

REPORT
OF THE
LIBRARY PROCESSING CENTRE
ENVIRONMENT TASK FORCE COMMITTEE, MARCH 1981

RECEIVED

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A.U.C.E.

Introduction:

What follows is a report prepared by the L.P.C. Environment Task Group, a volunteer committee established in September of last year to investigate the apparent general dissatisfaction with the physical environment of the L.P.C.

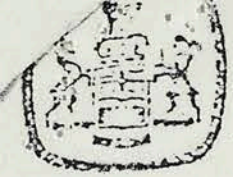
Included are:

- A. The terms of reference, drafted by Bob MacDonald and approved by the committee.
- B. A copy of the 'Environment Improvement Questionnaire', written by the group and distributed to everyone working in the building.
- C. A summary of the responses to the questionnaire (about 80 per cent were completed and returned).
- D. A report from Mr. Robson of the Occupational Health Branch, Department of Labour.
- E. The final recommendations of the group.
- F. The conclusion.

LPC Environment Task Group

Terms of Reference:

1. Organization— the group is established on a voluntary ad hoc basis, comprising staff working in the LPC willing to investigate and report on conditions in the LPC.
2. Main purpose— to investigate and report on:
 - heating and air-conditioning for levels 1 & 2 of the LPC;
 - staff room facilities for Library Processing staff.
3. Methods— the group will obtain information and opinions from staff, arrange for checks of equipment by Physical Plant, and obtain information and advice from Physical Plant by requests handled through the Processing administration (R. MacDonald and secretary). A report is to be drafted, which can be typed by the Processing admin. secretary.
4. Reporting— written report to be provided to the Processing Division heads and R. MacDonald— to be circulated among Processing staff. Report to provide information, an assessment and recommendations. A verbal presentation may also be made if desired.
5. Scheduling— the work of the group should be completed by December 31, 1980.



1981-01-12

U.B.C. Library Processing Centre
University of British Columbia
Vancouver, B. C.
V6T 1Z8

Attention: Mr. R. McDonald

Dear Sir:

At the request of the Environmental Task Force Committee, I conducted a survey of the environmental conditions at the Library Processing Centre.

I have written a letter to Mr. C. Smellie, Physical Plant, regarding the heating and ventilating systems, and have enclosed a copy for your information.

In addition, I obtained light level readings at various locations and found that both the quantity and quality of illumination are satisfactory for the majority of tasks being performed. The exceptions are at the video display terminals and fische readers.

This Branch is currently conducting a study of the problems related to VDT's and will make our findings available to you as soon as possible. In the meantime I would recommend the following:

- (a) Reduce the amount of time required for each operator to a maximum of two hours continuous viewing.
- (b) Provide good quality optical reflection filters for the viewing screens to reduce reflected images.

Yours truly,

Ralph L. Robson
Inspector

RLR/kk

cc: Mrs. E. Misewich,
Environmental Task Force Committee



1981-01-12

Mr. C. Smellie
Supt. of Mechanical Utilities
Physical Plant
University of British Columbia
Vancouver, B. C.

Dear Mr. Smellie:

Re: U.B.C. Library Processing Centre

Further to the inspection of your premises on 1981 -
January - 07, and our conversation at that time, the
following corrective measures are required to comply with
the Factory Act and Regulations of British Columbia.

1. Heating

- (a) Adjust the room temperature controllers to provide a minimum set differential of 3°C between heating and cooling cycles.
From past experience, we have found settings of 21°C and 25°C for perimeter units and 19°C and 25°C for interior units, to be the most acceptable.
- (b) Remove obstructions such as book stacks that are restricting the normal movement of air at the room temperature controllers to allow these devices to accurately sense the conditions in the spaces served.

2. Ventilation

- (a) Ensure that fresh air dampers, filtration equipment, bird screens, etc. are satisfactorily maintained to allow design air flow rates to be delivered to the occupied spaces.
- (b) Adjust the relative humidity levels within the building to reduce the differential between indoor and outdoor RH as much as possible to alleviate the sensation of dryness experienced by the occupants in the controlled atmosphere.

Completion of the above is required within a reasonable period of time. A reply advising us of completion, or your schedule for this work is required within thirty (30) days.

For further information or clarification, please contact the undersigned.

Yours truly,

Ralph L. Robson
Inspector

RLR/kk

cc: Mr. R. McDonald
Library Processing Centre

Mrs. E. Misewich
Environmental Task Force Committee

The Environment Improvement Questionnaire

The following is a questionnaire that is being sent out by the volunteers from the 'Environmental Task Force Committee', to determine, for the University, what improvements can be made to the environmental conditions in the Library Processing Centre.

