BE CLEAN AND FREE FROM BURRS.

IN ACCORDANCE WITH THE SPECIFICATIONS OF THE AIR FORCE ENGINEERING CENTER, WRIGHT-PATTERSON AIR FORCE BASE, OHIO, AND THE AIR FORCE ENGINEERING CENTER, WRIGHT-PATTERSON AIR FORCE BASE, OHIO, THIS DRAWING IS APPROVED FOR CONSTRUCTION.

1 1/2 IN 2 1/2 1962

- PAINTS 1/2 UN
- PAINTS 1/2 UN
- PAINT RED LEAD PRIMER T.P. 082, TYPE I
- HARRICK IRON WORKS
- DATE: D3
- DESIGNED BY: JIL
- 100-2945

THE AIR FORCE ENGINEERING CENTER, WRIGHT-PATTERSON AIR FORCE BASE, OHIO, IS THE OFFICIAL ENGINEERING AGENCY FOR THE AIR FORCE.

12-1-62	OPERATIONAL AS BUILT	SATAF	R
10-1-62	REV. TO SHOW CONSTR. AS-BUILT CONDITION	CEB/MCO	AT
4-1-62	ISSUED FOR DTSS A.F.B.	AFB/NO	GA
REVISION BY	DESCRIPTION	AGENCY	DATE
BY	DESCRIPTION		
<b>BEITEL CORPORATION</b> ENGINEERS AND ARCHITECTS 1400 - 14th Street - Dayton, Ohio		DEPARTMENT OF THE AIR FORCE AIR FORCE BALLISTIC MISSILE DIVISION (ASDC) WRIGHT-PATTERSON AIR FORCE BASE, OHIO	
DESIGNED BY: L.C. 1-1 DRAWN BY: REICK 3-1-60 CHECKED BY: RE 3-1-60 A.E. [Signature] APPROVED BY: [Signature] 3-1-60	<b>WS-107 A-1 OPERATIONAL BASE</b> UNITARY SILO LAUNCH CONTROL CENTER HUNG FLOORS SHOP DETAILS - SHT. 3		
AUTHORIZED BY: [Signature] DATE: 28 MARCH 1960 N.T.S.		DRAWING NO. 578-2-S-28	

METHOD OF OPERATION WE-HOUSE TYPES 4 AND 5

A. SUPPLY TO SYSTEM

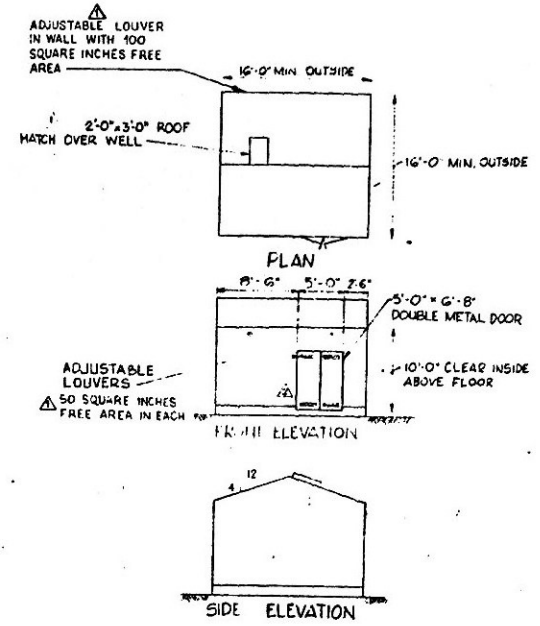
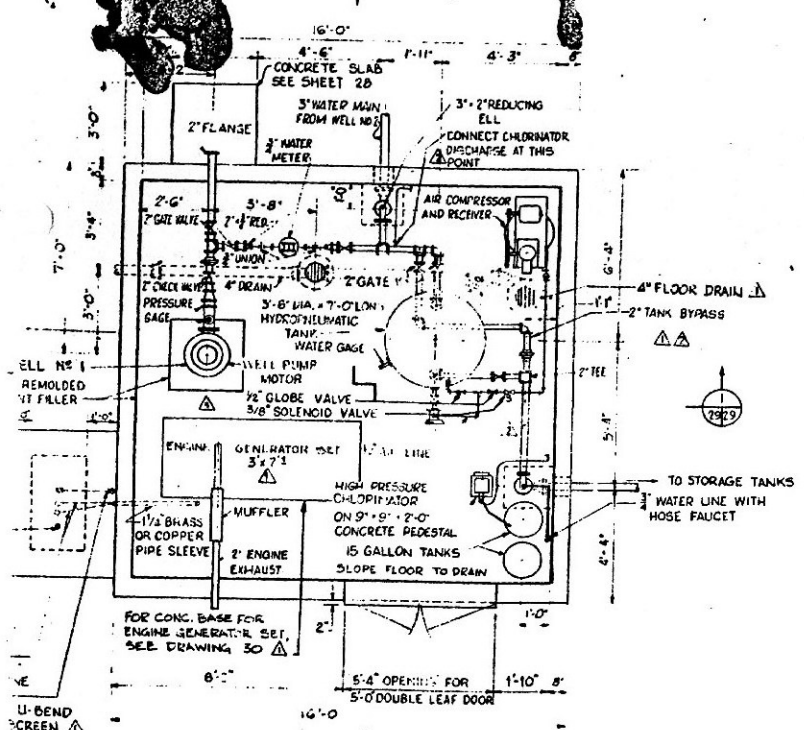
- INITIAL CONDITION, HYDRO-PNEUMATIC TANK FILLED TO HIGH WATER LEVEL. AIR PRESSURE AT HIGH SETTING.
- CONTROL VALVE (BY OTHERS) AT SITE OPENS. TANK SUPPLIES WATER WITH DROP IN PRESSURE AND WATER LEVEL. AT 6 INCH DROP IN WATER LEVEL WELL PUMP NO. 1 STARTS AND PUMPS WATER THROUGH THE SOFTENERS INTO THE HYDRO-PNEUMATIC TANK.
- CONTROL VALVE AT SITE CLOSES WHEN DEMAND IS MET. WATER LEVEL RISES IN TANK AT HIGH WATER LEVEL PUMP NO. 1 STOPS. AN ALTERNATOR IS PROVIDED SO THAT WELL PUMP NO. 2 WILL SUPPLY THE WATER ON THE NEXT CYCLE.
- WHEN THE HIGH WATER LEVEL IS REACHED THE SOLENOID VALVE ON THE AIR LINE WILL OPEN TO RAISE THE PRESSURE TO THE CORRECT SETTING, IF NECESSARY.
- THE CHLORINATOR IS NOT OPERATED AND OPERATE WHEN EITHER WELL PUMP OPERATES.
- PART OF THE HARD WATER BYPASSES THE SOFTENERS, AND IS MIXED WITH SOFTENED WATER BY THE PROPORTIONATOR.

B. REGENERATION CYCLE

- EACH SOFTENER HAS OWN CONTROLS
- WATER METER ON EACH SOFTENER STARTS REGENERATION CYCLE WHEN DEFINITE VOLUME HAS PASSED THROUGH SOFTENER. THE MULTIPORT VALVE OPERATES AUTOMATICALLY TO CONTROL THE BACKWASH, BRINE AND RINSE CYCLES. AN INTERLOCK PREVENTS MORE THAN ONE UNIT REGENERATING AT ONE TIME.
- BACKWASH CYCLE. VALVE CLOSES ON WELL WATER SUPPLY LINE. VALVE OPENS ON BACKWASH LINE. BACKWASH PUMP OPERATES 10 MINUTES. BACKWASH LINE VALVE CLOSES.
- BRINE CYCLE (ABOUT 60 MINUTES DURATION). BRINE PUMPED FROM BRINE TANK.
- RINSE CYCLE. BACKWASH PUMP OPERATES FOR 15 MINUTES TO END REGENERATION CYCLE.
- FILLING OF THE WASH WATER TANK CONTROLLED BY FLOAT VALVE.
- DURING THE REGENERATION CYCLE THE OTHER SOFTENER (A) CONTINUE TO FUNCTION.

