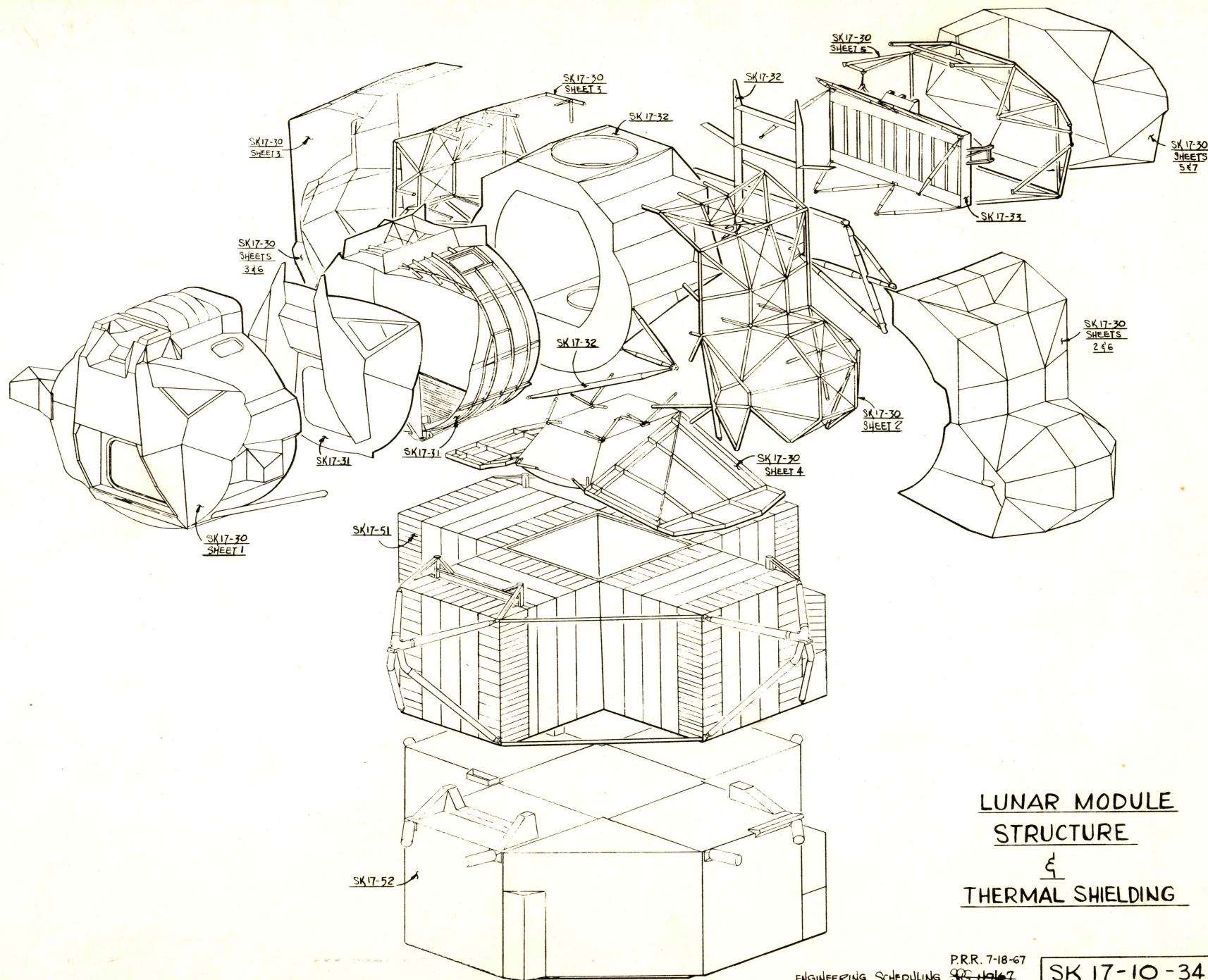


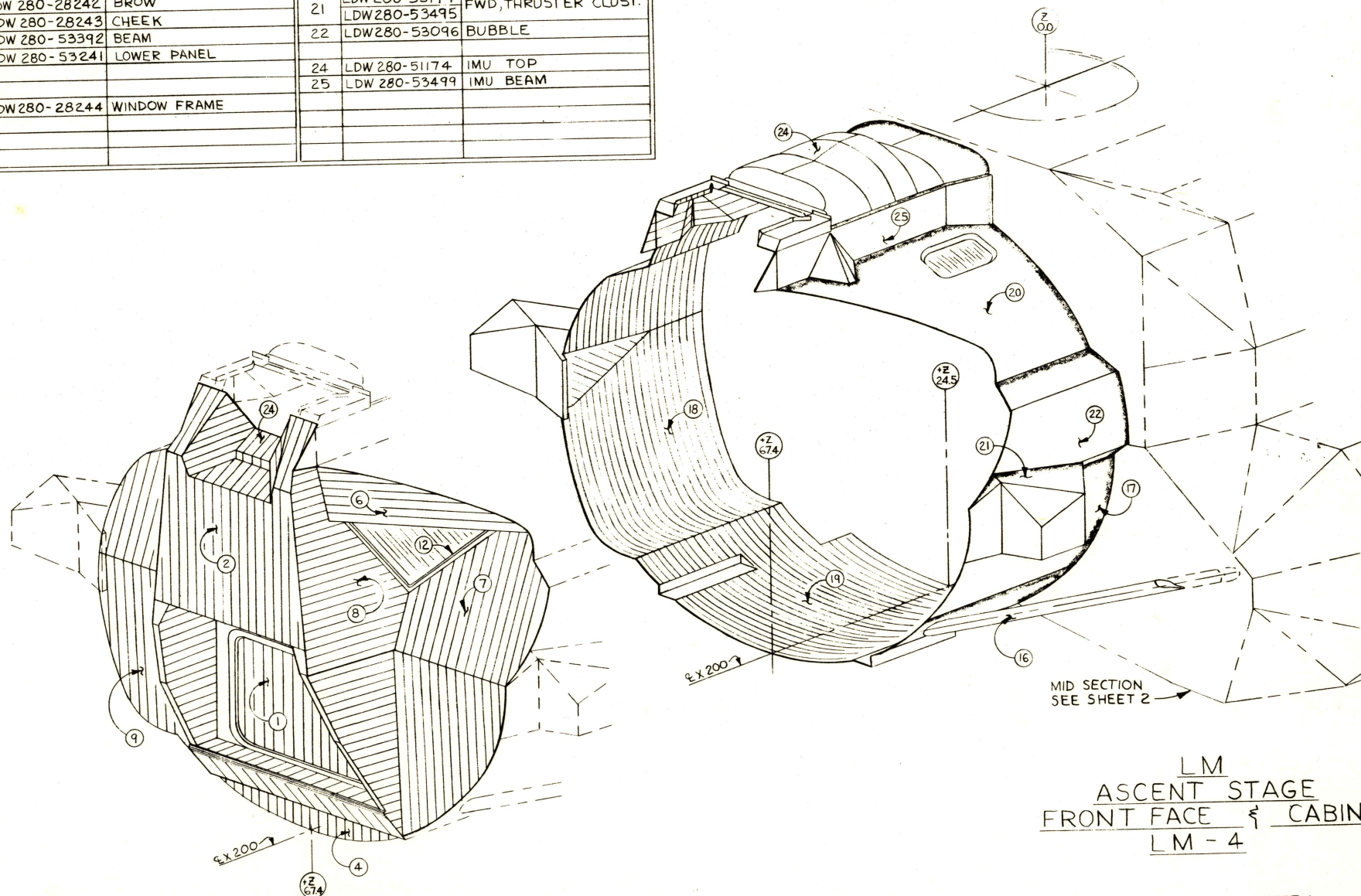


LUNAR MODULE
STRUCTURE
 &
THERMAL SHIELDING

P.R.R. 7-18-67
 ENGINEERING SCHEDULING ~~95-119167~~

SK 17-10-34

THERMAL SHIELDING			INSTL LDW 280-53173		
FRONT FACE SHIELDING			CABIN SHIELDING		
1	LDW 280-28175	FWD HATCH	16	LDW 280-53875	DRAG STRUT
2	LDW 280-54176	CENTER PANEL	17	LDW 280-53185	L.H. LOWER SIDE
			18	LDW 280-53186	R.H. LOWER SIDE
4	LDW 280-53279	LOWER BULKHEAD	19	LDW 280-53178	BOTTOM
			20	LDW 280-53347	UPPER
6	LDW 280-28242	BROW		LDW 280-53179	FWD, THRUSTER CLUST.
7	LDW 280-28243	CHEEK	21	LDW 280-53495	
8	LDW 280-53392	BEAM	22	LDW 280-53096	BUBBLE
9	LDW 280-53241	LOWER PANEL			
			24	LDW 280-51174	IMU TOP
			25	LDW 280-53499	IMU BEAM
12	LDW 280-28244	WINDOW FRAME			