This committee was formed because of continuous complaints from employees that our environment is not properly heat and air controlled, that there are health and safety concerns, and generally that our environment is not conducive to a suitable, productive work space. Professionals in all these fields will be consulted, with data formulated to come up with positive solutions that will aid in rectifying the bulk of our complaints. We would like to assure you that all questionnaires will be kept anonymous and confidential. They are being distributed for people to ponder, before a committee member comes by on _____ to collect them. At this time our representatives can help answer any questions you may have. (Please tick applicable space or keep comments succinct.)

1. In what area do you work? (According to zone map attached.)

2. Do you find it too warm in your office space? 1. Yes..... 2. No.....

3. a.m. 4. p.m. 5. both..... 6. other..... 7. normal.....

3. Do you find it too cold in your office space? 1. Yes..... 2. No.....

3. a.m. 4. p.m. 5. both..... 6. other..... 7. normal.....

4. Do you find temperatures vary in different areas? a) Yes..... b) No.....

c. Please list different areas, where you are noticing heat differences,

with a corresponding condition. (e.g., Auth/title filing -- too warm

Serials orders -- too cold.)

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5. Are you aware of drafts? 1. Yes..... 2. No.....

6. When are you aware of drafts? 1. a.m. 2. p.m. 3. both.....

4. other.....

7. Do you find the air stuffy? 1. Yes..... 2. No..... 3. Other.....
4. a.m. 5. p.m. 6. both.....
8. Are you dehydrated to the point where you are overly thirsty? 1. Yes.....
2. No..... 3. Other..... 4. a.m. 5. p.m. 6. both.....
9. Are you bothered with dust? 1. Yes..... 2. No..... 3. a.m.
4. p.m. 5. both..... 6. other.....
10. Are you bothered with irritants in the air? 1. Yes..... 2. No.....
3. a.m. 4. p.m. 5. both..... 6. other.....
11. Are you bothered by inhaling chemicals of any sort? 1. Yes.....
2. No..... 3. a.m. 4. p.m. 5. both..... 6. What kinds of
chemicals?
.....
.....
12. Are there irritants in the air that bother you besides the above-mentioned?
1. Yes..... 2. No.... 3. a.m. 4. p.m. 5. Both.....
6. What kinds?
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.....
13. Have you noticed an increase in common or communicable diseases since you
have been working in the L.P.C. building? 1. Yes..... 2. No.....
14. State which illnesses you are most commonly affected with. 1. None.....
2. Colds..... 3. flu..... 4. allergies..... 5. sinus..... 6. headaches.....
7. dizziness..... 8. shortness of breath..... 9. other.....
15. Are you noticing periods of drowsiness? 1. Yes..... 2. No..... 3. a.m. ...
4. p.m. 5. both..... 6. other.....
16. Are you noticing differences in general health that could be affected by
our environment? Yes..... No.... What, specifically?.....

17. Have you personally had to adjust 1. temperature controls..... 2. tape air ducts..... or 3. open doors..... 4. Other..... 5. None.....
18. How does lighting affect you? 1. Too bright..... 2. Too dull..... 3. Causing eye fatigue..... 4. Satisfactory.....
19. Do you have your own desk lamp? 1. Yes..... 2. No.....
- a) Do you use this to supplement existing light? 1. Yes..... 2. No.....
- b) Do you use this to replace existing lighting? 1. Yes..... 2. No.....
20. Are you experiencing eyestrain? 1. Yes..... 2. No.....
- From glare? 3. Yes..... 4. No..... Fiche readers? 5. Yes..... 6. No.....
- From terminals? 7. Yes..... 8. No..... 9. Other.....
21. Are there health hazards in your work area that you are aware of? 1. Yes..... 2. No..... 3. Exposed wires?..... 4. Protruding electric outlets?..... 5. Phone boxes?..... 6. Unstable shelves?..... 7. Other.....
- 21a. Are there any additional safety hazards you are aware of? 1. Yes..... 2. No..... 3. What kinds.....
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-
-
22. Do you find furnishings unsuitable for our general well being? 1. Yes..... 2. No.....
- a) Are chairs comfortable? 1. Yes..... 2. No..... 3. Too soft? 4. Too hard? 5. Causing backache? 6. Yes..... 7. No.....
- Are trucks stable? 8. Yes..... 9. No..... 10. Other.....
- Are desks suitable? 11. Yes..... 12. No..... 13. Other.....
- b) Is any other furniture unsuitable in your work area? 1. Yes..... 2. No.. 3. In what way?

c) If you could change the environment in which you work, what would you do to change it? (e.g., paint, plants, furniture, room dividers, etc.)

