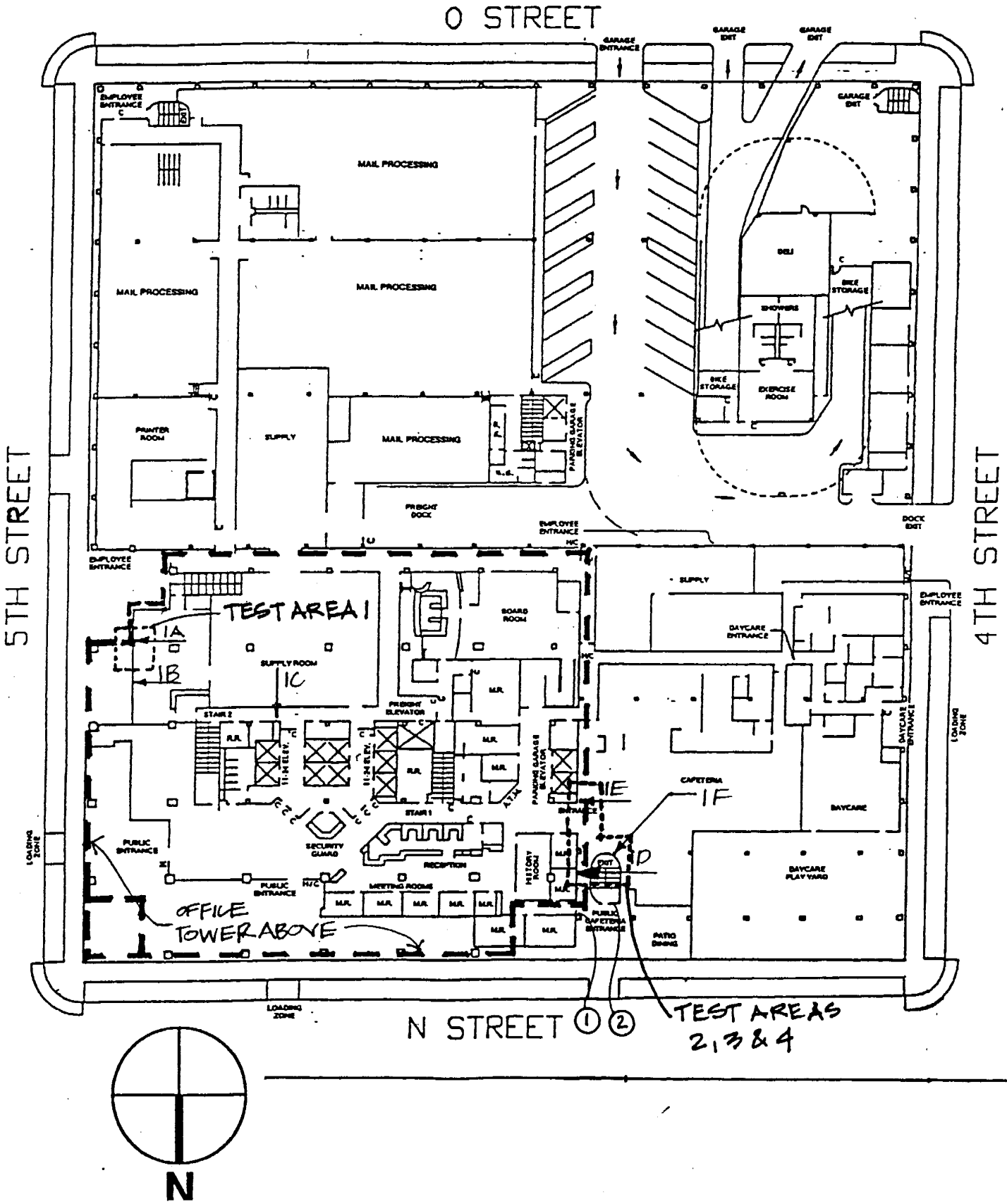
APPENDIX A

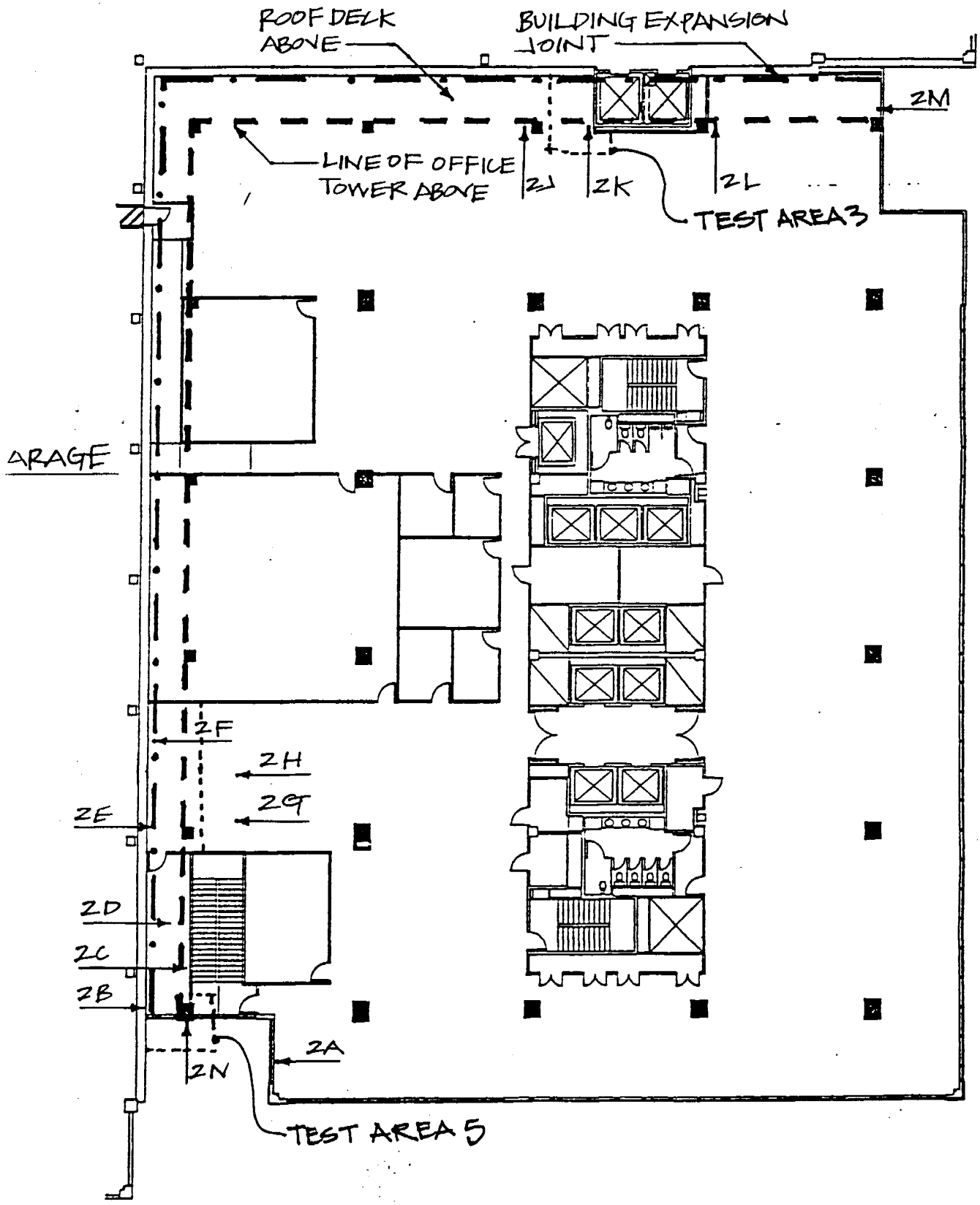
DRAWINGS

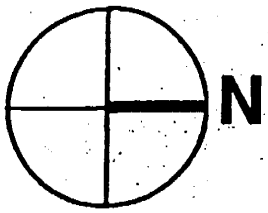
Floor Plans
Typical Curtainwall Partial Elevation and Wall Section SK0
Details SK1 to SK10

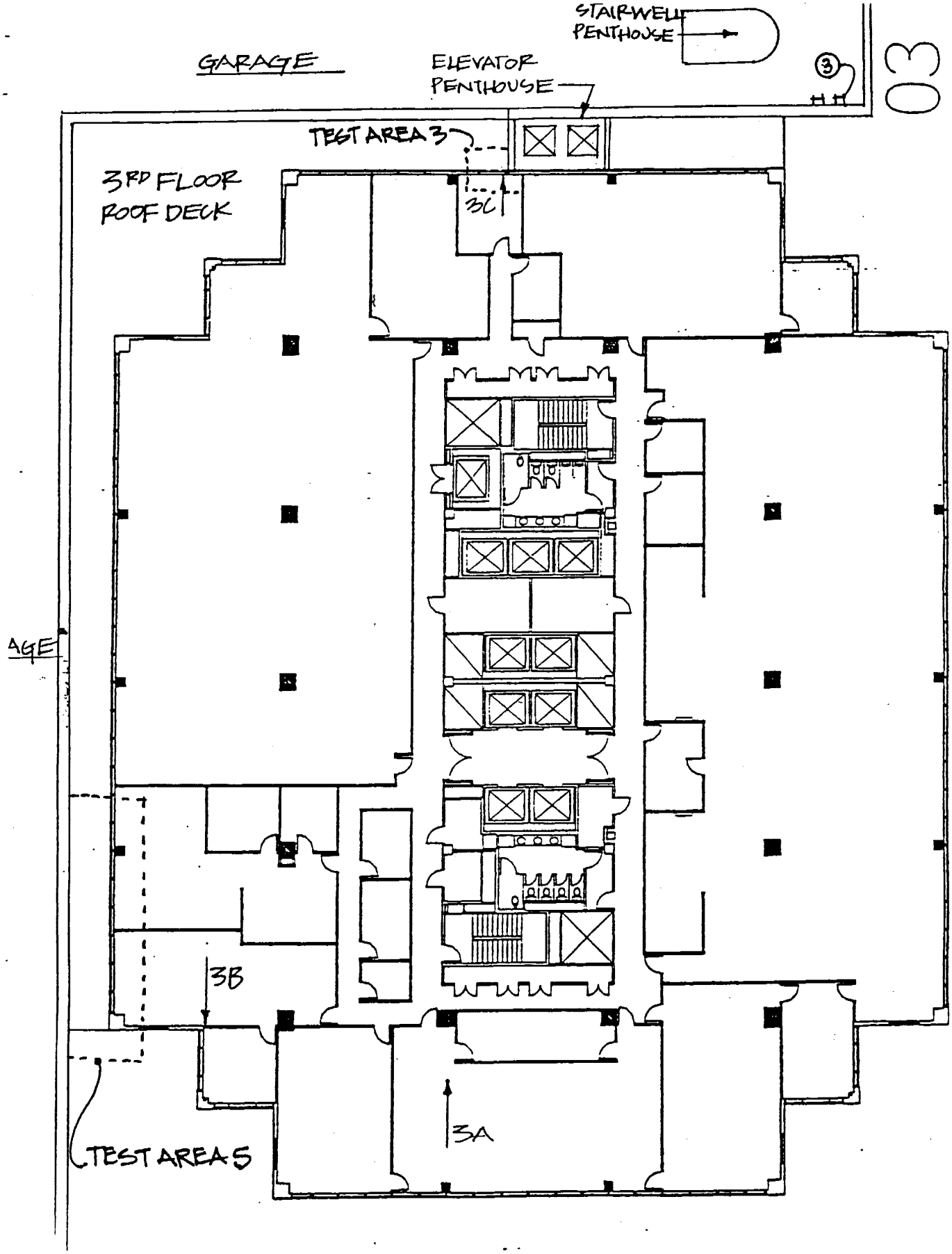
450 N Street, Sacramento, California 95814

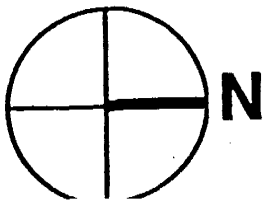


GARAGE

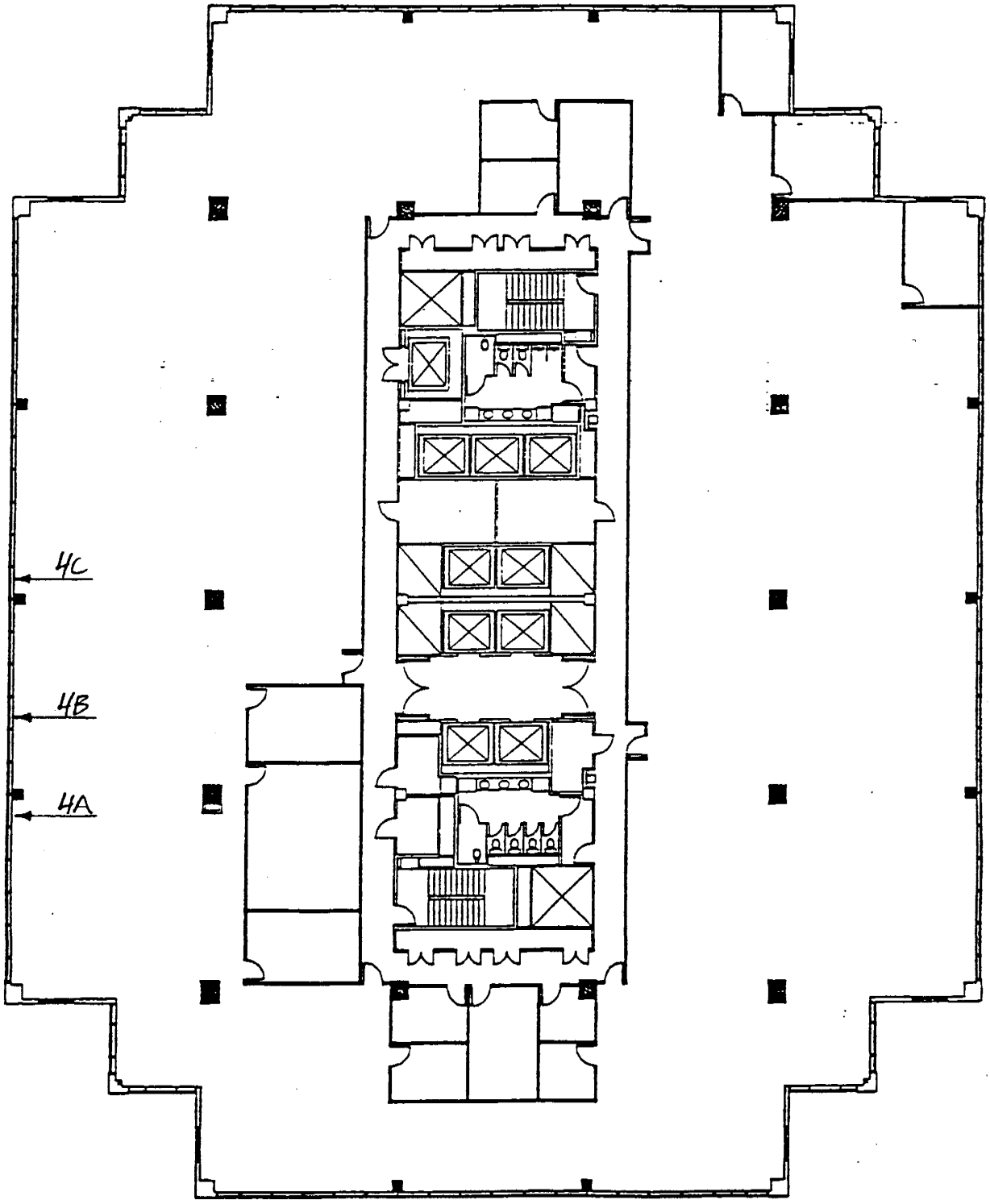

ROOF DECK ABOVE
BUILDING EXPANSION JOINT
2M
LINE OF OFFICE TOWER ABOVE
2J
2K
2L
TEST AREA 3
ARAGE
2F
2H
2G
2E
2D
2C
2B
2A
2N
TEST AREA 5