LM
ASCENT STAGE
FRONT FACE & CABIN
LM - 4

THERMAL SHIELDING LDW280-54150

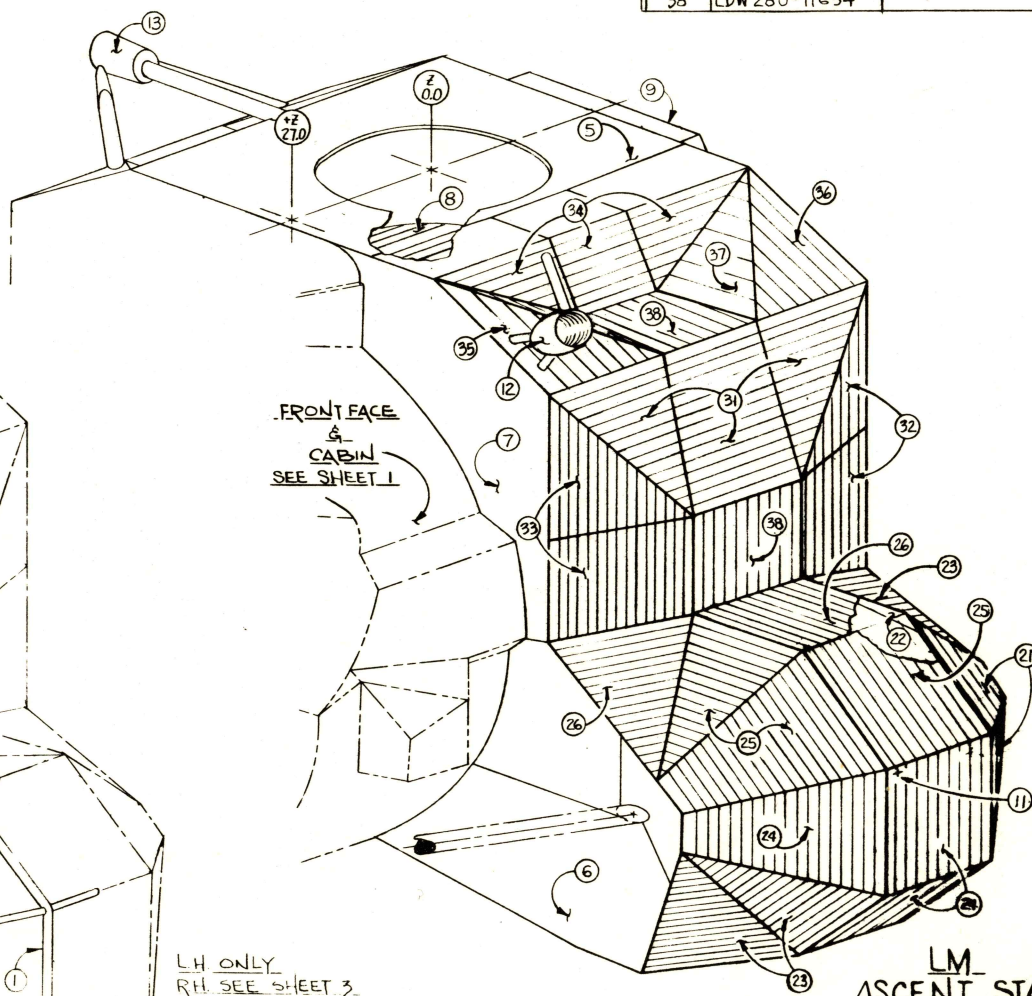
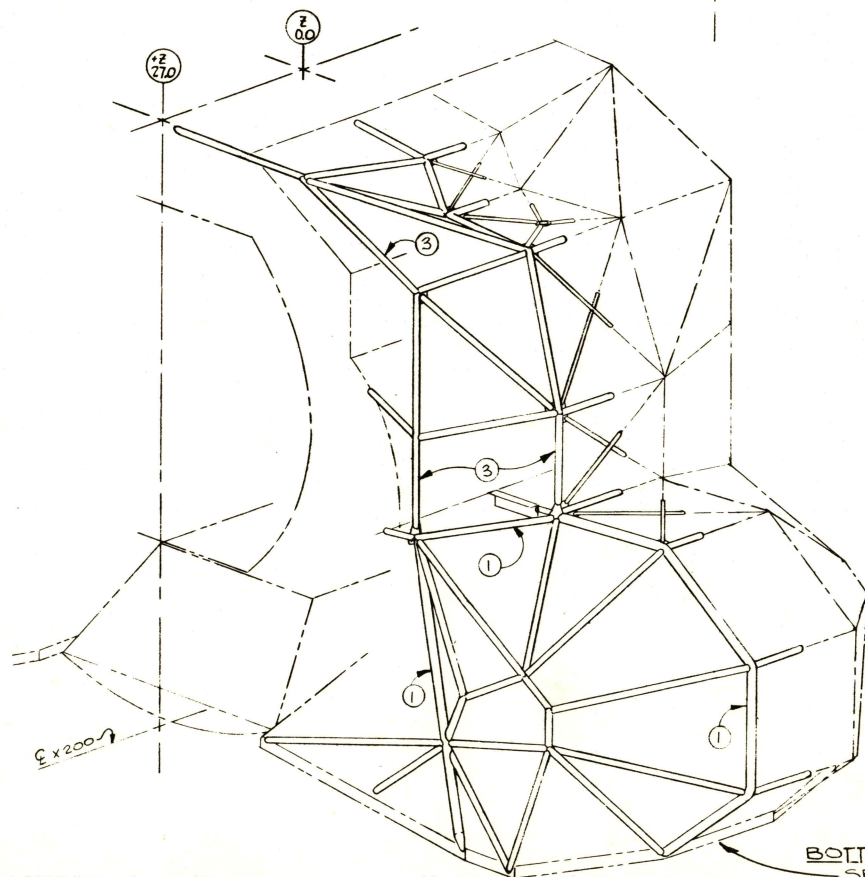
ITEM	DRAWING	TITLE
1	LDW280-53155	CAGE INSTL L.H. TANK
	LDW280-53226	CAGE ASSY L.H. TANK
2	LDW280-53160	SHLD INSTL L.H. TANK
3	LDW280-53381	CAGE INSTL L.H. & R.H. SIDE
	LDW280-53382	CAGE ASSY L.H. & R.H. SIDE
4	LDW280-53163	SHLD INSTL L.H. & R.H. SIDE
5	LDW280-53861	SHIELD, TOP x 312 1/2
6	LDW280-53851	SHLD, FWD & AFT, TANKS
7	LDW280-53852	SHLD, FWD & AFT, BLKHD
8	LDW280-53282	SHLD INSTL, UPR HATCH
9	LDW280-54154	SHLD INSTL, UPR BLKHD
11	LDW280-28398	BRKT, DOCKING LIGHT
12	LDW280-28895	FWD, VHF ANTENNA
13	LDW280-28885	STEERABLE ANTENNA

② SHLD INSTL L.H. TANK LDW280-53160

ITEM	DRAWING	TITLE
21	LDW280-11635	SHIELD
22	LDW280-11636	"
23	LDW280-11637	"
24	LDW280-11638	"
25	LDW280-11639	"
26	LDW280-11640	"

④ SHLD INSTL L.H. & R.H. SIDE LDW280-53163

ITEM	DRAWING	TITLE
21	LDW280-11642	SHIELD
22	LDW280-11647	"
23	LDW280-11648	"
34	LDW280-11649	" L.H. ONLY
	LDW280-11650	" R.H. ONLY
35	LDW280-11651	"
36	LDW280-11652	"
37	LDW280-11653	"
38	LDW280-11654	"



LH ONLY
RH. SEE SHEET 3.

BOTTOM THERMAL ASSY.
SEE SHEET 4.