METHOD OF OPERATION WELL HOUSE TYPE 3

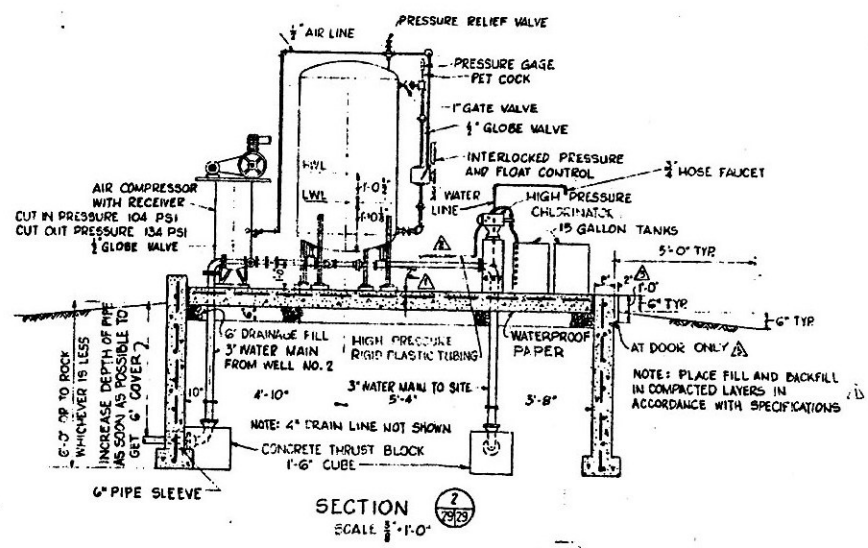
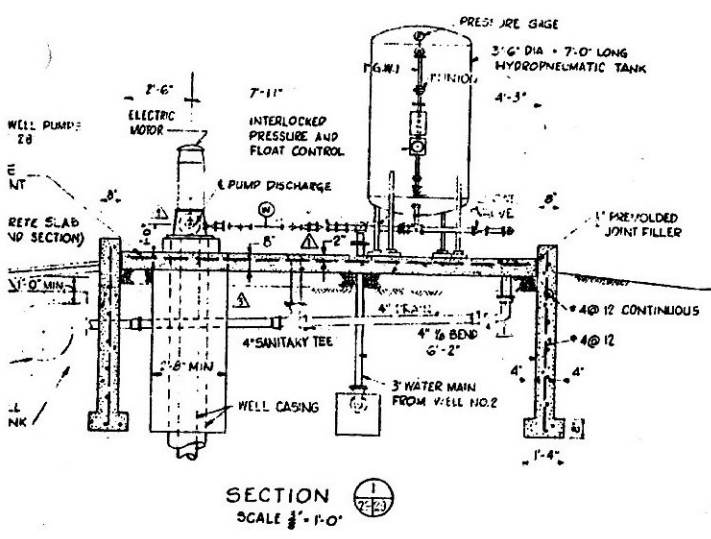
SAME AS FOR WELL HOUSE TYPES 4 & 5 EXCEPT NO SOFTENERS



SYMBOLS FOR SCREWED PIPE FITTING

STRAINER	
WATER METER	
PRESSURE GAGE	
VALVE - GATE UNLESS OTHERWISE NOTED	
SOLENOID VALVE	
CHECK VALVE	
UNION, SCREWED	
ELBOW	
TEE	
REDUCER	

NOTE FOR ELECTRICAL WORK SEE SHEETS 35 AND 37.



~~THIS WELL HOUSE DELETED FROM CONTRACT.~~

~~"AS BUILT" RECORD DRAWING~~  
 CONT. NO. DA30075 ENG 9562  
 APPROVED BY L. E. BREMKAMP, LT. COL., S. E. AREA ENGINEER  
 DATE 31 JULY 1962

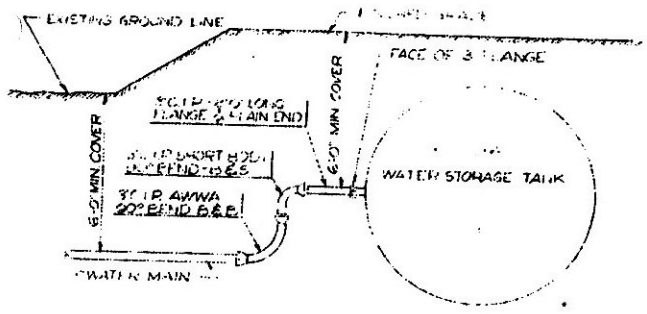
WS-28

REVISION	DATE	DESCRIPTION	ADD
1	11 JUL 60	DELETE SLAB RESTING ON PUMP BASE, ADD NOTE	AP
2	21 JUL 60	REMOVE WATER METER, REVISE NOTES, ADD NOTES	AP
3	24 JUN 60	ADD DIMENSIONS, REVISE PIPE SIZE; ADD DRAIN	AP
4	24 JUN 60	ADD GENERATOR, DELETE GAS ENGINE, ADD NOTES	AP

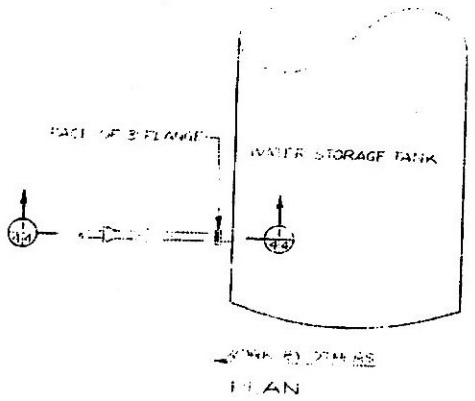
ALEXANDER POTTER AND ASSOCIATES ARCHITECT-ENGINEER NEW YORK, NEW YORK

U. S. ARMY ENGINEER DISTRICT, NEW CORPS OF ENGINEERS NEW YORK, NEW YORK

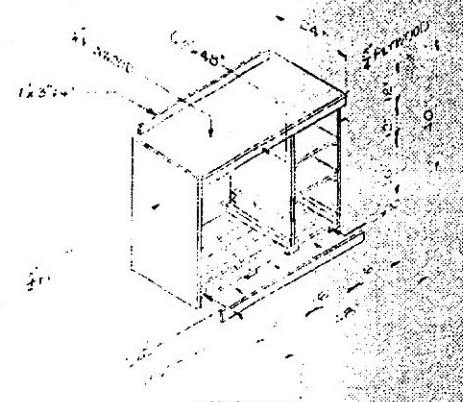
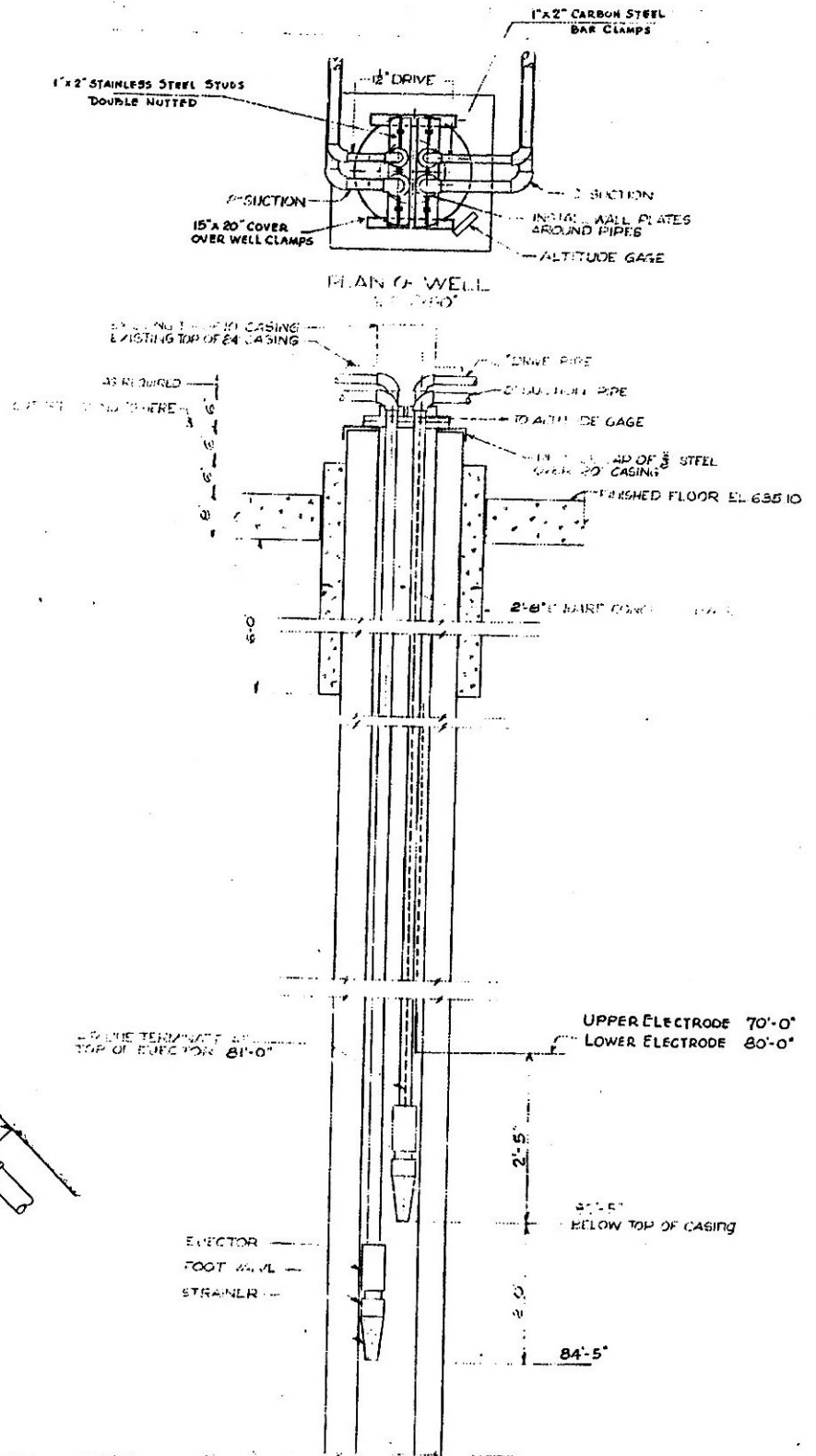
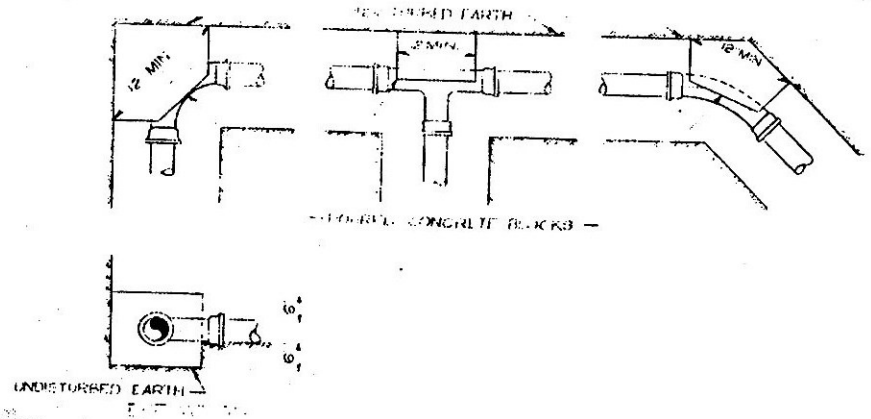
WS-107A-1 OPERATIONAL BA