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23. Do you find noise levels disturbing? 1. Yes..... 2. No.....
Is noise factor caused from 3. machinery?..... 4. phones?..... 5. people's
voices?..... 6. Heat and airconditioning?..... 7. Other?.....

24. Do you find storage area adequate? 1. Yes... 2. No.....

25. Do you receive any natural light from outside around your work area?

1. Yes..... 2. No..... 3. Direct..... 4. Filtered.....

26. If you have a window that has curtains, do you find them adequate?

1. Yes..... 2. No..... 3. Other.....

27. Do you find VDT readers legible? 1. Yes..... 2. No.....

Micro readers? 3. Yes..... 4. No.....

Printouts? 5. Yes..... 6. No.....

7. Others..... 8. legible..... 9 illegible.....

28. Would you like to see sickroom facilities improved? 1. Yes..... 2. No.....

Other comments:

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29. Are you satisfied with the contents of vending machines in the staff room?

1. Yes..... 2. No.....

30. What foods and drinks would you specifically prefer to see in the vending
machines.....

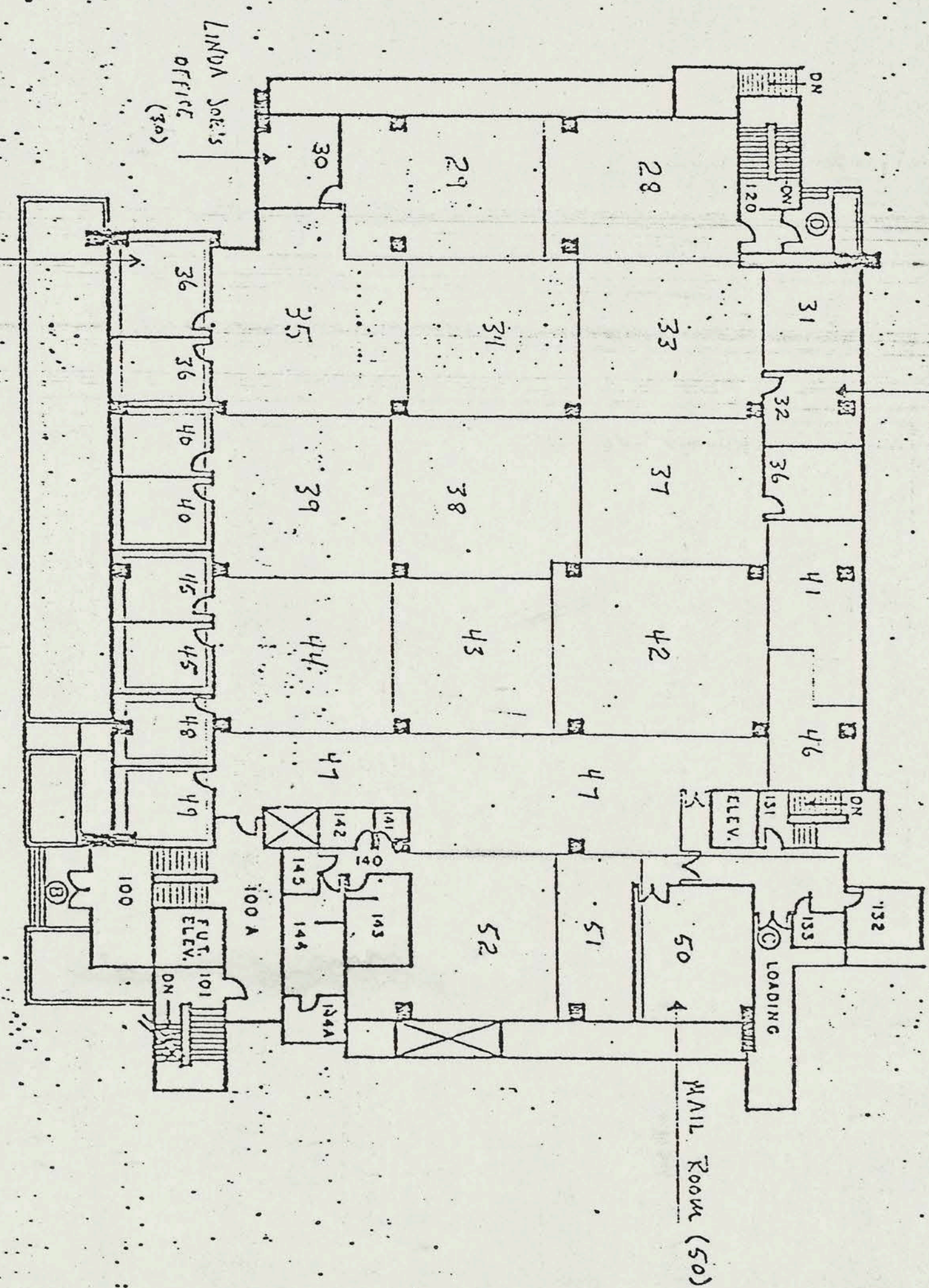
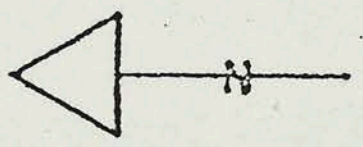
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31. How would you evaluate response to complaints about working conditions?