LM
ASCENT STAGE
MID SECTION
LM-4

COMPLETE REVISION 7-19-67
ENGINEERING SCHEDULING PRR-4-23-67
4-10-66

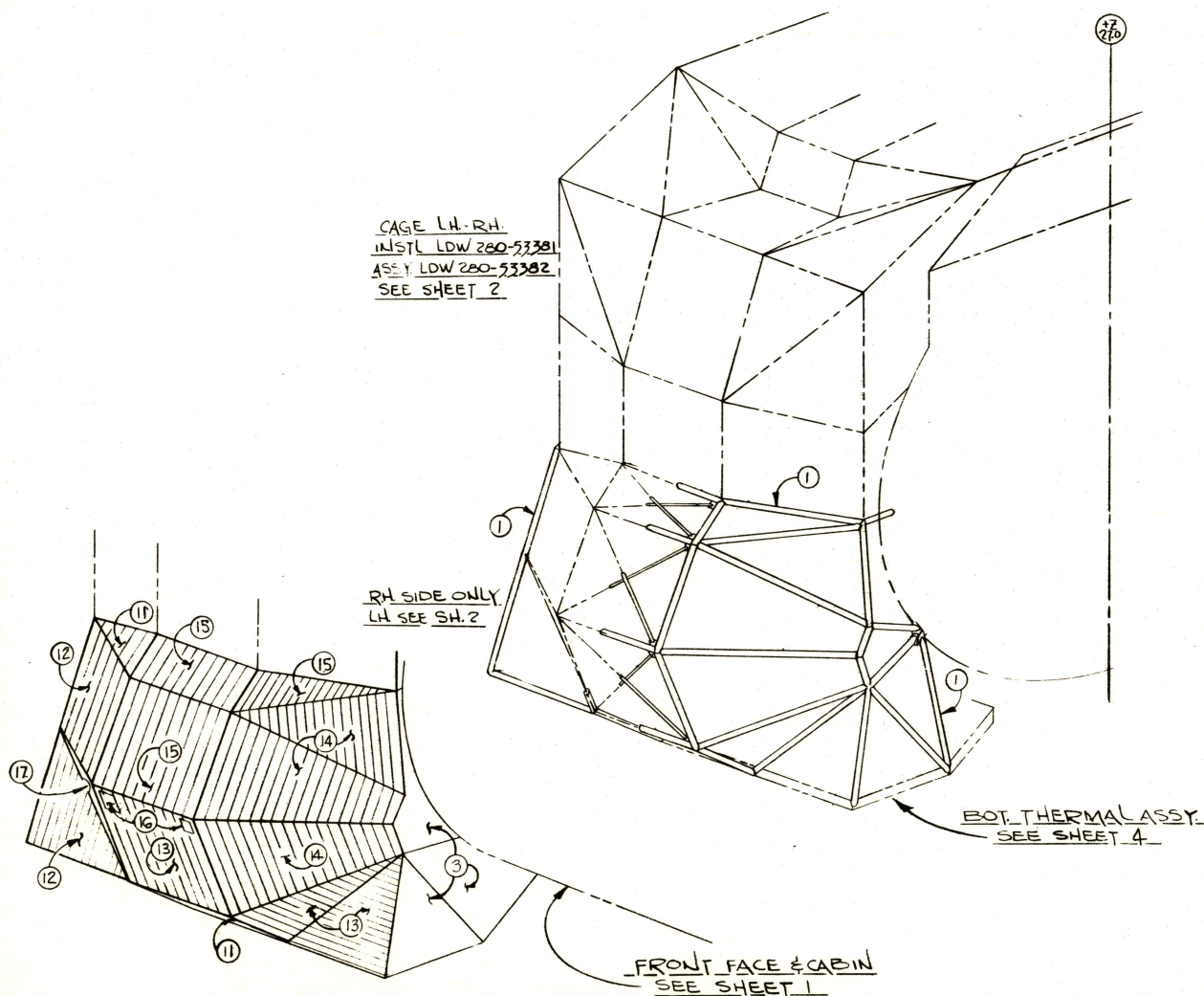
SHEET 2
SK 17-30-54

THERMAL SHIELDING LDW 280-54150

ITEM	DRAWING	TITLE
1	LDW 280-53156	CAGE INSTL, R.H. TANK
	LDW 280-53231	CAGE ASSY, R.H. TANK
2	LDW 280-53161	SHLD INSTL, R.H. TANK
3	LDW 280-53851	SHLD INSTL, FWD & AFT TK

② SHIELDING INSTL R.H. TK LDW 280-53161

ITEM	DRAWING	TITLE
11	LDW 280-11641	SHIELD
2	LDW 280-11642	"
13	LDW 280-11643	"
14	LDW 280-11644	"
15	LDW 280-11645	"
16	LDW 280P11500	FAIRING
17	LDW 280P11517	"



LM
ASCENT STAGE
MID SECTION
LM-4

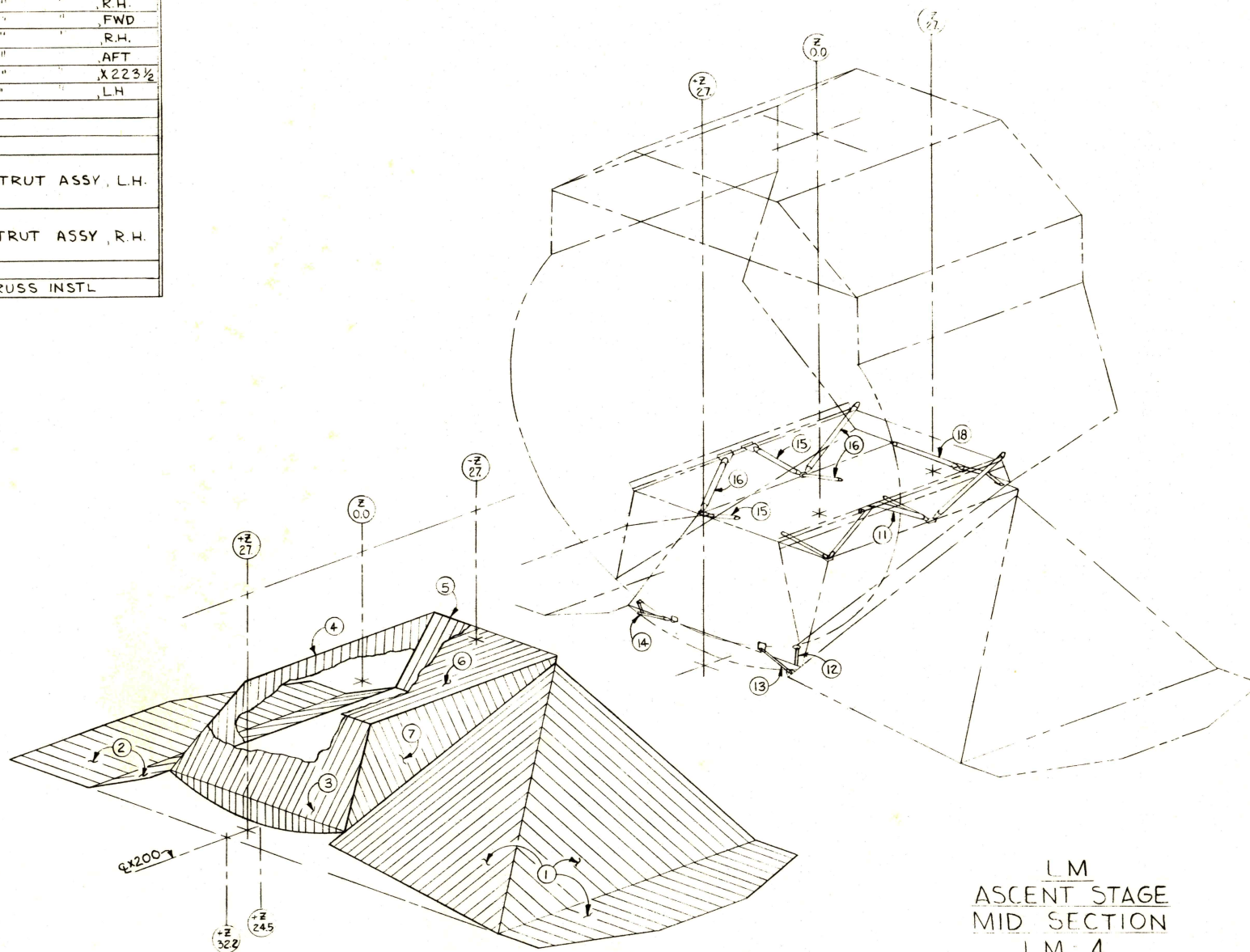
7-19-67
COMPLETE REVISION PER: 4-20-67
ENGINEERING SCHEDULING: 2-6, 10-18-66

SHEET 3

SK 17-30-34

THERMAL SHIELDING LDW 280-53153

ITEM	DRAWING	TITLE
1	LDW 280-53159	PANEL INSTL L.H.
2	LDW 280-53162	" " R.H.
3	LDW 280-53203	" " FWD
4	LDW 280-53222	" " R.H.
5	LDW 280-53223	" " AFT
6	LDW 280-53224	" " X223 1/2
7	LDW 280-53225	" " LH
11	LDW 280-28866	
12	LDW 280-28877	STRUT ASSY L.H.
13	LDW 280-28879	
14	LDW 280-28481	
15	LDW 280-28867	STRUT ASSY R.H.
16	LDW 280-53867	
18	LDW 280-53165	TRUSS INSTL