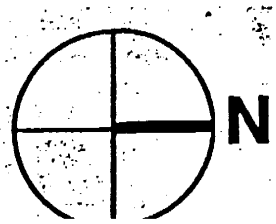

N


STAIRWELL PENTHOUSE
GARAGE
ELEVATOR PENTHOUSE
3
03
TEST AREA 3
3RD FLOOR ROOF DECK
3C
AGE
3B
3A
TEST AREA 5

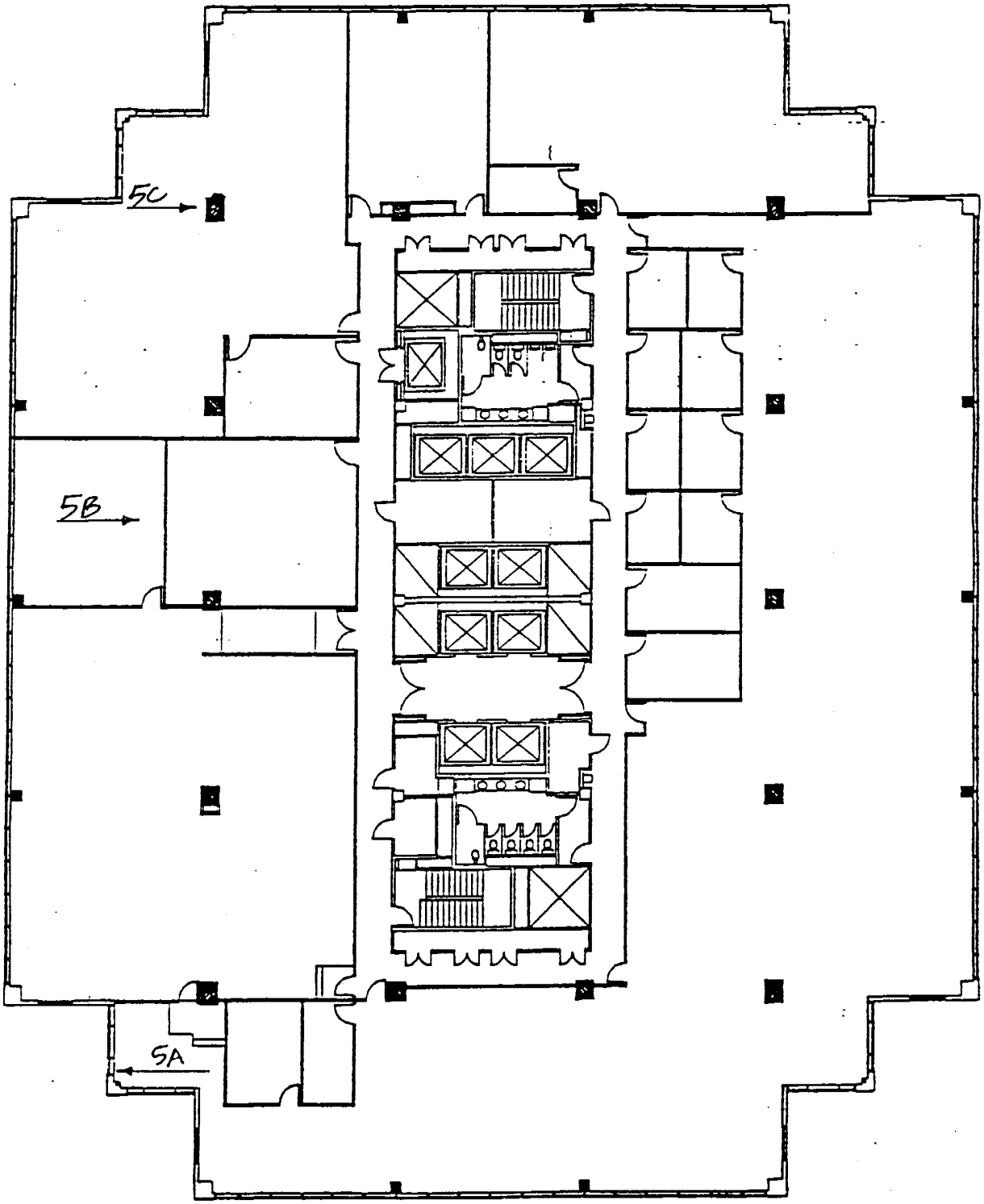

N

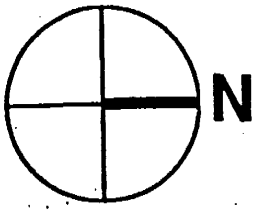
04

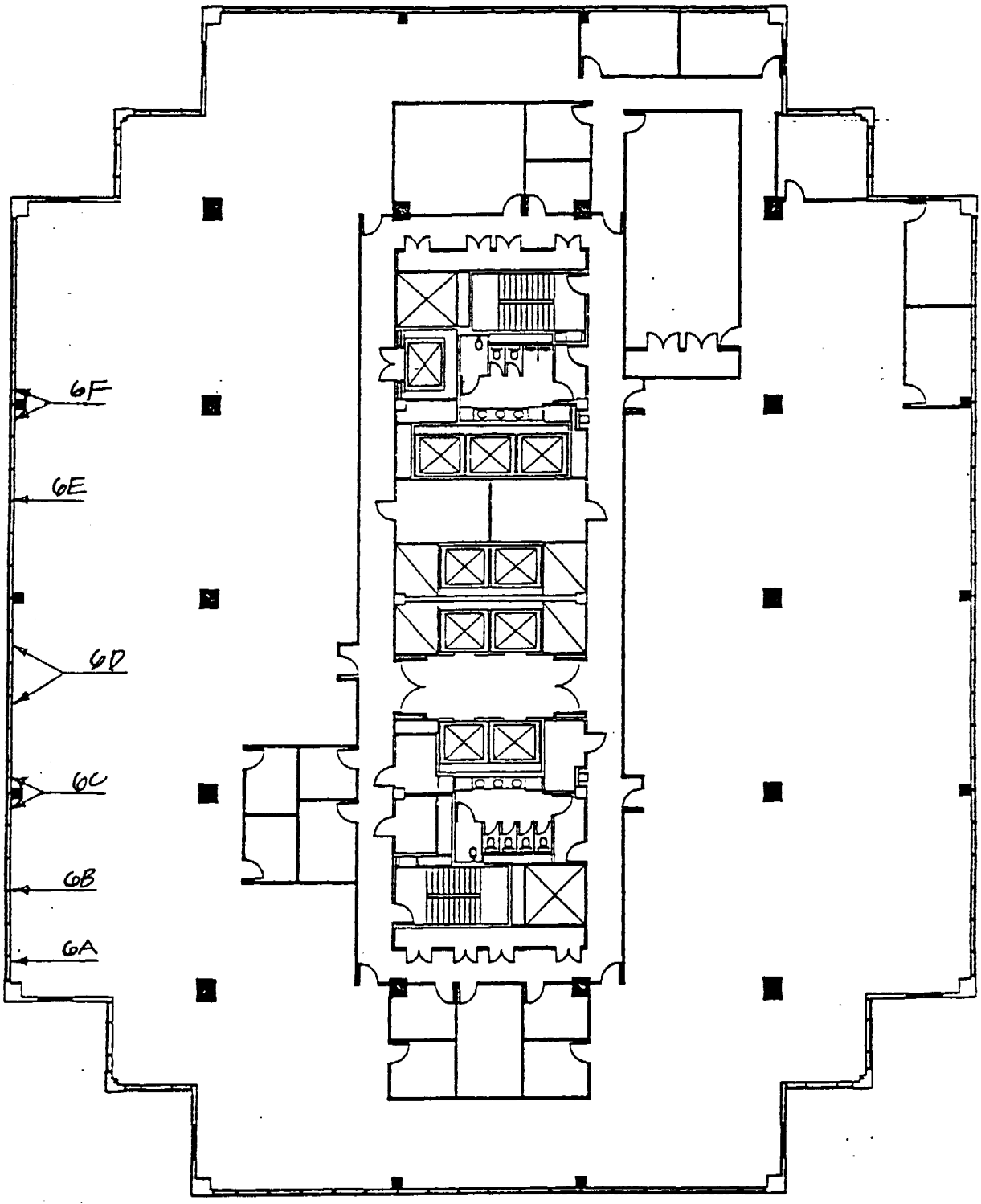


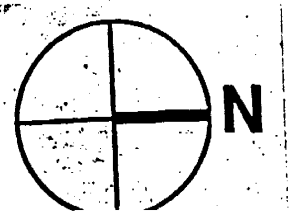


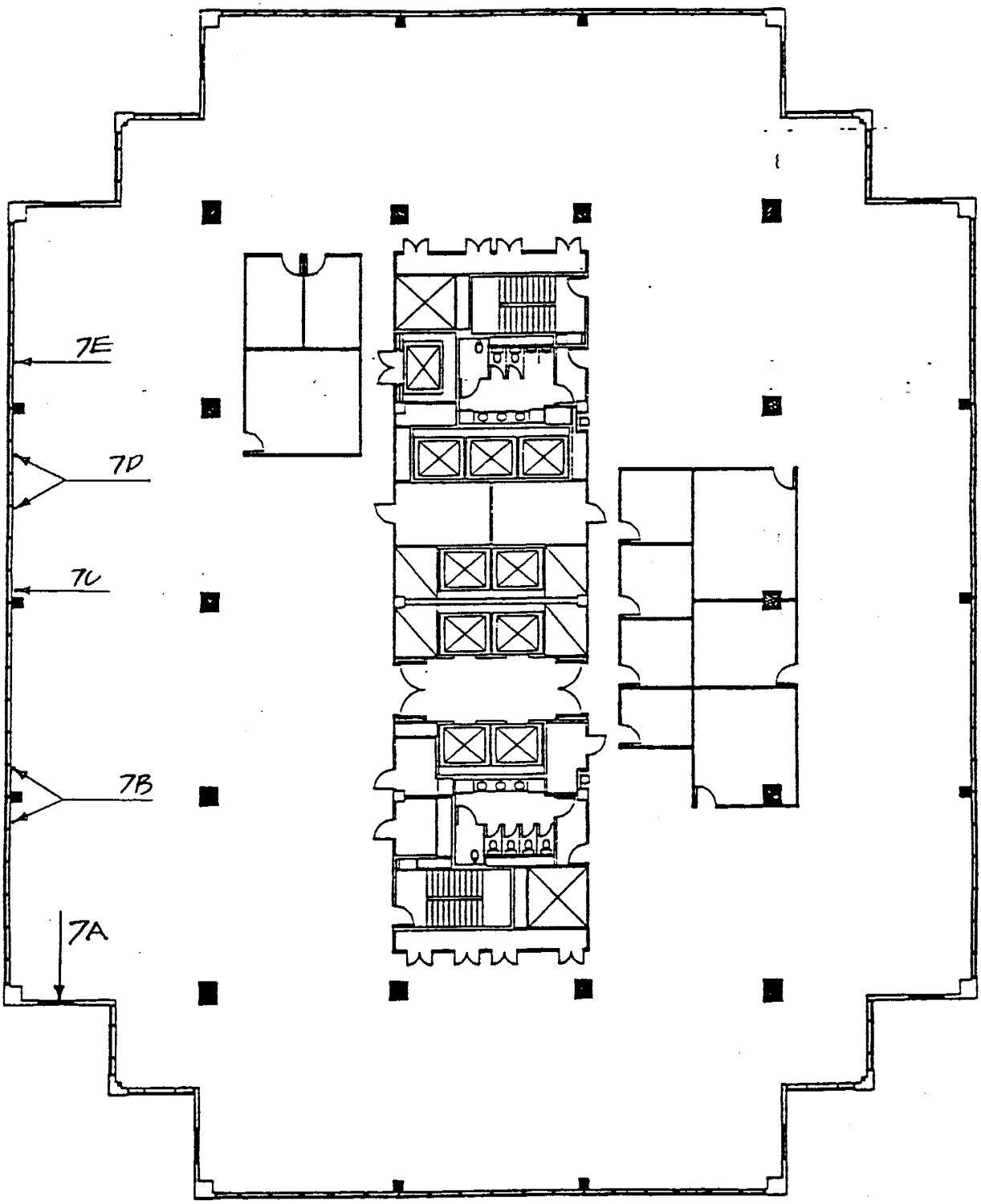
05

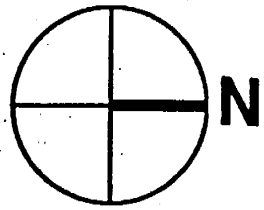


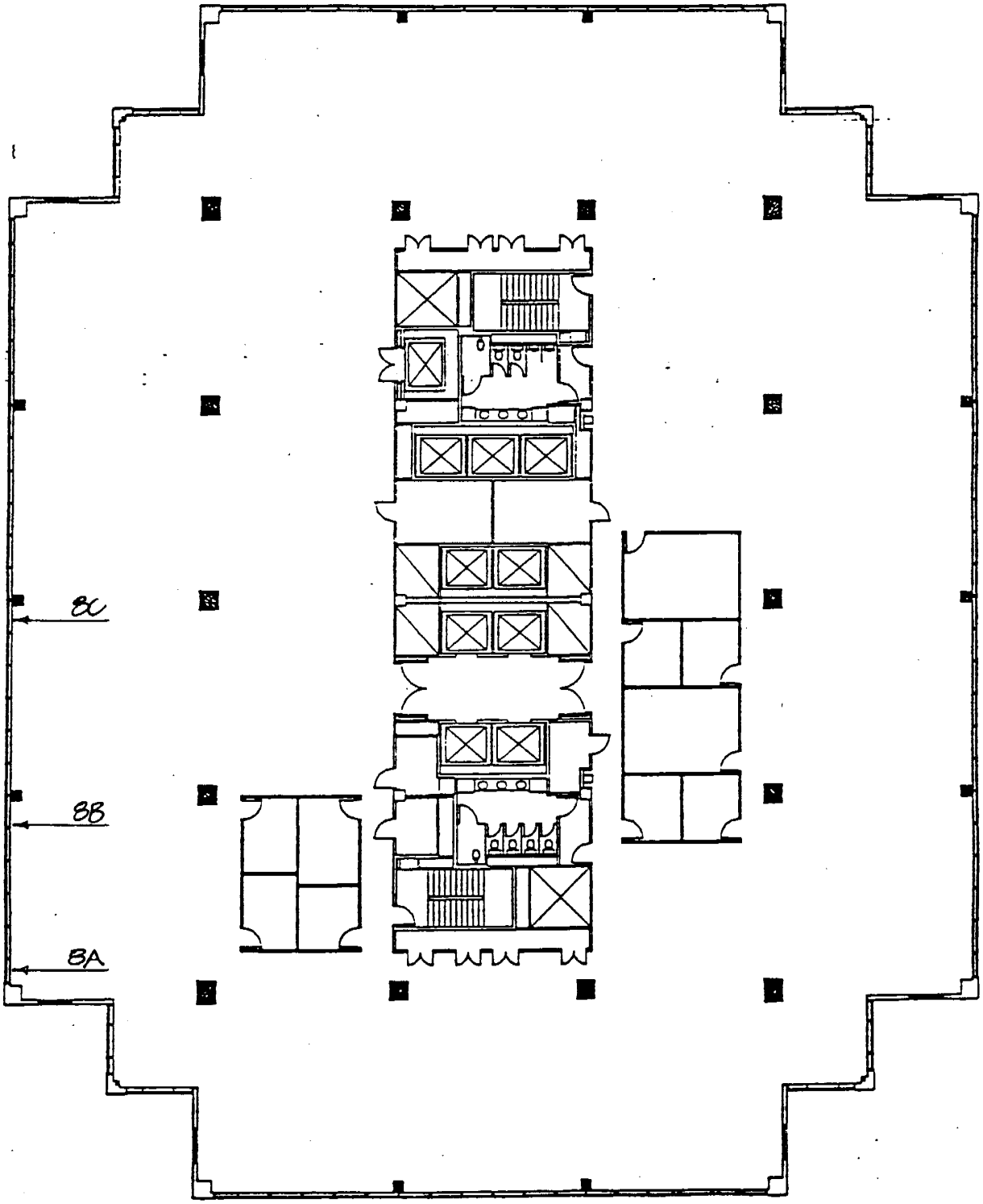


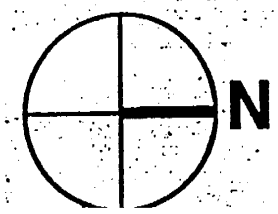

6F
6E
6D
6C
6B
6A

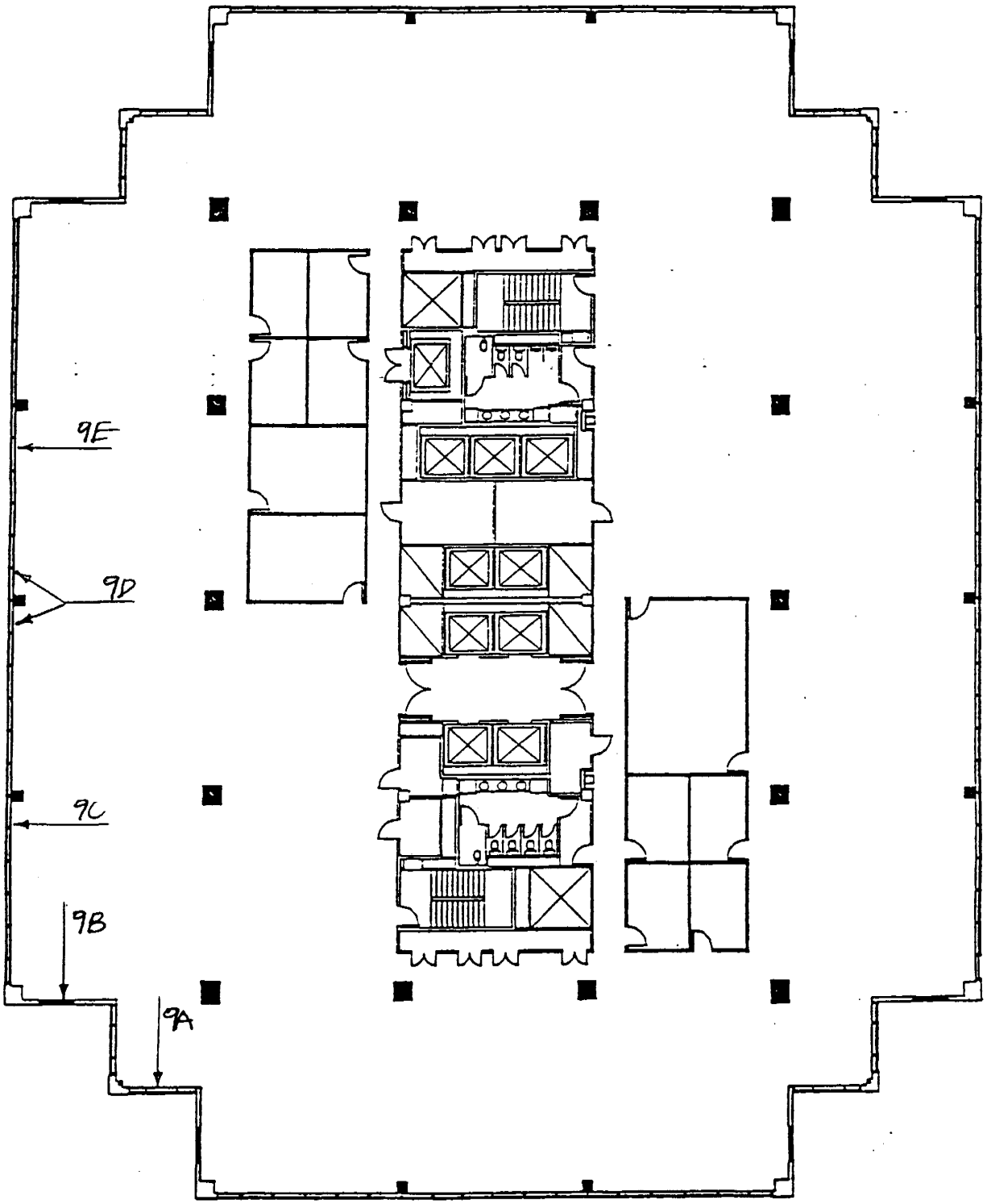

N

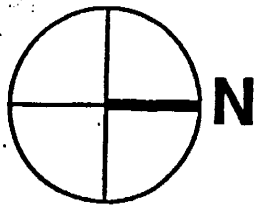

7E
7D
7C
7B