WORK BY OTHERS  
 (Symbol)



DETAIL OF MAIN STORAGE TANK  
 SCALE 3/8"=1'-0"



CHEMICAL STORAGE CABINET  
 NOT TO SCALE



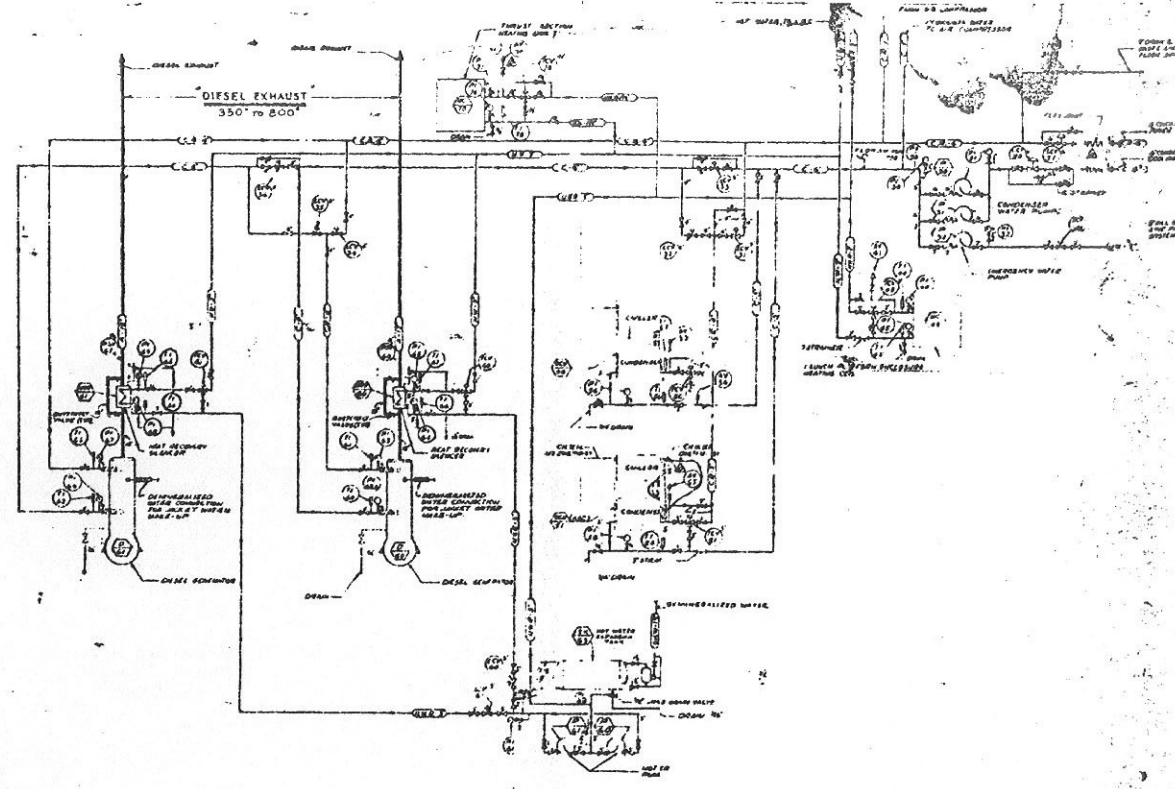
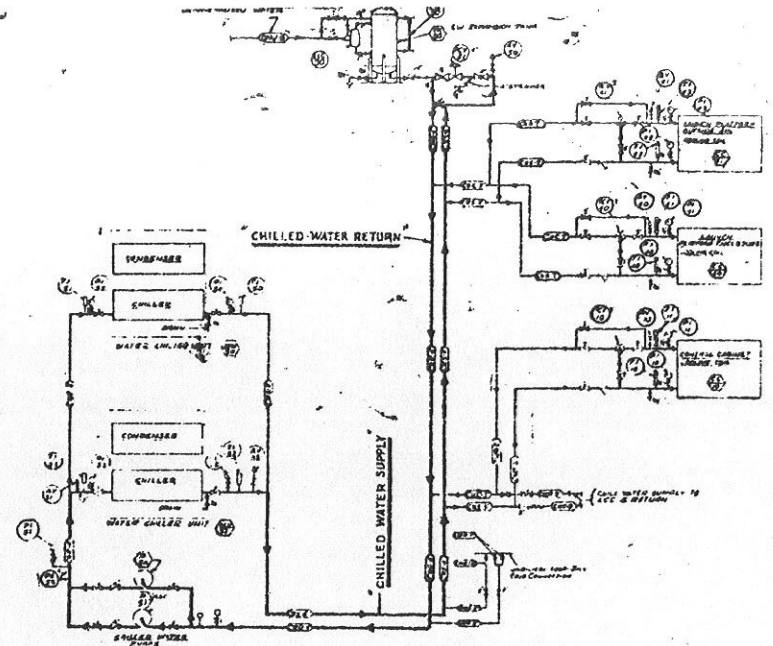
WOOD PLATFORM FOR SALT STORAGE  
 SCALE 3/8"=1'-0"

**"AS BUILT"  
 RECORD DRAWING**  
 CONT. NO. DA 30-075ENG-2562  
 APPROVED BY  
*L. E. BARNHAMP*  
 L. E. BARNHAMP, LT. COL., U.S. ARMY  
 AREA ENGINEER  
 DATE 7 SEPTEMBER 1962