LM
ASCENT STAGE
MID SECTION
LM 4

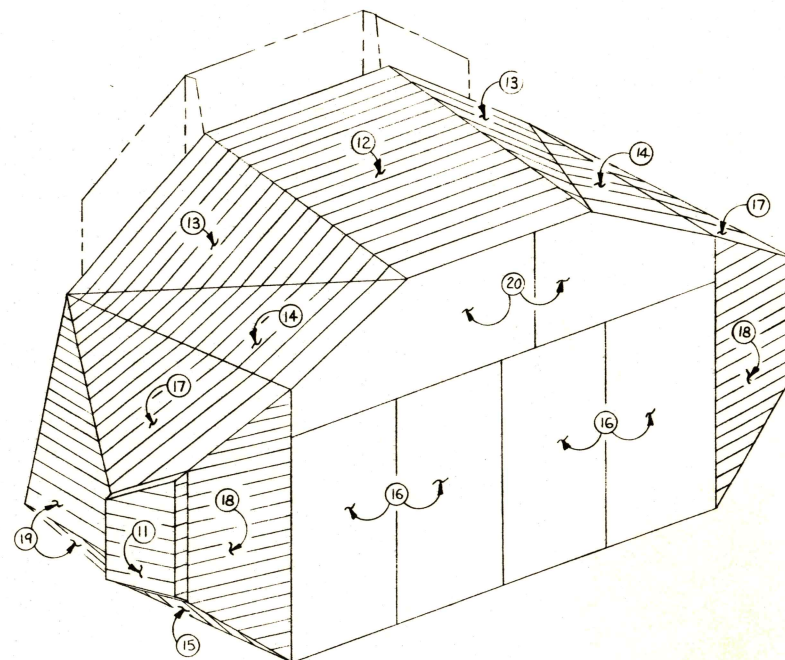
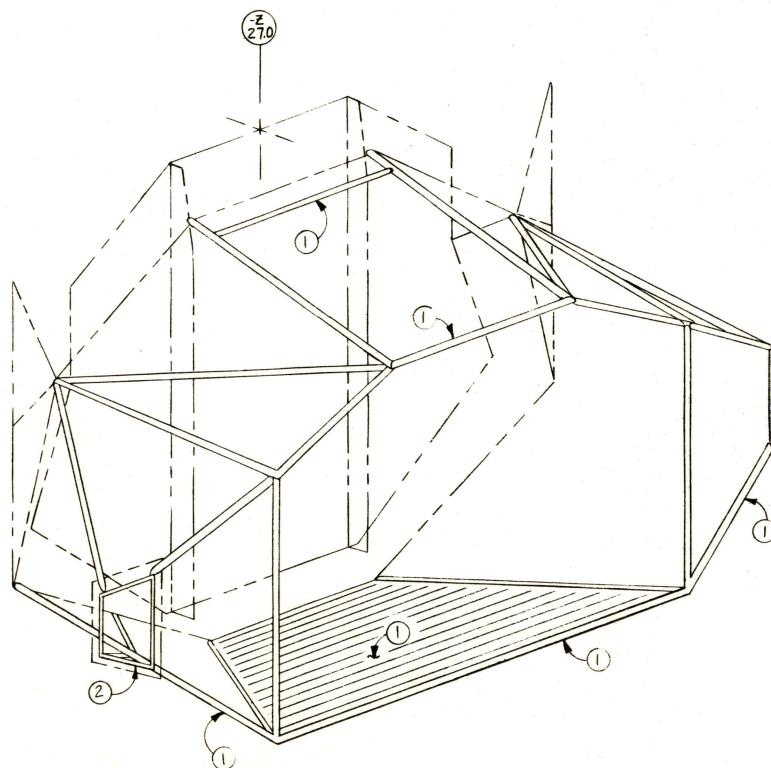
ENGINEERING SCHEDULING PRR 4-27-67

SHEET 4

SK-17-30-34

THERMAL SHIELDING LDW 280-54450		
1	LDW 280-53451	CAGE ASSY
2	LDW 280-51454	PANEL ASSY
2	LDW 280-53452	SUPT INSTL RCS AFT
3	LDW 280-54453	SHIELD INSTL

(3) SHIELDING INSTL LDW 280-54453		
11	LDW 280-54871	SHLD INSTL RCS AFT
12	LDW 280-14463	SHLD ASSY, UPR MID
13	LDW 280-14464	" " " INBD
14	LDW 280-14465	" " " OUTBD
15	LDW 280-14469	" " " LWR SIDE
16	LDW 280-14470	" " " ACCESS
17	LDW 280-14476	" " " UPR SIDE
18	LDW 280-14477	" " " AFT SIDE
19	LDW 280-14478	" " " SIDE ACC
20	LDW 280-53461	UPR AFT ACCESS PNL



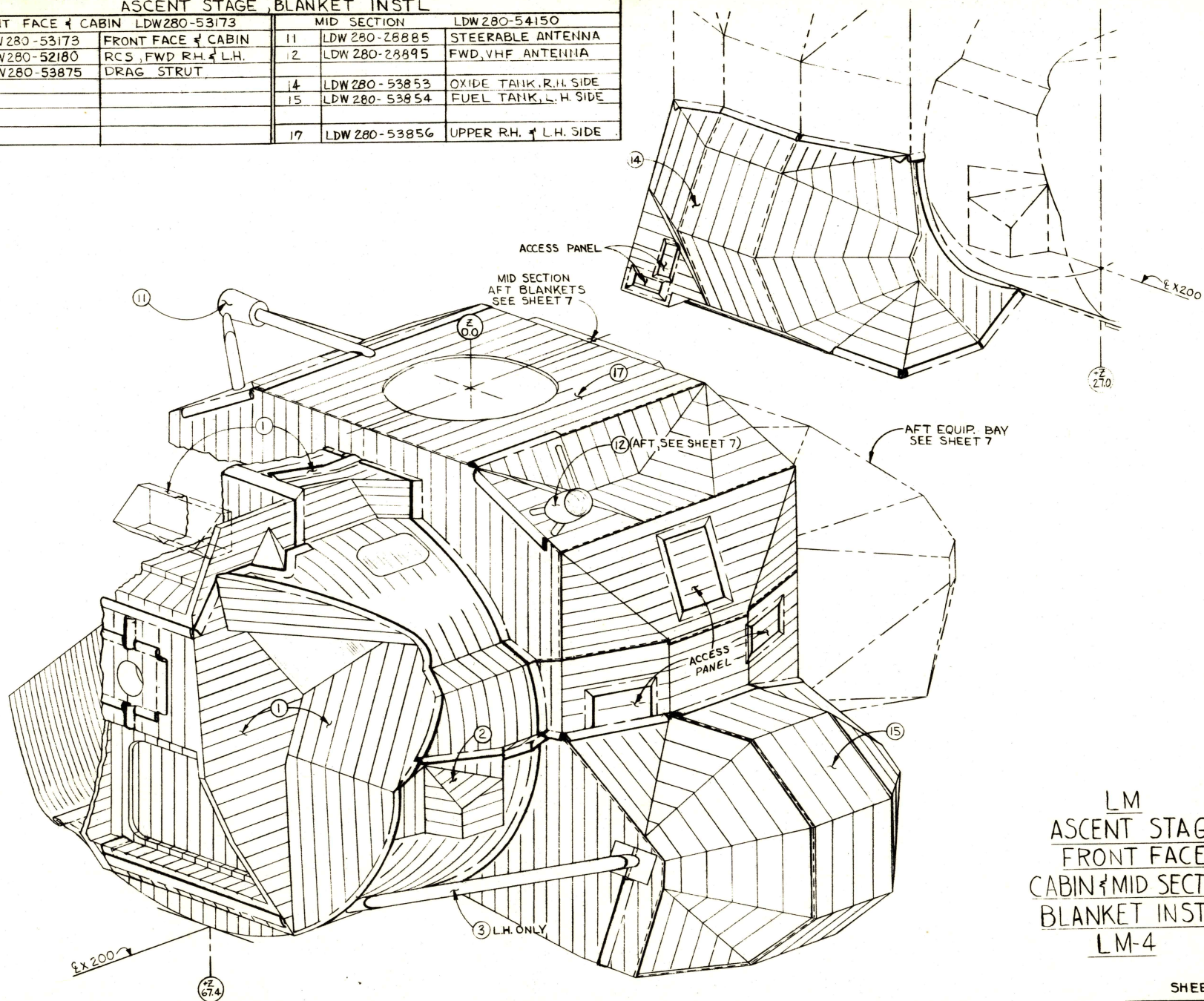
LM
ASCENT STAGE
AFT EQUIPMENT BAY
LM-4

ENGINEERING SCHEDULING PRR 7-19-67
5-2-67

SHEET 5

SK 17-30-34

ASCENT STAGE, BLANKET INSTL			
FRONT FACE & CABIN LDW280-53173		MID SECTION LDW280-54150	
1	LDW280-53173	11	LDW280-26885 STEERABLE ANTENNA
2	LDW280-52180	12	LDW280-26895 FWD, VHF ANTENNA
3	LDW280-53875		
		14	LDW280-53853 OXIDE TANK, R.H. SIDE
		15	LDW280-53854 FUEL TANK, L.H. SIDE
		17	LDW280-53856 UPPER RH. & LH. SIDE



