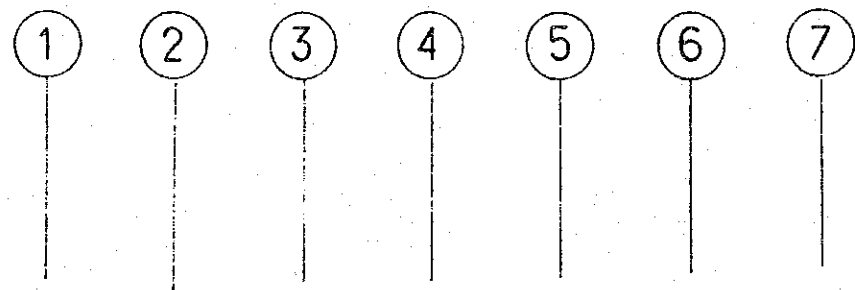
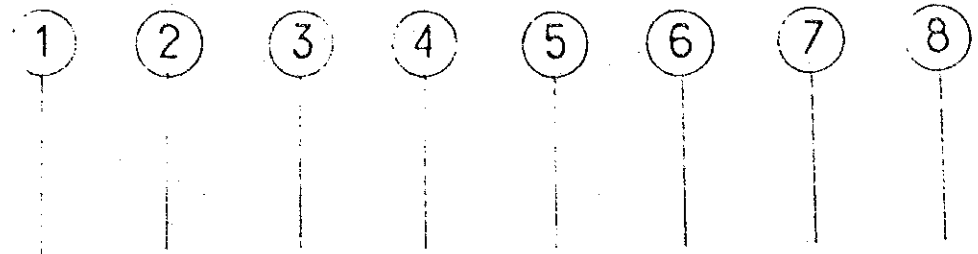
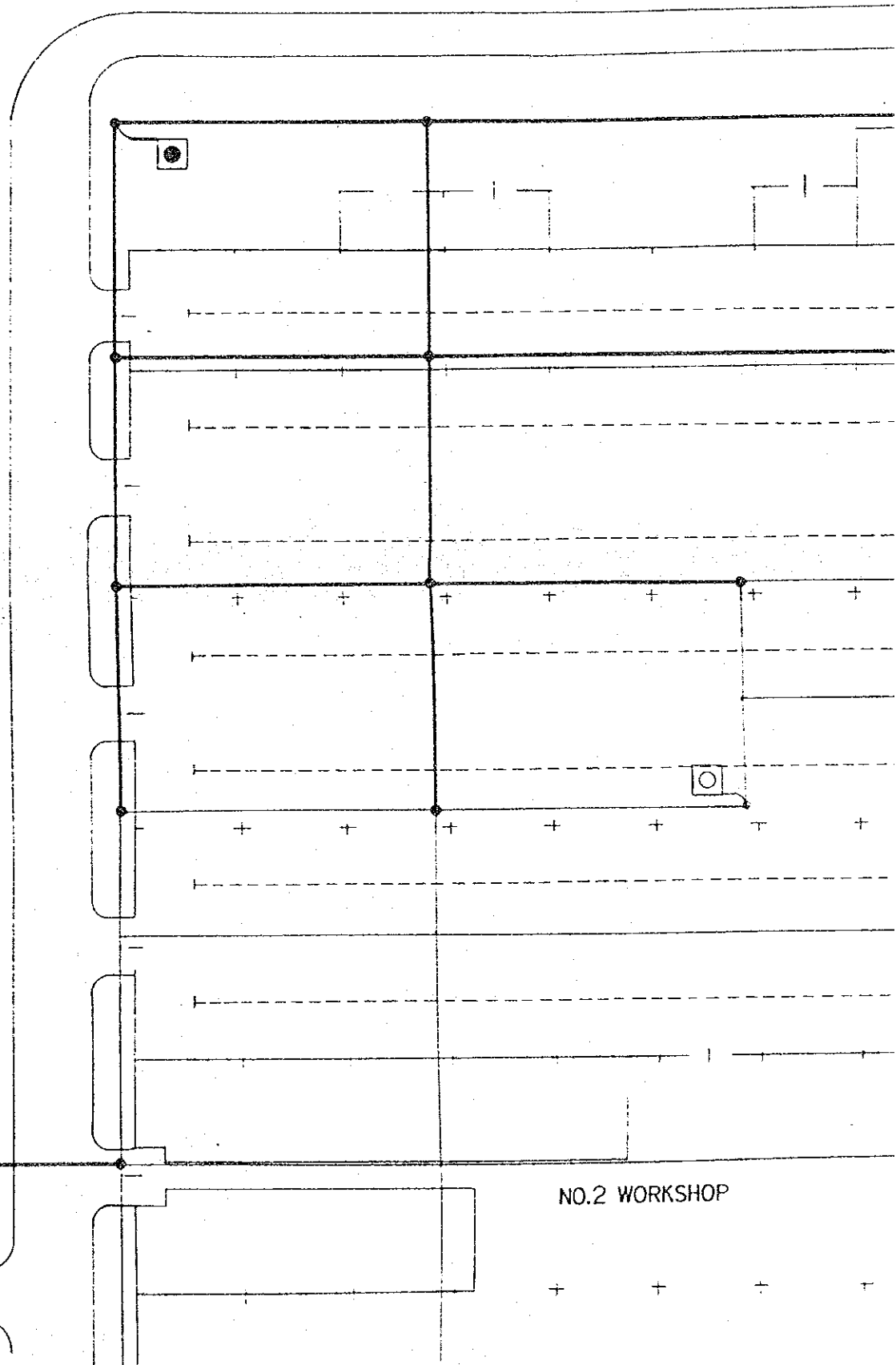
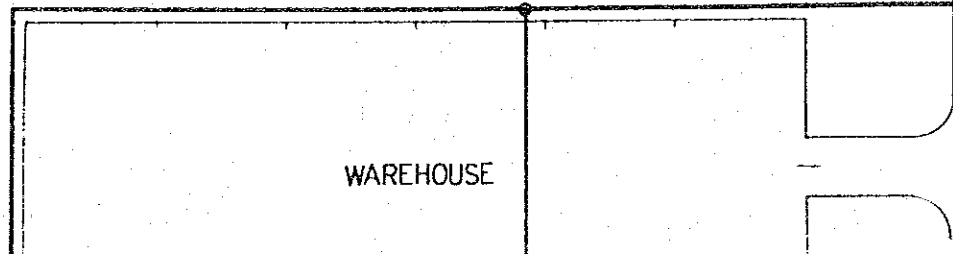