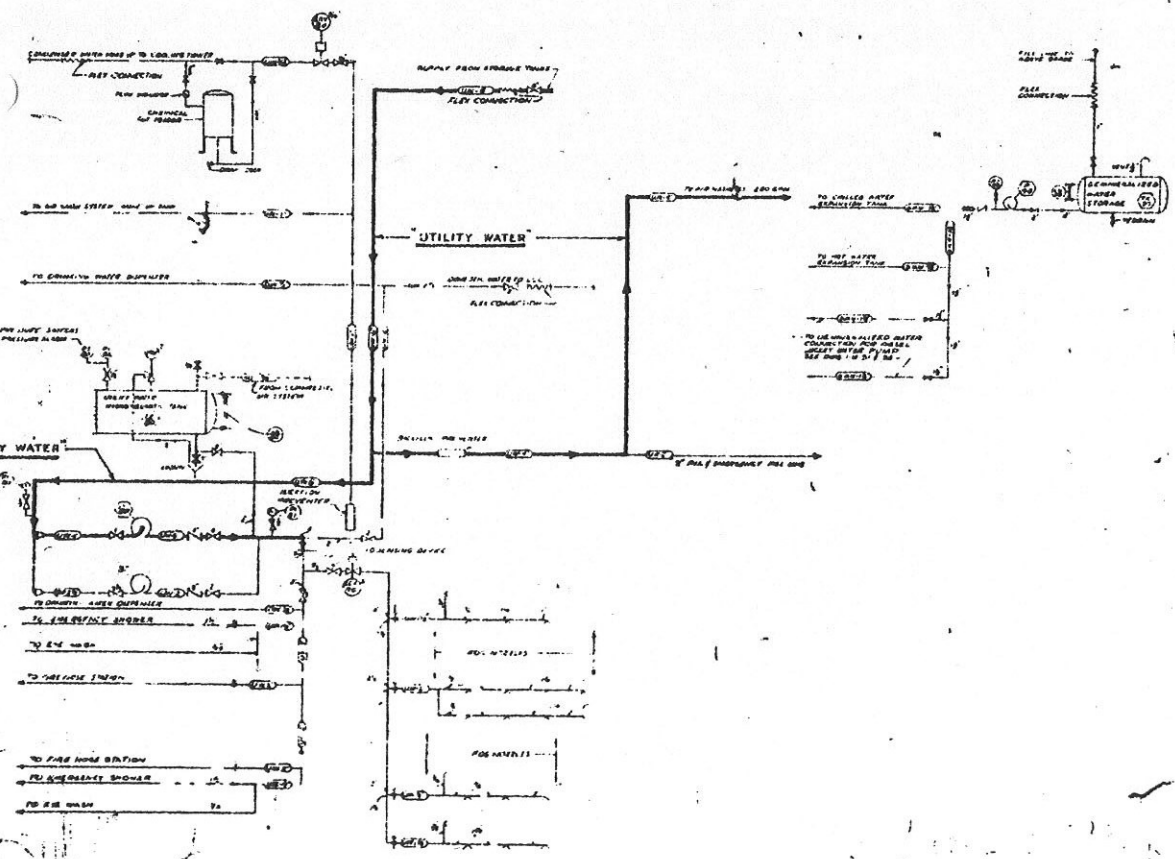
U-5-50

1-29-62	OPERATIONAL AS BUILT	
3-29-62	CORRECTED TO SHOW "AS BUILT" CONDITIONS	
REVISION	DATE	DESCRIPTION
ALEXANDER POTTER ASSOCIATES ARCHITECT-ENGINEER		U.S. ARMY ENGINEER CORPORATION

1. All lines shown on the sketch on part 10 shall be identified, per L/R 2552, in the following manner:
- The "Waste Water" lines with direction of flow toward bottom of the silo.
  - The "Sump Discharge" lines with direction of flow away from the sump pump which is located at the bottom of the silo.
2. The markings shall be painted letters and numbers on a white background.
- Letters and numbers shall be black, 1-1/4 inches high for pipe sizes 4 to 6 inches, 2-1/2 inches high for pipe sizes 8 to 10 inches and 3-1/2 inches high for pipes over 10 inches. Upper case letters and arabic numerals shall be used. Printing shall be placed axially along the pipe with the use of stencils being recommended.
3. Direction of flow arrow shall indicate the normal direction(s) of flow of the material in the system. A double headed arrow shall be placed on lines subject to reverse flow. The color of the arrow shall be painted black, FED-STD 593, Code No. 27018. Arrow stems shall be 1/8 of pipe diameter in width and 1 times the diameter in length.
4. The placement of markings shall be on all systems of piping, indicated in paragraph 1, as follows:
- Approximately (3) feet above floor level on each vertical run through a compartment.
  - One marking shall be visible, on each pipeline, in each compartment.
  - Care shall be taken so that the marking is placed where visibility is least restricted.
  - Identification markings shall be held to a reasonable minimum.
5. THOSE LINES SHOWN ON THE SKETCH ON PART 10, SHALL BE IDENTIFIED IN ACCORDANCE WITH PART 4-B, PARAGRAPH (2) 2552-A-1) WITH THE INDICATED TITLES.



PART II



Be sure to read instructions from DSD/USAF 24 before  
 1. Do not use this drawing for the fabrication of  
 2. Do not use this drawing for the fabrication of  
 3. Do not use this drawing for the fabrication of  
 4. Do not use this drawing for the fabrication of  
 5. Do not use this drawing for the fabrication of

JUN 13 1962

FOR SITES 1 2 3 4 5 6 7 8 9 10 11

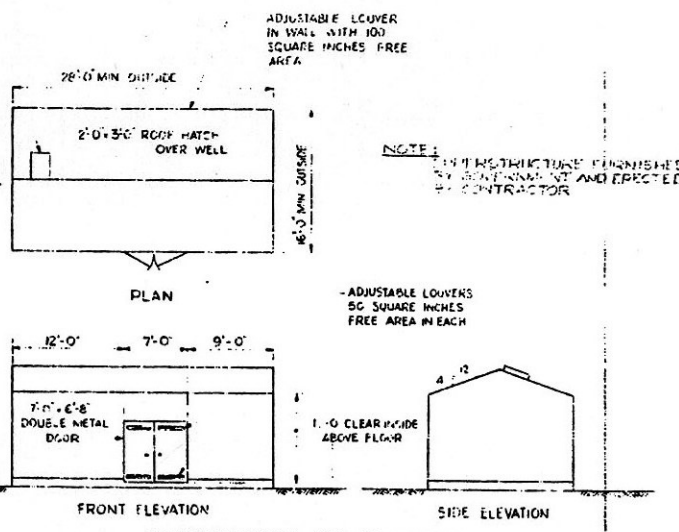
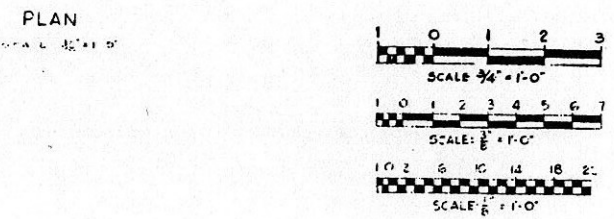
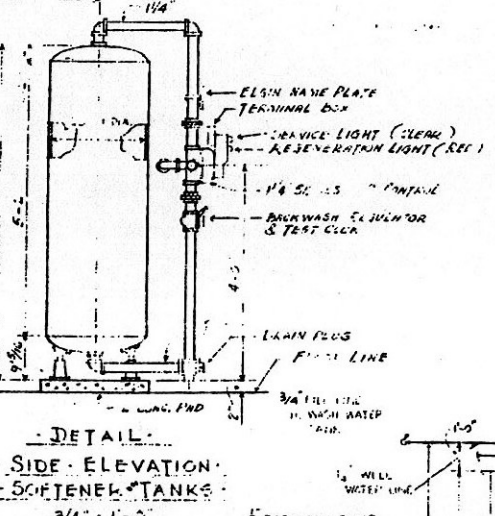
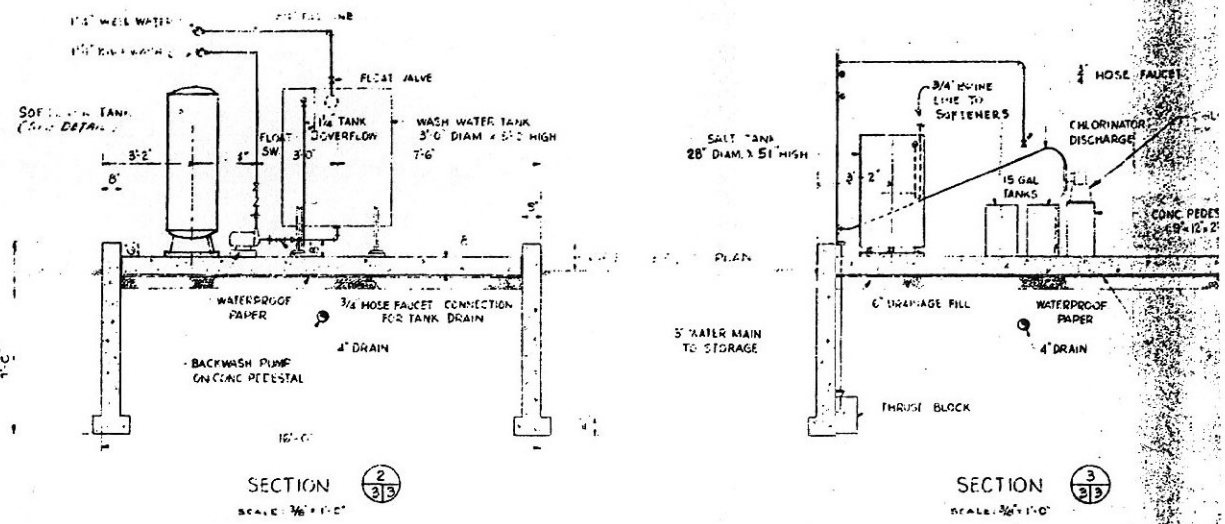
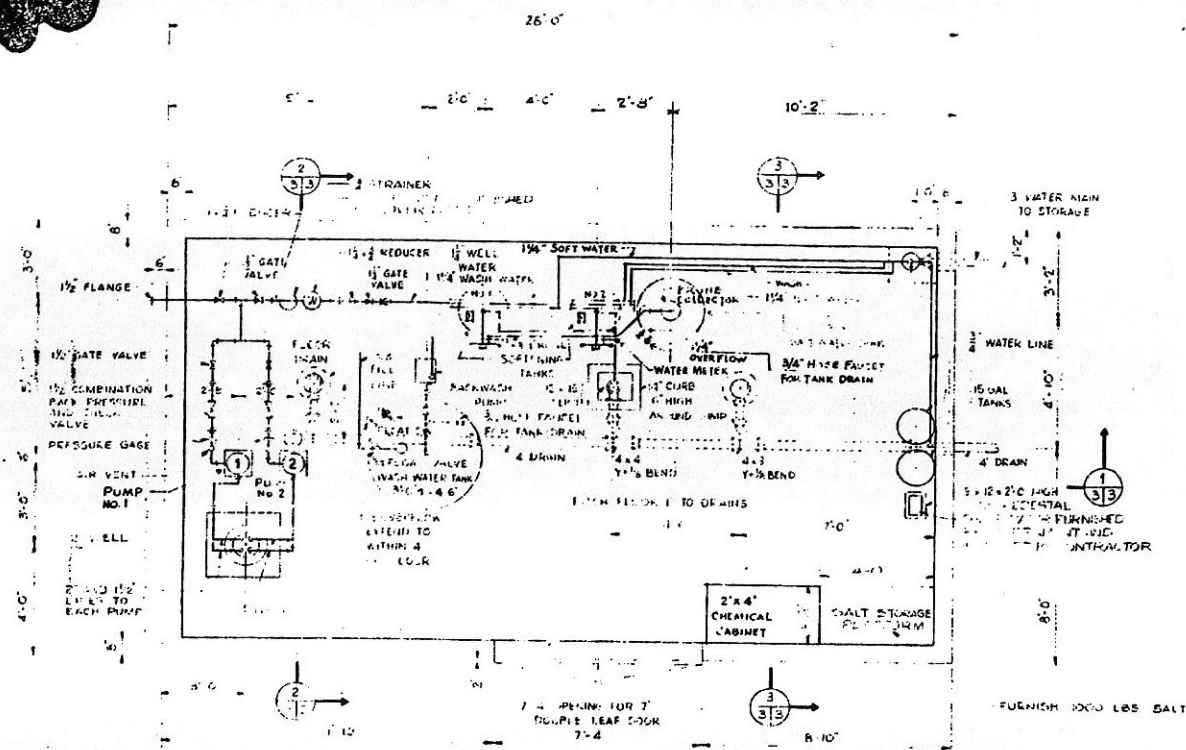
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WS-107 A-1 OPERATION  
 MISCELLANEOUS IDENTIFICATION