LM
ASCENT STAGE
FRONT FACE
CABIN & MID SECTION
BLANKET INSTL
LM-4

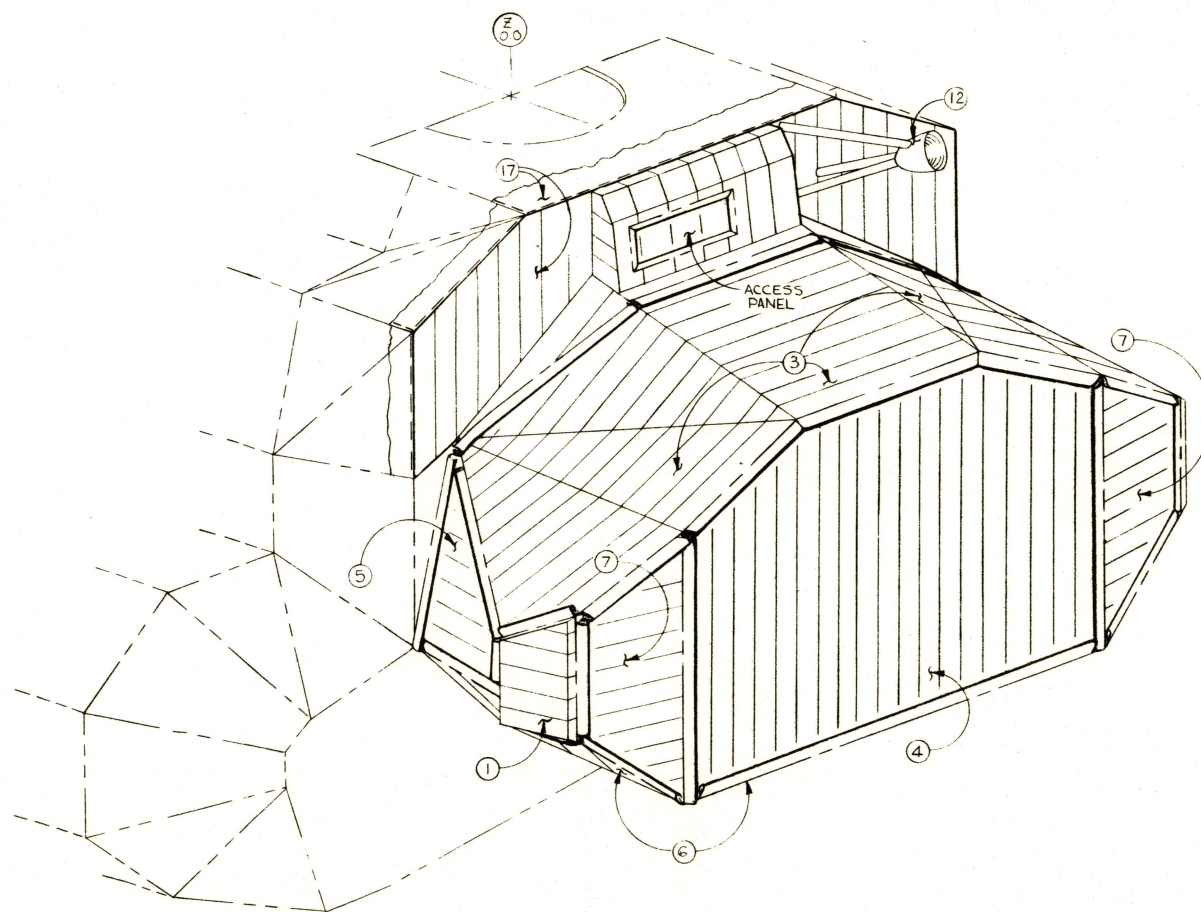
SHEET 6

ENGINEERING SCHEDULING PRR 7-19-67 4-H-67

SK17-30-34

ASCENT STAGE, BLANKET INSTALLATIONS		
AFT EQUIPMENT BAY LDW280-54453		
1	LDW280-28897	RCS, AFT R.H. & L.H.
3	LDW280-14435	BLANKET, TOP
4	LDW280-14436	BLANKET, BACK
5	LDW280-14437	BLANKET, RH. & L.H. SIDE
6	LDW280-14438	BLANKET, BOTTOM
7	LDW280-14439	BLANKET, R.H. & L.H. BACK

MID SECTION		SEE SHEET 6
12	LDW280-28895	AFT, VHF ANTENNA
17	LDW280-53856	UPPER RH. & L.H. SIDE



LM
ASCENT STAGE
AFT EQUIPMENT BAY
BLANKET INSTL
LM-4

SHEET 7

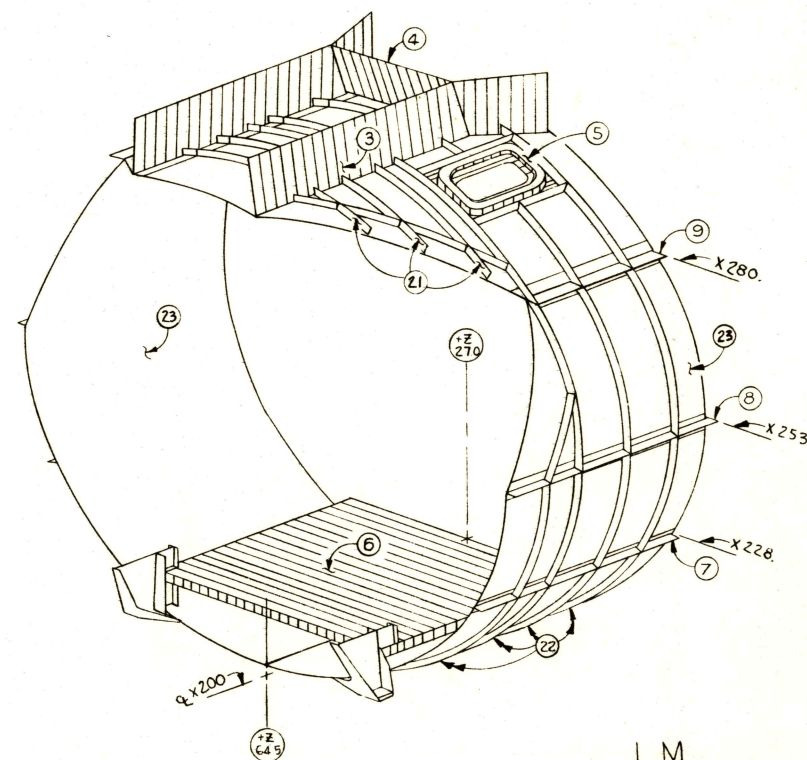
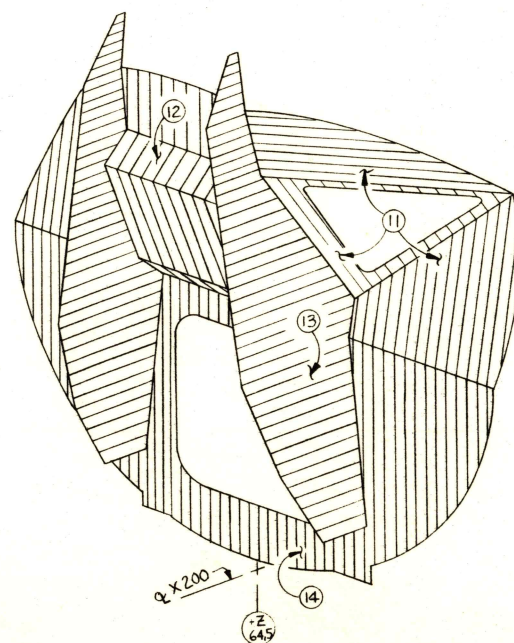
ENGINEERING SCHEDULING PRG 7-11-67 11-57

SK17-30-34

CABIN PRIME STRUCTURE LDW280-54010		
ITEM	DRAWING	TITLE
1	LDW280-54075	FACE ASSY
	LDW280M54137	FRONT FACE MACHINING
2	LDW280-54051	CABIN SKIN INSTL
3	LDW280-23031	IMU BEAM INSTL
4	LDW280-23114	FRAME INSTL CANTED
5	LDW280-53023	CABIN WINDOW INSTL UPR
6	LDW280H23060	FLOOR ASSY & INSTL
7	LDW280-23025	LONGERON INST X228.RH
	LDW280-23049	LONGERON INST X228.LH
8	LDW280-23047	LONGERON INST X252-X253
9	LDW280-23048	LONGERON INST X280.

① FRONT FACE MACHINING LDW280M54137		
FRONT FACE ASSY LDW280-54011		
ITEM	DRAWING	TITLE
11	LDW280-23015	PNL ASSY CHEEK, BROW & WIND
12	LDW280-23016	PNL ASSY UPR CENTER
13	LDW280M10440	WEB BEAM
14	LDW280M10392	BULKHEAD LWR

② CABIN SKIN INSTL LDW280-54051		
ITEM	DRAWING	TITLE
21	LDW280-23021	FRAME INSTL UPR
22	LDW280-23074	FRAME INSTL
23	LDW280-23018	SKIN ASSY



LM
ASCENT STAGE
FRONT FACE & CABIN
LM-4

ENGINEERING SCHEDULING PRR. 7-17-67
5-8-67

SK 17-31-34

③⑧ MID SECTION STRUCTURE LDW 280-54012

ITEM	DRAWING	TITLE
1	LDW 280-54020	SKIN INSTL
2	LDW 280-54027	DECK ASSY X 310
3	LDW 280-23035	" " " X 294
4	LDW 280-23032	" " " INSTL 277
5	LDW 280-23029	" " " INSTL X 253
6	LDW 280-23028	BEAM ASSY INSTL Y 174
7	LDW 280-54030	" " " " Y 22
8	LDW 280-23044	WEB INSTL Y 36 3/4
	LDW 280-23077	BEAM INST, ENG FWD
9	LDW 280-53078	" " " " AFT
	LDW 280-53079	" " " " SIDES
10	LDW 280-54019	STIFFENER INSTL Z 27
11	LDW 280-23053	WATER TANK INSTL