SYMBOLS

- WELDING
- ◻ GROUNDING ROD WITH INSPECTION HOLE
- ANNEALED COPPER WIRE $50 \leq S < 120 \text{MM}^2$



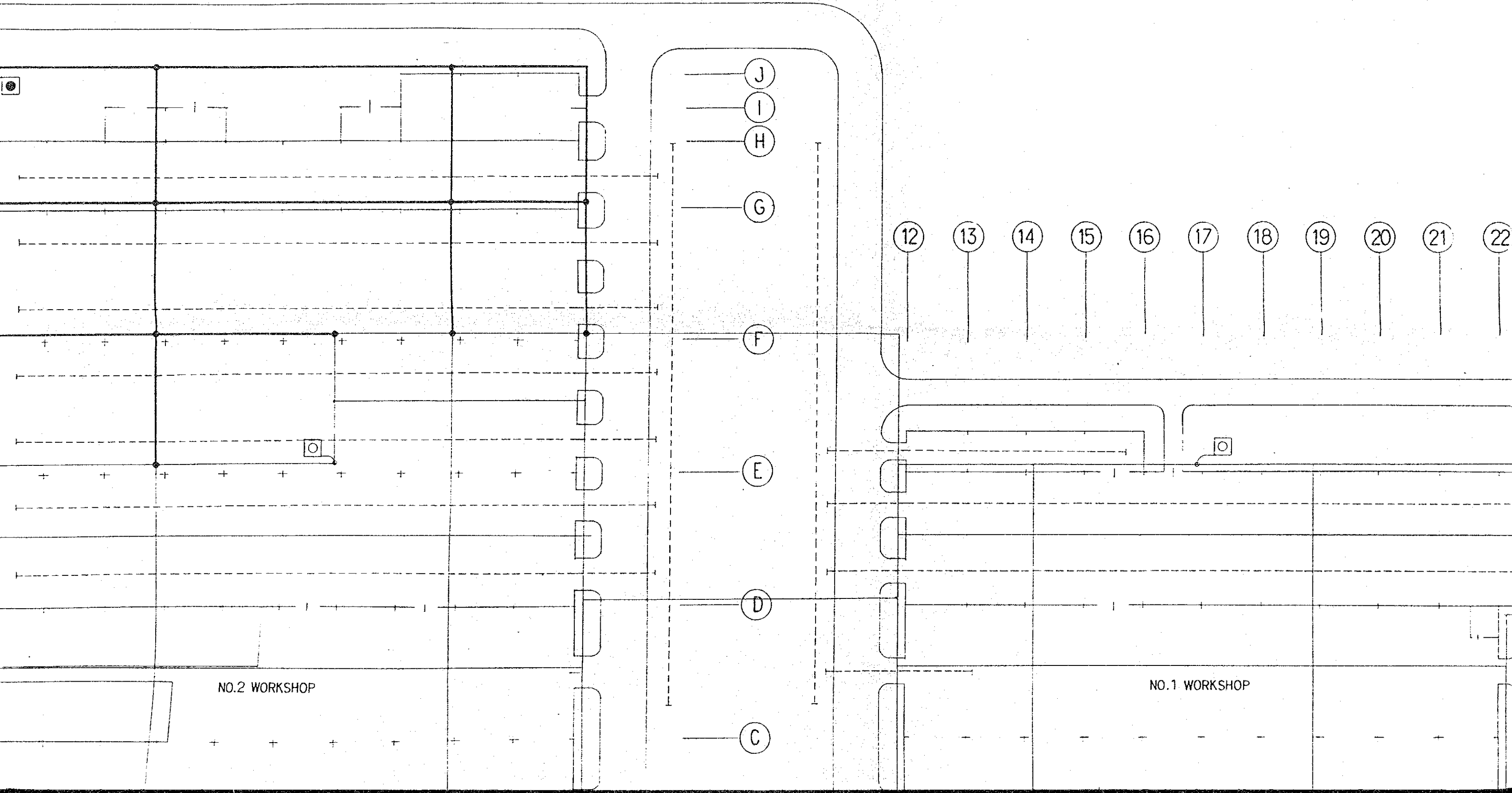
A —



NO.2 WORKSHOP

WAREHOUSE

② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

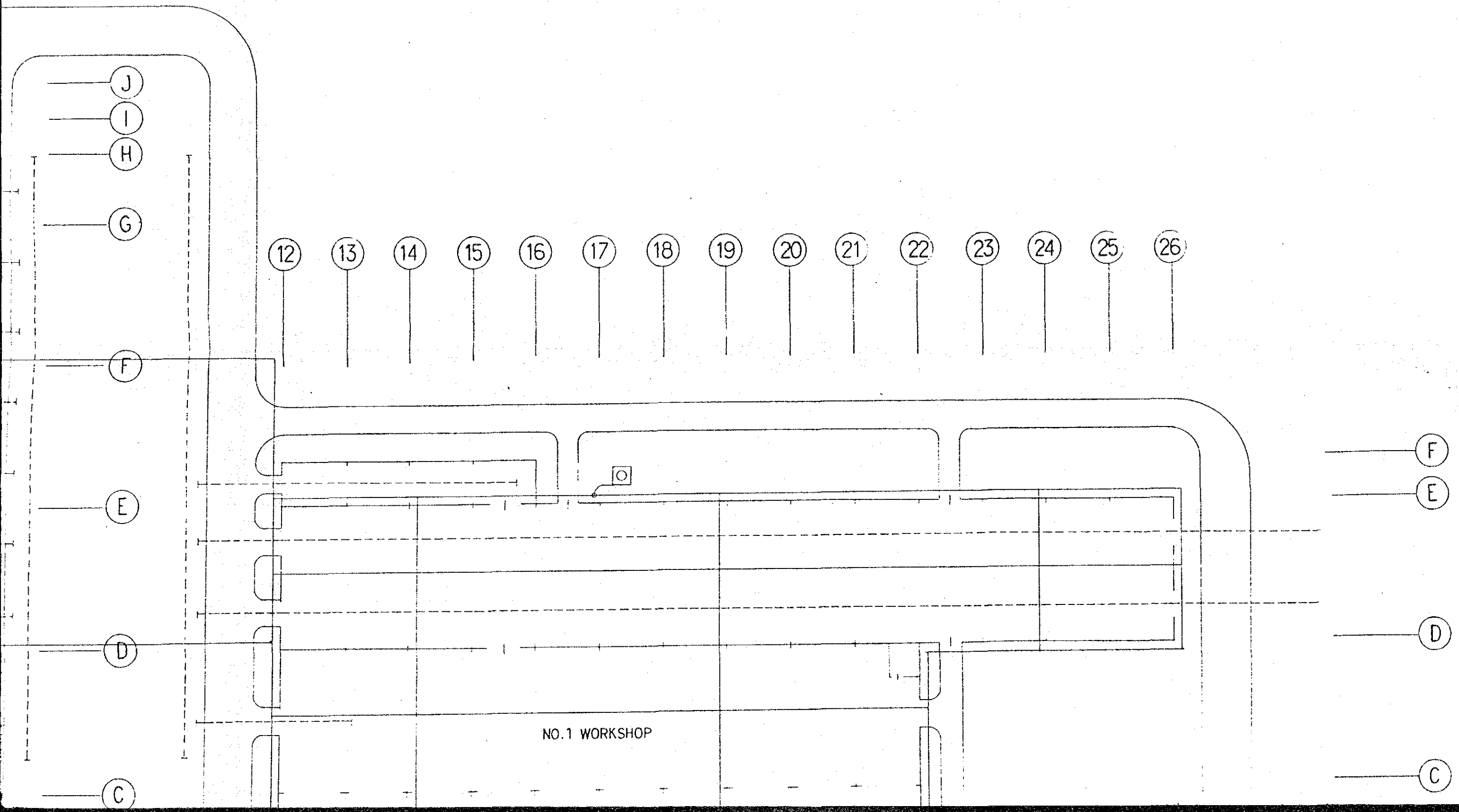


NO.2 WORKSHOP

NO.1 WORKSHOP

J
I
H
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F
E
D
C

⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒



25

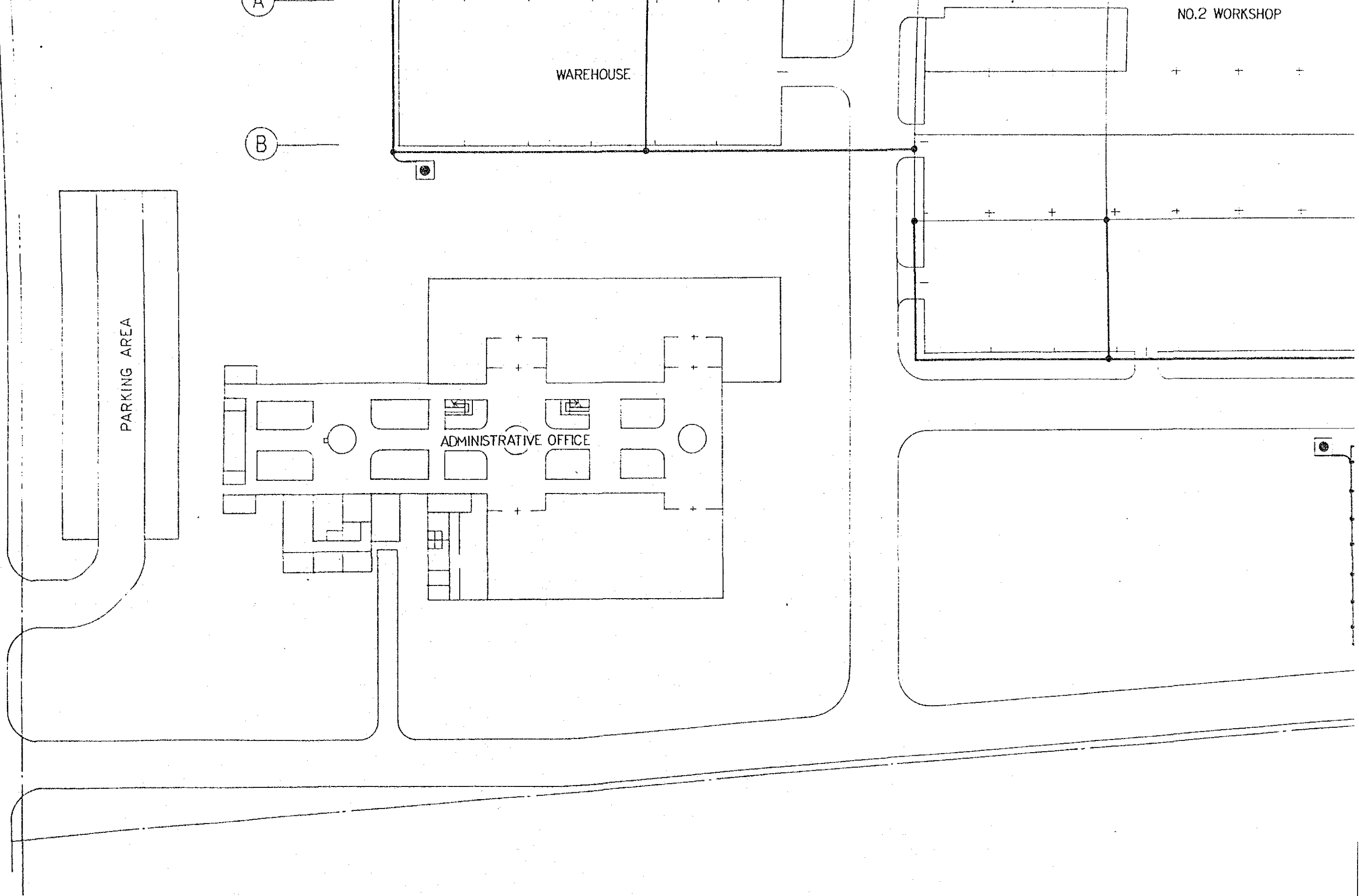


FIG. 25 GRO

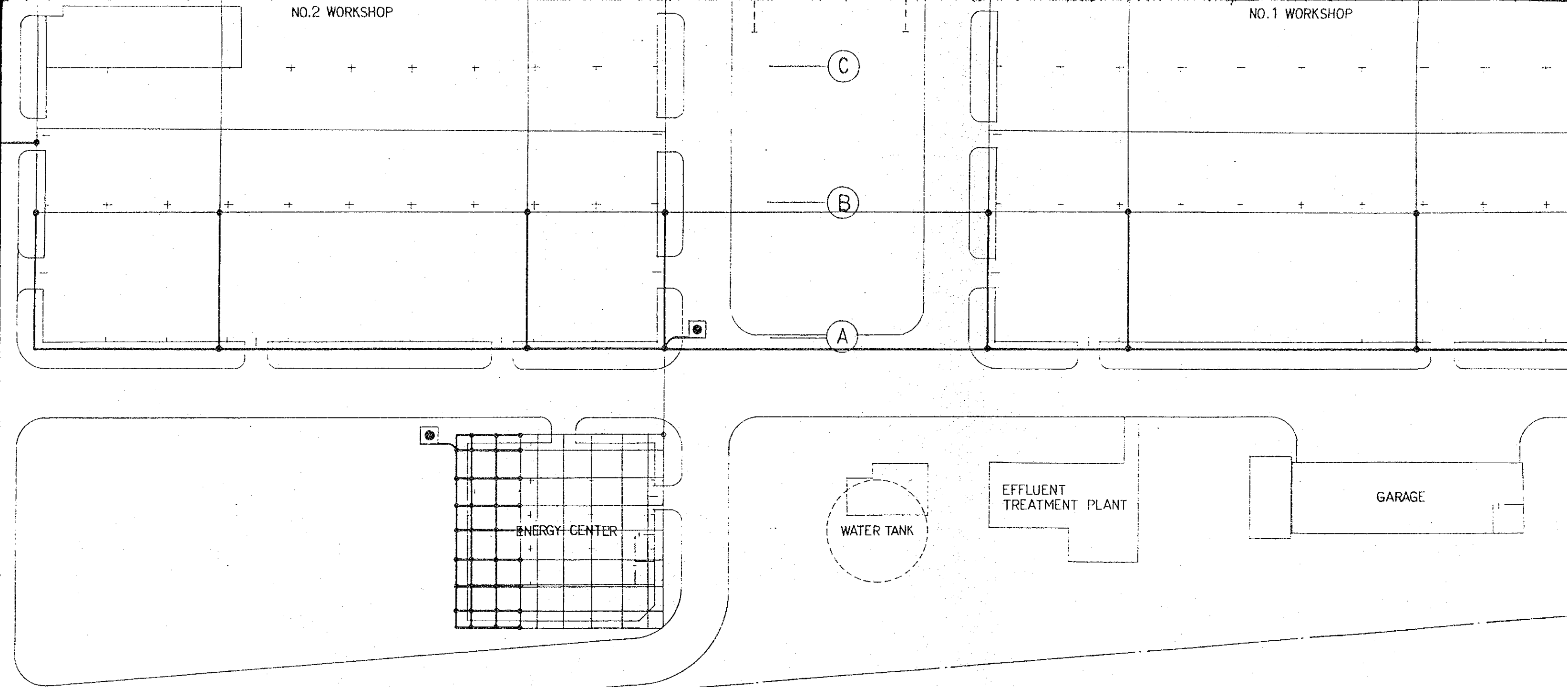
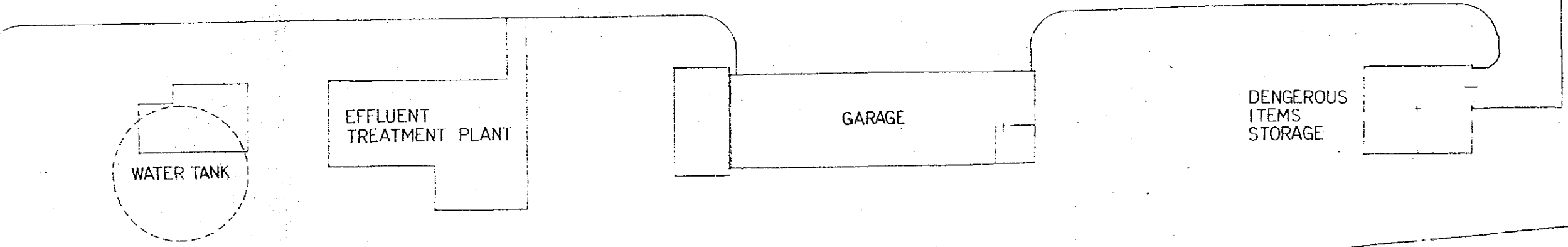
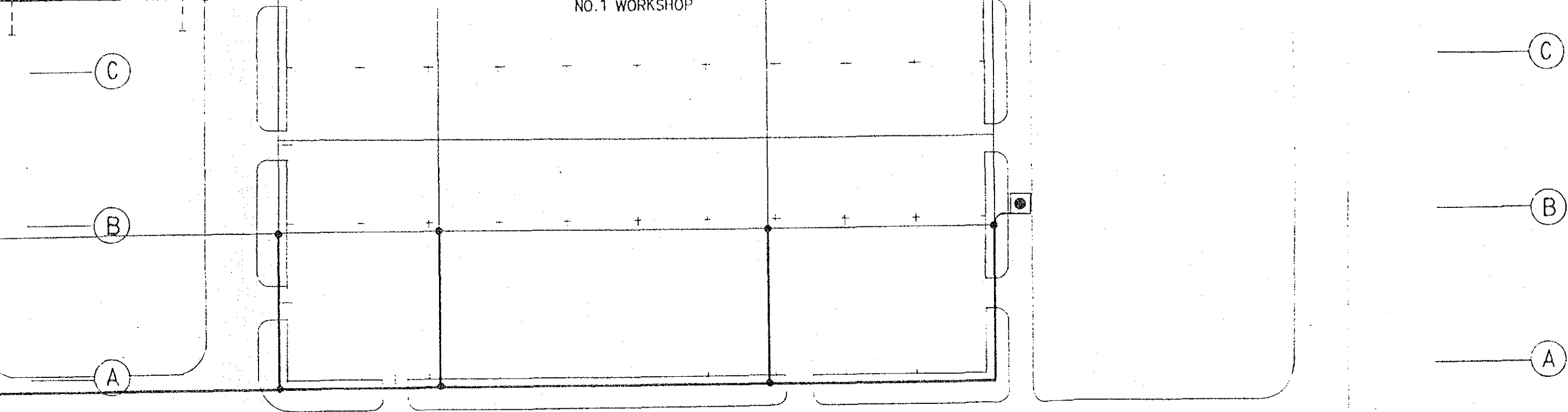


FIG.25 GROUNDING SYSTEM PLAN SCALE 1:500

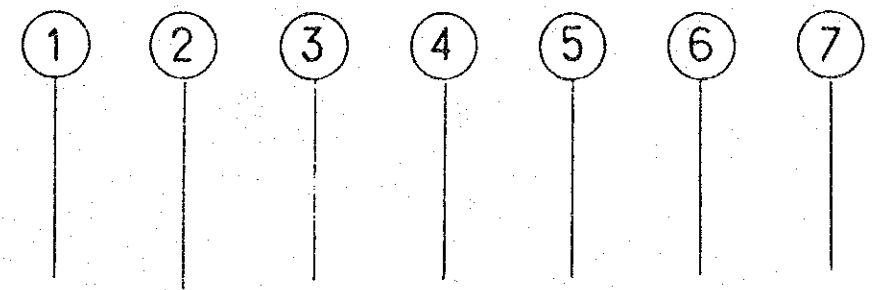
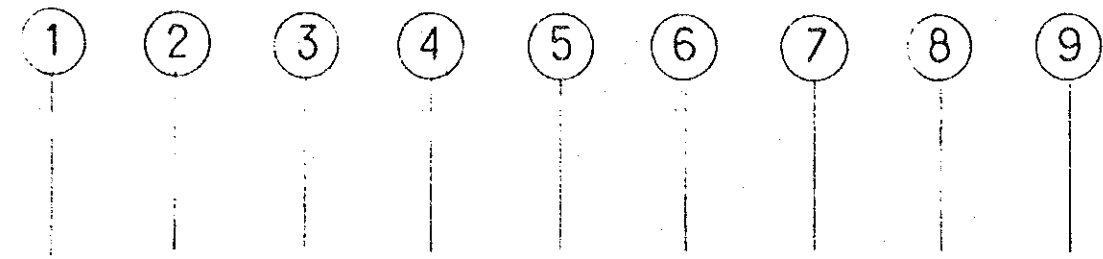
NO.1 WORKSHOP