7A

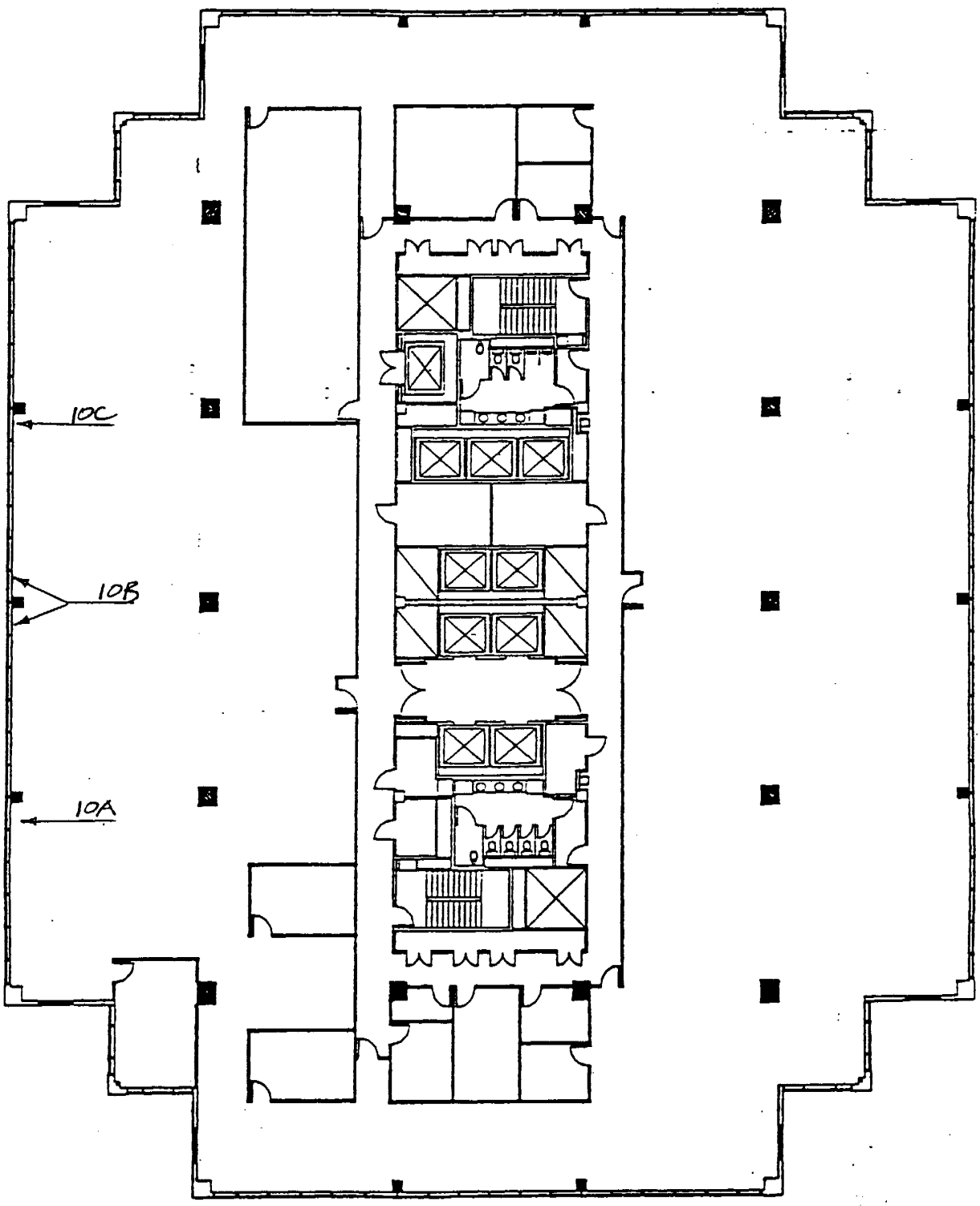

N

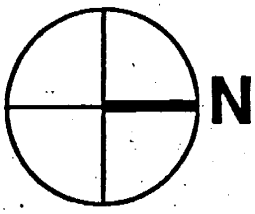

8C
8B
8A

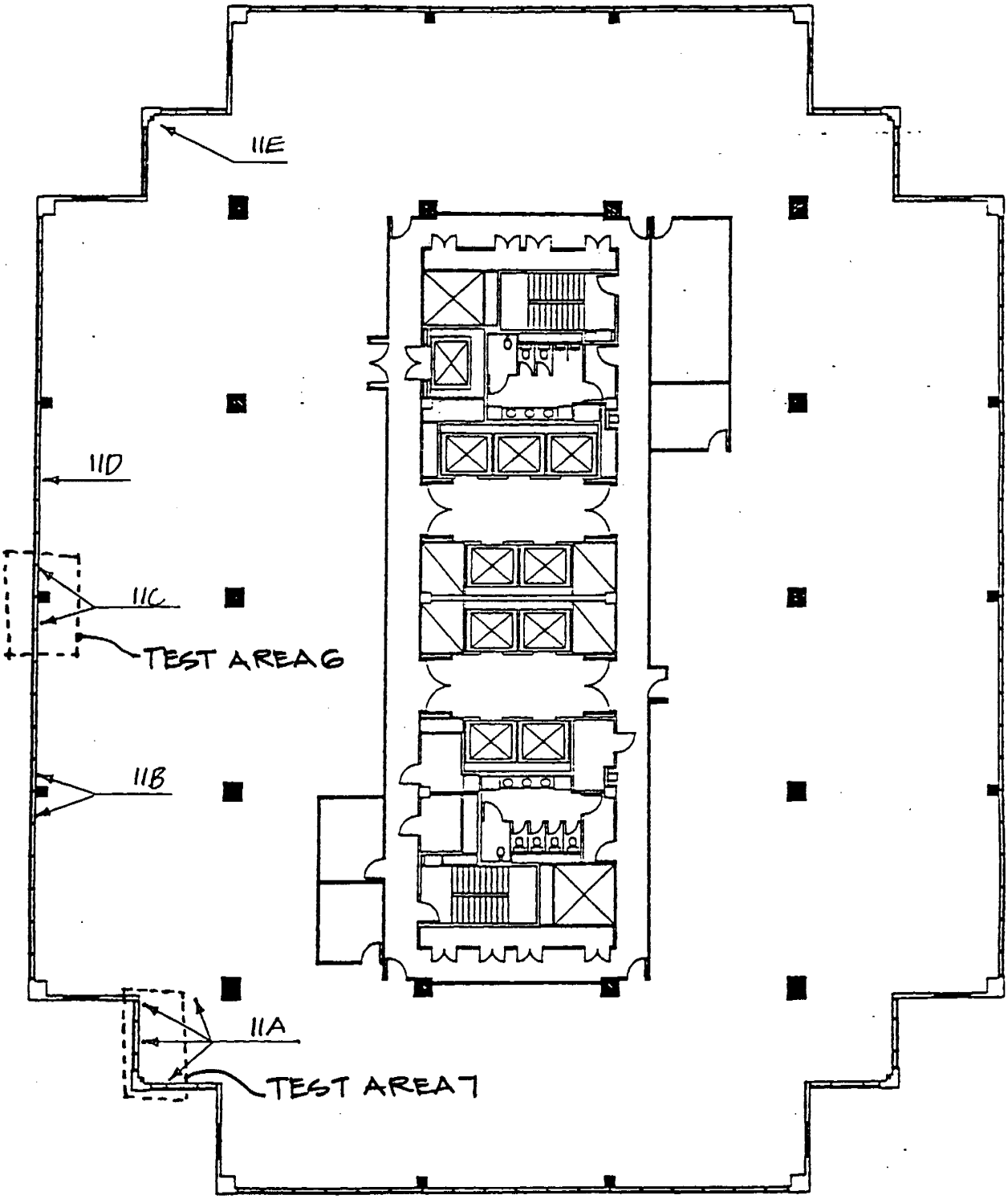

N

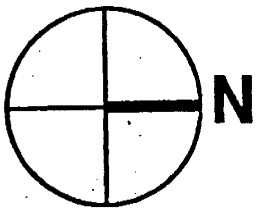

9E
9D
9C
9B
9A

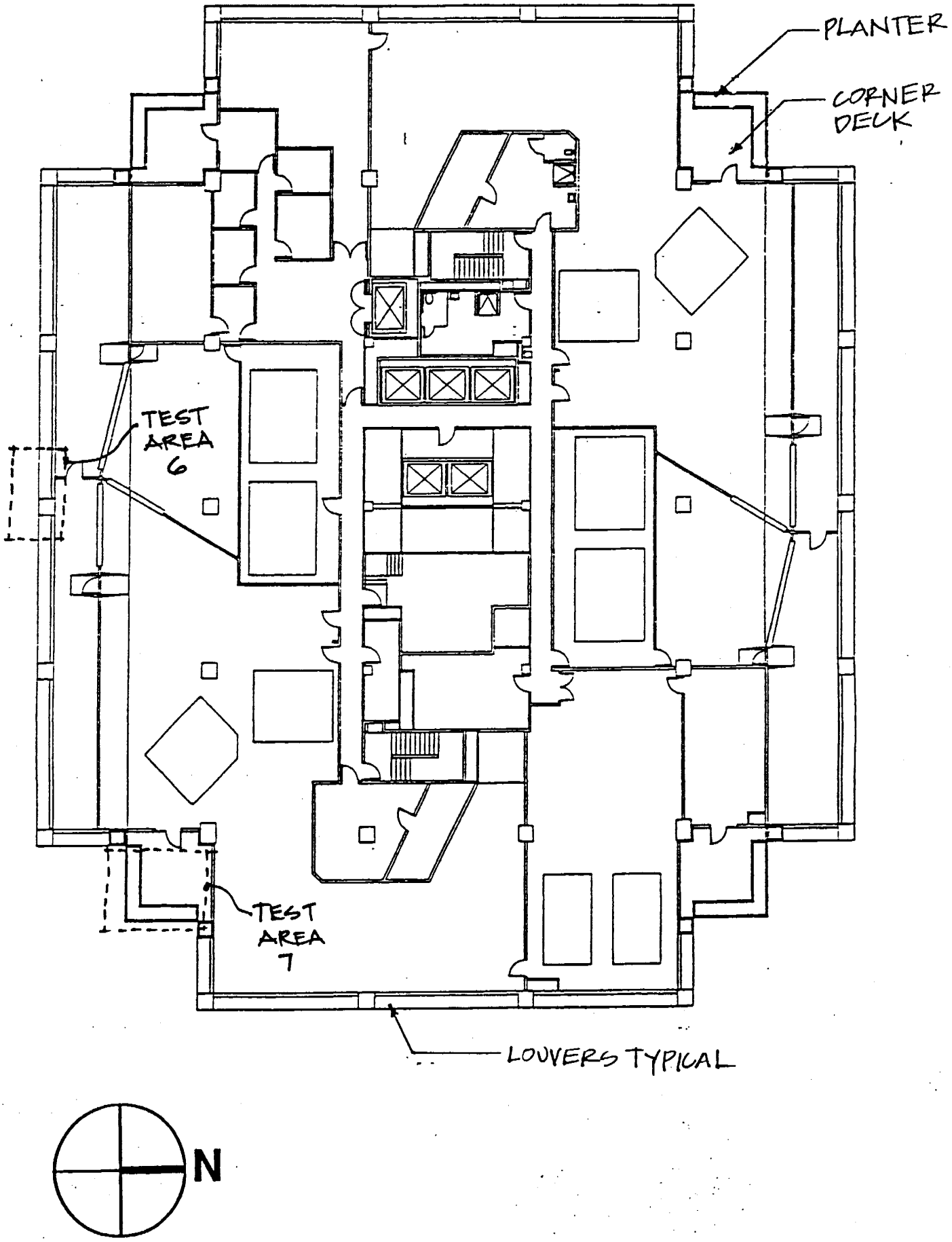

N


10C
10B
10A

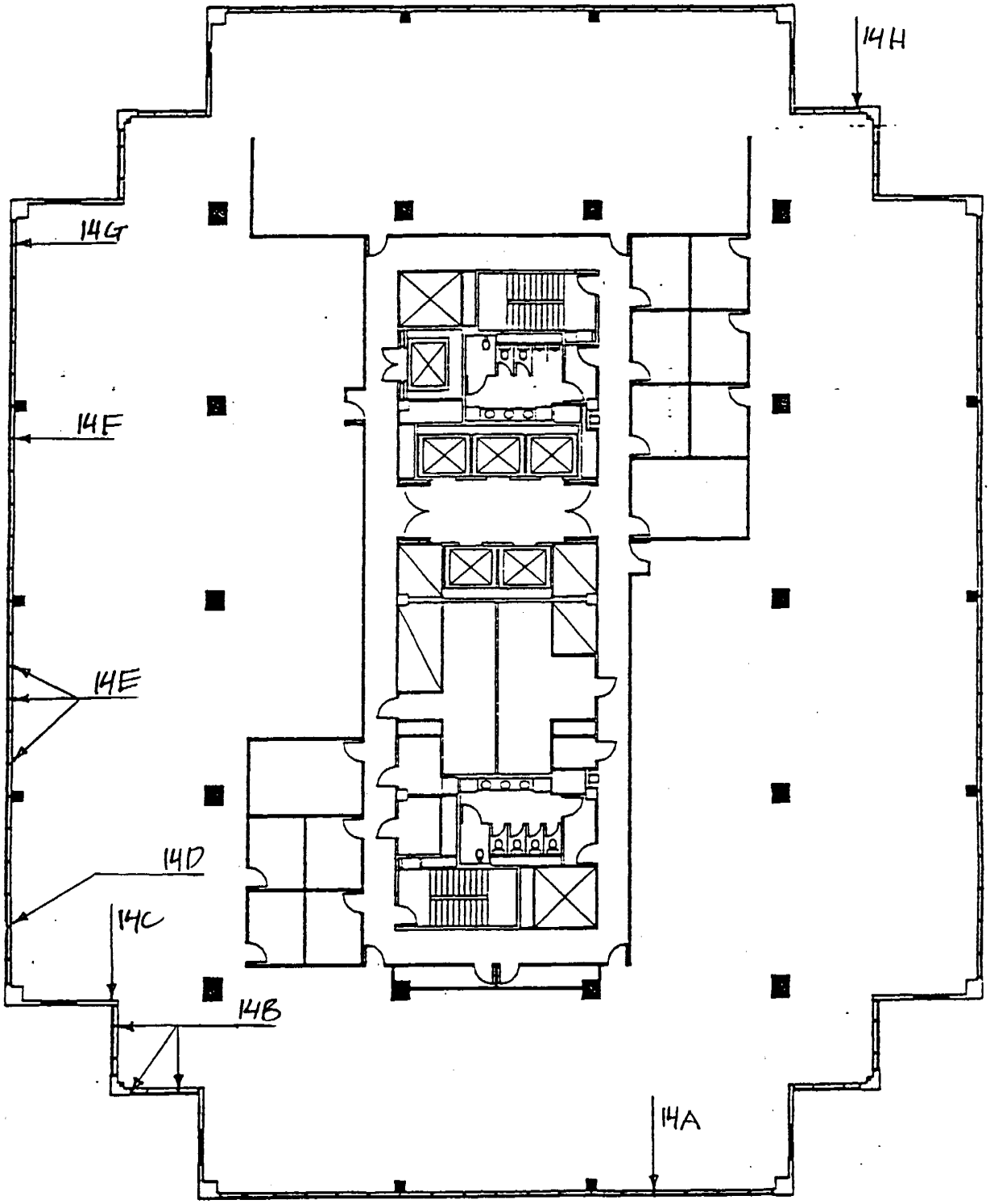

N

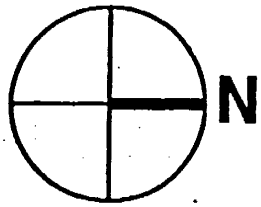

11E
11D
11C
TEST AREA 6
11B
11A
TEST AREA 7

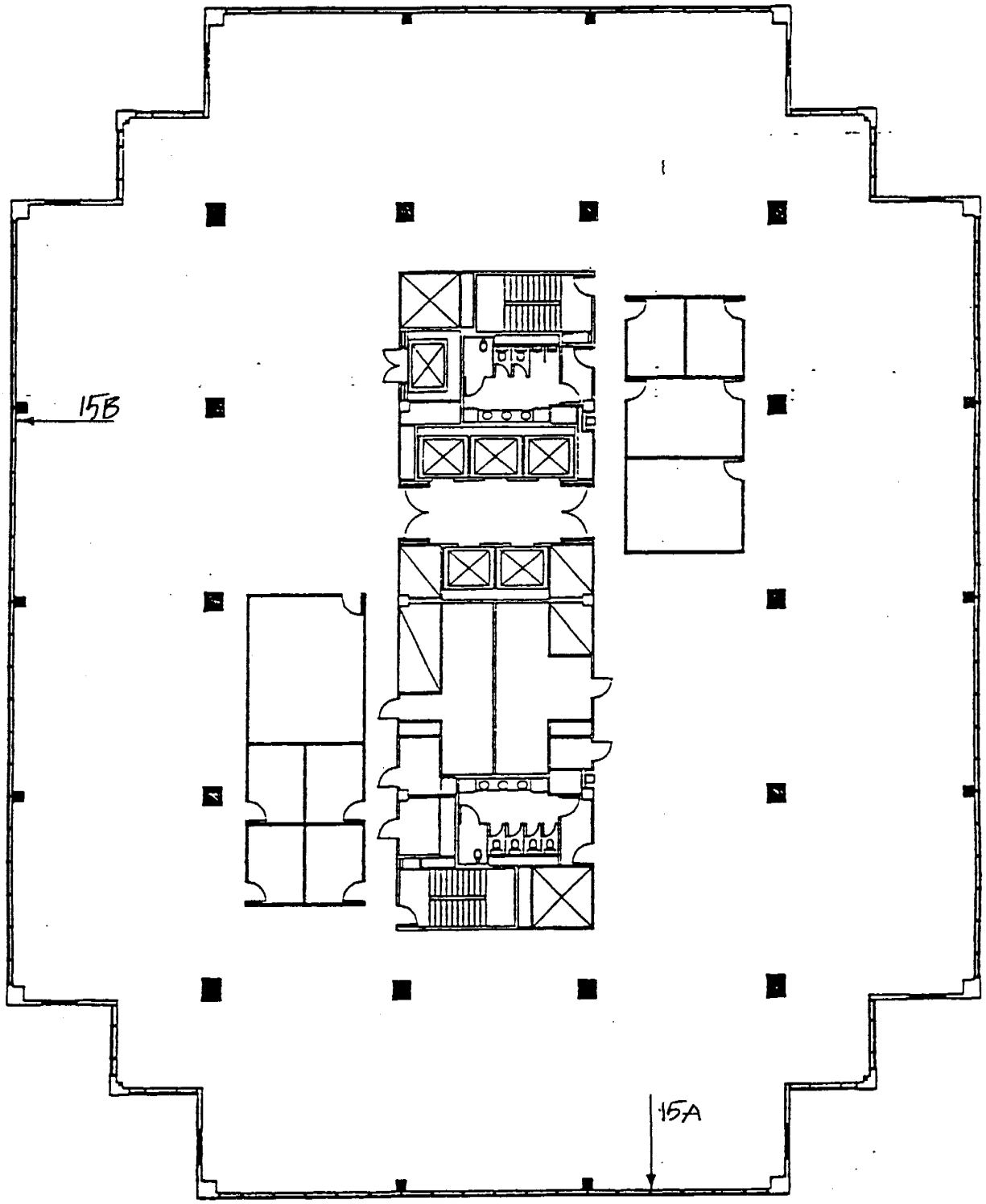

N

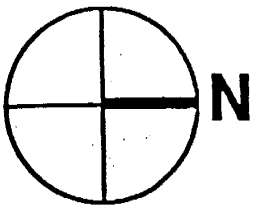

PLANTER
CORNER DECK
TEST AREA 6
TEST AREA 7
LOUVERS TYPICAL
N

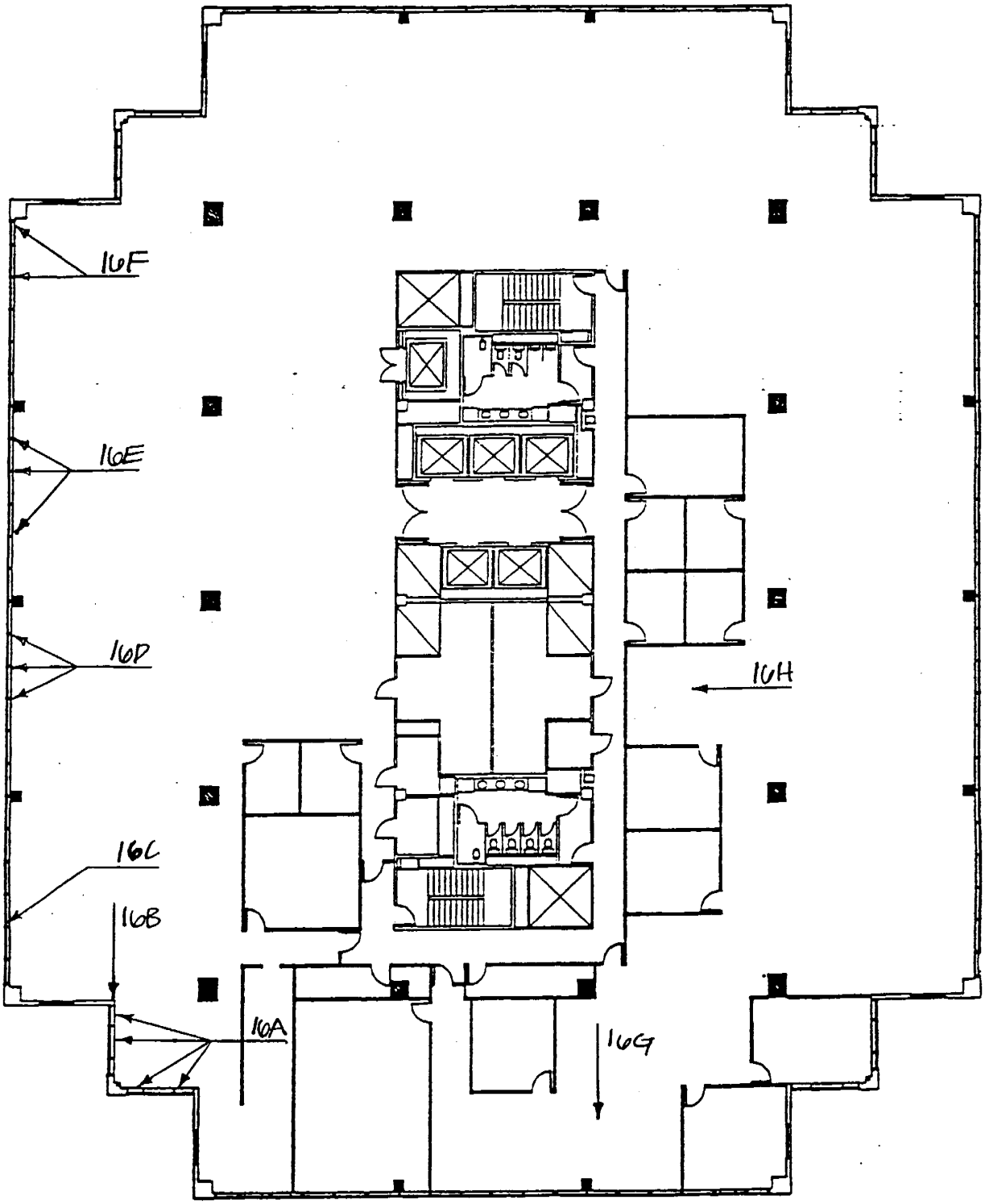
14

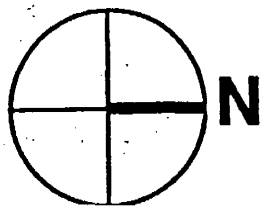