① SKIN INSTL LDW 280-54020

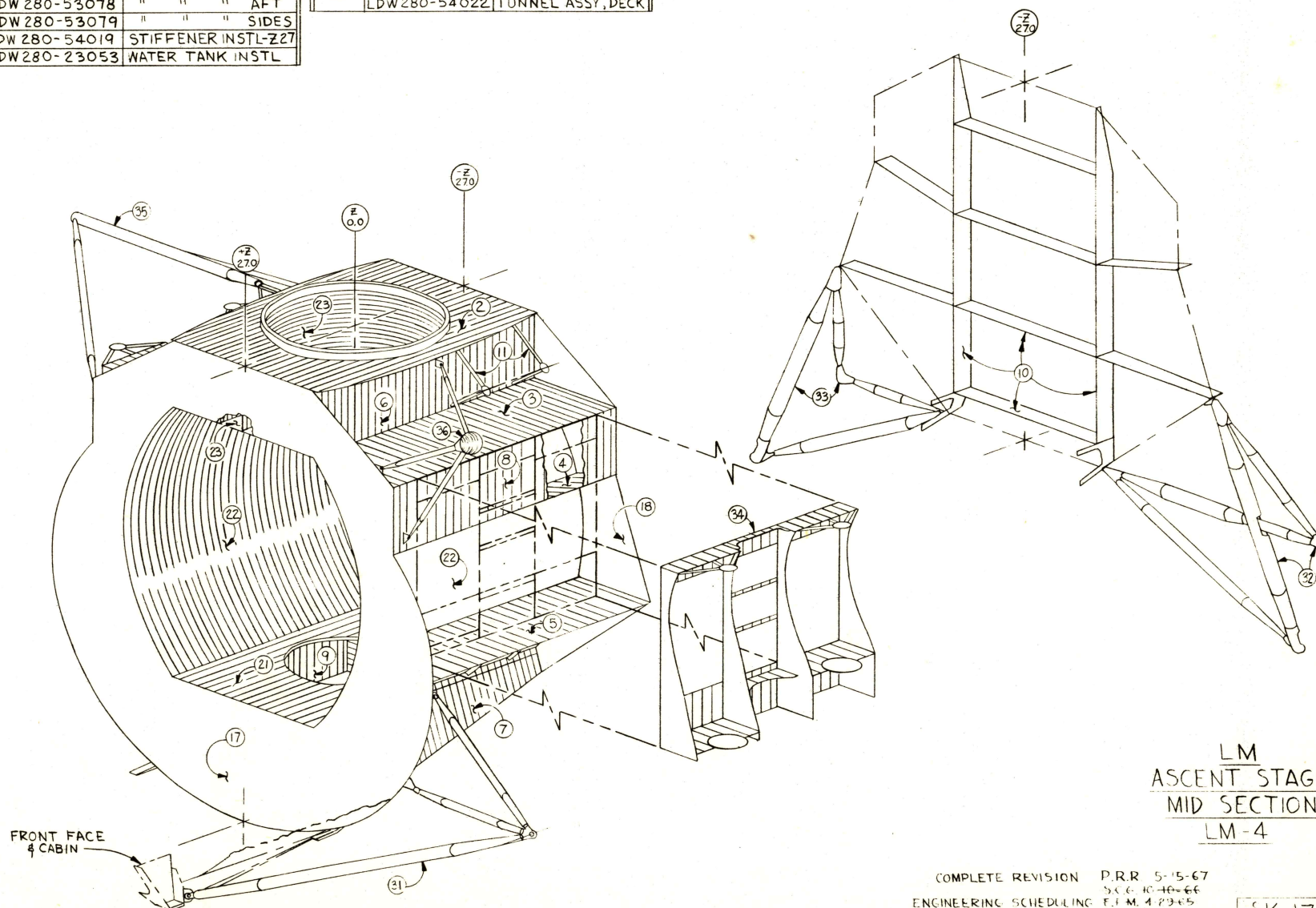
16	LDW 280-54041	SKIN WELD DECK ASSY
17	LDW 280M10772	BULKHEAD, FWD
18	LDW 280M10735	" " " AFT

①⑥ SKIN WELD DECK ASSY LDW 280-54041

21	LDW 280M10434	DECK, LOWER
22	LDW 280-23014	SKIN ASSY
23	LDW 280-54017	DECK ASSY, UPR
	LDW 280-54022	TUNNEL ASSY, DECK

STRUCTURE ASSY A/S LDW 280-54002

ITEM	DRAWING	TITLE
31	LDW 280-53024	TRUSS INSTL TANK SUPT
32	LDW 280-54036	" " " AFT L.H.
33	LDW 280-54037	" " " R.H.
34	LDW 280-54144	RCS MODULE INSTL SUPT
35	LDW 280-23256	STEERABLE ANT. SUPT
36	LDW 280-23257	FWD VHF ANTENNA SUPT
38	LDW 280-54012	MID SECTION STRUCTURE



LM
ASCENT STAGE
MID SECTION
LM-4

COMPLETE REVISION P.R.R. 5-15-67
ENGINEERING SCHEDULING S.C.C. 10-16-66
F.I.M. 4-23-65

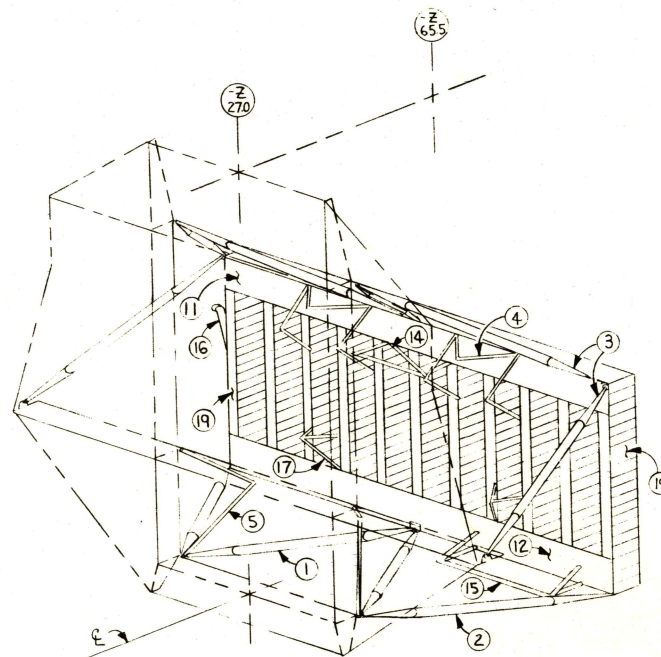
SK 17-32-34

AFT EQUIP BAY STRUCT LDW 280-54401

ITEM	DRAWING	TITLE
1	LDW 280-14222	TUBE RACK SUPT, INBOARD
2	LDW 280-14223	" " " OUTBOARD
3	LDW 280-14224	" " " UPPER
4	LDW 280-23434	FITTING & HE SUPT INSTL
5	LDW 280-54405	RACK ASSEMBLY

⑤ RACK ASSEMBLY LDW 280-54405

ITEM	DRAWING	TITLE
11	LDW 280-14112	BEAM ASSY HORIZ UP/R 272
12	LDW 280-14113	" " " LWR 233
14	LDW 280-23421	SUPT INSTL UP/R CENT.
15	LDW 280-23422	" " LWR OUTB.
16	LDW 280-23430	" " 5" BAND ANT
17	LDW 280-23433	" " GOX TANK
19	LDW 280-54406	BEAM ASSY VERT 6
	LDW 280-54407	" " " ±Y7
	LDW 280-54408	" " " ±Y14
	LDW 280-54409	" " " ±Y21
	LDW 280-54410	" " " ±Y28
	LDW 280-54411	" " " ±Y35