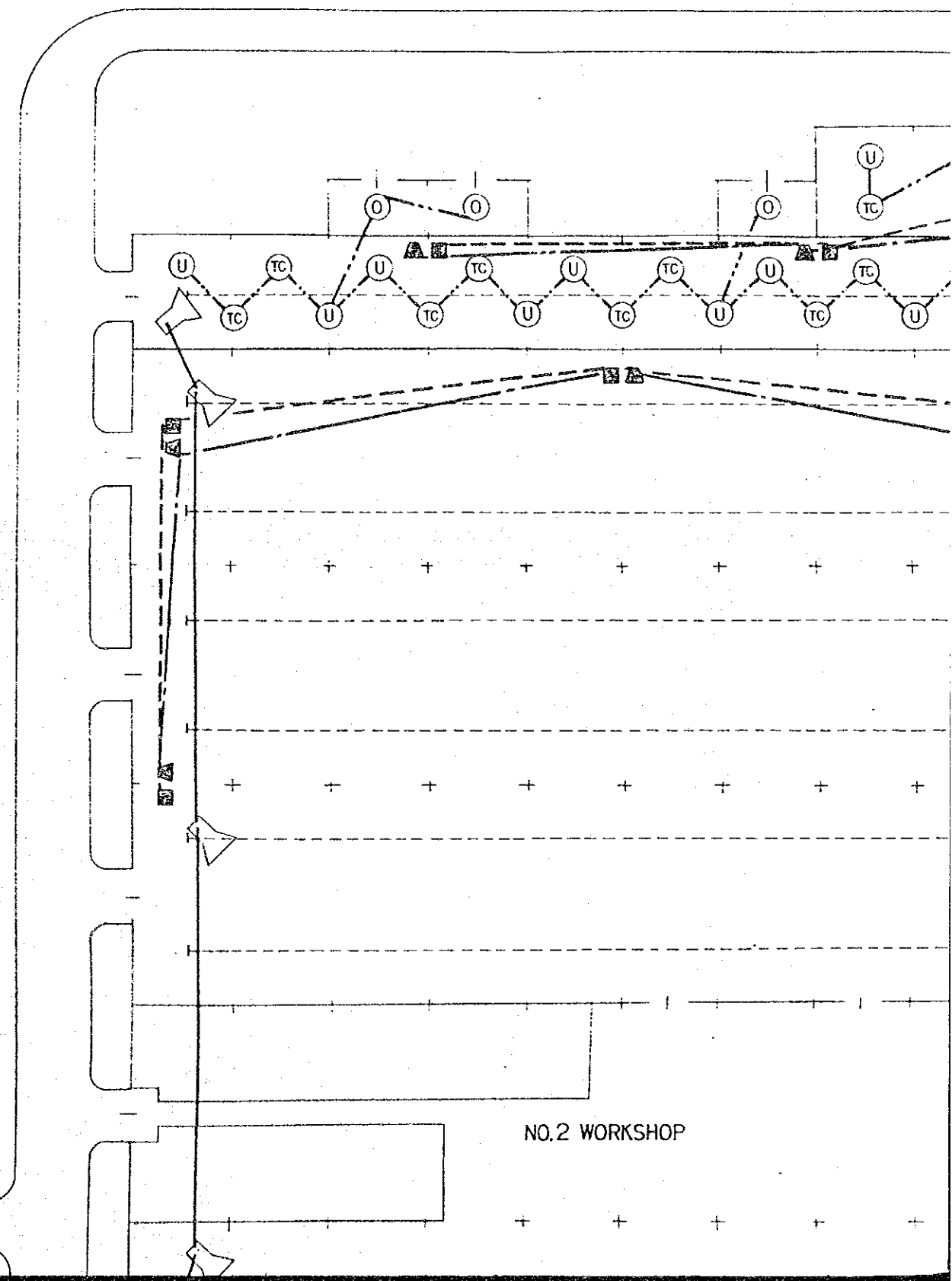
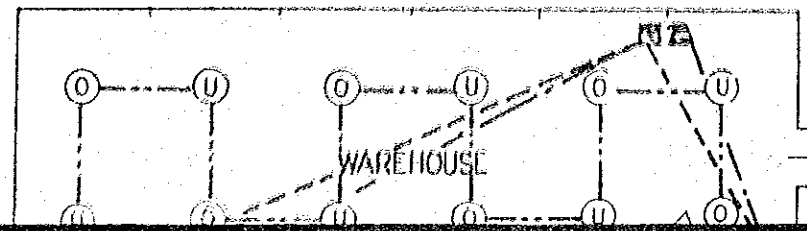
PLAN SCALE 1 : 500

SYMBOLS

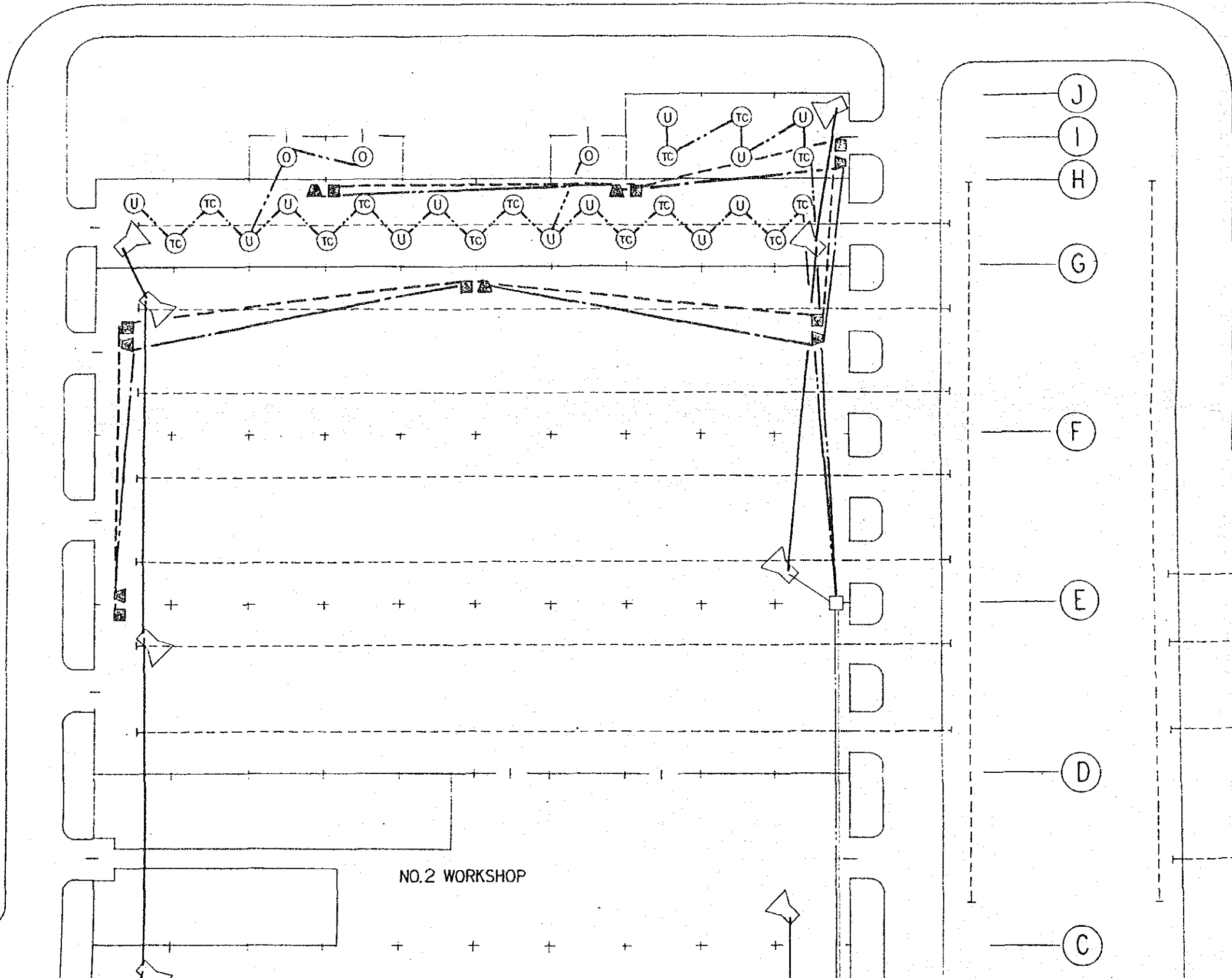
- ▼ MANUAL ALARM UNIT
- INTERCONNECTION UNIT
- PHOTOELECTRIC SMOKE-DETECTOR
- ⊙ FIXED TEMPERATURE SPOT-DETECTOR
- ⊙ TC RATE-OF-RISE SPOT-DETECTOR
- UNDERGROUND BURIAL CABLE
- - - DETECTOR LINE
- · - · - FIRE SIGNAL LINE
- - - INTERCONNECTING LINE
- SPEAKER LINE
- 🔊 SPEAKER