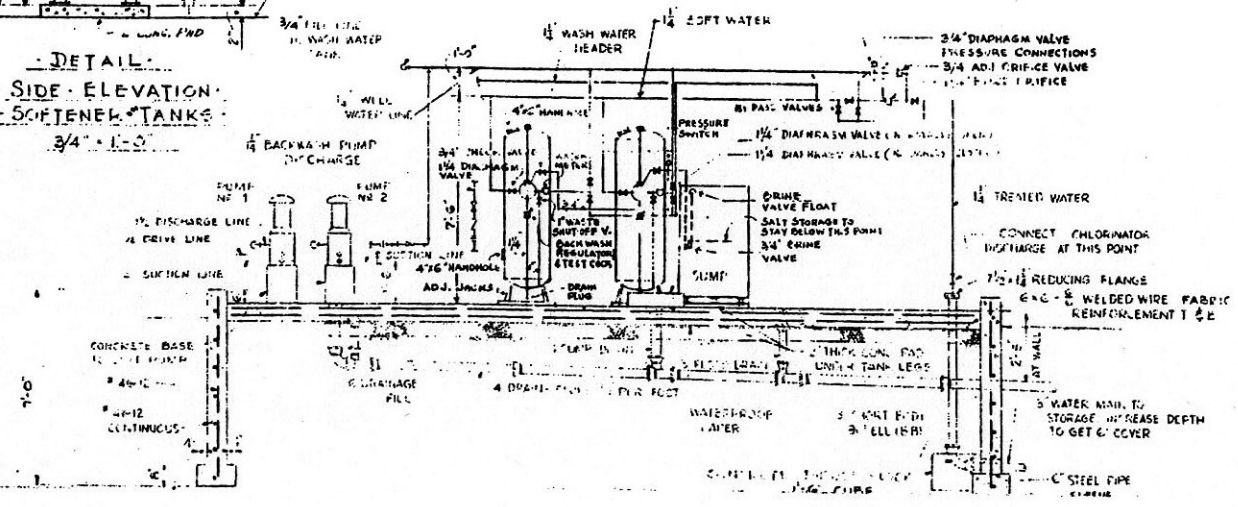


SYMBOLS FOR SCREWED PIPE FITTINGS

STRAINER		CHECK VALVE	
WATER METER		UNION, REWED	
PIPE END GATE		ELBOW	
VALVE-GATE UNLESS OTHERWISE NOTED		TEE	
SOLENOID VALVE		REDUCE	