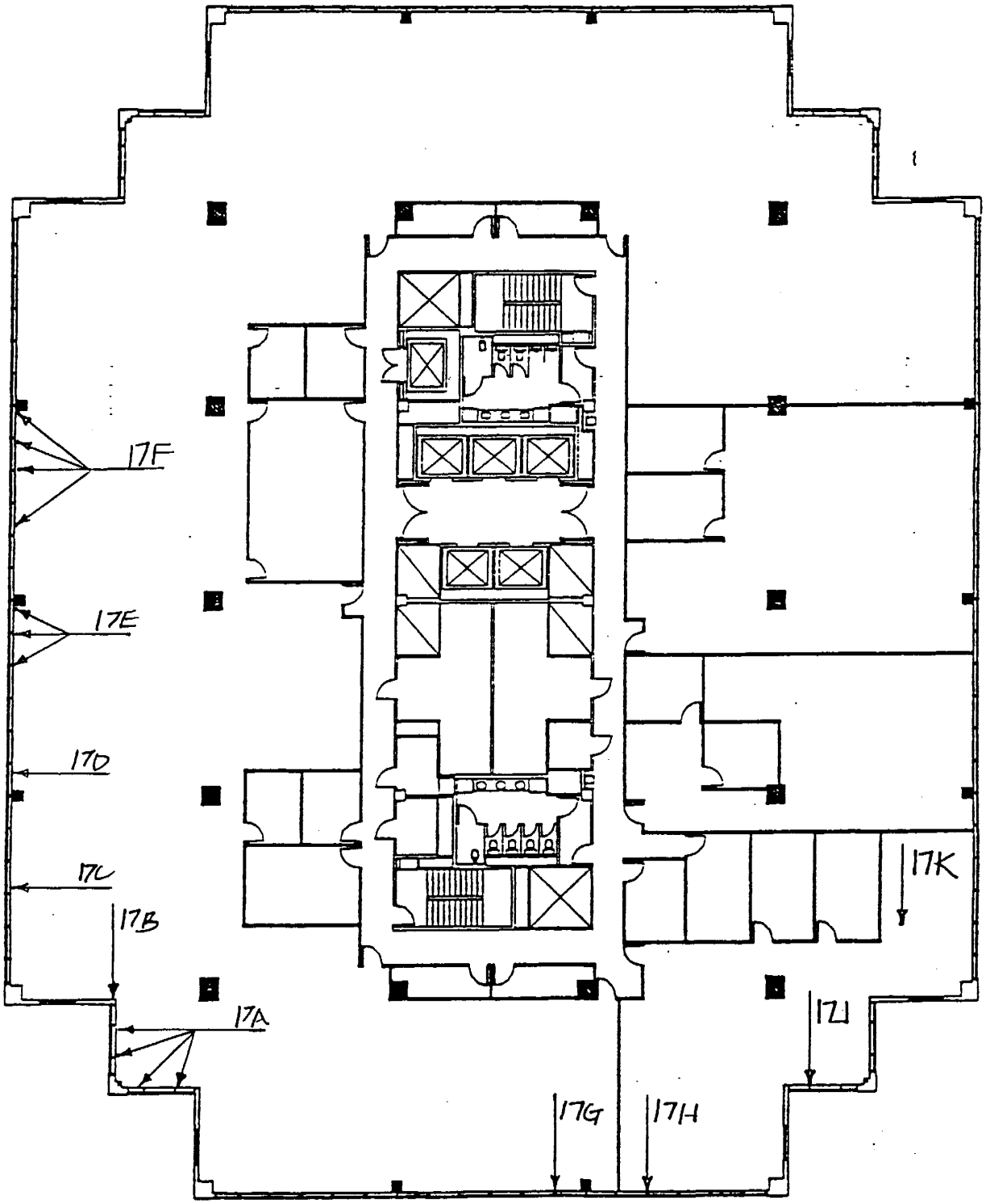

15B
15A

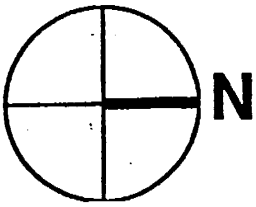

N

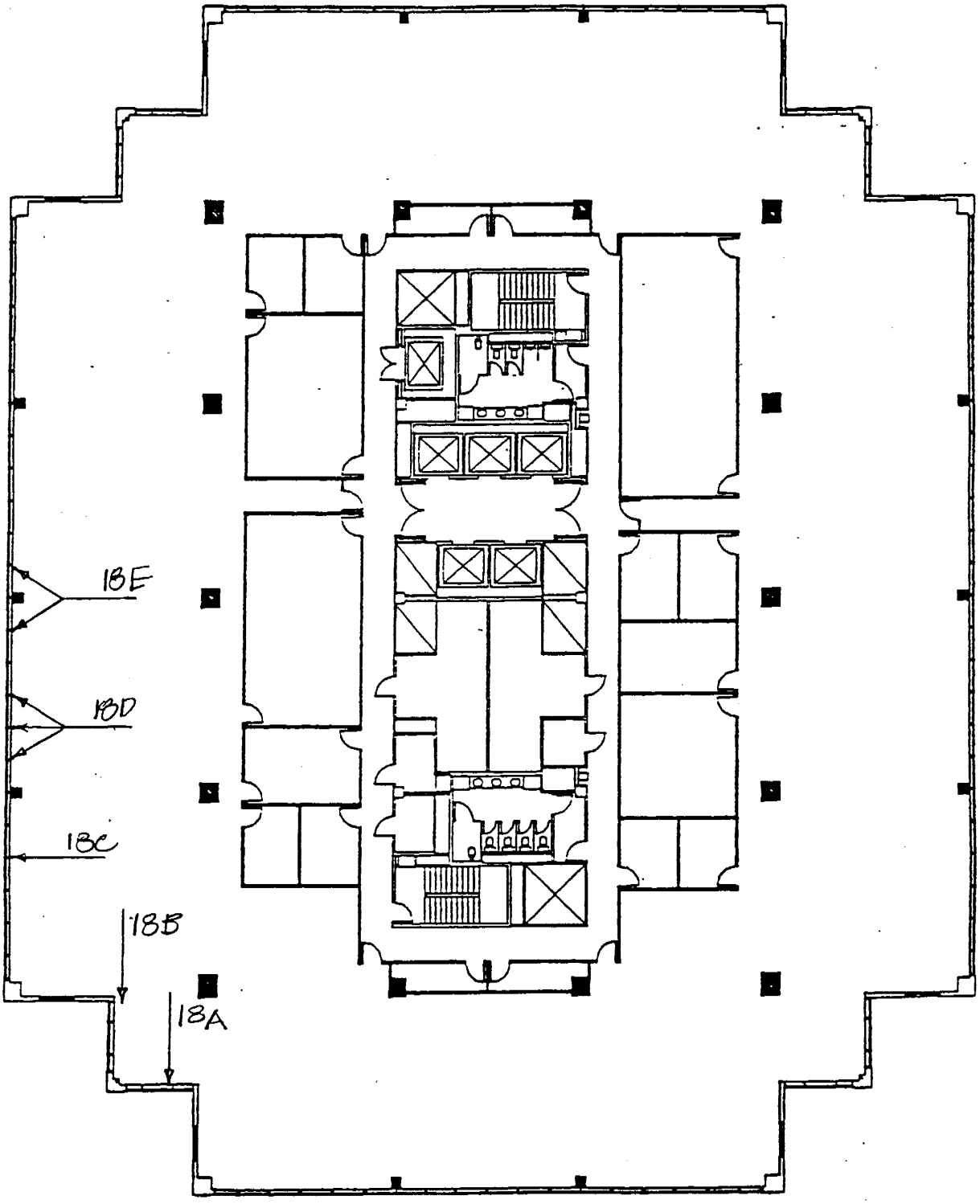

16F
16E
16D
16C
16B
16A
16G
16H

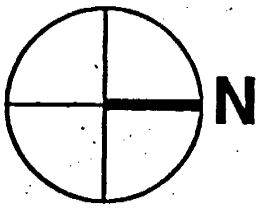

N

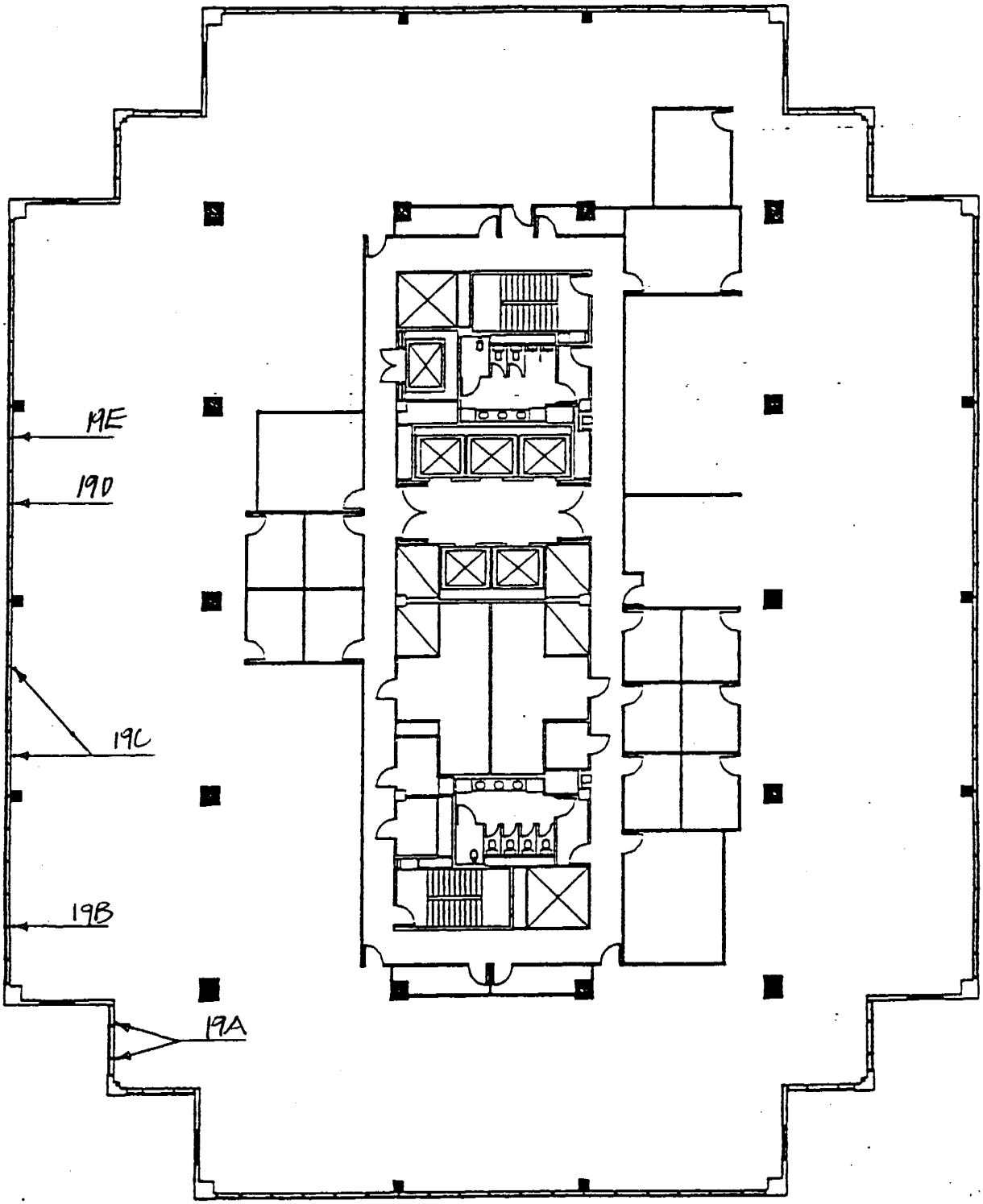
17

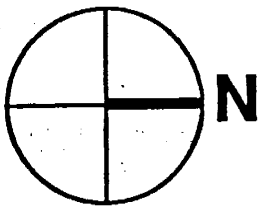


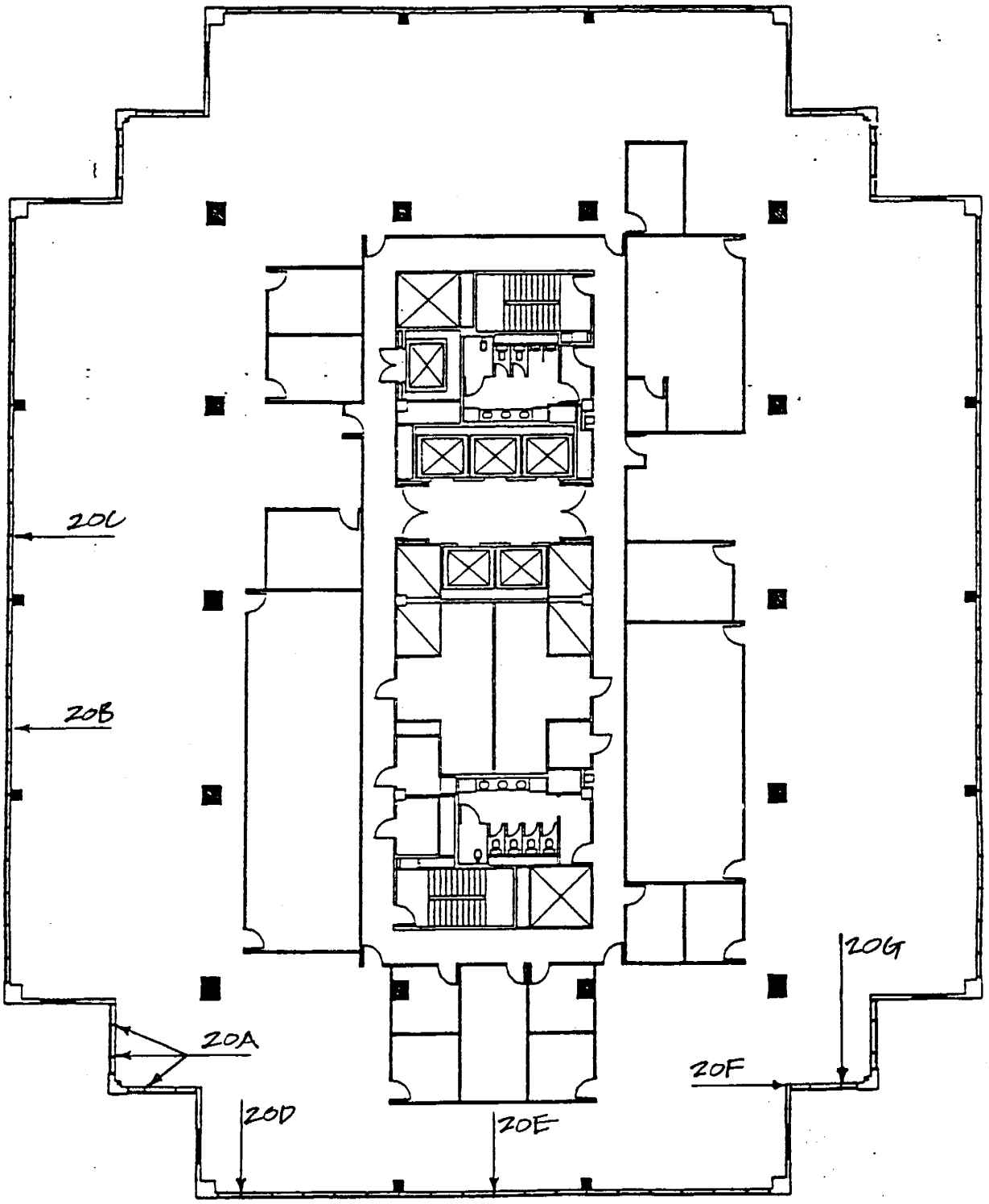


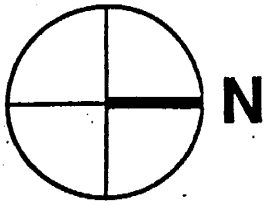

18E
18D
18C
18B
18A

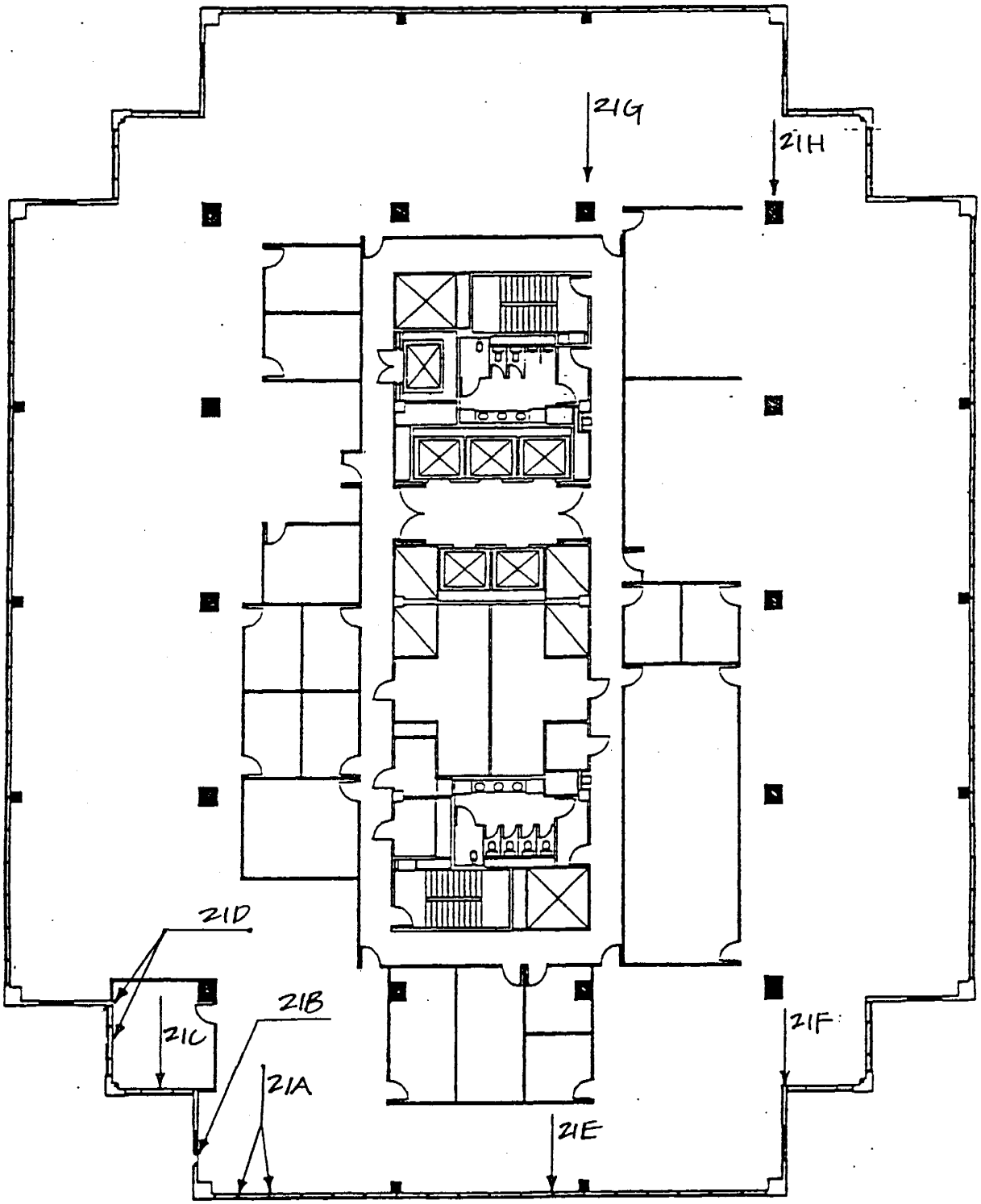

N

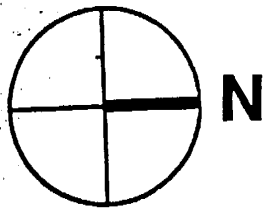

19E
19D
19C
19B
19A

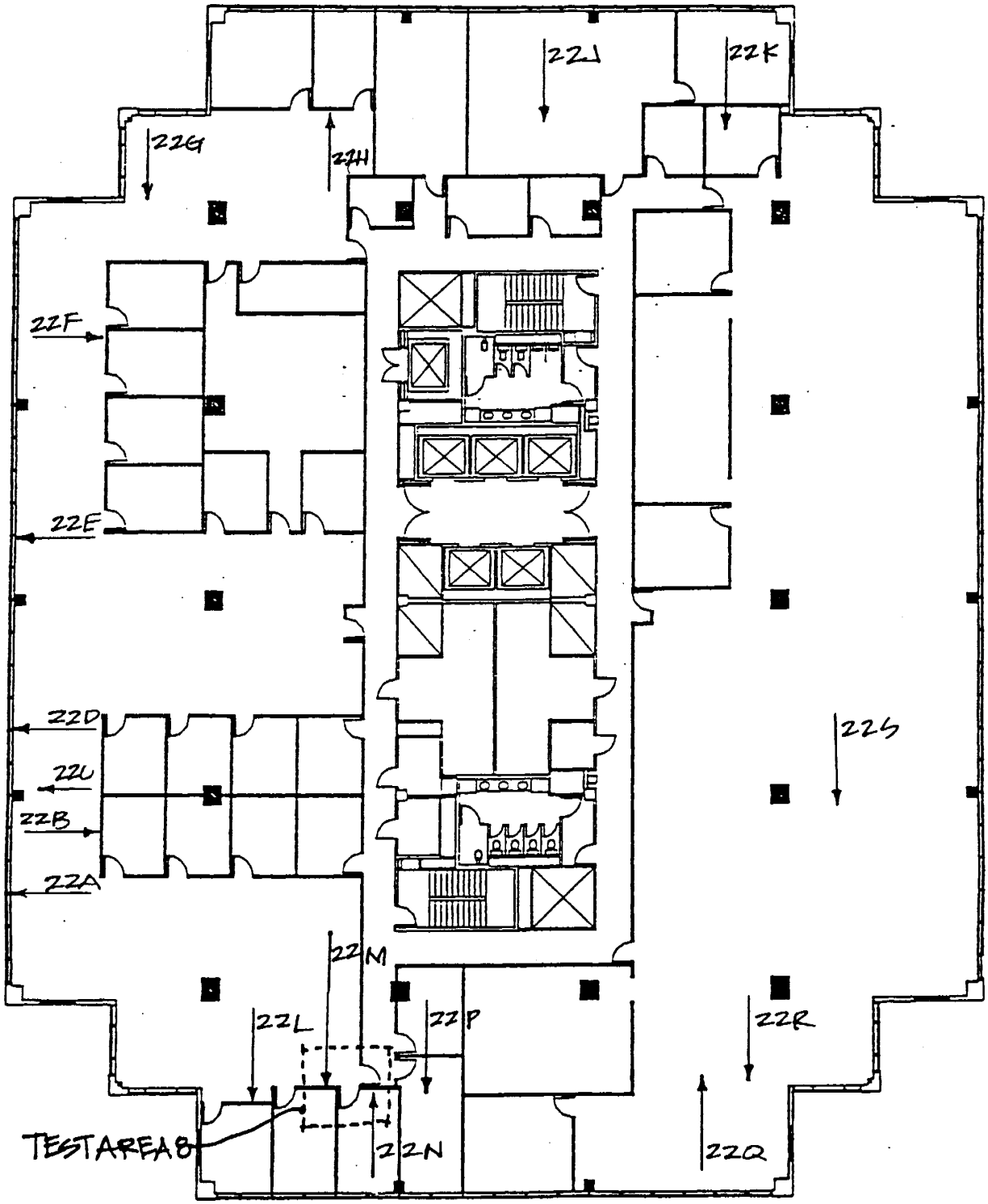

N

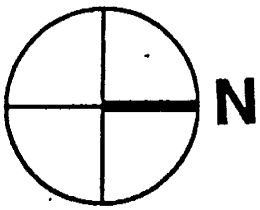

20C
20B