(A) —

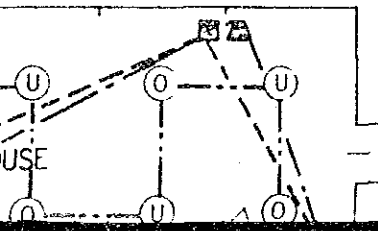


① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

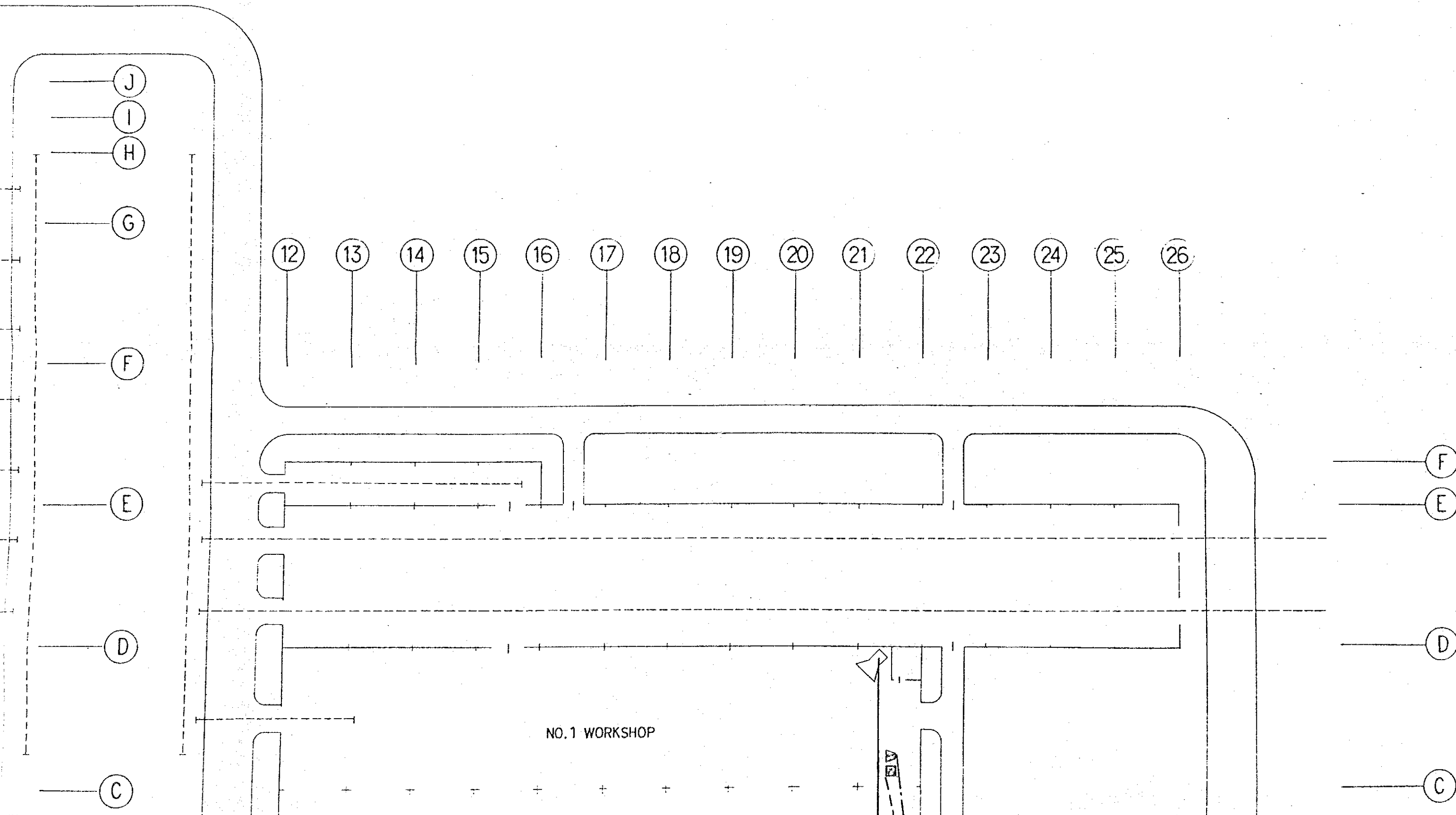


⑫ ⑬ ⑭ ⑮ ⑯

⑤ ⑥ ⑦



NO.1 W



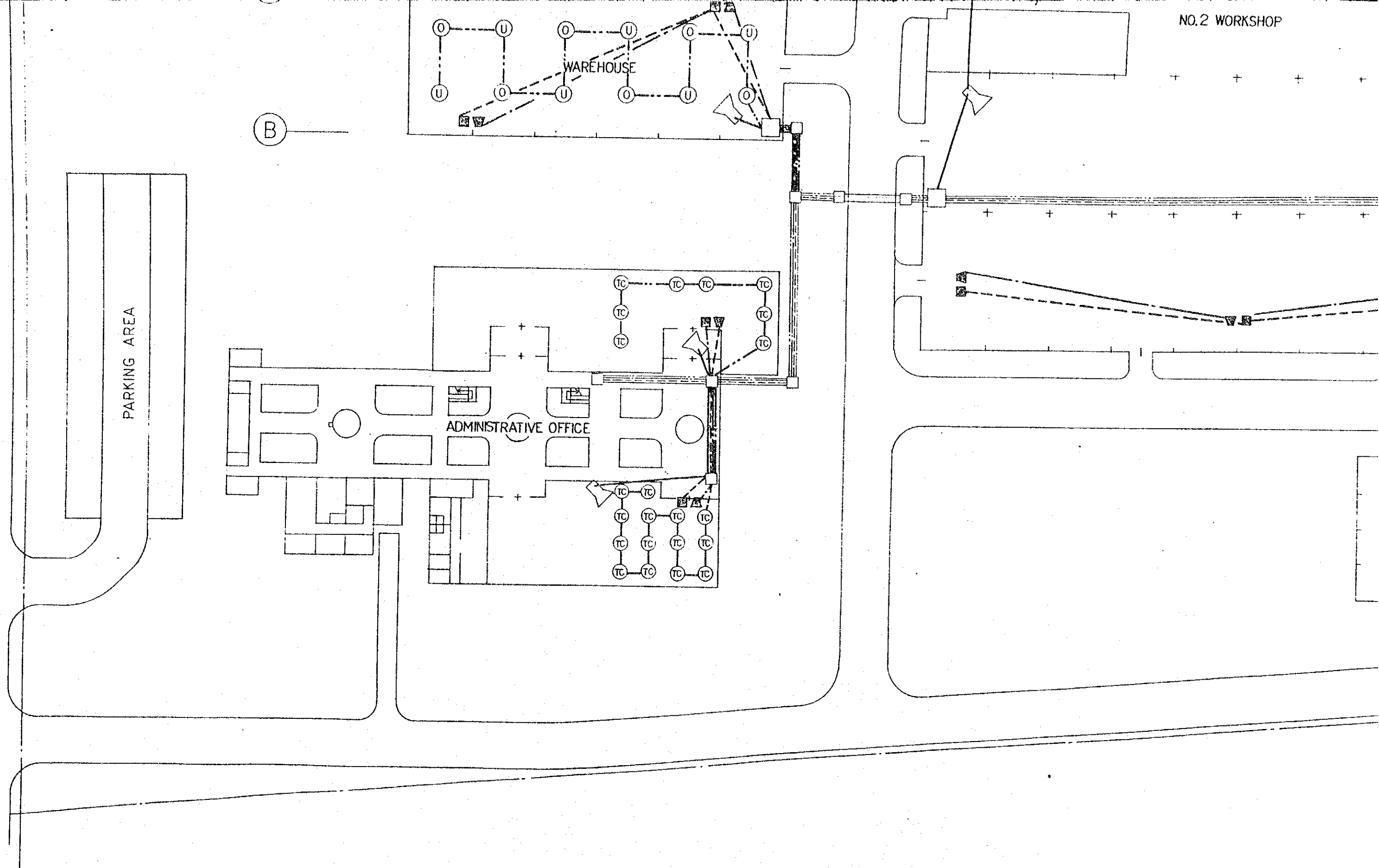


FIG.26 COMM

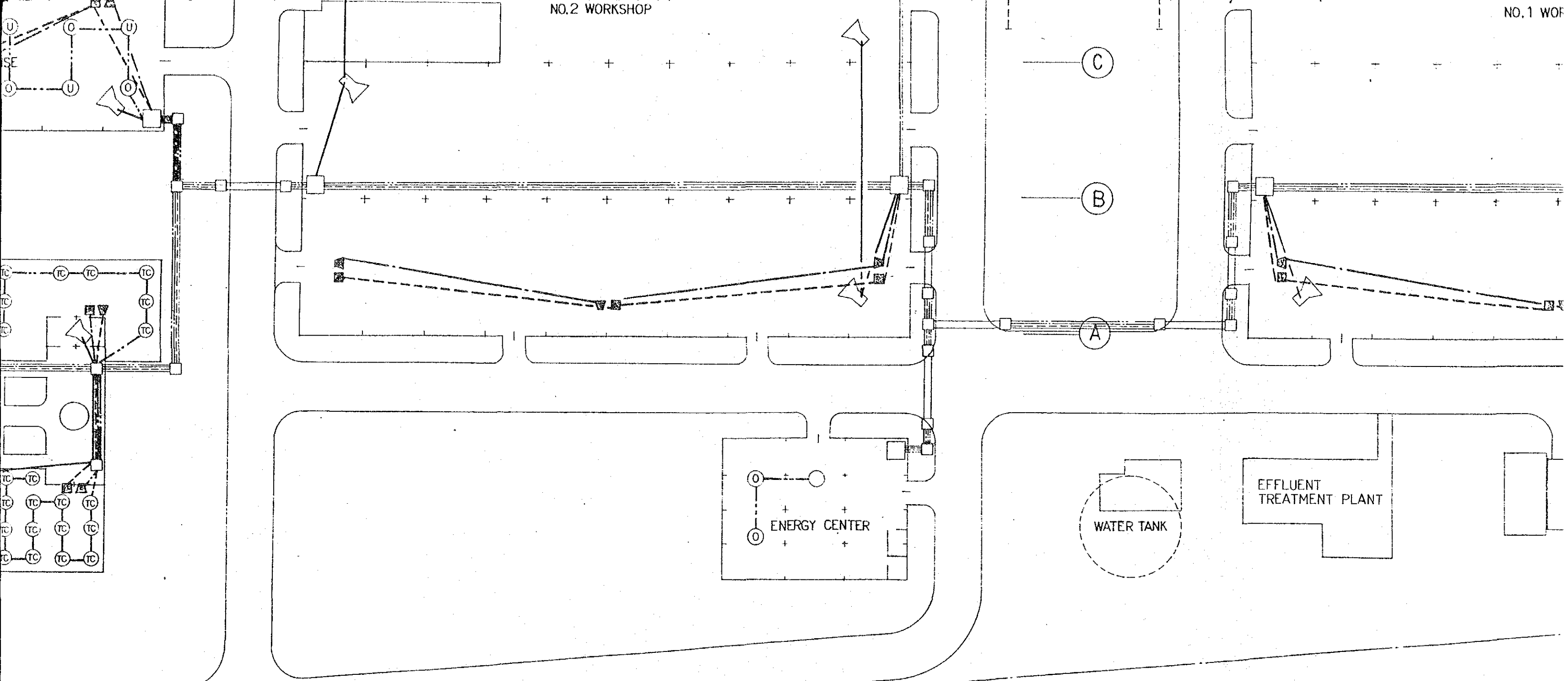
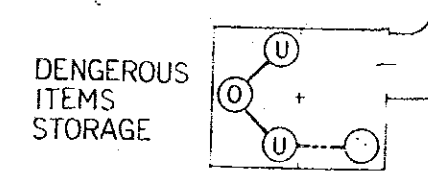
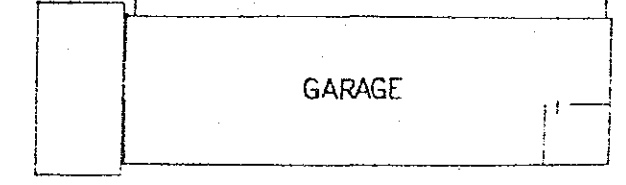
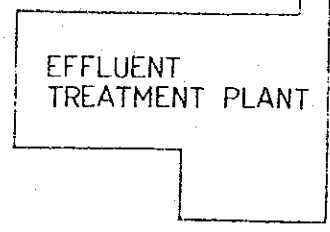
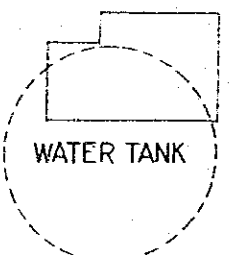
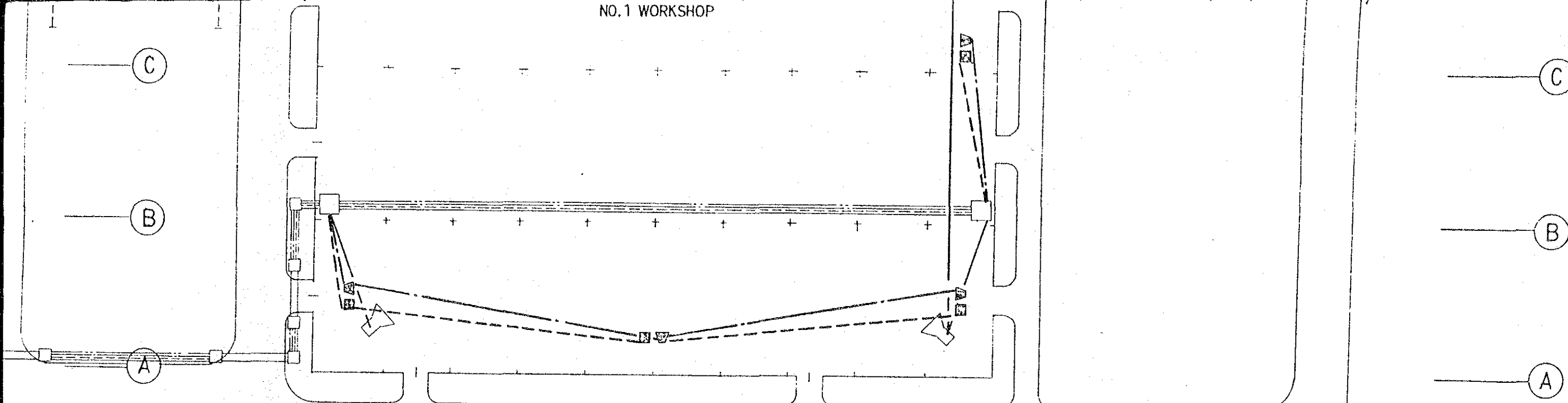
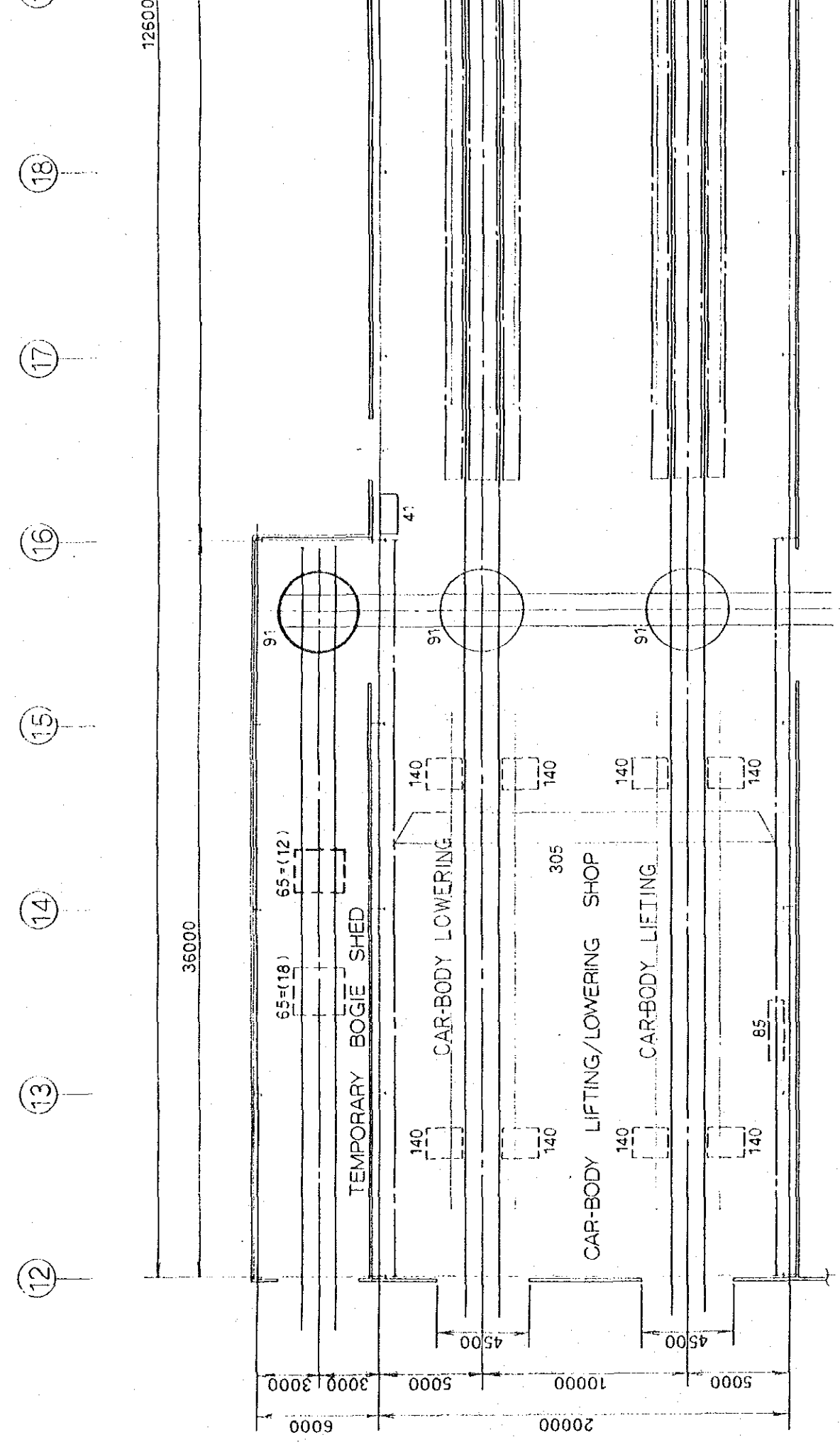