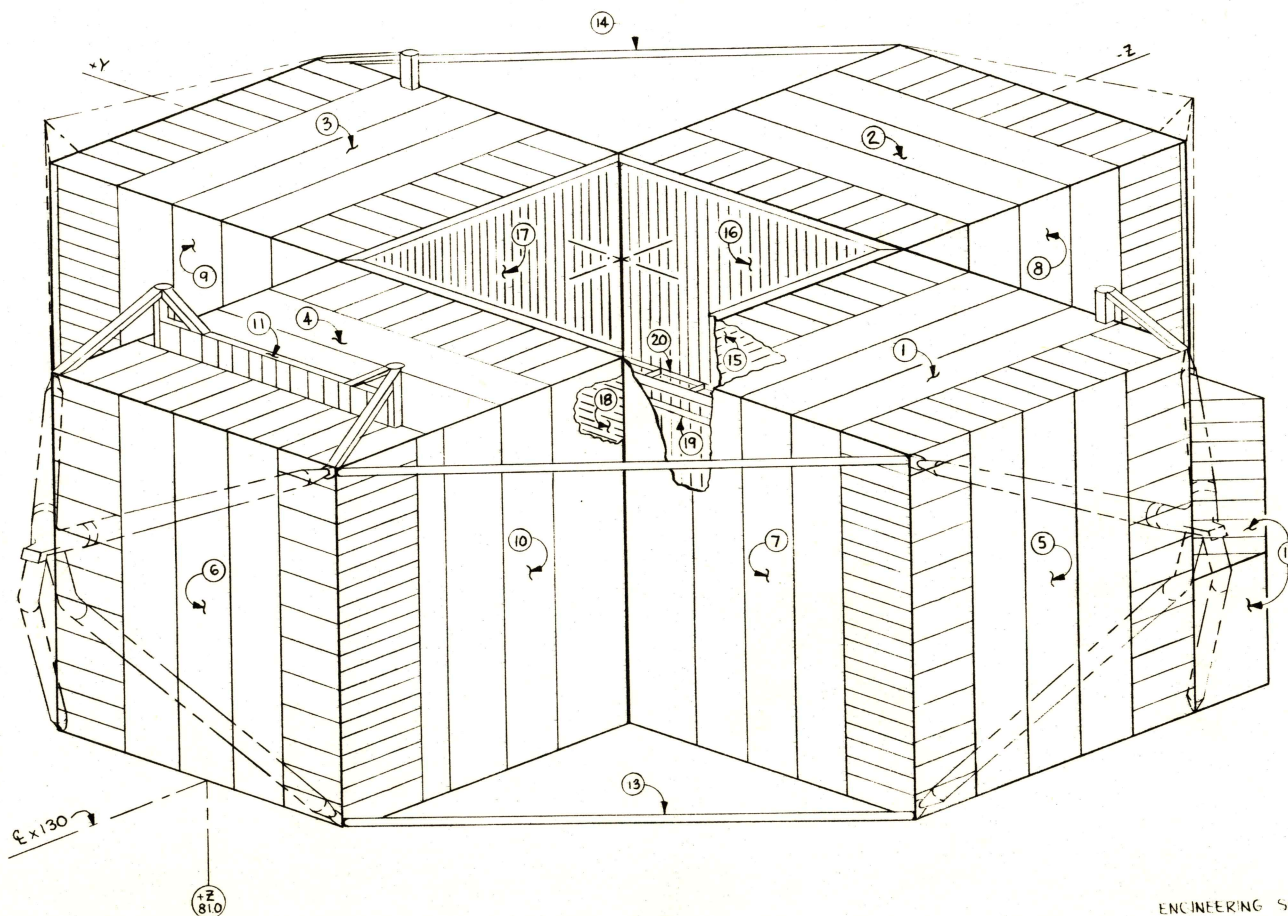
LM
ASCENT STAGE
AFT EQUIPMENT BAY
LM-4

COMPLETE REVISION PRR 7-11-67
500-10-10-66
ENGINEERING SCHEDULING FPM 3-26-65

SK 17-33-34

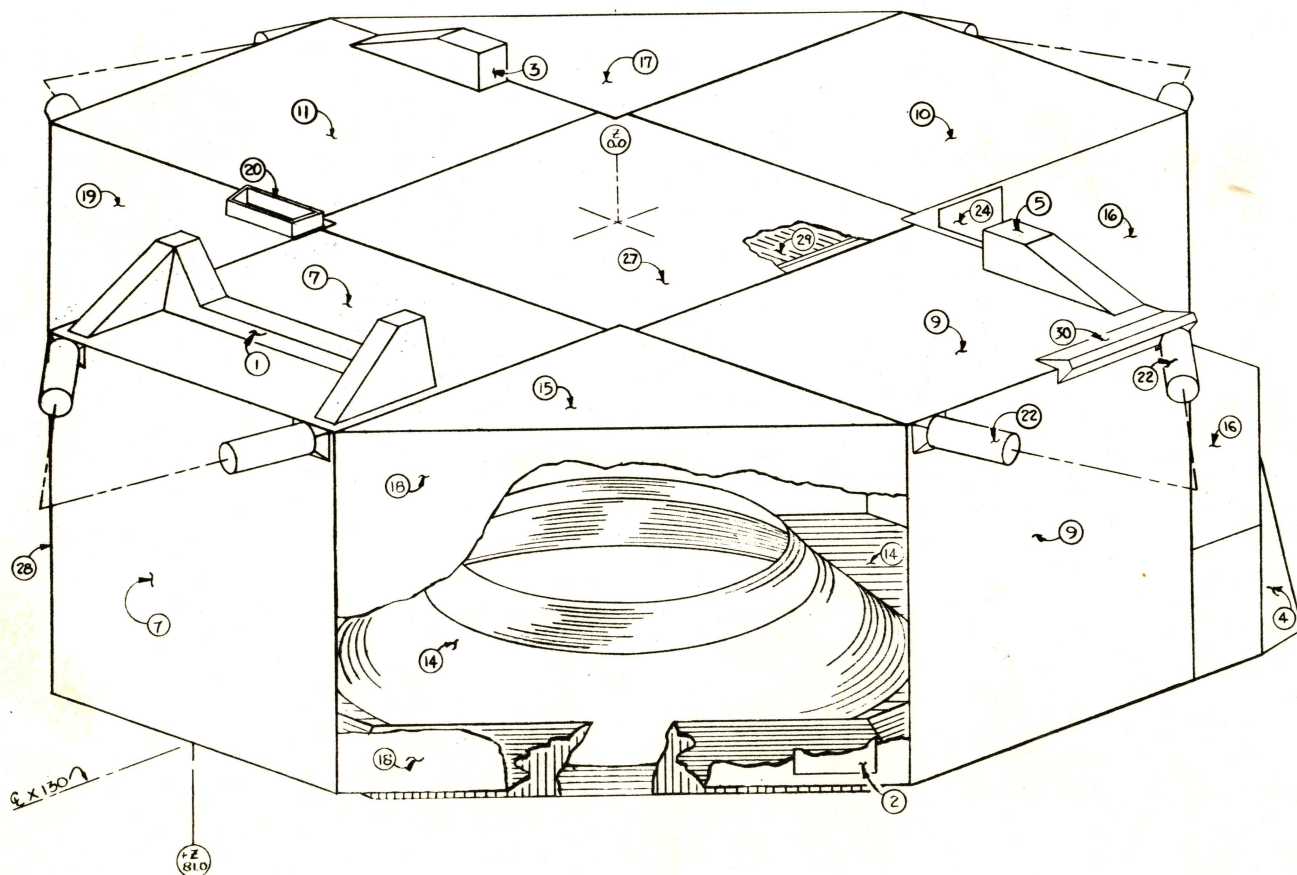
DESCENT STAGE STRUCTURE INSTL LDW 280-54510

ITEM	DRAWING	TITLE	ITEM	DRAWING	TITLE	ITEM	DRAWING	TITLE
1	LDW 280-54521	DECK INSTL LH UPPER	8	LDW 280-23539	PANEL INSTL AFT LH	15	LDW 280-23538	PANEL INSTL ENG LH
2	LDW 280-54523	" " AFT		LDW 280-23536	" " R.H.	16	LDW 280-23532	" " " AFT
3	LDW 280-54520	" " R.H.		LDW 280-54528	" " R.H. FWD	17	LDW 280-23537	" " " R.H.
4	LDW 280-54522	" " FWD	9	LDW 280-54531	" " AFT	18	LDW 280-23529	" " FWD
5	LDW 280-54525	BULKHEAD INSTL LH		LDW 280-54537	" " FWD LH	19	LDW 280-23550	BEAM " " TRUSS
	LDW 280-54524	" " R.H.	10	LDW 280-54534	" " R.H.	20	LDW 280-23551	" " " ACT
	LDW 280-54526	" " FWD	11	LDW 280-23540	BEAM ASSY SUPT			
6	LDW 280-54527	" " AFT	12	LDW 280-23569	SUPT INSTL SCI. EQ. BAY			
	LDW 280-23530	PANEL INSTL LH FWD	13	LDW 280-23547	STRUT INSTL LWR			
7	LDW 280-54533	" " AFT	14	LDW 280-23549	" " UPPER			