NOTE: 1000. 40\"/>

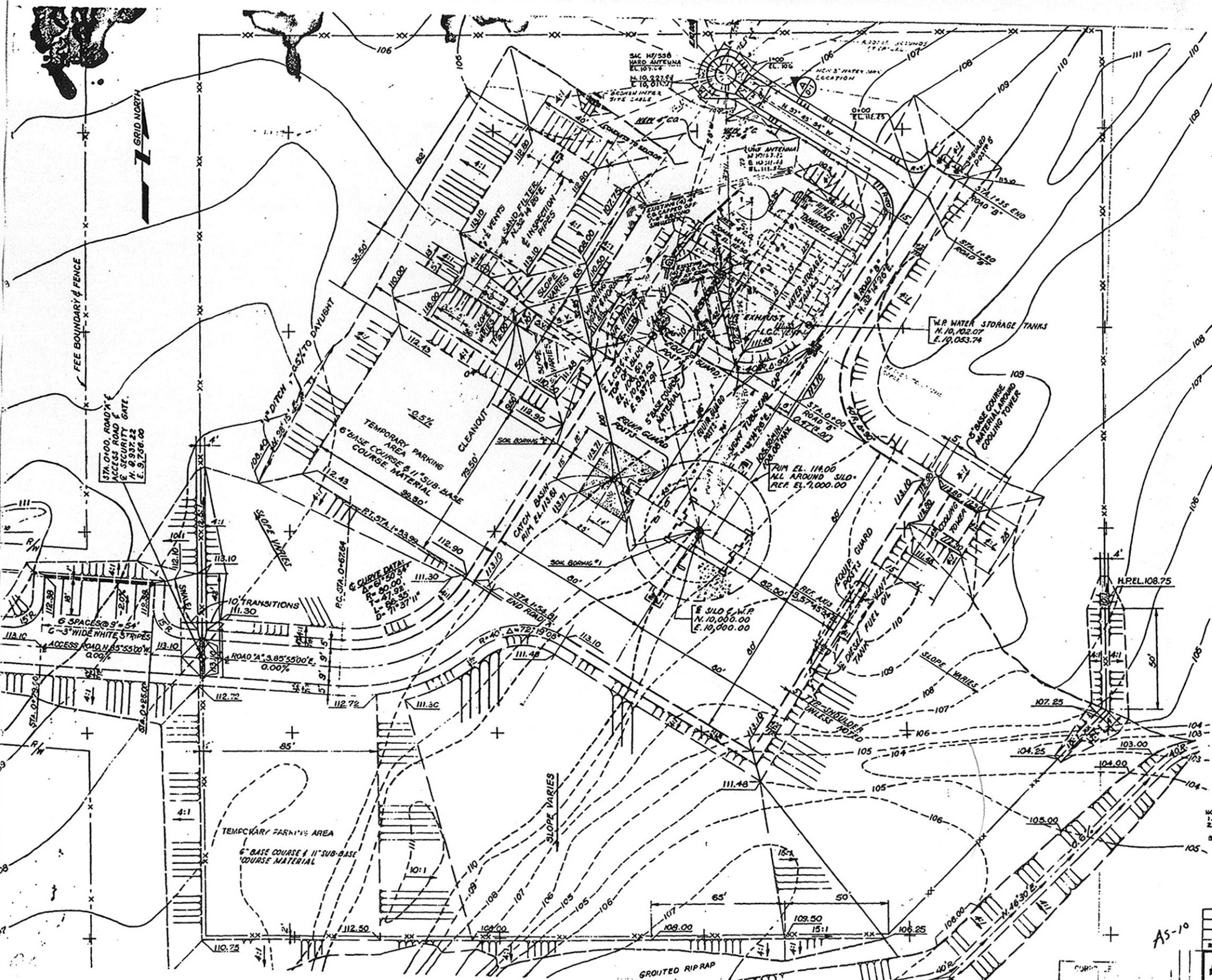


- OPERATION
- A. SUPPLY TO SYSTEM
    1. FLOAT SWITCH (BY OTHERS) AT UNDERGROUND STORAGE TANKS STARTS WELL PUMP SUPPLYING THE SOFTENERS.
    2. PART OF THE WELL WATER BYPASSES THE SOFTENERS AND IS MIXED WITH SOFTENED WATER BY THE PROPORIONATOR
    3. FLOAT SWITCH AT SITE SHUTS OFF WELL PUMP WHEN DEMAND IS MET.
  - B. REGENERATION CYCLE
    1. EACH SOFTENER HAS OWN CONTROL
    2. WATER METER ON EACH SOFTENER STARTS REGENERATION CYCLE WHEN DEFINITE VOLUME HAS PASSED THROUGH SOFTENER. THE MULTIPORT VALVE OPERATES AUTOMATICALLY TO CONTROL THE BACKWASH, BRINE AND RINSE CYCLES. AN INTERLOCK PREVENTS MORE THAN ONE UNIT REGENERATING AT ONE TIME.
    3. BACKWASH CYCLE VALVE CLOSERS ON WELL WATER SUPPLY

**"AS BUILT" RECORD DRAWING**  
 CONT. NO. DA-30075-ENG. 9562  
 APPROVED BY *L. E. BREMKAMP*  
 L. E. BREMKAMP, LT. COL., U.S. ARMY ENGINEER  
 DATE 7 SEPTEMBER 1962

1-29-63	OPERATIONAL AS-BUILT
75EP161	CORRECTED TO SHOW "AS BUILT" CONDITION
REVISION DATE	DESCRIPTION
ALEXANDER POTTER ASSOCIATES ARCHITECT-ENGINEER NEW YORK, NEW YORK	
U.S. ARMY ENGINEER CORPS NEW YORK	

Plattsburgh AFB  
 Site SSG-2  
 Alburg



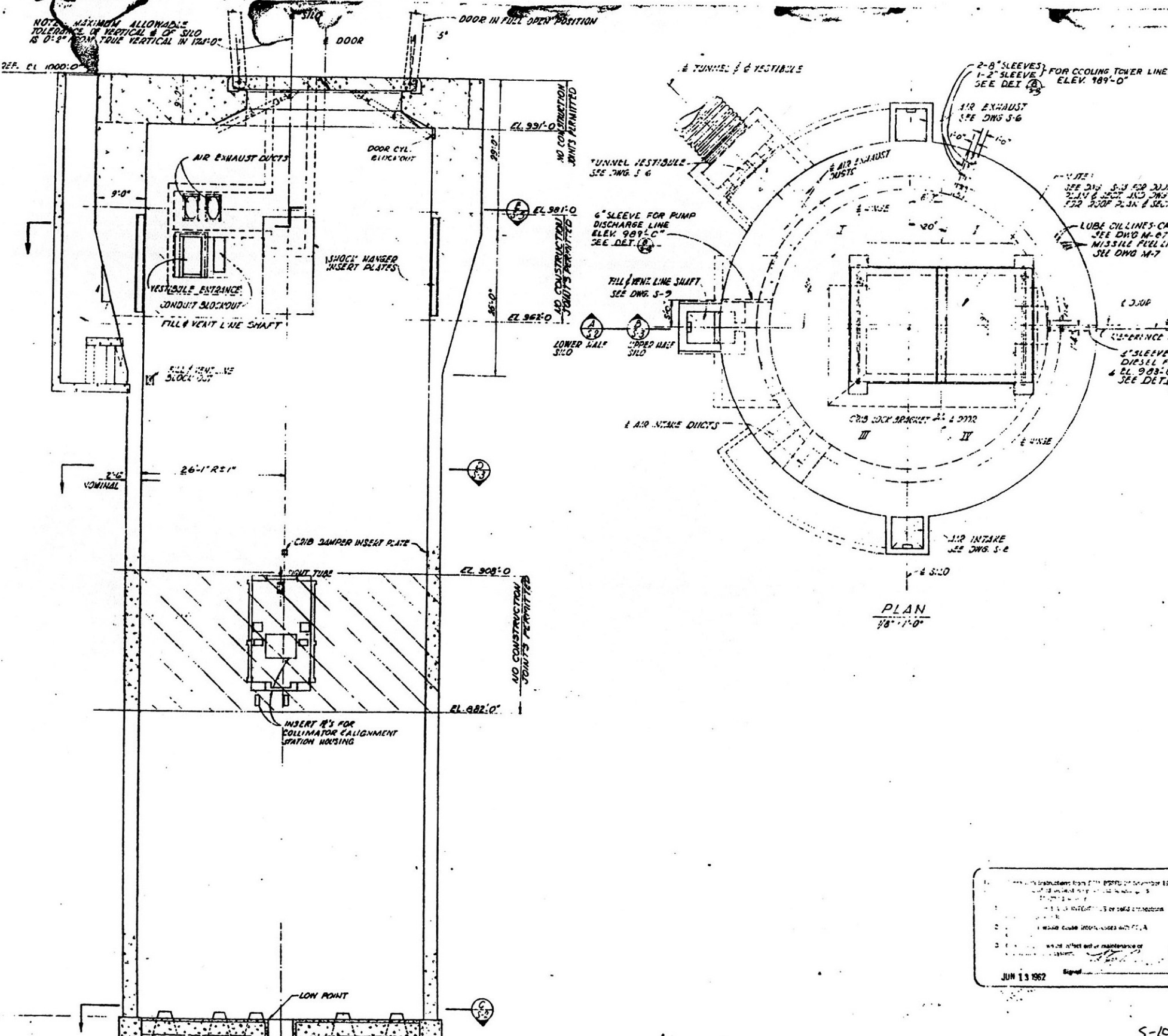
NOTE:  
 1. 4'-0" RADIUS BENDS, 4" CONDUIT ONLY.  
 2. FOR '2' SERVICE ROAD AND ANTENNA SHOULDER  
 SEE D. 556-0-1.  
 3. B.M. 0500 CAP.

A5-10

REVISION DATE	DESCRIPTION

TECHTEL CORPORATION  
 ENGINEERS AND CONSTRUCTORS  
 SAN FRANCISCO - LOS ANGELES - NEW YORK

DEPARTMENT OF  
 BALLISTIC SYSTEMS



**CONSTRUCTION JOINTS**

1. JOINTS SHALL BE LOCATED AS SHOWN IN DRAWINGS. SURFACES OF CONCRETE AT CONSTRUCTION JOINTS SHALL BE KEPT CLEAN AND EFFECTIVELY CLEANED BY OTHER MEANS ACCEPTABLE TO CONTRACTING OFFICE. AS TO LEAVING A CLEAN SURFACE OF SOUND CONCRETE EXPOSED BEFORE PLACING SUBSEQUENT POUR OF CONCRETE, IMMEDIATELY PRIOR TO PLACING THE NEXT POUR OF CONCRETE, THE CLEANED UP WASHED SURFACE SHALL BE COATED WITH CEMENT MORTAR. REFER TO SPECS FOR ADDITIONAL DETAILS. ADDITIONAL CONSTRUCTION JOINTS ARE PERMISSIBLE EXCEPT IN AREAS NOTED ON THE DRAWINGS. THE LOCATION OF ADDITIONAL CONSTRUCTION JOINTS SHALL BE APPROVED BY THE CONTRACTING OFFICER.