FIG.26 COMMUNICATION SYSTEM PLAN SCALE 1:500

NO.1 WORKSHOP



ITEM PLAN SCALE 1:500



- EQUIPMENT TO BE INSTALLED AT 1ST STEP
- ADDITIONAL EQUIPMENT
- TRANSFERRED EQUIPMENT (INSTALLED AT 1ST STEP)
- MOVABLE EQUIPMENT
- FIXED EQUIPMENT

FIG. 27
 MACHINE LAYOUT PLAN (1/4) SCALE 1:25
 ENTRANCE/ LEAVING INSPECTION SHOP,
 CAR-BODY LIFTING/ LOWERING SHOP

19

20

21

22

23

24

25

26

126000

90000

F

E

LEAVING INSPECTION

72

ENTRANCE/LEAVING INSPECTION SHOP

ENTRANCE INSPECTION

43	211	209	208	207	154-3	154-1	153	152	151	314	314	314	154-4

303

D

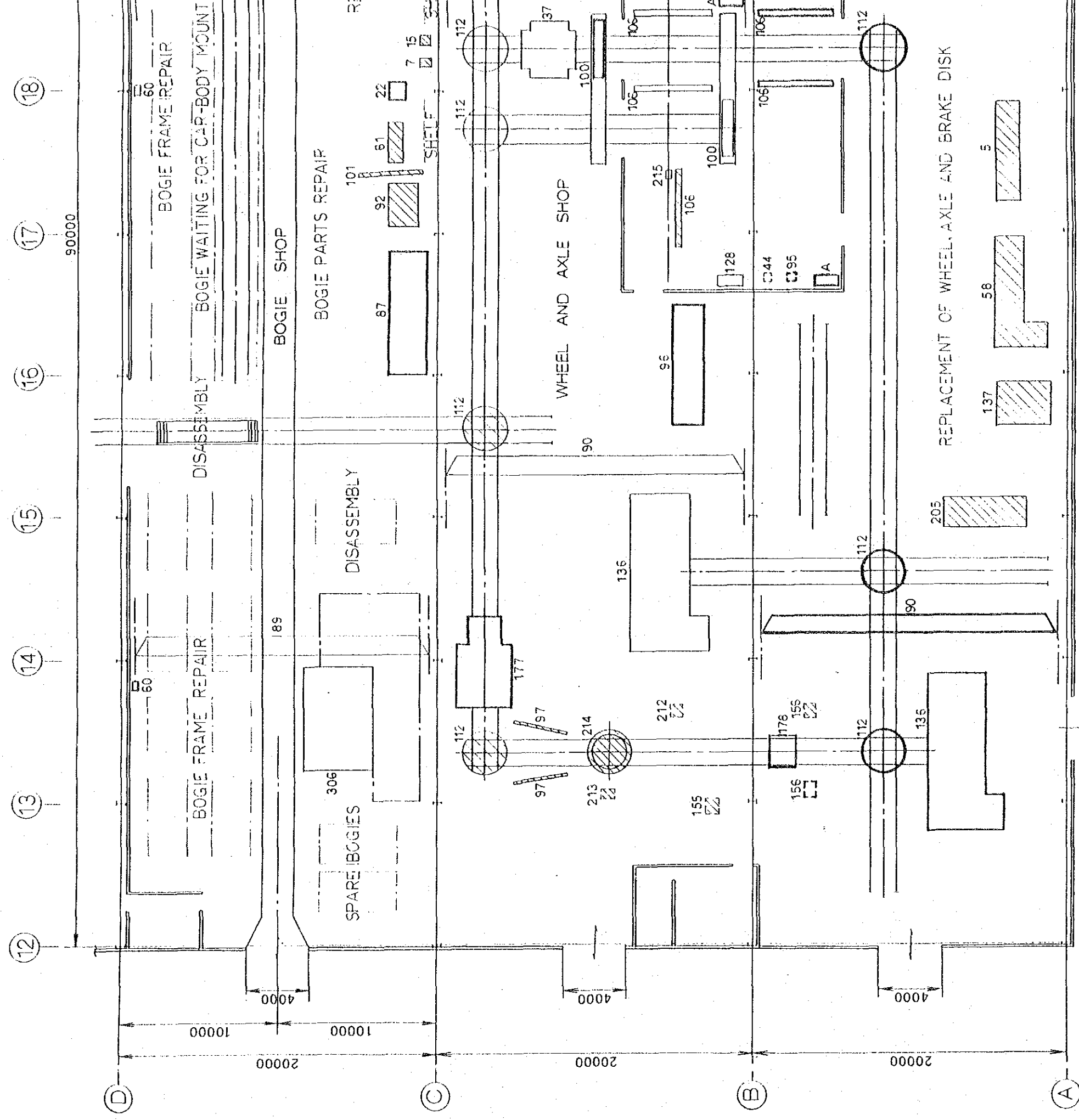
ILLED

EP)

1: 250

91	BOGIE	TURNTABLE	1
65	TEMPORARY	BOGIE	30
TEMPORARY BOGIE SHED			
305	OVERHEAD	TRAVELLING CRANE	1
140	LIFTING	JACK	8
91	BOGIE	TURN TABLE	2
85	SCAFFOLDING	CAR BODY REPAIR	1
CAR-BODY LIFTING/LOWERING SHOP			
NO.	NAME OF EQUIPMENT		QTY

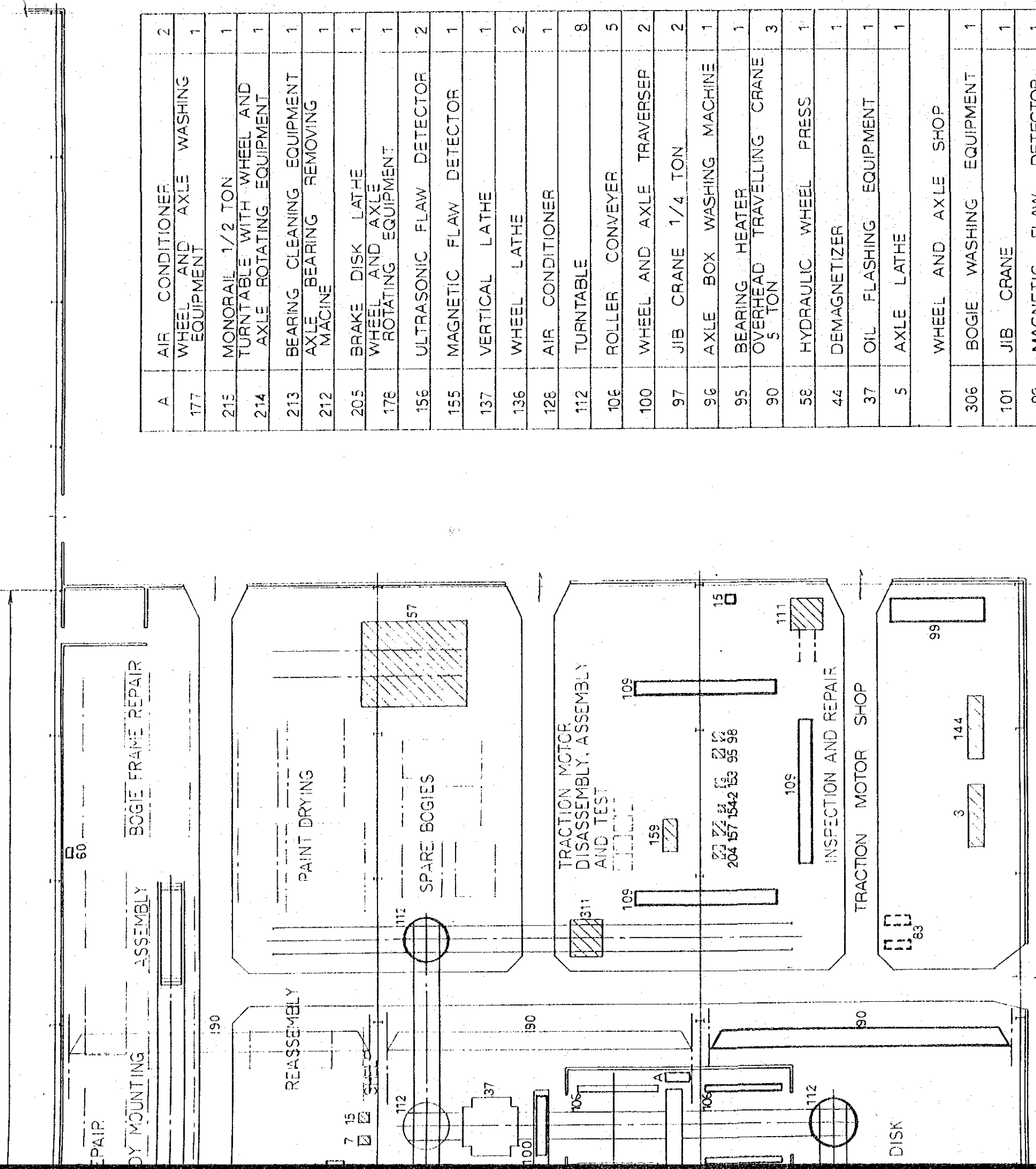
314	AIR BRAKE	TESTER	2
303	UNDER FLOOR	EQUIPMENT AIR BLAST FACILITY	1
211	MAIN	CONTROLLER TESTER	1
209	MAIN	RECTIFIER TESTER	1
208	RUNNING	RECORD ANALYSER	1
207	ELECTRIC	CAR PERFORMANCE TESTER	1
154-4	DIELECTRIC	STRENGTH TESTER	1
154-3	DIELECTRIC	STRENGTH TESTER	1
154-1	DIELECTRIC	STRENGTH TESTER 54KV	1
153	INSURATION	RESISTANCE TESTER	1
152	VEHICLE	BORNE A.T.S. DEVICE TESTER	1
151	ELECTRIC	CAR WIRING TESTER	1
72	POWER	SOURCE DEVICE FOR TESTING	1
43	VACUUM	CLEANER	1
41	AIR	COMPRESSOR	1
ENTRANCE/LEAVING INSPECTION SHOP			
NO.	NAME OF EQUIPMENT		QTY



[---] EQUIPMENT TO BE INSTALLED AT 1ST STEP
 [---] ADDITIONAL EQUIPMENT
 [---] TRANSFERRED EQUIPMENT (INSTALLED AT 1ST STEP)
 [---] MOVABLE EQUIPMENT
 [---] FIXED EQUIPMENT

311	TRAVERSER FOR ROTATING MAC
204	LAYER SHORT -CIRCUITING TESTER
159	TRACTION MOTOR
157	INSULATION DETERIC TESTER
154-2	DIELECTRIC STRENGTH
153	INSULATION RESISTANC
144	DYNAMIC BLANCING
111	AIR BRAST BOOTH

FIG. 28
 MACHINE LAYOUT PLAN (2/4) SCALE 1:250
 BOGIE SHOP, WHEEL AND AXLE SHOP, TRACTION SHOP



ING MACHINE	1
RT TESTER	1
MOTOR TESTER DETERIORATION	1
STRENGTH TESTER	1
RESISTANCE TESTER	1
ANCING MACHINE	1
BOOTH	1

109	SLAT CONVEYER	3
99	PARTS CLEANER	1
98	AXLE BEARING INDUCTION HEATER	1
95	PINION HEATER	1
90	OVERHEAD TRAVELLING CRANE 5 TON	1
63	LOW PLATFORM CART	2
15	PEDESTAL GRINDNG MACHINE	1
3	LATHE	1
TRACTION MOTOR SHOP		
NO	NAME OF EQUIPMENT	QTY

A	AIR CONDITIONER	2
177	WHEEL AND AXLE WASHING EQUIPMENT	1
213	MONORAIL 1/2 TON	1
214	TURNABLE WITH WHEEL AND AXLE ROTATING EQUIPMENT	1
213	BEARING CLEANING EQUIPMENT	1
212	AXLE BEARING REMOVING MACHINE	1
205	BRAKE DISK LATHE	1
178	WHEEL AND AXLE ROTATING EQUIPMENT	1
158	ULTRASONIC FLAW DETECTOR	2
155	MAGNETIC FLAW DETECTOR	1
137	VERTICAL LATHE	1
136	WHEEL LATHE	2
128	AIR CONDITIONER	1
112	TURNABLE	8
106	ROLLER CONVEYER	5
100	WHEEL AND AXLE TRAVERSER	2
97	JIB CRANE 1/4 TON	2
96	AXLE BOX WASHING MACHINE	1
95	BEARING HEATER	1
90	OVERHEAD TRAVELLING CRANE 5 TON	3
58	HYDRAULIC WHEEL PRESS	1
44	DEMAGNETIZER	1
37	OIL FLASHING EQUIPMENT	1
5	AXLE LATHE	1
WHEEL AND AXLE SHOP		
306	BOGIE WASHING EQUIPMENT	1
101	JIB CRANE	1
92	MAGNETIC FLAW DETECTOR	1
90	OVERHEAD TRAVELLING CRANE 5 TON	1
89	OVERHEAD TRAVELLING CRANE 15 TON	1
87	PARTS CLEANER	1
61	SPRING TESTER	1
60	ELECTRIC ARC WELDER	3
57	BOGIE PAINTING EQUIPMENT	1
22	HYDRAULIC PRESS	1
15	PEDESTAL GRINDNG MACHINE	1
7	UPRIGHT DRILLING MACHINE	1
BOGIE SHOP		
NO	NAME OF EQUIPMENT	QTY