20A
20D
20E
20F
20G

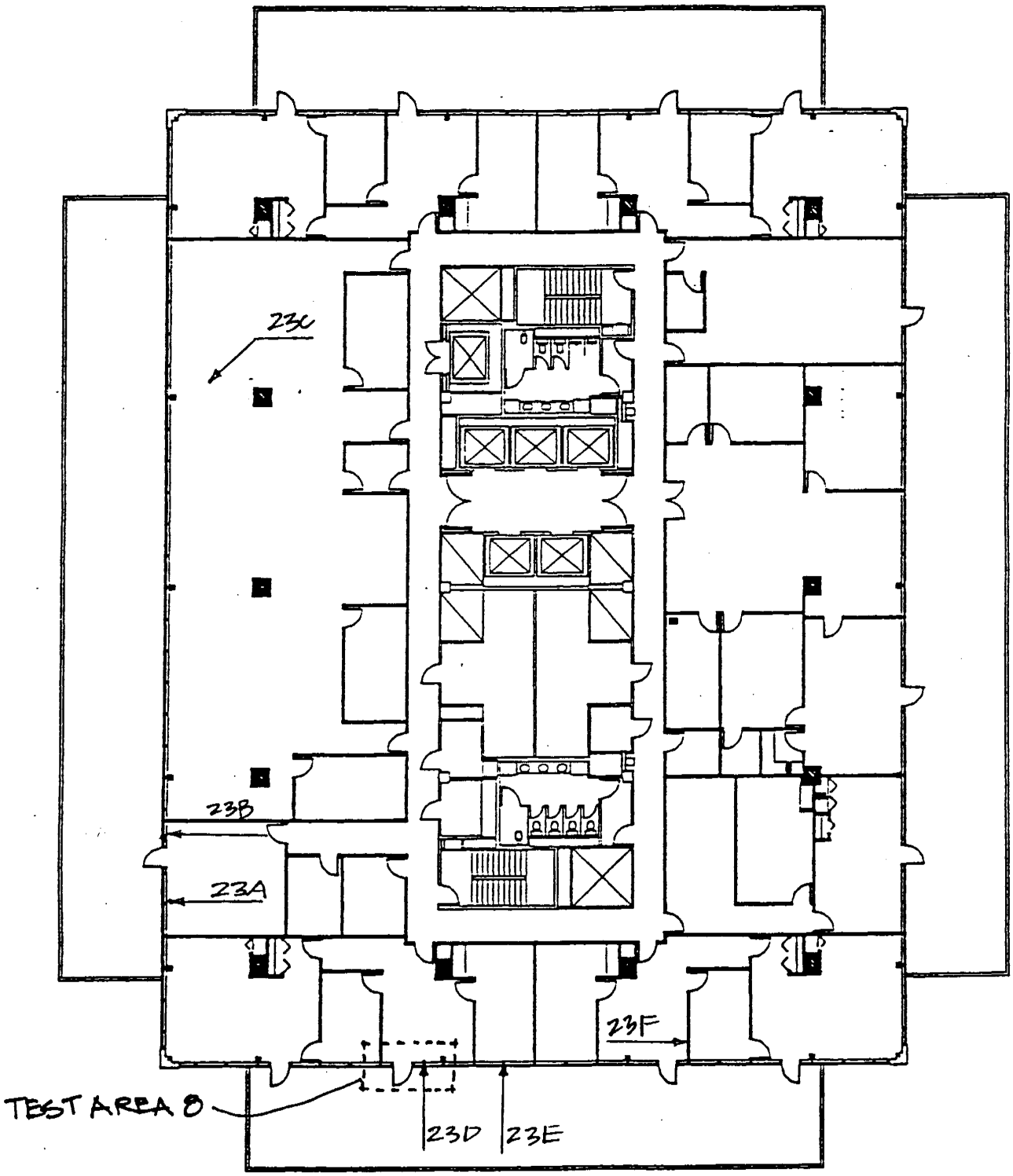

N

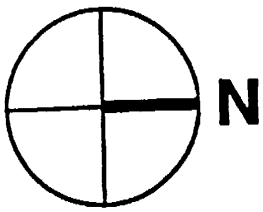

21G
21H
21D
21C
21B
21A
21E
21F

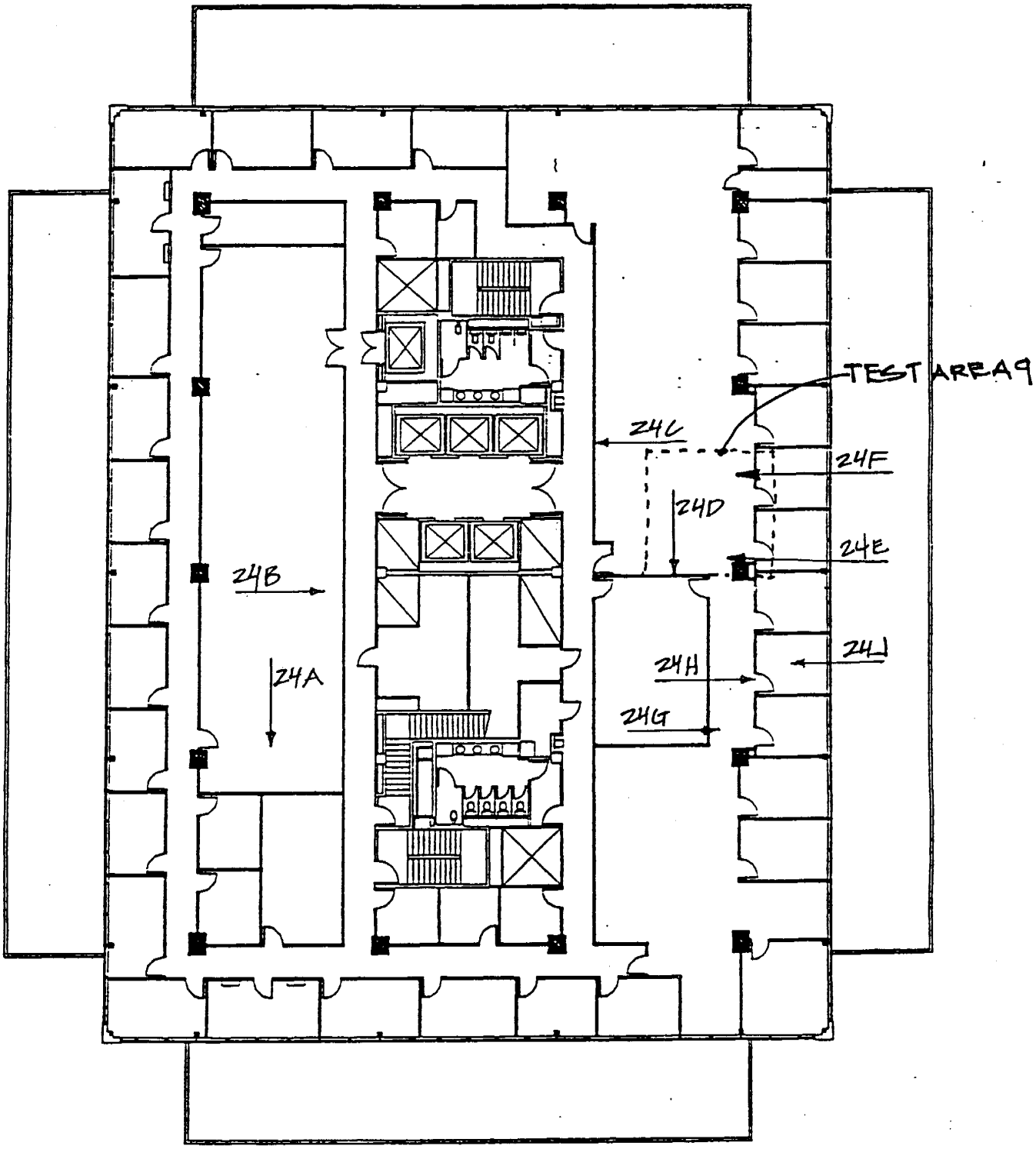

N

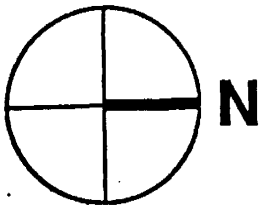

22J
22K
22G
22H
22F
22E
22D
22C
22B
22A
22S
22M
22L
22P
22R
TESTAREA8
22N
22Q

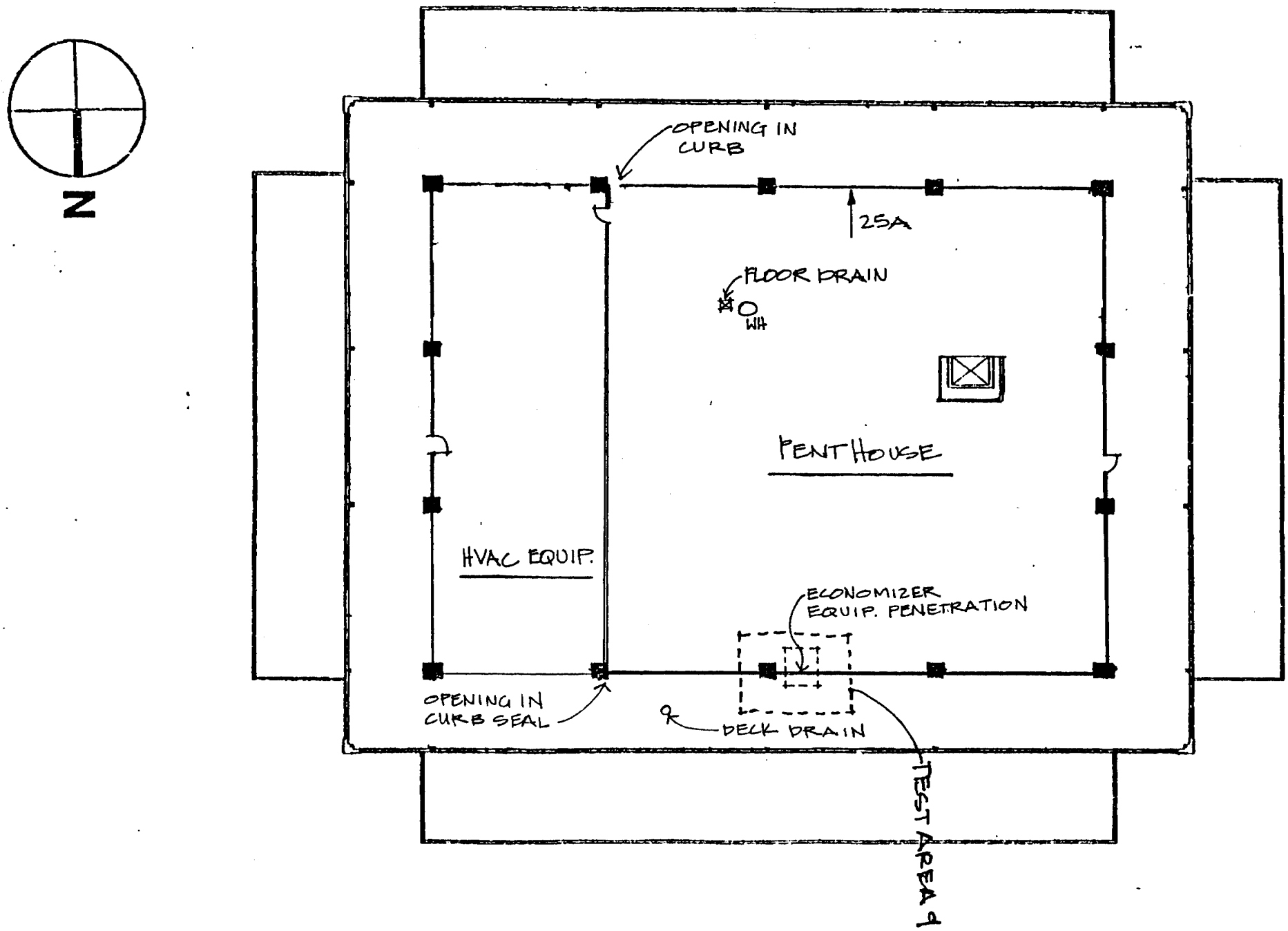

N


23C
23B
23A
23F
TEST AREA 8
23D
23E

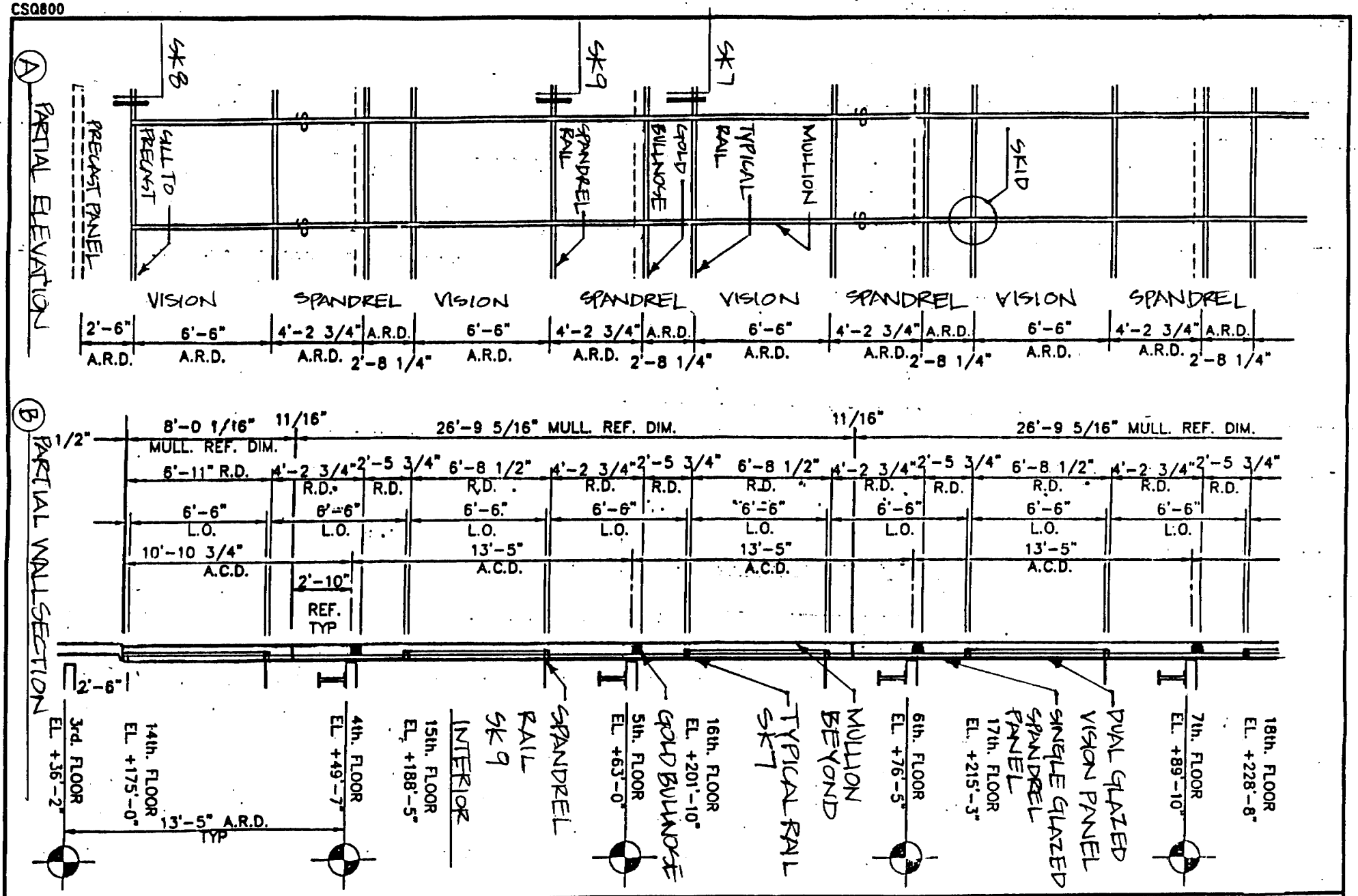

N


TEST AREA 9
24C
24F
24D
24E
24B
24A
24H
24I
24G


N


N
OPENING IN CURB
25A
FLOOR DRAIN
WH
PENTHOUSE
HVAC EQUIP.
ECONOMIZER EQUIP. PENETRATION
OPENING IN CURB SEAL
DECK DRAIN
TEST AREA 1