**REINFORCING STEEL-BUTT WELDED JOINTS**

2. REINFORCING STEEL TO BE JOINED IN THE FIELD BY EITHER THE THERMIT WELDING PROCESS OR SMELDED ARC WELDING METHOD.
3. THE SELECTION OF WELDING ELECTRODE WILL BE LIMITED TO THE LOW HYDROGEN TYPE.
4. SPECIAL CARE WILL BE TAKEN TO PREVENT OVER EXPOSURE OF ELECTRODE TO MOISTURE AT ANY TIME.
5. FIELD APPLICATION DURING HIGH RELATIVE HUMIDITY (40% MAXIMUM OR TO MANUFACTURER'S RECOMMENDATION) SHALL BE MINIMIZED TO 2 HOURS.
6. HERMETICALLY SEALED BOXES OR PACKAGES WILL BE USED IN THE FIELD FOR ELECTRODES. OPENED BOXES WILL BE RETURNED TO THE DRYING OVEN.

**GENERAL**

7. REFERENCE ELEVATION AT TOP OF SD EQUALS 1000'-0"; FOR ACTUAL ELEVATION AND DIRECTION OF REFERENCE AXIS SEE CIVIL DRAWINGS.
8. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR LOCATION OF EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
9. SPECIAL PRECAUTIONS SHALL BE TAKEN TO ELIMINATE VOIDS IN THE CONCRETE AROUND THE SHOCK HANGER INSERT PLATE AND THE OVERHEAD DOOR ACTUATOR BRACKETS.
10. NOTE THE USE OF HIGH STRENGTH REINFORCING STEEL IN THE OVERHEAD DOOR AND HIGH STRENGTH STEEL BOLTS ON THE DETAILS. SPECIAL PRECAUTIONS SHALL BE TAKEN TO INSURE THEIR PROPER PLACEMENT.
11. THE MINIMUM CONCRETE STRENGTH IN 28 DAYS SHALL BE 3750 PSI EXCEPT FOR OVERHEAD DOOR SLAB WHICH SHALL BE 5000 PSI.

Instructions from EITM (PSFD) on November 1961

1. ...

2. ...

3. ...

JUN 13 1962

8 in - 1 in

FOR SITES 1 2 3 4 5 6 7 8 9 10 11

REVISION	DATE	DESCRIPTION	APPROVED BY
1-29-63		OPERATIONAL AS BUILT	
2-26-64		REV. TO SHOW CONSTR. AS-BUILT CONDITION	CEBMD/UP
5-2-60		ISSUED FOR PLATTBURGH A.F.B.	AFBMD/ED

BECTEL CORPORATION  
ENGINEERS AND CONSTRUCTORS  
SAN FRANCISCO - LOS ANGELES - NEW YORK

DEPARTMENT OF THE AIR FORCE  
AIR FORCE BALLISTIC MISSILE DIVISION WAFB  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

5-10

1404 27-1111 U.S. GOVERNMENT PRINTING OFFICE: 1962 O-548-100

THIS AND ALL OTHER DRAWINGS SHALL BE IDENTIFIED, PER 1/2 2532, AS FOLLOWS: PART 1 THRU 8 INCLUS.

**Provide and Install Metal Identification Tapes on 1/2" Cold Lines & Piping**

The tags shall be 3" x 4" for pipes less than 4" in size and 4" x 12" for pipes 4" & larger.

The tag shall identify the contents of the line, its pressure, the direction of flow by an arrow and the color code. See table (PART 2) for this information plus tag locations.

Printed letters and numbers on tags shall be black on a white background and shall be 1/2" high for pipes less than 4" in size and 1-inch high for pipes 4" and larger. The arrow shall be black and the stem shall be the same size as the letters. See identification tag detail (PART 3) for all additional information.

The colors shall conform to Federal Standard 395, Colors, as follows:

Color	FED-STD. 395 CODE NUMBER
Blue	15102
Green	15107
Orange	15107
Grey	16473
Black	27038
White	17075

**PART 4**

If conditions exist in the silo, launch control center and the missile assembly building shall be identified as follows:

**Identification Markings:**

Lines under 30" Circumferential Measurement - Shall be marked with (2) tape 1st tape shall be as called out in (1st Force-Navy Aeronautical Waiver Standard) AND-10375.

2nd tape shall give design temperature of the flowing medium.

Lines with a Circumferential Measurement of over 30" - Shall be marked with a 12" x 12" painted sign (white background) and made with 1-1/2" high black, block letters saying "Air Conditioning" on top line and the design temperature of the flowing medium on the third line.

Design temperatures, for silo and launch control center shall be as indicated on the accompanying sketches:

(PART 7) for Silo  
(PART 8) for Launch Control Center

The design temperatures for the missile assembly building shall be as indicated on the M.V. & A.C. flow diagrams of facility contract drawings.

Placement of identification tapes, or signs shall be on each system of equipment as follows:

- On intake and exhaust ends of the system.
- Where duct branches off the main.
- Approximately (3) five feet above floor level on each vertical run through a compartment.
- One identification shall be visible on each duct, in each compartment.
- Care shall be taken so that the identification is placed where visibility is least restricted.
- Identification markings shall be held to a reasonable minimum.

**PART 5**

**To Protection Signs** shall be modified as follows:

That sign which has been painted shall be replaced (existing paint need not be removed). See paragraph 2 for paint.

Unpainted pipe shall be painted with grey enamel conforming to MIL-E-7729, Type I, Color No. 511 (FED-STD 595, Color No. 16473).

Identification tapes shall be used on pipelines less than 4" in diameter.

(a) The tapes shall completely encircle the pipe. The identification group shall consist of individually printed tapes placed along the pipe as indicated on identification tape installation detail sheet (PART 3) with the following information on the tapes:

First Tape - (Color Code) Brown 10049

Black Lettering on Color Code	"Fire Protection"
(Symbol) Horizontal Diamond	

Second Tape - (Lettering) "Water"

Third Tape - (Numbers & Lettering) "25 PSI"

Fourth Tape - Arrow showing direction of flow

(Second, third and fourth tapes shall have black letters, numbers or arrow on white background)

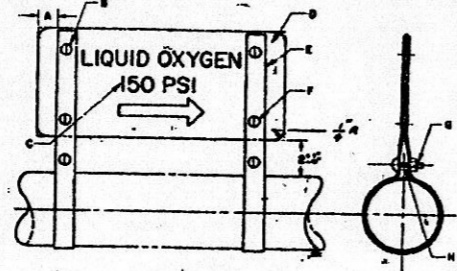
(b) Size of tape and lettering. Minimum width of the tapes shall be 1" (including symbol). The minimum lettering size shall be 3/32" high with 1/32" between lines of a label and 1/8" between a label and its repetition.

Identification tapes shall be placed on the fog system downstream of

**REFERENCE: SEE FRONT MATTER, FILE ISOMETRIC LINE VIEW**

Line Designation	Tag To Be Attached To Symbol No.	Specific Contents of Line	Color Code	Pressure	Location
HEX 1 (Vent)	-17, -9, -6 & -1	Gas/Nitrogen	Orange	50 PSI	Top of Silo
OVV (Vent)	-14, -4 & -1	Gaseous Nitrogen & Gaseous Oxygen	Orange	50 PSI	Top of Silo
OVV (LO <sub>2</sub> FILL)	-3, -7, -9 & -12	Liquid Oxygen	Grey & Green	150 PSI	Pratib
OVV (LO <sub>2</sub> FILL)	-2	Liquid Oxygen	Grey & Green	150 PSI	Double Arrow
OVV (LO <sub>2</sub> FILL)	-1	Liquid Oxygen	Grey & Green	150 PSI	Pratib
OVV (LO <sub>2</sub> FILL)	-1	Liquid Oxygen	Grey & Green	150 PSI	Heat Ex. Top TX & Tower TX
NLS (LO <sub>2</sub> FILL)	-15, -9, -6, -4, -1, -16 & -17	Liquid Nitrogen	Blue	200 PSI	Pratib & Tanks
NLS (LO <sub>2</sub> FILL)	-1	Liquid Nitrogen	Blue	200 PSI	Near Heat Exchanger & Tower TX
<b>LO<sub>2</sub> CONTROL PREPARE (REF. INC. 1-N-11)</b>					
OVV	OVV 10" &	Liquid Oxygen	Grey & Green	150 PSI	L2
OVV	OVV 6" &	Liquid Oxygen	Grey & Green	150 PSI	Double Arrow
OVV	OVV 4" &	Liquid Oxygen	Grey & Green	150 PSI	From L-16
<b>LO<sub>2</sub> FILL PREPARE (REF. INC. 1-N-46)</b>					
OVV	Between Filter & L-18	Liquid Oxygen	Grey & Green	150 PSI	L-18
<b>NLS PREPARE (REF. INC. 1-N-12) LOWER PLANT</b>					
NLS-2A	Between A-201 & C-205	Liquid Nitrogen	Blue	200 PSI	V-215
<b>PRESSURIZATION PREPARE (REF. INC. 1-N-16)</b>					
OVV-8a	Between TV-5A & Manifold	Gaseous Nitrogen & Gaseous Oxygen	Orange	50 PSI	Manifold
OVV-8a	Between TV-43 & Manifold	Gaseous Nitrogen & Gaseous Oxygen	Orange	50 PSI	Manifold
OVV	OVV 6" &	Gaseous Nitrogen & Gaseous Oxygen	Orange	50 PSI	Manifold