: 250
TION MOTOR

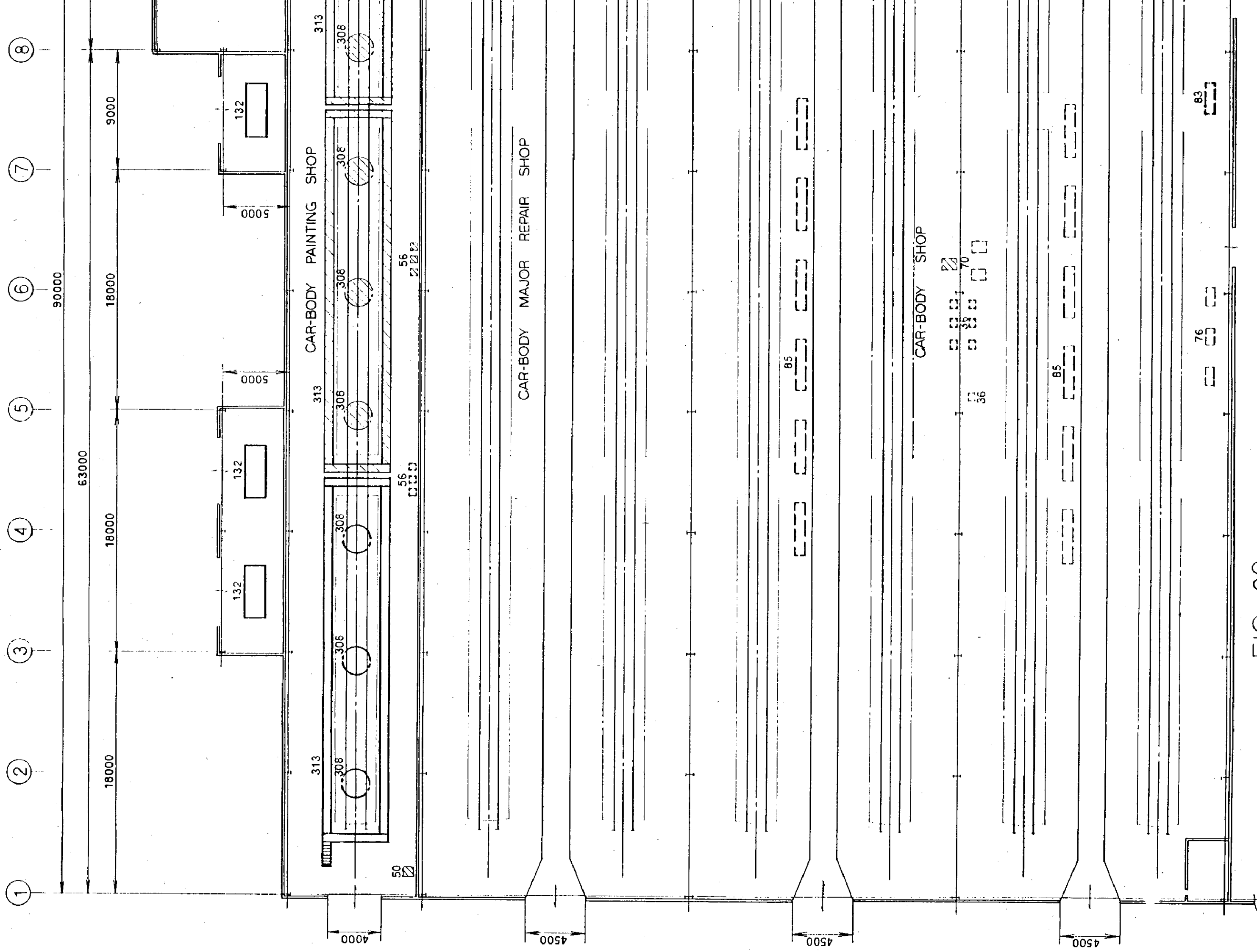
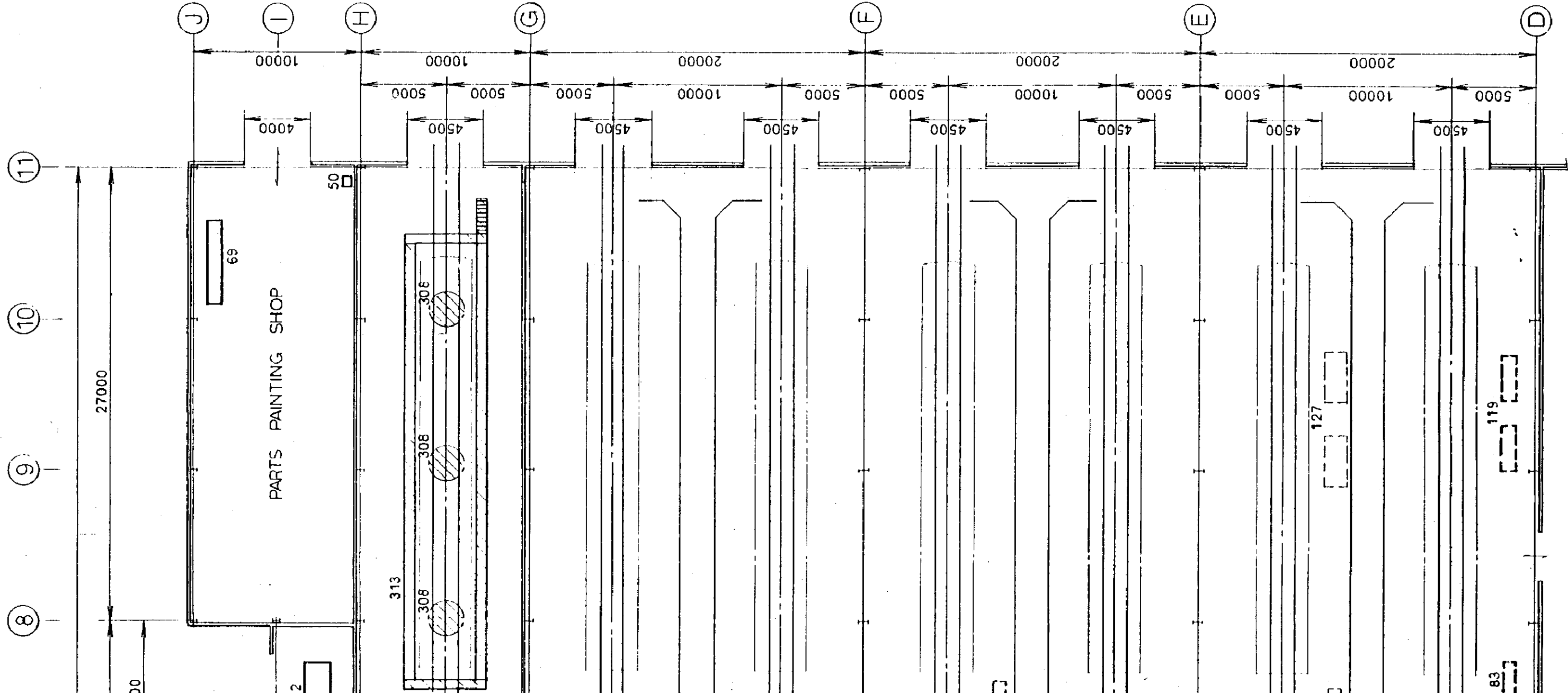
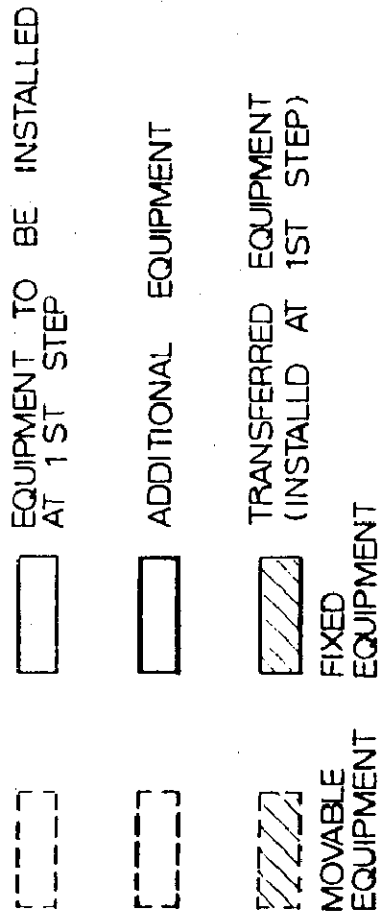


FIG. 29

MACHINE LAYOUT PLAN (3/4) SCALE 1:2
 PARTS PAINTING SHOP, CAR-BODY PAINTING SHOP
 CAR-BODY MAJOR REPAIR SHOP, CAR-BODY SHOP



69	PARTS CLEANER	1
50	PAINT MIXER	1
PARTS PAINTING SHOP		
313	SCAFFOLD FOR CAR-BODY PAINTING	3
308	AIR EXHAUST	9
132	AIR HEATING EQUIPMENT	3
56	CAR-BODY PAINTING MACHINE	6
50	PAINT MIXER	1
CAR - BODY PAINTING SHOP		
127	TRACTOR	2
119	FORKLIFT TRUCK	2
85	SCAFFOLDING CAR. FOR CAR-BODY REPAIR	12
83	LOW PLATFORM CART	1
76	CART	3
70	UNDER FLOOR EQUIPMENT MOUNTING AND DEMOUNTING EQUIPMENT	3
36	ELECTRIC WELDER	7
CAR - BODY SHOP		
NO.	NAME OF EQUIPMENT	Q'TY



SCALE 1:250
 PAINTING SHOP,
 CAR-BODY SHOP

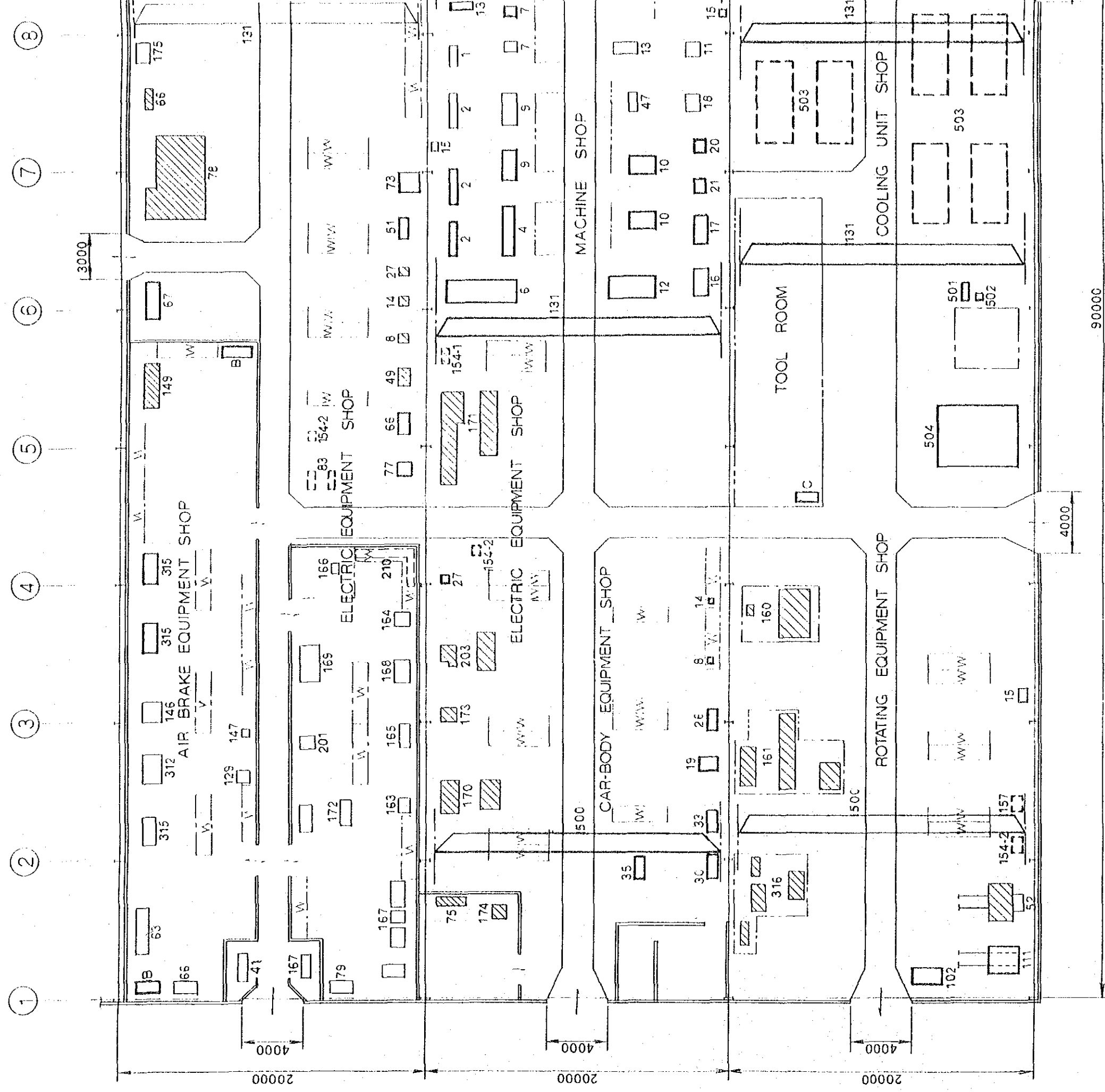
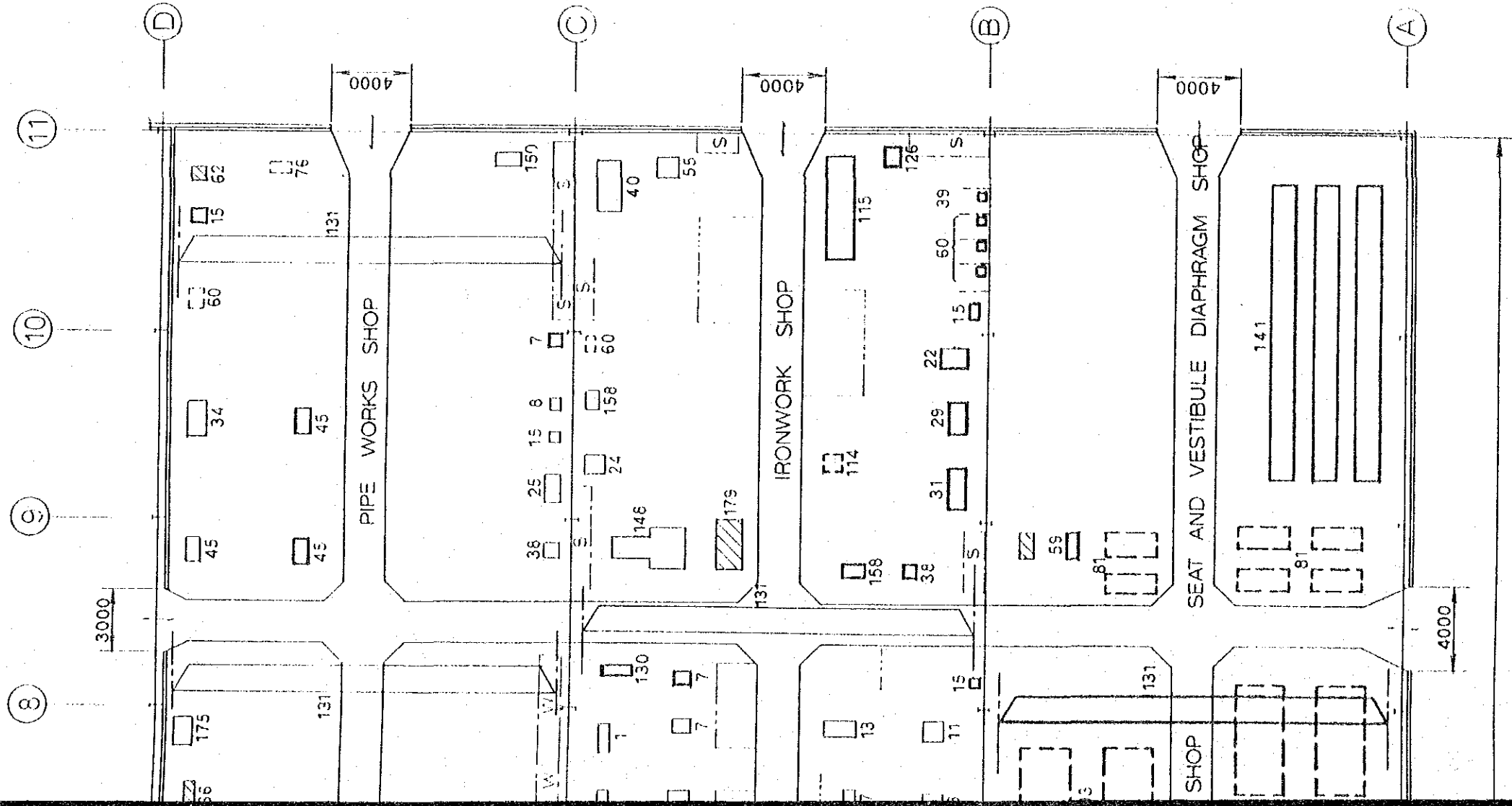