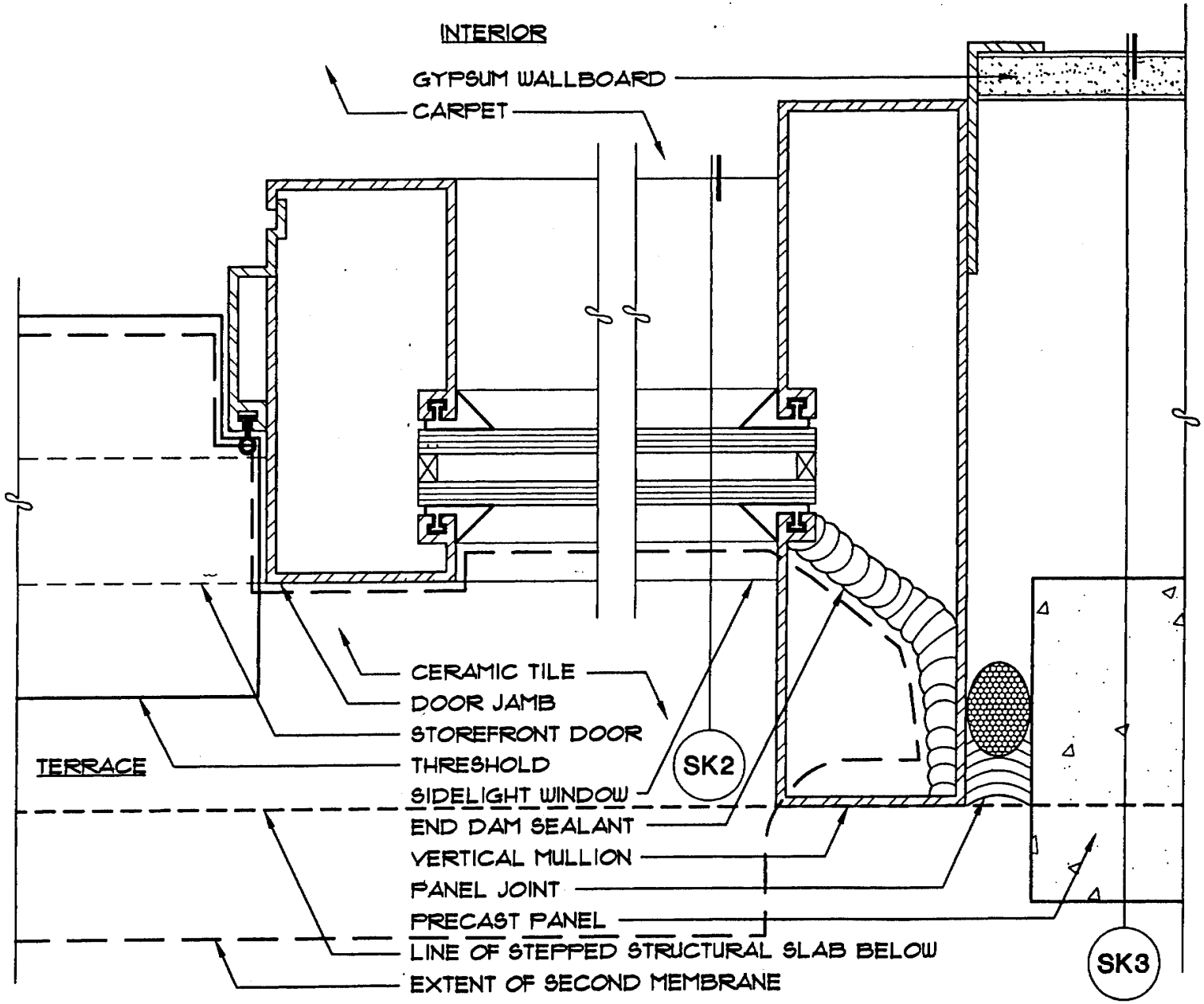
CSQ800



SK0	97187	1 JUNE 98	CURTAINWALL TYP. ELEVATION & SECTION NO SCALE

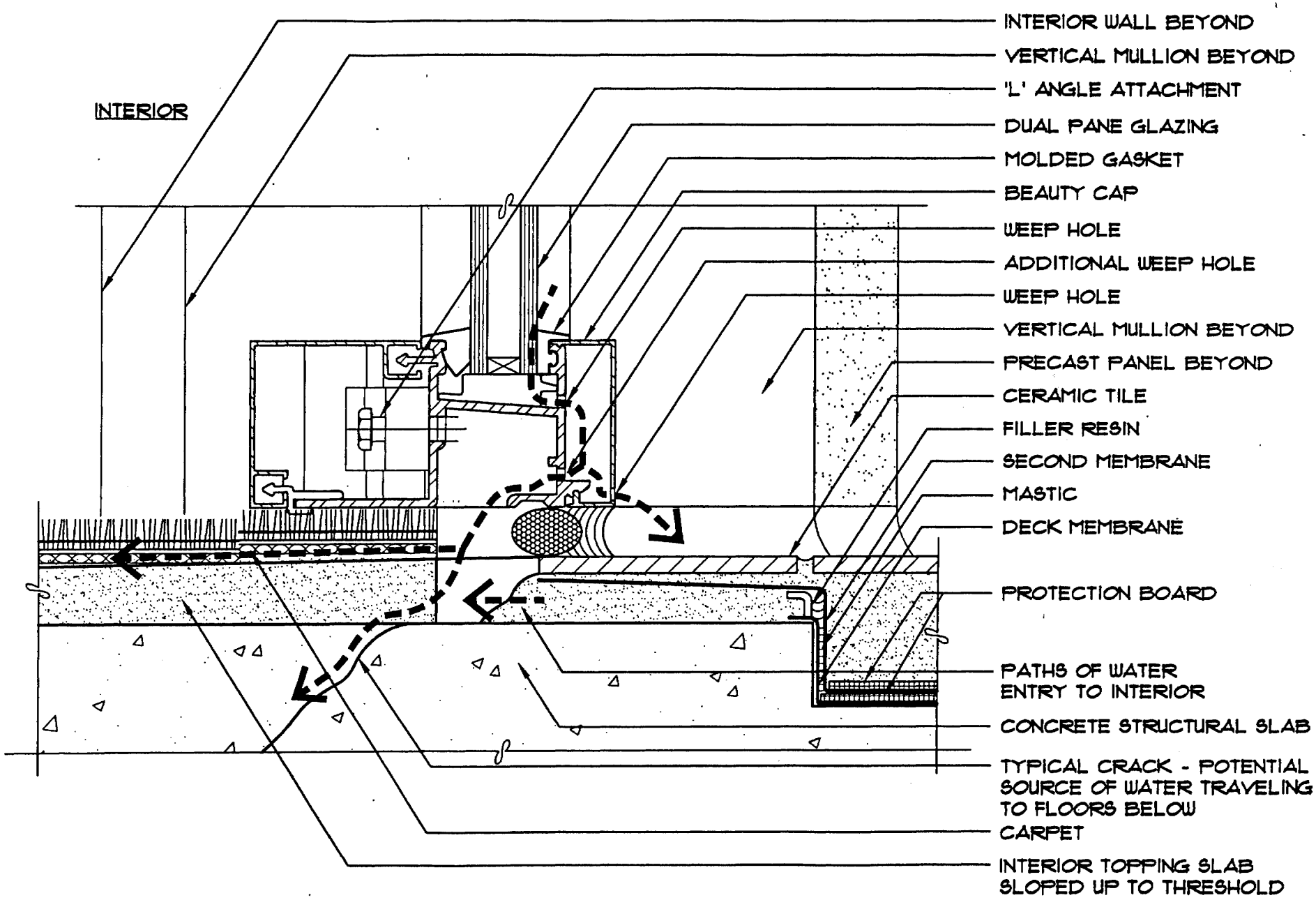
CAPITOL SQUARE
450 N STREET, SACRAMENTO
WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton
Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390



SK1	97187	1 JUNE 98	23RD FLOOR TERRACE PARTIAL PLAN @ BUILD. WALL SCALE: 6"=1'-0"	CAPITOL SQUARE 450 N STREET, SACRAMENTO WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton
Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390



SK2

97187

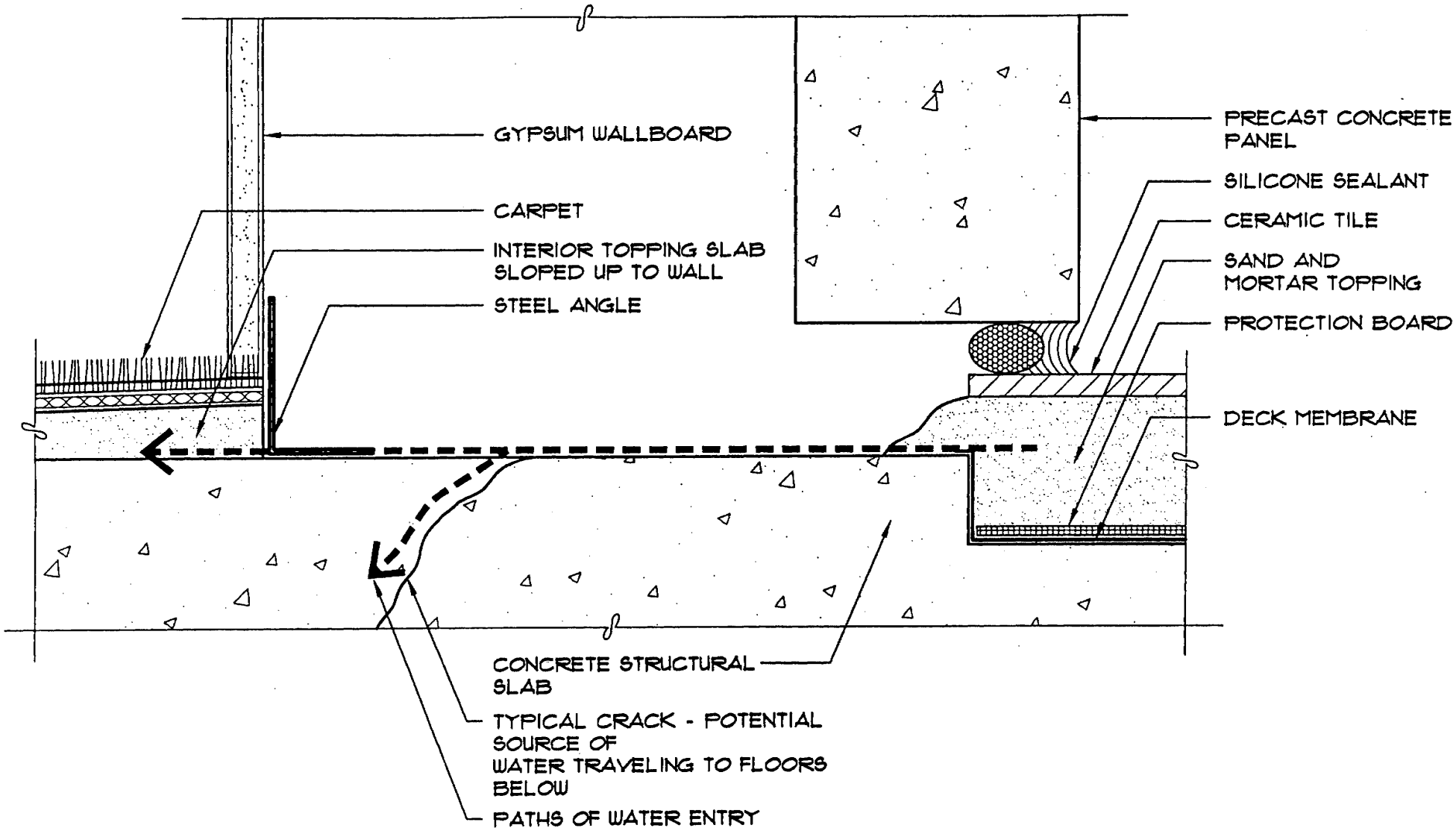
1 JUNE 98

23RD FLOOR TERRACE
SIDELIGHT SILL
SCALE: 6"=1'-0"

CAPITOL SQUARE
450 N STREET, SACRAMENTO
WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton

Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390



SK3

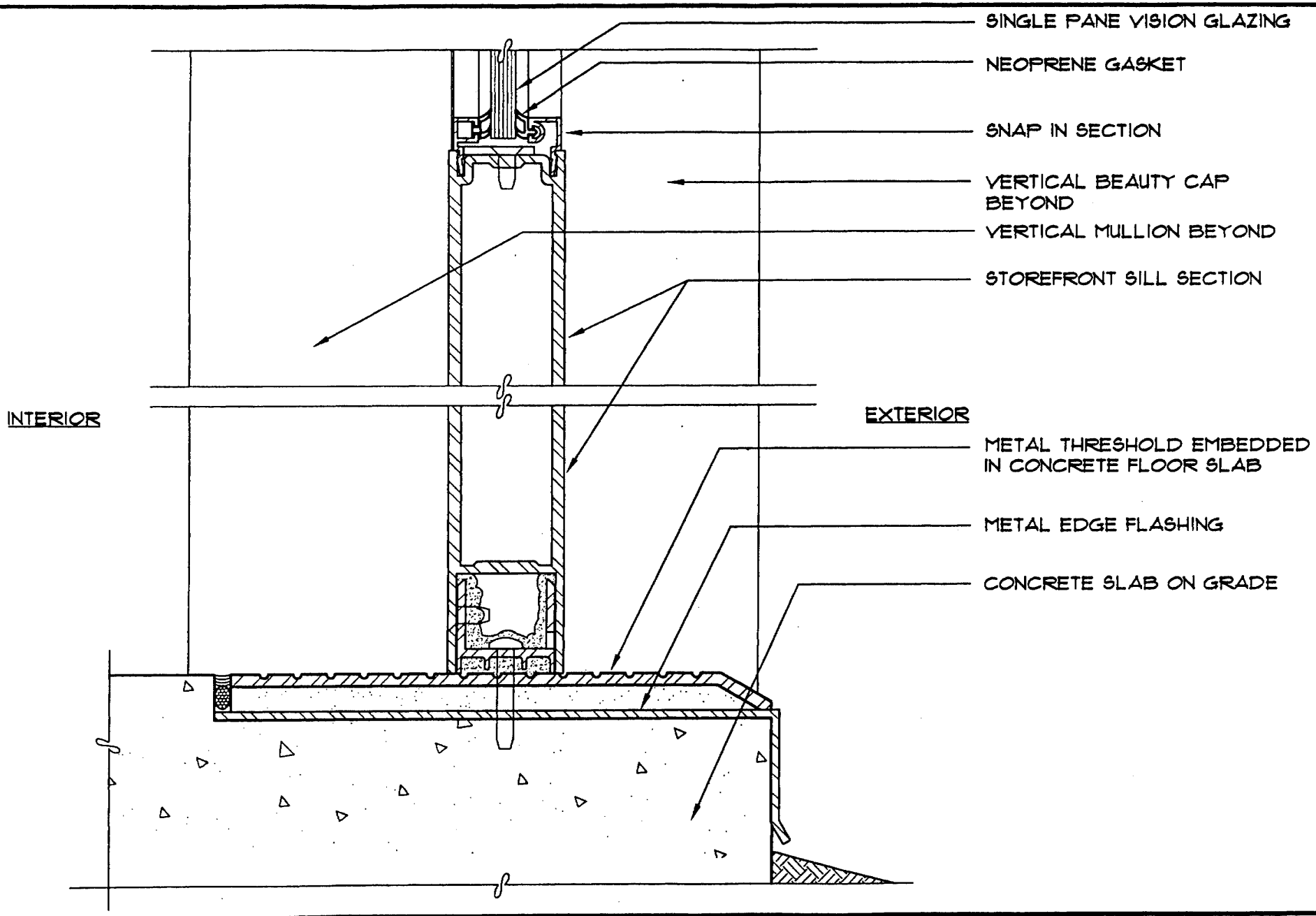
97187

1 JUNE 98

23RD FLOOR TERRACE
PRE-CAST PANEL
SCALE: 6"=1'-0"

CAPITOL SQUARE
450 N STREET, SACRAMENTO
WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton
Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390



SK4

97187

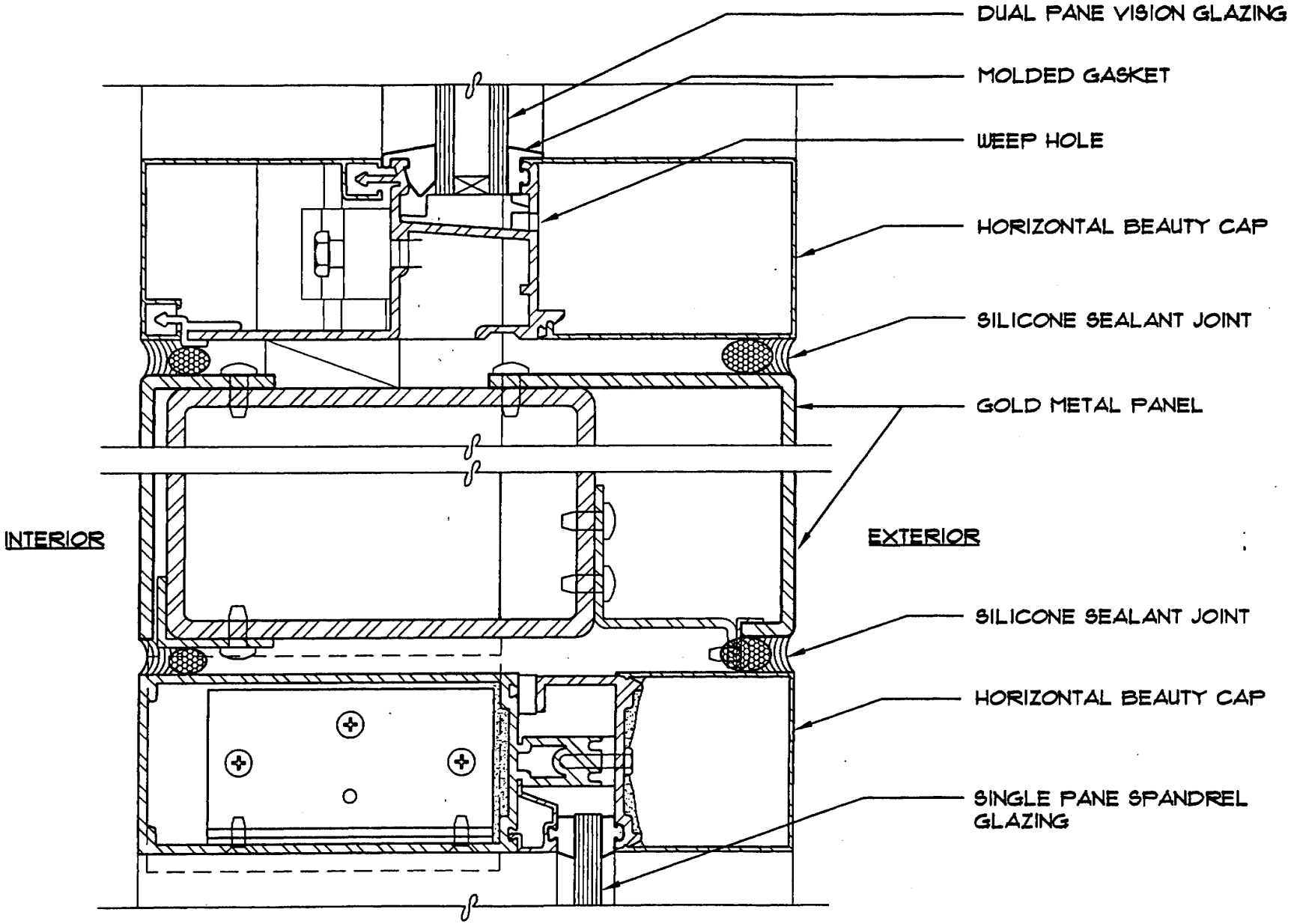
1 JUNE 98

STOREFRONT
SILL
SCALE: 6"=1'-0"

CAPITOL SQUARE
450 N STREET, SACRAMENTO
WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton

Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390



SK5

97187

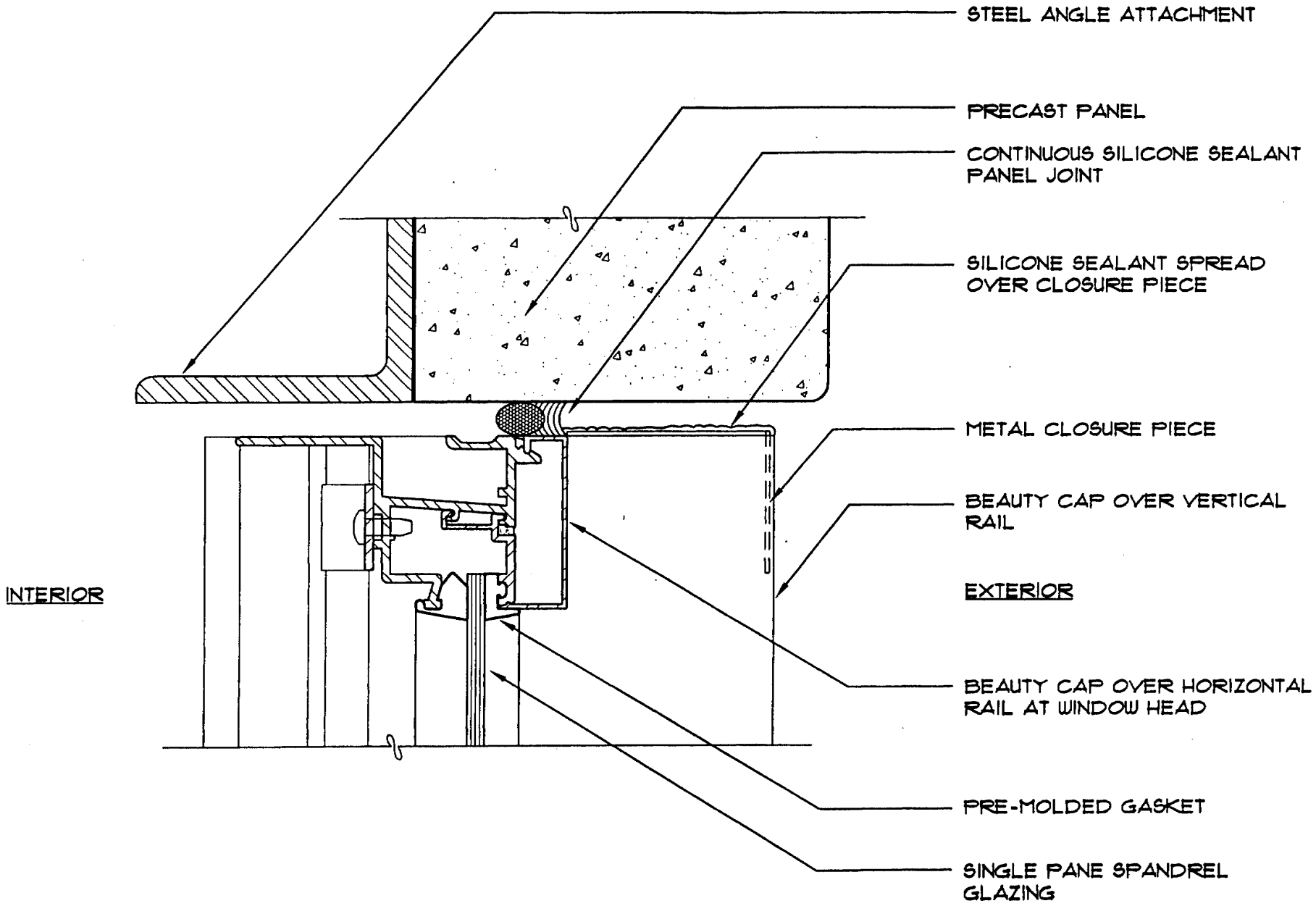
1 JUNE 98

STOREFROND
GOLD BAND
SCALE: 6"=1'-0"

CAPITOL SQUARE
450 N STREET, SACRAMENTO
WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton

Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390



SK6

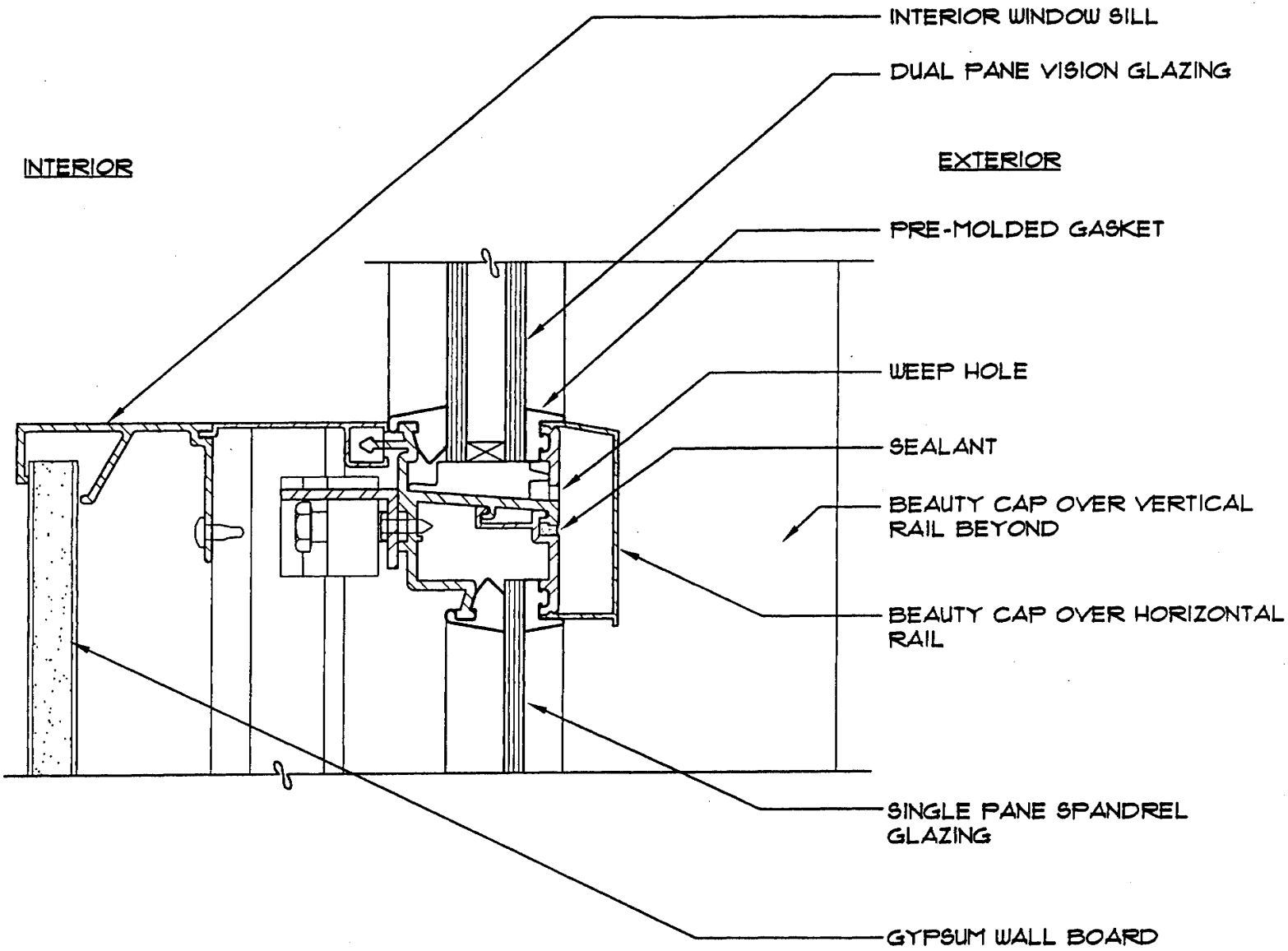
97187

1 JUNE 98

CURTAINWALL
HEAD TO PRECAST PANEL
SCALE: 6"=1'-0"

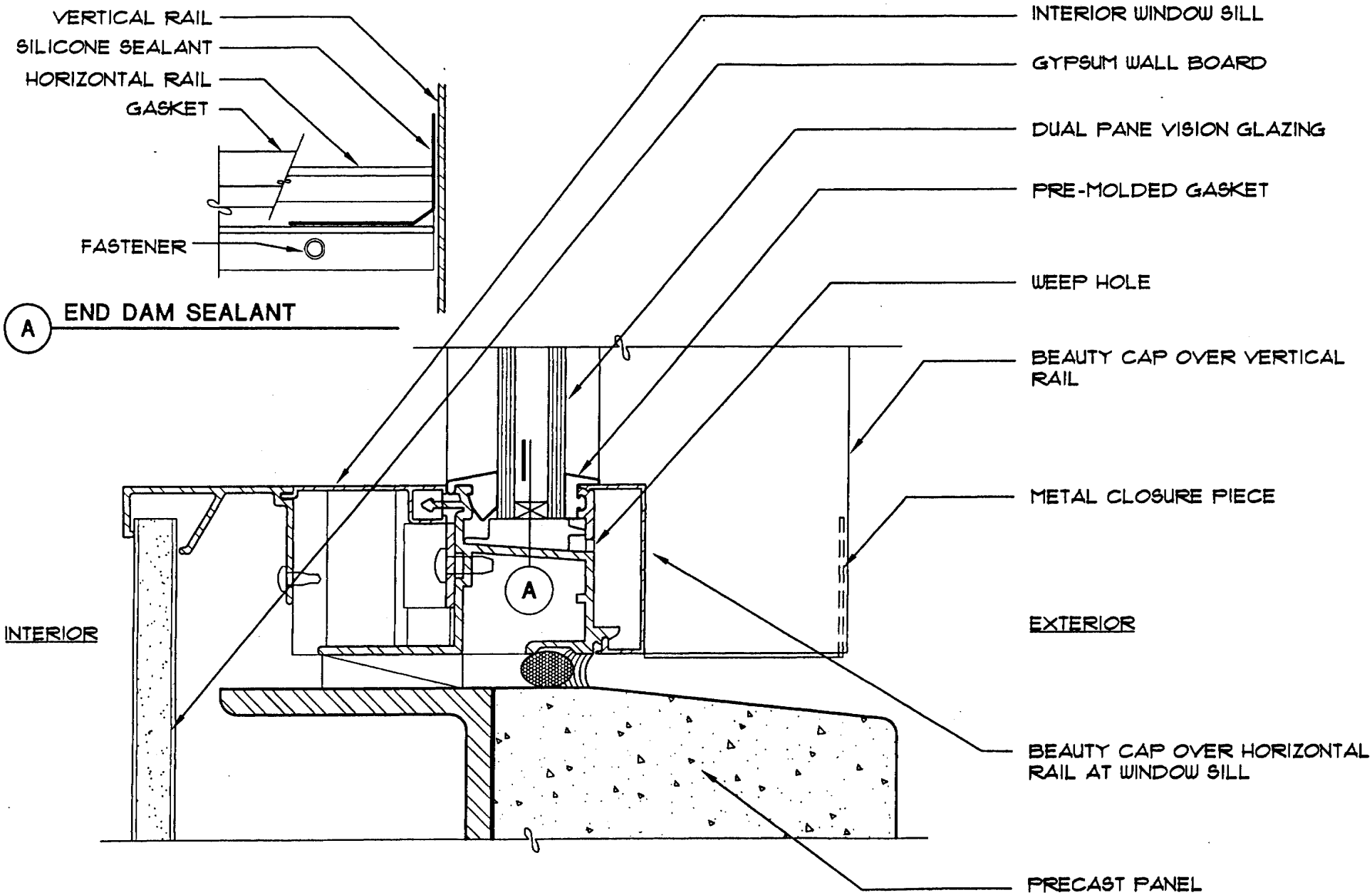
CAPITOL SQUARE
450 N STREET, SACRAMENTO
WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton
Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390



SK7	97187	1 JUNE 98	CURTAINWALL TYPICAL HORIZONTAL RAIL SCALE: 6"=1'-0"	CAPITOL SQUARE 450 N STREET, SACRAMENTO WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton
Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390



SK8

97187

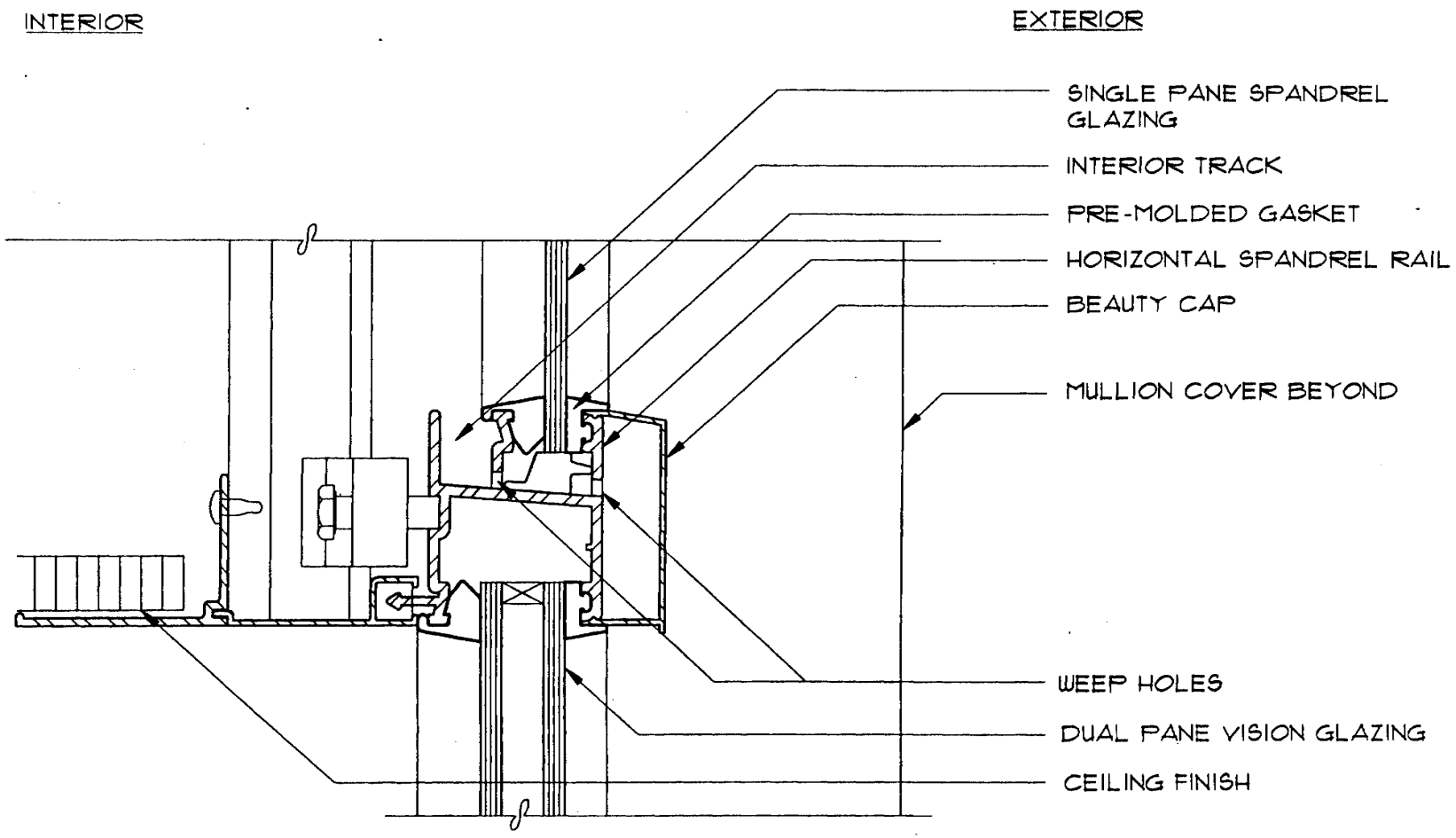
1 JUNE 98

CURTAINWALL
SILL TO PRECAST PANEL
SCALE: 6"=1'-0"

CAPITOL SQUARE
450 N STREET, SACRAMENTO
WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton
Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390

CSQ809

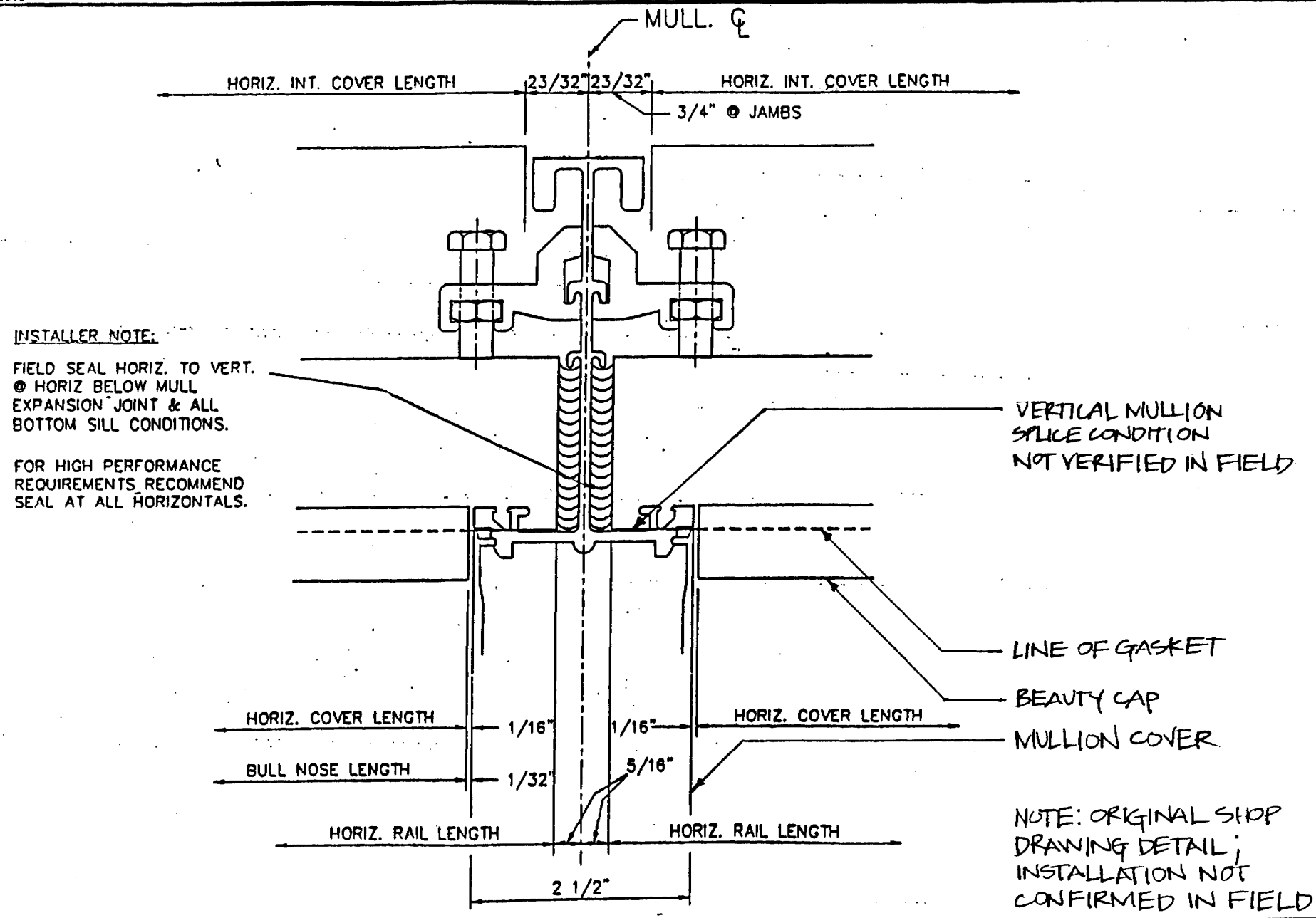


SK9	97187	1 JUNE 98	CURTAINWALL SPANDREL PANEL RAIL NO SCALE

CAPITOL SQUARE
450 N STREET, SACRAMENTO
WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton
Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390

CSQ810



SK10	97187	1 JUNE 98	CURTAINWALL TYPICAL RAIL TO MULLION NO SCALE

CAPITOL SQUARE
450 N STREET, SACRAMENTO
WATER INFILTRATION INVESTIGATION

Rosenberg McGinnis AIA, Inc.
San Francisco • Stockton
Architects • Engineers • 2540 Pacific Avenue • Stockton, CA 95240
(209) 939-3399 FAX (209) 939-3390