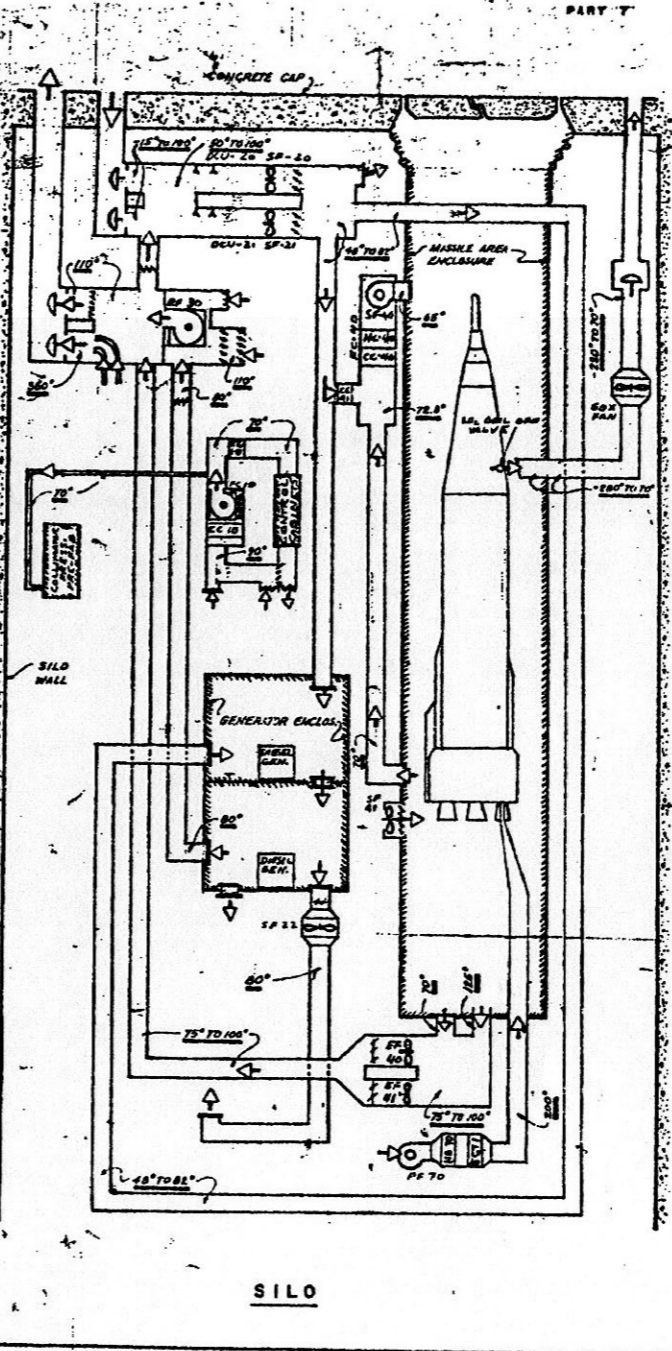
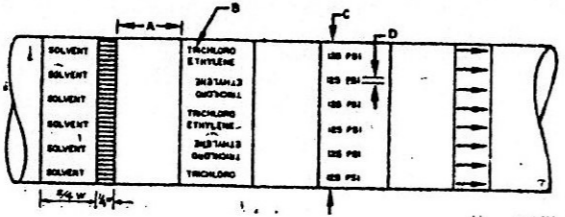
**PART 6**



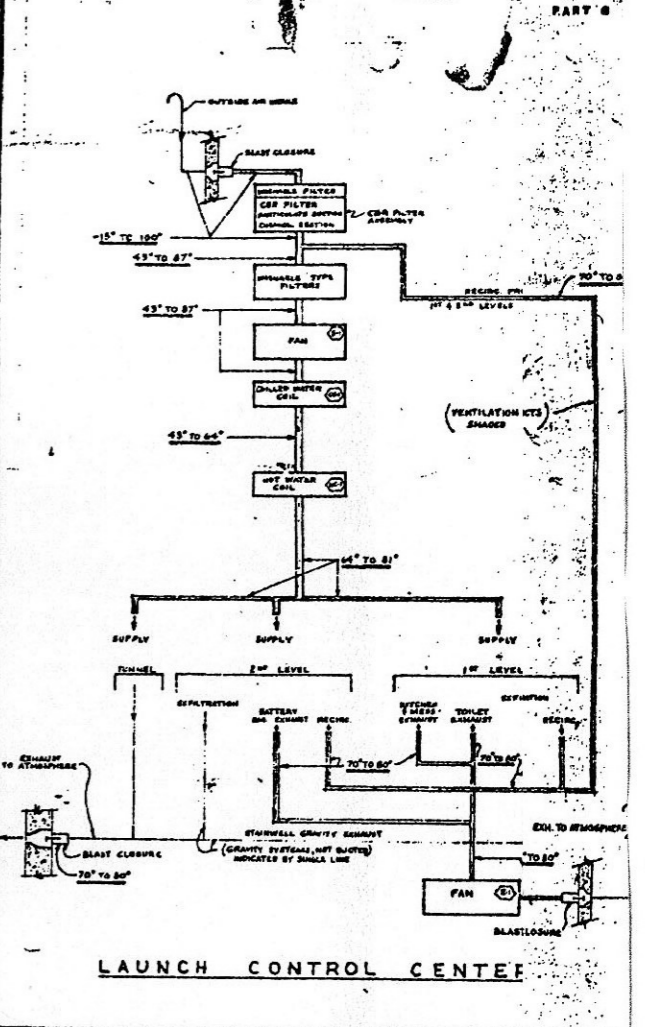
**IDENTIFICATION TAG DETAIL**

- LATH CLAMP SHALL BE 1/2" x 1/4"
- 10 - 21 x 1/2" of 316 STAINLESS STEEL BOND HEAD BUSH BOLT (4 BLACK)
- FOR LETTERING AND COLOR CODE (PART 5)
- IDENTIFICATION GROUP BAND OF 3/8" DIA.
- MARKING STRIPS TO BE MADE FROM 1/2" DIA STAINLESS STEEL HIGH 1/4" WIDENING - 5/8" WIDENING - NO PAINTING REQUIRED.
- ALL MARKS TO BE PUNCHED THROUGH THE MATERIAL PRIOR TO PAINTING.
- 10 - 21 x 1/2" of 316 STAINLESS STEEL BOND HEAD BUSH BOLT (4 BLACK)
- CLAMP TO BE 1/2" WIDENING - 1 - 1/2" WIDENING.
- FOR IDENTIFICATION TAG COLOR CODE (PART 5)
- IDENTIFICATION TAG TO BE PLACED WITH THE PIPE LINE. THE TAG ON CHAIN LINE MUST BE CONTACT OR TYPED THE TAG SHOULD BE PLACED WITH THE PIPE LINE.
- TAG SUPPLIES TO BE IN CASE AND CARBON STEEL SHEET. BEAR ALL LOADS. GREAT CARE TO BE TAKEN TO PREVENT DAMAGE TO TAGS. SEE 1 OF 2 DRAFTS, AS INDICATED IN DRAW. OF IT-2-207 (REV. 1962).

**PART 8**



**SILO**



**LAUNCH CONTROL CENTER**

FOR SITES 1 2 3 4 5 6 7 8 9 10 11 12

Instructions from USO/ESS 24 November 1961...  
 JUN 13 1962

REVISION	DATE	ISSUED FOR PORTS/SPRINGFIELD
1	7/10/61	REVISED PART 8 & 9
2	11/10/61	REVISED PART 8 & 9

BECHTEL CORPORATION  
 ENGINEERS AND CONSTRUCTORS  
 SAN FRANCISCO - LOS ANGELES - NEW YORK

DEPARTMENT OF THE AIR  
 AIR FORCE BALLISTIC MISSILE DIVISION  
 WRIGHT-PATTERSON AIR FORCE BASE, OHIO