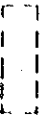





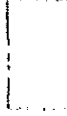
FIG. 30

MACHINE LAYOUT PLAN (4/4)

SCALE 1:250

ELECTRIC EQUIPMENT SHOP, AIR BRAKE EQUIPMENT
 MACHINE SHOP, IRONWORK SHOP, ROTATING EQUIPMENT
 AND OTHERS



-  EQUIPMENT TO BE INSTALLED AT 1ST STEP
-  ADDITIONAL EQUIPMENT
-  TRANSFERRED EQUIPMENT (INSTALLED AT 1ST STEP)
-  MOVABLE EQUIPMENT
-  FIXED EQUIPMENT
-  WORKBENCH (SHELF)
-  DEPOSITORY FOR MATERIAL OR PARTS

1:250

EQUIPMENT SHOP, SHOP

C	AIR CONDITIONER	1
	TOOL ROOM	
35	NIBBLING MACHINE	1
33	BENDING MACHINE	1
30	BENDING ROLL	1
26	SHEARING MACHINE	1
19	CRANK PRESS	1
14	BENCH GRINDING MACHINE	1
8	BENCH DRILLING MACHINE	1
	CAR-BODY EQUIPMENT SHOP	
179	DRAFT GEAR DISASSEMBLING/ ASSEMBLING MACHINE	1
158	MAGNETIC FLAW DETECTOR	2
150	OIL DUMPER TESTER	1
148	TIGHT LOCK COUPLER TESTER	1
131	OVERHEAD TRAVELLING CRANE 2 TON	1
126	AUTOMATIC GAS CUTTING MACHINE	1
115	PARTS CLEANER	1
114	RUST REMOVER	1
60	ELECTRIC WELDER	4
55	FURNACE	1
40	PNEUMATIC POWER HAMMER	1
39	ALGON GAS ARC WELDER	1
38	SPOT WELDER	2
31	PUNCHING/SHEARING MACHINE	1
29	BENDING ROLL	1
25	SHEARING MACHINE	1
24	HYDRAULIC PRESS 100 TON	1
22	HYDRAULIC PRESS	1
15	PEDESTAL GRINDING MACHINE	2
8	BENCH DRILLING MACHINE	1
7	UPRIGHT DRILLING MACHINE	1
	IRONWORK SHOP	
NO.	NAME OF EQUIPMENT	QTY

141	SEAT STORING EQUIPMENT	1
81	SEAT TRANSFER CART	6
59	INDUSTRIAL SEWING MACHINE	2
	SEAT AND VESTIBULE DIAPHRAGM SHOP	
504	COOLING UNIT TEST EQUIPMENT	1
503	COOLING UNIT REPAIRING CARRIER	6
502	AIR EXHAUST	1
501	CLEANING MACHINE	1
131	OVERHEAD TRAVELLING CRANE 2 TON	2
	COOLING UNIT SHOP	
500	OVERHEAD TRAVELLING CRANE 3 TON	1
316	AIR COMPRESSOR TESTER	1
161	MOTOR ALTERNATOR TESTER	1
160	FAN TESTING MACHINE	1
157	INSULATION DETERIORATION TESTER	1
154-2	DIELECTRIC STRENGTH TESTER	1
111	AIR BLAST BOOTH	1
102	AIR FILTER CLEANING MACHINE	1
52	DRYING OVEN	1
15	PEDESTAL GRINDING MACHINE	1
	ROTATING EQUIPMENT SHOP	
131	OVERHEAD TRAVELLING CRANE 2 TON	1
76	CART	1
62	HYDRAULIC PRESSURE TESTER	1
60	ELECTRIC WELDER	1
45	THREADING MACHINE	3
34	PIPE BENDER	1
15	PEDESTAL GRINDING MACHINE	1
	PIPE WORKS SHOP	
NO.	NAME OF EQUIPMENT	QTY

FIG.31

MACHINE NAME TABLE (FIG.30)

131	OVERHEAD TRAVELLING CRANE	2 TON	1
130	CENTERING MACHINE		1
47	HACKSAWING MACHINE		1
21	DRILL GRINDING MACHINE		1
20	CEMENTED CARBIDE TOOL GRINDING MACHINE		1
18	UNIVERSAL TOOL GRINDING MACHINE		1
17	UNIVERSAL GRINDING MACHINE		1
16	SURFACE GRINDER		1
15	PEDESTAL GLINDING MACHINE		2
13	SHAPER		1
12	HORIZONTAL BORING MACHINE		1
11	UNIVERSAL MILLING MACHINE		1
10	VERTICAL MILLING MACHINE		2
9	RADIAL DRILLING MACHINE		2
7	UPRIGHT DRILLING MACHINE		2
6	LATHE 3.000		1
4	LATHE 2.000		1
2	LATHE 1.000		3
1	LATHE 650		1
	MACHINE SHOP		
B	AIR CONDITIONER		2
315	AIR BRAKE VALVE TESTER		3
312	BRAKE VALVE TESTER		1
149	DOOR ENGINE TESTER		1
147	PRESSURE GAUGE TESTER		1
146	SAFETY VALVE TESTER		1
129	WIPER TESTER		1
67	PARTS CLEANER		1
66	DUST ARRESTING EQUIPMENT		1
63	ULTRASONIC WASHING EQUIPMENT		1
41	AIR COMPRESSOR		1
	AIR BRAKE EQUIPMENT SHOP		
NO.	NAME OF EQUIPMENT		QTY

500	OVERHEAD TRAVELLING CRANE	3 TON	1
210	VARIOUS ELECTRIC MEASURING APPARATUS		1
203	MAIN CONTROLLER TESTER		1
201	CONTACTLESS RELAY TESTER		1
175	ELECTRIC POWER SOURCE DEVICE FOR TESTING		1
174	BATTERY CAPACITY TESTER		1
173	POWER SOURCE DEVICE FOR TESTING		1
172	VACUUM CIRCUIT BREAKER TESTER		1
171	MAIN RECTIFIER TESTER		1
170	MOTOR ALTERNATOR CONTROL EQUIPMENT TESTER		1
169	RELAY TESTER		1
168	DISTRIBUTING CIRCUIT BREAKER TESTER		1
167	A.T.S. TESTER		1
166	LIGHTNING ARRESTER TESTER		1
165	ELECTRO MAGNETIC VALVE TESTER		1
164	ELECTRIC METER CALIBRATING APPARATUS		1
163	SPEEDOMETER GENERATOR TESTER		1
154-2	DIELECTRIC STRENGTH TESTER		2
154-1	DIELECTRIC STRENGTH TESTER		1
131	OVERHEAD TRAVELLING CRANE	2 TON	1
83	LOW PLATFORM CART		2
79	AIR CONDITIONER		1
78	WASHING EQUIPMENT		1
77	PARTS CLEANER		1
75	WATER PURIFING EQUIPMENT		1
73	ELECTRIC COIL DRYING OVEN		1
66	DUST ARRESTING EQUIPMENT		2
51	COILING MACHINE		1
49	SOFT GRIT BLASTING MACHINE		1
27	BUFFING MACHINE		2
14	BENCH GRINDING MACHINE		1
8	BENCH DRILLING MACHINE		1
	ELECTRIC EQUIPMENT SHOP		
NO.	NAME OF EQUIPMENT		QTY