APPENDIX B

INVESTIGATION SUMMARY

Reported Leaks
Investigation Schedule
Watertest Summary

Reported Leaks

	Leak Number	Room	Location	TESTING Watertest	Demolition	Visual	Leak Source	Suspected Source
1	1A	Print Room	Floor	9-13			threshold, curtainwall	
2	1B	Print Room	Floor			√		threshold, curtainwall
3	1C	Hallway		-	-	-	not investigared	
4	1D	Cafeteria	Ceiling	7			deck waterproofing	
5	1E	Cafeteria	Ceiling	8			wall to floor joint, elevator threshold	
6	1F	Cafeteria	Floor/Wall	27-29			slab cracks, wall base, penthouse roof slope	
7	2A	Office	Ceiling			√		curtainwall
8	2B	Storage	Ceiling	23			deck edge flashing	
9	2C	Storage	Ceiling			√		curtainwall, panel cracks
10	2D	Storage	Ceiling			√		curtainwall, panel cracks
11	2E	Office	Ceiling	25-26			panel cracks	
12	2F	Office	Ceiling	25-26			panel cracks	
13	2G	Office	Ceiling			√		curtainwall, panel cracks
14	2H	Office	Ceiling			√		curtainwall, panel cracks
15	2J	Office	Ceiling			√		curtainwall, penthouse roofing
16	2K	Office	Ceiling	14-20			curtainwall, penthouse roofing	
17	2L	Office	Ceiling			√		curtainwall, panel cracks
18	2M	Office	Ceiling			√		deck edge flashing
19	2N	Stairwell	Ceiling	24			inconclusive, adjacent to 2B	deck edge flashing
20	3A	Office	Ceiling	-	-	-	not investigated	
21	3B	Office	Ceiling	14-20			curtainwall, penthouse roofing	
22	3C	Conference	Wall/Floor		√	√		curtainwall
23	4A	Office	Ceiling			√		curtainwall
24	4B	Office	Ceiling			√		curtainwall
25	4C	Office	Ceiling			√		curtainwall
26	5A	Office	Ceiling			√		curtainwall
27	5B	Office	Ceiling	-	-	-		unknown
28	5C	Office	Ceiling	-	-	-		unknown
29	6A	Office	Ceiling			√		curtainwall
30	6B	Office	Ceiling			√		curtainwall
31	6C	Office	Ceiling			√		curtainwall, column cover cold joint
32	6D	Office	Ceiling			√		curtainwall
33	6E	Office	Ceiling			√		curtainwall
34	6F	Office	Ceiling			√		curtainwall, column cover cold joint
35	6G	Office	Ceiling			√		curtainwall
36	7A	Office	Ceiling			√		curtainwall; panel cracks
37	7B	Office	Ceiling			√		curtainwall, column cover cold joint
38	7C	Office	Ceiling			√		curtainwall
39	7D	Office	Ceiling			√		curtainwall, column cover cold joint
40	7E	Office	Ceiling			√		curtainwall
41	8A	Office	Ceiling			√		curtainwall, column cover cold joint
42	8B	Office	Ceiling			√		curtainwall
43	8C	Office	Ceiling			√		curtainwall
44	9A	Office	Ceiling			√		curtainwall
45	9B	Office	Ceiling			√		curtainwall, panel cracks

Reported Leaks

	Leak Number	Room	Location	TESTING Watertest	Demolition	Visual	Leak Source	Suspected Source
46	9C	Office	Ceiling			√		curtainwall, column cover cold joint
47	9D	Office	Ceiling			√		curtainwall, column cover cold joint
48	9E	Office	Ceiling			√		curtainwall
49	10A	Office	Ceiling			√		curtainwall
50	10B	Office	Ceiling			√		curtainwall, column cover cold joint
51	10C	Office	Ceiling			√		curtainwall, column cover cold joint
52	11A	Office	Ceiling	34			planter membrane	
53	11B	Office	Ceiling			√		curtainwall, column cover cold joint
54	11C	Office	Ceiling	1-6			column cover cold joint	
55	11D	Office	Ceiling			√		curtainwall
56	11E	Office	Ceiling			√		planter membrane
57	14A	Office	Ceiling			√		curtainwall
58	14B	Office	Ceiling			√		curtainwall
59	14C	Office	Ceiling			√		curtainwall
60	14D	Office	Ceiling			√		curtainwall
61	14E	Office	Ceiling			√		curtainwall
62	14F	Office	Ceiling			√		curtainwall
63	14G	Office	Ceiling			√		curtainwall
64	14H	Office	Ceiling			√		curtainwall
65	15A	Office	Ceiling			√		curtainwall
66	15B	Office	Ceiling			√		curtainwall
67	16A	Office	Ceiling			√		curtainwall
68	16B	Office	Ceiling			√		curtainwall
69	16C	Office	Ceiling			√		curtainwall
70	16D	Office	Ceiling			√		curtainwall
71	16E	Office	Ceiling			√		curtainwall
72	16F	Office	Ceiling			√		curtainwall
73	16G	Office	Ceiling	-	-	-	unknown	
74	16H	Office	Ceiling	-	-	-	unknown	
75	17A	Office	Ceiling			√		curtainwall
76	17B	Office	Ceiling			√		curtainwall
77	17C	Office	Ceiling			√		curtainwall
78	17D	Office	Ceiling			√		curtainwall
79	17E	Office	Ceiling			√		curtainwall
80	17F	Office	Ceiling			√		curtainwall
81	17G	Office	Ceiling			√		curtainwall
82	17H	Office	Ceiling			√		curtainwall
83	17J	Office	Ceiling			√		curtainwall
84	17K	Office	Ceiling	-	-	-	unknown	
85	17L	Office	Ceiling	-	-	-	unknown	
86	18A	Office	Ceiling			√		curtainwall
87	18B	Office	Ceiling			√		curtainwall
88	18C	Office	Ceiling			√		curtainwall
89	18D	Office	Ceiling			√		curtainwall
90	18E	Office	Ceiling			√		curtainwall
91	19A	Office	Ceiling			√		curtainwall
92	19B	Office	Ceiling			√		curtainwall

Reported Leaks

	Leak Number	Room	Location	TESTING Watertest	Demolition	Visual	Leak Source	Suspected Source
93	19C	Office	Ceiling			√		curtainwall
94	19D	Office	Ceiling			√		curtainwall
95	19E	Office	Ceiling			√		curtainwall
96	19F	Office	Ceiling			√		curtainwall
97	20A	Office	Ceiling			√		curtainwall
98	20B	Office	Ceiling			√		curtainwall
99	20C	Office	Ceiling			√		curtainwall
100	20D	Office	Ceiling			√		curtainwall
101	20E	Office	Ceiling			√		curtainwall
102	20F	Office	Ceiling			√		curtainwall
103	20G	Office	Ceiling			√		curtainwall
104	21A	Office	Ceiling			√		curtainwall
105	21B	Office	Ceiling			√		curtainwall
106	21C	Office	Ceiling			√		curtainwall
107	21D	Office	Ceiling			√		curtainwall
108	21E	Office	Ceiling			√		curtainwall
109	21F	Office	Ceiling			√		curtainwall
110	21G	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
111	21H	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
112	22A	Office	Ceiling			√		panel cracks, terrace deck membrane
113	22B	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
114	22C	Office	Ceiling			√		panel cracks, terrace deck membrane
115	22D	Office	Ceiling			√		panel cracks, terrace deck membrane
116	22E	Office	Ceiling			√		panel cracks, terrace deck membrane
117	22F	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
118	22G	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
119	22H	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
120	22J	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
121	22K	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
122	22L	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
123	22M	Office	Ceiling	21-22	√			curtainwall, panel cracks, terrace deck membrane
124	22N	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane

Reported Leaks

	Leak Number	Room	Location	TESTING Watertest	Demolition	Visual	Leak Source	Suspected Source
125	22P	Conference	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
126	22Q	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
127	22R	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
128	22S	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
129	23A	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
130	23B	Office	Ceiling			√		curtainwall, panel cracks, terrace deck membrane
131	23C	Office	Floor			√		curtainwall, panel cracks, terrace deck membrane
132	23D	Office	Floor			√		curtainwall, panel cracks, terrace deck membrane
133	23E	Office	Floor			√		curtainwall, panel cracks, terrace deck membrane
134	23F	Office	Floor			√		curtainwall, panel cracks, terrace deck membrane
135	24A	Office	Ceiling			√		opening in penthouse deck curb
136	24B	Office	Ceiling			√		penthouse deck drain
137	24C	Office	Ceiling			√		wet room plumbing in penthouse
138	24D	Office	Ceiling			√		economizer penetration
139	24E	Office	Ceiling			√		economizer penetration
140	24F	Office	Ceiling	30-31			economizer penetration	
141	24G	Office	Ceiling			√		sealant gap in penthouse deck curb
142	24H	Office	Ceiling			√		deck drain
143	24J	Office	Ceiling			√		deck drain
144	25A	Workshop	Ceiling	32-33			panel cracks	

Investigation Schedule

	Water Test Number	Swingstage	Demo	Day 1 1-Apr	Day 2 13-Apr	Day 3 14-Apr	Day 4 15-Apr	Day 5 21-Apr	Day 6 22-Apr	Day 7 7-May	Day 8 8-May	Day 9 20-May
First Floor Curtainwall - TEST AREA #1												
wall base - reproduction shop	9-11											
curtainwall	12-13											
West Expansion Joint - TEST AREA #2												
parking level 2	7											
expansion joint cover												
elevator threshold	8											
Elevator Enclosure - TEST AREA #3												
deck coating	14											
deck edge	35											
EIFS wall (panel)	17											
elevator threshold	8											
joint at office building	14											
roofing	20											
splice	18											
gold band	19											
pre-cast panel	15											
curtainwall	17											
Stairwell Enclosure - TEST AREA #4												
slab to wall joints	27-28											
door	29											
threshold	29											
roofing	29											
South Expansion Joint - TEST AREA #5												
~~parking level 1~~												
~~parking level 2~~												
joint cover	25											
raised deck	25											
precast panel	26											
curtainwall	26											
Louvers - TEST AREA #6												
interior sealant joint	3											
exterior sealant joint vertical	4	√										
precast panel cold joint	6	√										
precast panel shelf	2											
exterior seal joint horizontal	3											
Curtainwall Survey		√	20-May									
12th floor corner deck - TEST AREA #7												
~~deck membrane~~												
~~drains~~												
~~termination~~												
~~precast panel joints~~		√										
planters	34											
~~curtainwall~~		√										
23rd floor decks - TEST AREA #8												
deck membrane	21		20-May									
drain	21											
membrane termination	22		20-May									
precast panel joints	22											
threshold	22		20-May									
door	22											
window	22		20-May									
Roof Deck - TEST AREA #9												
deck membrane	30											
drains	30											
membrane termination	30											
penthouse roofing	30											
economizer penetration	31											

Watertest Summary

Water Test Number	Leak Number**	Date	Spray Location	Time	Result	Source	Existing Conditions Exterior	Existing Conditions Interior	* Notes
1	11C	4/1/98	vertical sealant joint at pre-cast spandrel panel above 11th floor	10 min.	no leak	NA	floor above leak area - silicone sealant appears to be in good condition	stained ceiling tiles, no stains on column fireproofing or gypsum interior column cover	
2	11C	4/1/98	pre-cast spandrel panel ledge at base of louver	10 min.	no leak	NA		same as test 1	
3	11C	4/1/98	lower 5' of vertical sealant joint between louver frame and pre-cast column cover, west side	10 min.	no leak*	NA	floor above leak area - sealant joint has lost adhesion from substrate in several locations	same as test 1	water entered joint at louver sill into mechanical room interior
4	11C	4/1/98	lower 5' of vertical sealant joint between louver frame and pre-cast column cover, east side	10 min.	no leak	NA	floor above leak area - sealant joint has lost adhesion from substrate in several locations	same as test 1	
5	11C	4/1/98	lower corner of pre-cast column cover cold joint	20 min.	no leak	NA	floor above leak area - cracks are visible at line of cold joint between side and face of pre-cast column	same as test 1	
6	11C	4/1/98	full height of column cover	15 min.	leak*	crack at cold joint*	same as test 5	same as test 1	water enters crack in cold joint of column precast column cover and travels down on interior face of precast panel to ceiling below
7	1D	4/13/98	flood test around deck drain, against curb and column on north side of garage level 2 directly above leak	6 min.	leak*	curb to column joint*	floor above leak area - gaps in deck membrane, gaps in sealant joint at curb to column,	stained ceiling tiles, stains on concrete beam and column	water enters through deck membrane and/or curb termination joint to travel through structural slab and exits at steel deck penetration
8	1E	4/13/98	water from leak in hose flooded level 3 parking slab and flowed to elevator threshold	2 min.	leak*	expansion joint cover	water stains on floor and wall from water blown in from north and/or running down from floor above then pooling at elevator lobby and	stained ceiling tiles in cafeteria, two floors below	water drained directly down to 2nd level garage elevator alcove
9	1A	4/14/98	threshold butt joint	40 sec.	leak*	threshold butt joint	metal threshold set in concrete slab as sill for storefront window wall, no sealant at butt joint of threshold	water stains on threshold and concrete floor	water viewed on interior directly opposite spray location
10	1A	4/14/98	same as test 9	5 min.	leak*	threshold butt joint	same as test 9	same as test 9	water continued to travel along interior threshold between mullions and spilled onto concrete floor
11	1A	4/14/98	sill can butt joint	2 min.	leak*	threshold butt joint	gaps in silicone sealant at sill butt joint, loss of adhesion to metal	same as test 9	same as test 9 and 10
12	1A	4/15/98	failed sealant at vertical mullion butt joint to sill	5 min.	leak*	NA	gaps in silicone sealant	same as test 9	inconclusive test, leak may be from water getting through masking over treshold and sill as with test 9
13	1A	4/15/98	gold band, top and bottom	13 min.	leak*	curtainwall assembly	no weep holes	water stains on interior window frame from head mullion	leak from adjacent mullion at head
14	2K & 3C	4/15/98	flood test garage deck drains at roof level	30 min.	no leak	NA	deck coating appears in good condition around drain and in field	water stains on 2nd floor ceiling and rust on drain pipe, water damage to 3rd floor wall below window in corner	
15	2K & 3C	4/15/98	crack in pre-cast concrete panel under curtainwall mullion directly above leak	10 min.	no leak	NA	crack in pre-cast panel, sealant joints look good	same as test 14	
16	2K & 3C	4/15/98	same as test 15 including two panels	30 min.	no leak		same as test 15	same as test 14	
17	2K & 3C	4/21/98	horizontal sealant joint between curtainwall window sill & pre-cast panel and vertical joint between EIFS elevator wall and curtainwall	2 sec.	leak*	curtainwall assembly	silicone sealant in good condition, glazing gaskets in good condition	same as test 14	leak into 3rd floor from water draining out of sill can, no end closure or weeps, trapped behind horizontal sealant joint
18	2K & 3C	4/21/98	splice joint at vertical mullion	12 sec.	leak*	curtainwall assembly	splice joint sealant has completely, failed in adhesion to the metal mullion	same as test 14	same conditions as test 17
19	2K & 3C	4/21/98	elevator penthouse roof edge flashing*	2 sec.	no leak	NA	incorrect laps on roofing membrane and edge flashing, materials wet, no weeps in metal trim sections	same as test 14	water dripped along back of penthouse wall to structural slabs at third floor

Watertest Summary

Water Test Number	Leak Number**	Date	Spray Location	Time	Result	Source	Existing Conditions Exterior	Existing Conditions Interior	* Notes
19a	2K & 3C	4/21/98	elevator penthouse roof edge flashing*	60 min.	no leak	NA	incorrect laps on roofing membrane and edge flashing, materials wet, no weeps in metal trim sections	same as test 14	water left to run at very low volume to saturate wall assembly, leak 18 slowed to very slow drip
20	2K & 3C	4/21/98	same as test19	7 min.	leak*	elevator penthouse roof assembly	same as test 19	same as test 14	water pressure increased, leak noted from deck drain at 2nd floor ceiling, water saturated roof deck topping slab under deck membrane and behind sealant joints, eventually dripping down at penetrations including deck drain
21	22M	4/21/98	23rd floor terrace tile	15 min.	no leak	NA	tile grout is crack, tiles appear loose	stains on ceiling tiles under slab penetrations, active leak in all storms	
22	22M	4/21/98	door threshold and sidelight	5 min.	leak*	curtainwall assembly & terrace membrane	weeps have been added to sidelight sill, sealant in good condition, remedial sealant has been installed around threshold and door frame	same as test 21	carpet at 23rd floor saturated at door and sidelight, drips from ceiling insulation at 22nd floor, toppingand structural slab saturated until water dripped down at penetration in slab
23	2B	4/21/98	roof deck edge flashing	10 min.*	leak*	gap in edge flashing termination	opening in end of metal edge flashing at 3rd level deck edge flashing	severe water stains on ceiling tiles at column lines, drip marks down window frame	water spray did not re-create leak until splashed up into end of flashing as with windy conditions, then area leaked immediately
24	2N	4/21/98	pre-cast panel	19 min.	no leak	inconclusive	cracks in pre-cast panels, sealant joints appear in good condition, adjacent to roof edge flashing in test 23	same as test 23	slight amount of water felt in backing rod behind horizontal head sealant, not confirmed, water may travel from leak confirmed on other side of column in test 23
25	2E & 2F	4/21/98	garage level deck drain flooded	5 min.	no leak	NA	deck coating in poor condition	no visible water stains at 3rd floor, stained ceiling tiles at 2nd floor, rusted drain lines in ceiling, water marks on insulation and suspended elements	
26	2E & 2F	4/21/98	cracks in pre-cast panels	1.75 hours	leak*	panel cracks	large cracks in top edge of pre-cast panels under window sills	same as test 25	water enters panel cracks and runs down backside of panel to 3rd floor slab, water detected on carpet, assumed to eventually saturate roof deck topping slab and structural slab then travel to floor below through slab penetrations such as deck drain
27	1F	4/22/98	garage roof slab flooded at stairwell penthouse	6 min.	leak*	slab cracks	area does not slope well to deck drains, many cracks in slab, sealant at wall base is deteriorated, no weep screed at base of stucco wall	water damage to base of interior wall at all levels of stairwell enclosure, waterstaining in ceiling elements and back side of original curved wall of 1st level of stairwell	test stopped after 15 minutes due to amount of water dripping through cracks onto parked cars and potential for flooding at 3rd floor elevator thresholds
28	1F	4/22/98	base of wall at garage stairwell penthouse	4 min.	leak*	curb cold joint*	slab crack run under framed stucco wall of penthouse	same as test 23	leaks at southeast wall into 3rd level form curb cold joint, no leaks to interior of penthouse observed
29	1F	4/22/98	stairwell penthouse roof	3 min.	leak*	incorrect roof slope, flush door threshold	roof slopes away from scupper drain to spill water over edge above entry door	same as test 23	water runs over roof edge, directly into penthouse interior at door head and threshold and into interior wall framing, potentially to run down inner wall to 1st level
30	24F	5/7/98	penthouse base flashing splice	10 min.	no leak	NA	metal wall extends over base flashing set on concrete curb	water staining evident on penthouse floor slab, numerous visible cracks in slab, conduit and equipment bracing penetrate slab	

Watertest Summary

Water Test Number	Leak Number**	Date	Spray Location	Time	Result	Source	Existing Conditions Exterior	Existing Conditions Interior	* Notes
31	24F	5/7/98	metal roof at elevator economizer penetration	1 min.	leak*	economizer penetration	battens sealed at base, gaps in metalwall at penetration	water stains on equipment and bracing	water dripped through holes between metal wall and economizer duct penetration
32	25A	5/8/98	metal wall head flashing	15 min.	no leak	NA	unknown sealant, baffle and splice conditions	severely stained steel framing and insulation	
33	25A	5/8/98	pre-cast panel	10 min.	leak*	panel cracks	panel sealant appears to be in good condition, visible cracks in panel	same as test 32	water dripped off backside of precast pnale onto interior structural steel framing
34	11A	5/8/98	south planter level 12	5 min.	leak*	planter membrane		leak occurred at full length of wall dripping from fire stopping	leak occured for full length of window wall

* See "Notes" column for description

** See Floor Plan for leak location and number designation