LM
DESCENT STAGE
STRUCTURE
LM-4

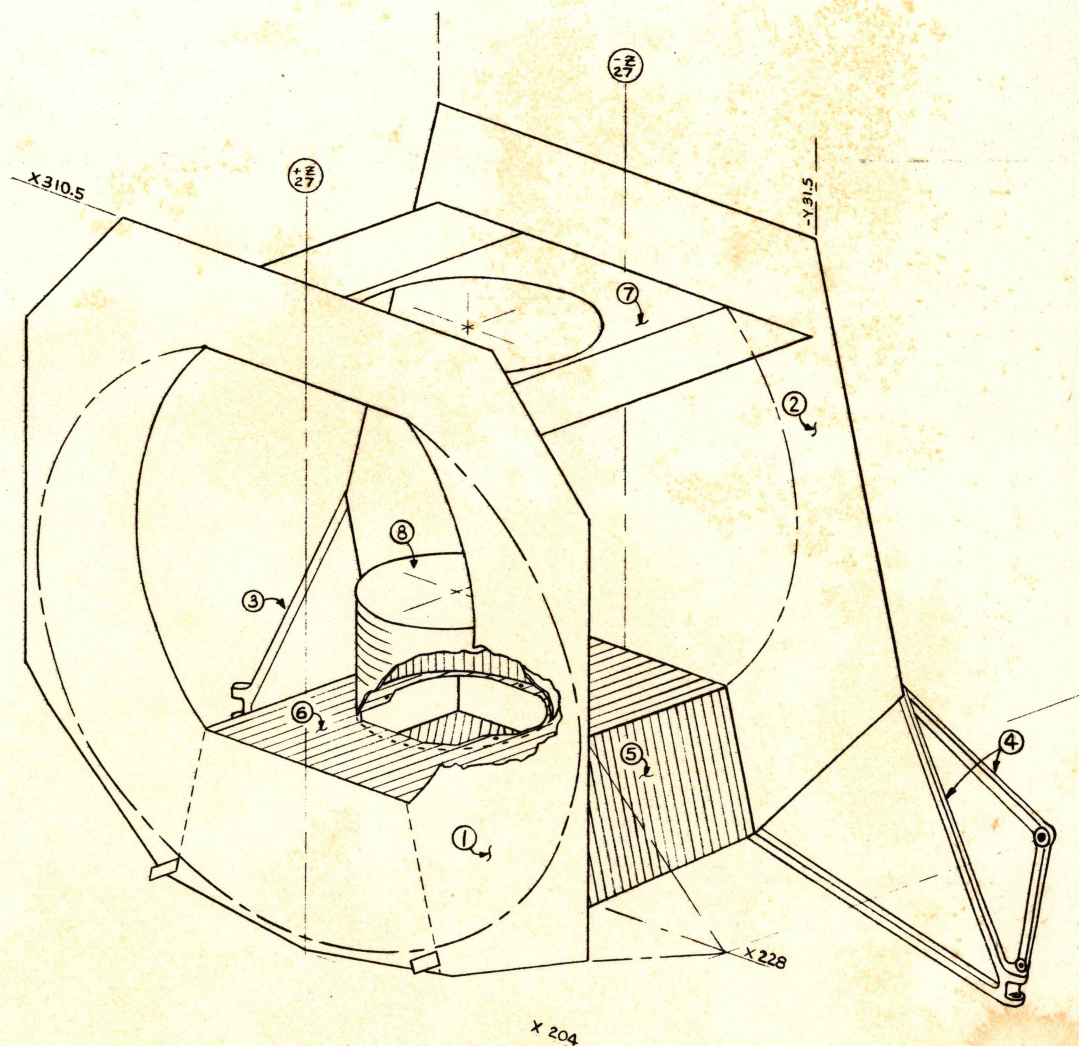
DESCENT STAGE			THERMAL SHIELDING			LDW 280-54553		
ITEM	DRAWING	TITLE	ITEM	DRAWING	TITLE	ITEM	DRAWING	TITLE
1	LDW280-28644	FORWARD INTERSTAGE	14	LDW280-25661	BASE HEAT SHIELD INSTL.	27	LDW280-51360	SHIELD INSTL. ENG. COMP.
2	LDW280-28645	ACCESS COV. INSTL. PLSS.	15	LDW280-52664	SHIELD INSTL. QUAD. I	28	LDW280-28561	SHIELD INSTL. QUAD. IV
3	LDW280-28646	BLANKET INSTL. AFT. RH. W/F	16	LDW280-52665	SHIELD INSTL. QUAD. II	29	LDW280-52635	BLAST DEFLECTOR INSTL.
4	LDW280-52648	ACCESS COVER SEQ. DAY	17	LDW280-28666	SHIELD INSTL. QUAD. III	30	LDW280-28816	SHIELD INSTL. HE TEST PT
5	LDW280-28649	L.H. AFT. INTERSTAGE	18	LDW280-54558	" " " I			
			19	LDW280-28667	SHIELD INSTL. QUAD. IV			
7	LDW280-52656	FORWARD THERMAL	20	LDW280-51671	GUILLotine ACCESS COVER			
9	LDW280-51657	L.H. THERMAL	22	LDW280-28672	SHIELD INSTL. OUTRIGGER			
10	LDW280-52658	AFT. THERMAL						
11	LDW280-52659	R.H. THERMAL						
			24	LDW280-51818	SHIELD ASSY & INSTL.			



LM
DESCENT STAGE
THERMAL SHIELDING
LM-4

ENGINEERING SCHEDULING 48-15-67 P.R.R. 7-17-67 SK-17-52-34

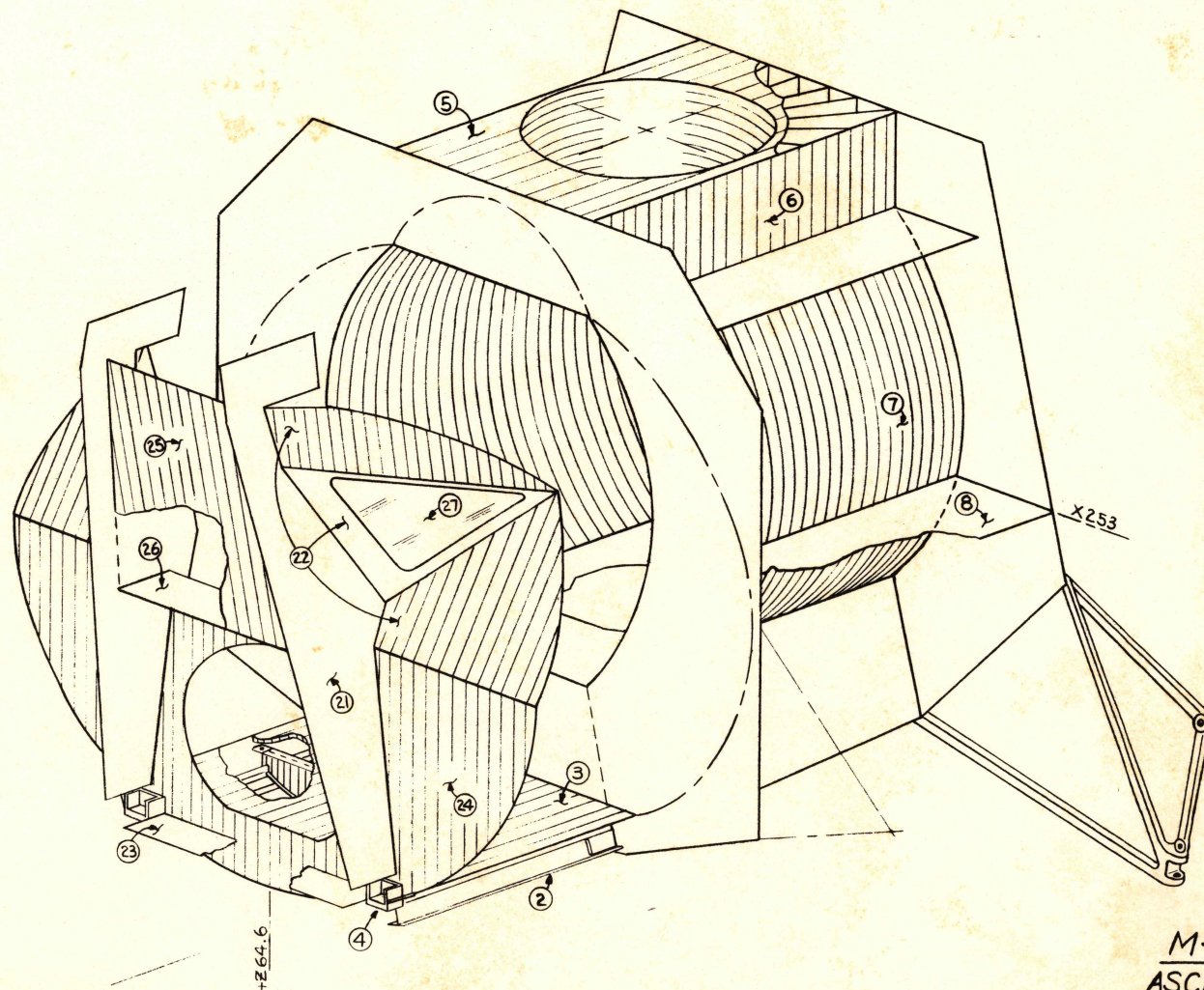
ITEM	DRAWING	NAME
1	LMU 280-5033	BULKHEAD +Z 27
2	-50337	BULKHEAD -Z 27
3	M50043	FITTING-INTERSTAGE-AFT-R.H.
4	M50040	FITTING-INTERSTAGE-AFT-L.H.
	M50044	FITTING-TANK SUPPORT-AFT BULKHEAD
5	-50323	BEAM ASSEMBLY,SLOPING ±Y22 @ X211.6
6	-50124	DECK-ENGINE SUPPORT
7	-50332	DECK-UPPER DOCKING TUNNEL
8	-50325	ENGINE COVER



LEM
M-5 & LTA-1
ASCENT STAGE
STRUCTURE

SK17-31-1
SHEET 1 OF 3

ITEM	DRAWING	NAME	FACE ASSEMBLY - CABIN - ITEM ①		
1	LMU 280-5011	FACE ASSEMBLY - CABIN	ITEM	DRAWING	NAME
2	50331	BEAM ASSY-FACE+Z64.56 TO BULKHEAD+Z 27	21	LMU 280-50111	BEAM ASSY-MAIN-FACE
3	50118	FLOOR ASSY-CABIN (X215)		LMU 280-50123	PANEL-FACE CHEEK
4	M50041	FITTING-INTERSTAGE - FRONT FACE	22	LMU 280-50109	50112 PANEL-FACE EYEBROW
5	50331	DECK-UPPER-UPPER DOCKING TUNNEL		M50032	WINDOW FRAME
6	50333	BEAM-SIDE-UPPER DOCKING TUNNEL	23	LMU 280-50104	BEAM X211.6 -FACE
7	50320	SKIN-MID SECTION	24	50110	PANEL ASSY-FACE LOWER
8	50339	DECK ASSY X253.5 - MID SECTION	25	50241	PANEL ASSY-FACE UPPER
			26	50240	SHELF X252 -FACE
			27	LTM 280-10120-11	WINDOWS



LEM
M-5 & LTA-1
ASCENT STAGE
STRUCTURE

SK17-31-1
SHEET 2 OF 3