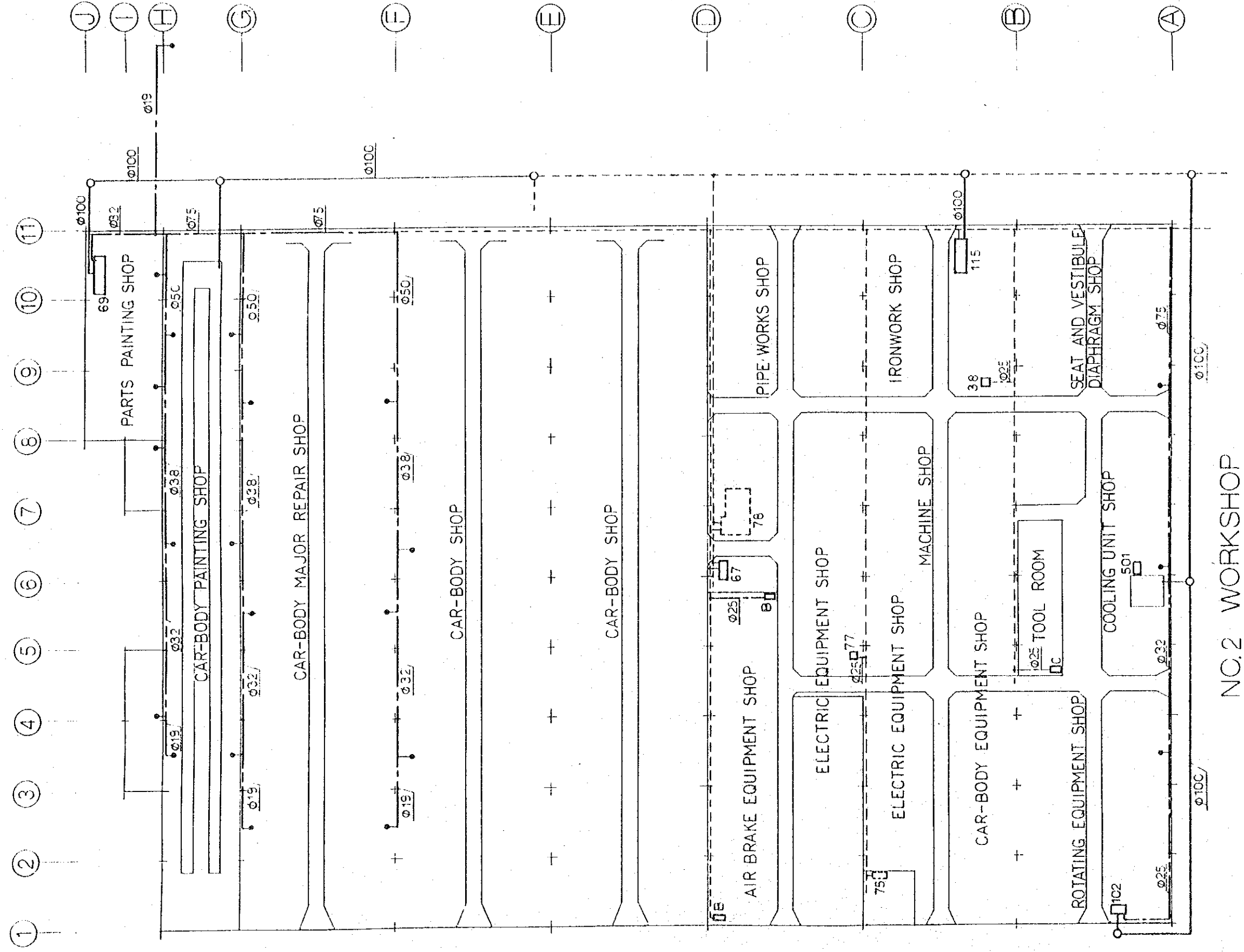
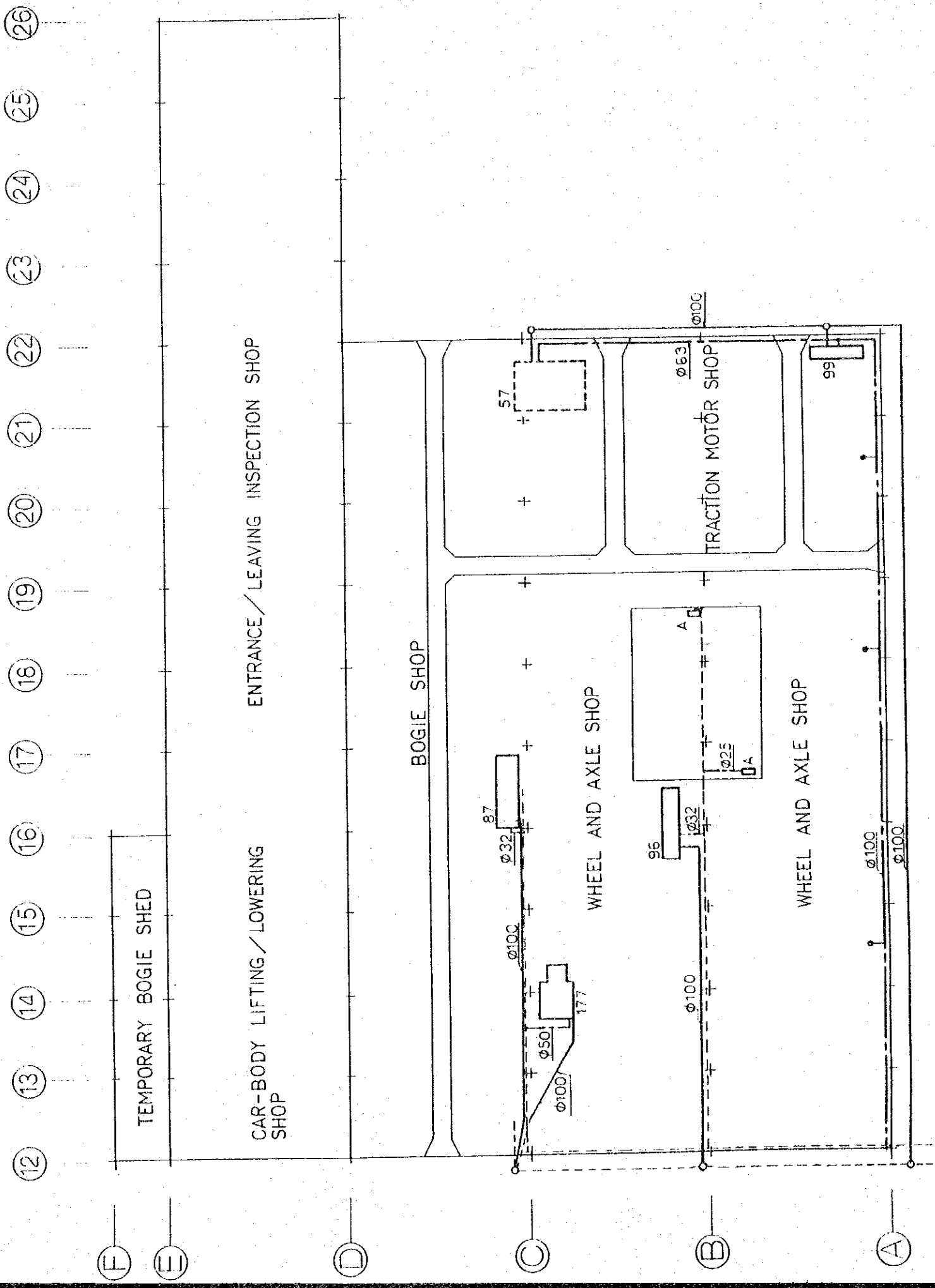


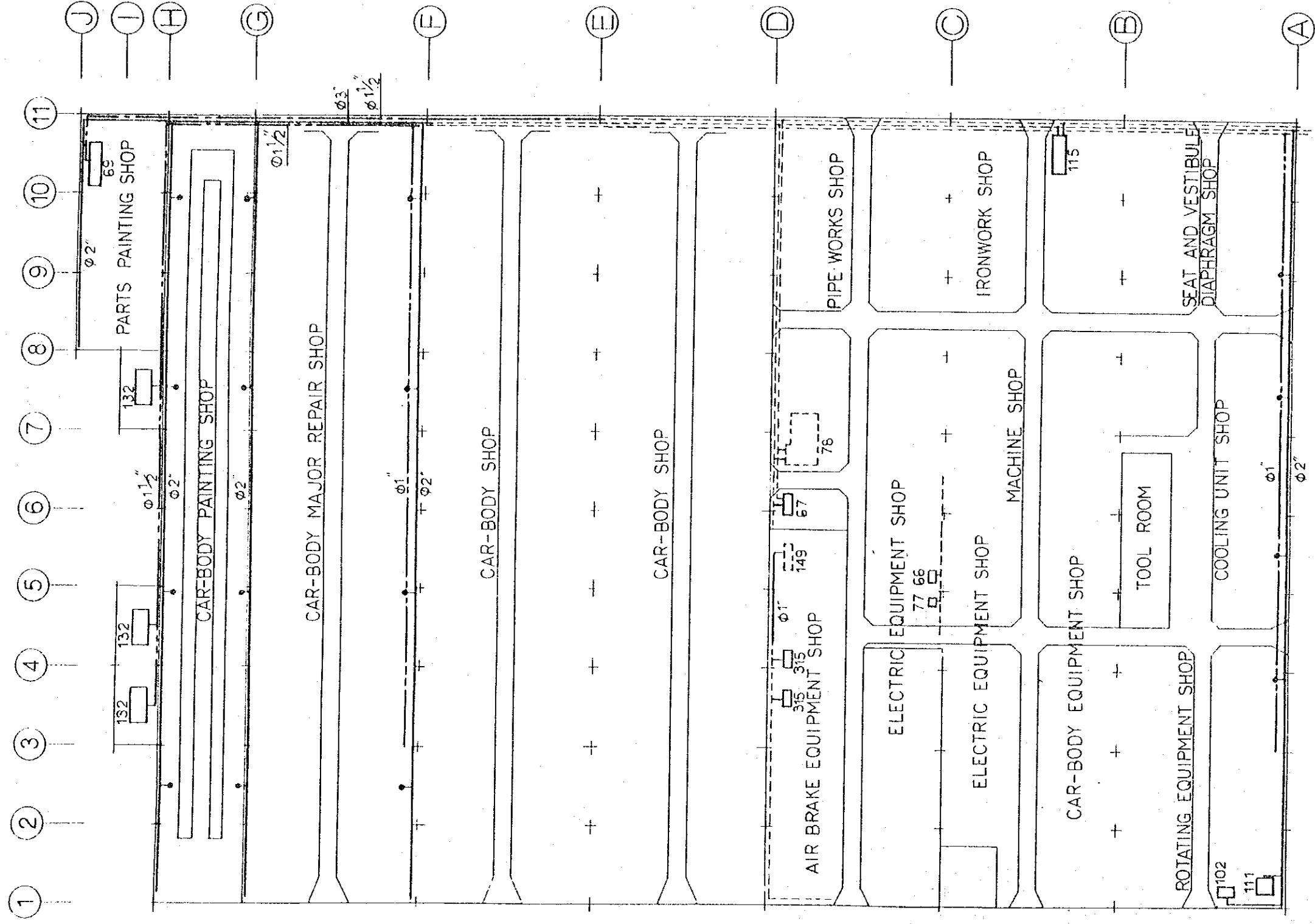
FIG. 32
INDUSTRIAL WATER PIPING



NO.1 WORKSHOP

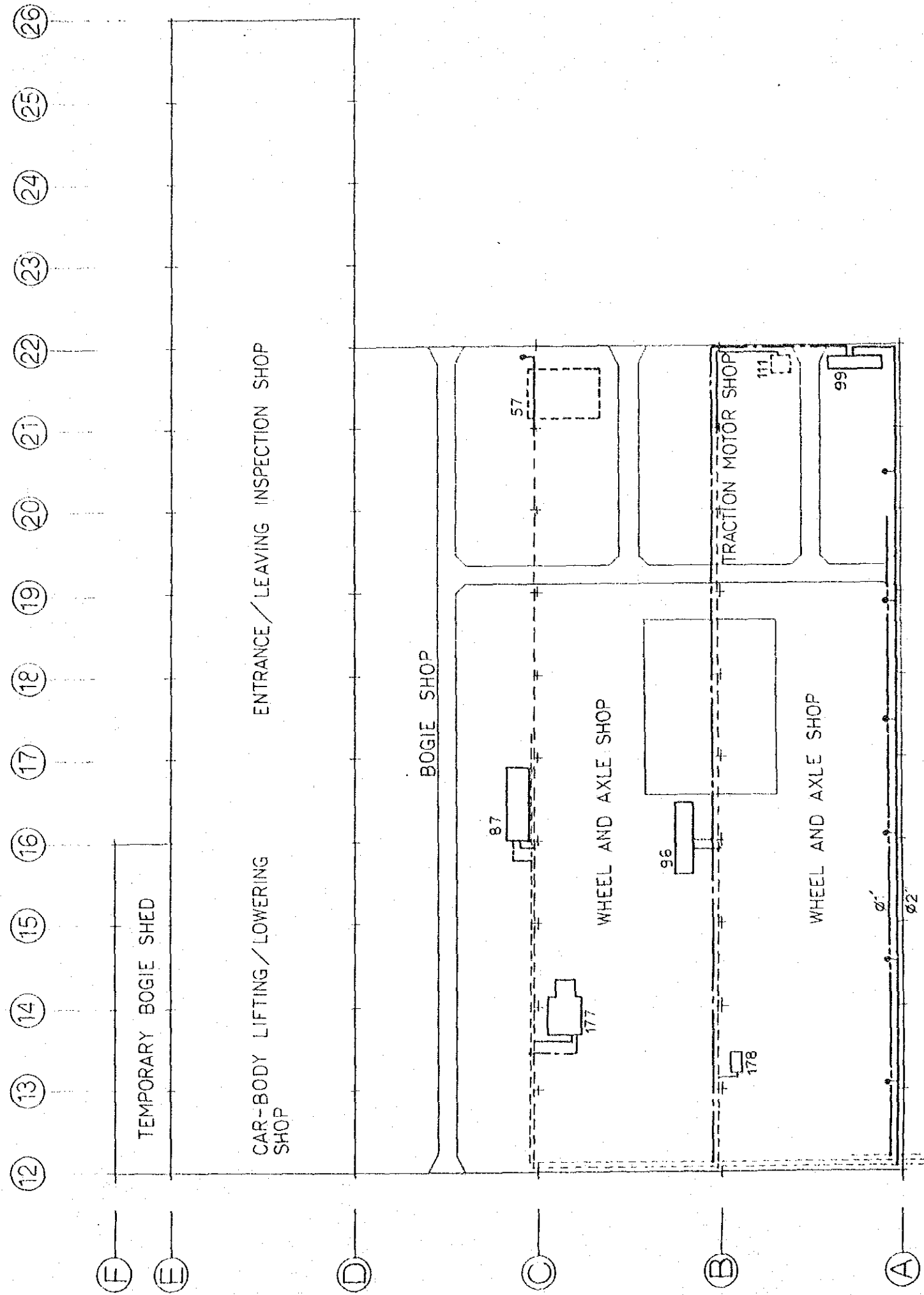
- INDUSTRIAL DRAIN PIPE (EXTENSION)
- - - INDUSTRIAL WATER PIPE (EXTENSION)
- - - - INDUSTRIAL WATER PIPE AND DRAIN PIPE (INSTALLED AT 1ST STEP)
- ADDITIONAL EQUIPMENT
- TRANSFERRED EQUIPMENT
- HYDRANT

PIPING PLAN SCALE 1:400



NO. 2 WORKSHOP

FIG. 33
STEAM, NATURAL GAS
COMPRESSED AIR



NO.1 WORKSHOP

NATURAL GAS,
AIR PIPING PLAN
SCALE 1:400

- COMPRESSED AIR PIPE (EXTENSION)
- STEAM PIPE (EXTENSION)
- - - NATURAL GAS PIPE (EXTENSION)
- - - - COMPRESSED AIR, STEAM AND NATURAL GAS PIPE (INSTALLED AT 1ST STEP)
- ADDITIONAL EQUIPMENT
- TRANSFERRED EQUIPMENT

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