Comments:
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32. Other comments:.....

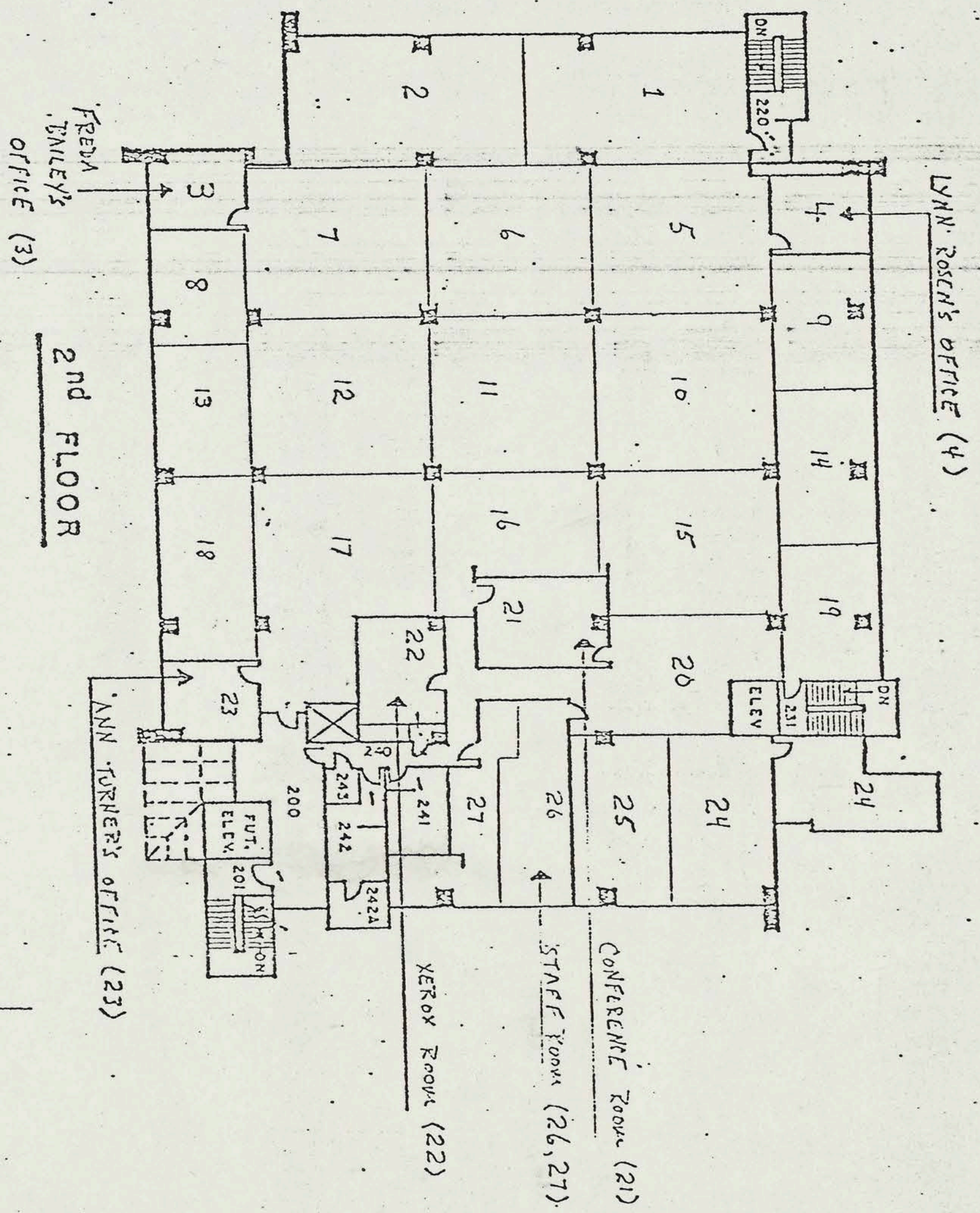
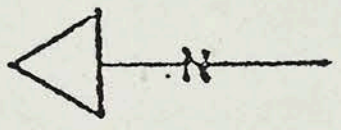
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GROUND FLOOR

ZONES 28-52

NOV 13 4 OCT 25 1975



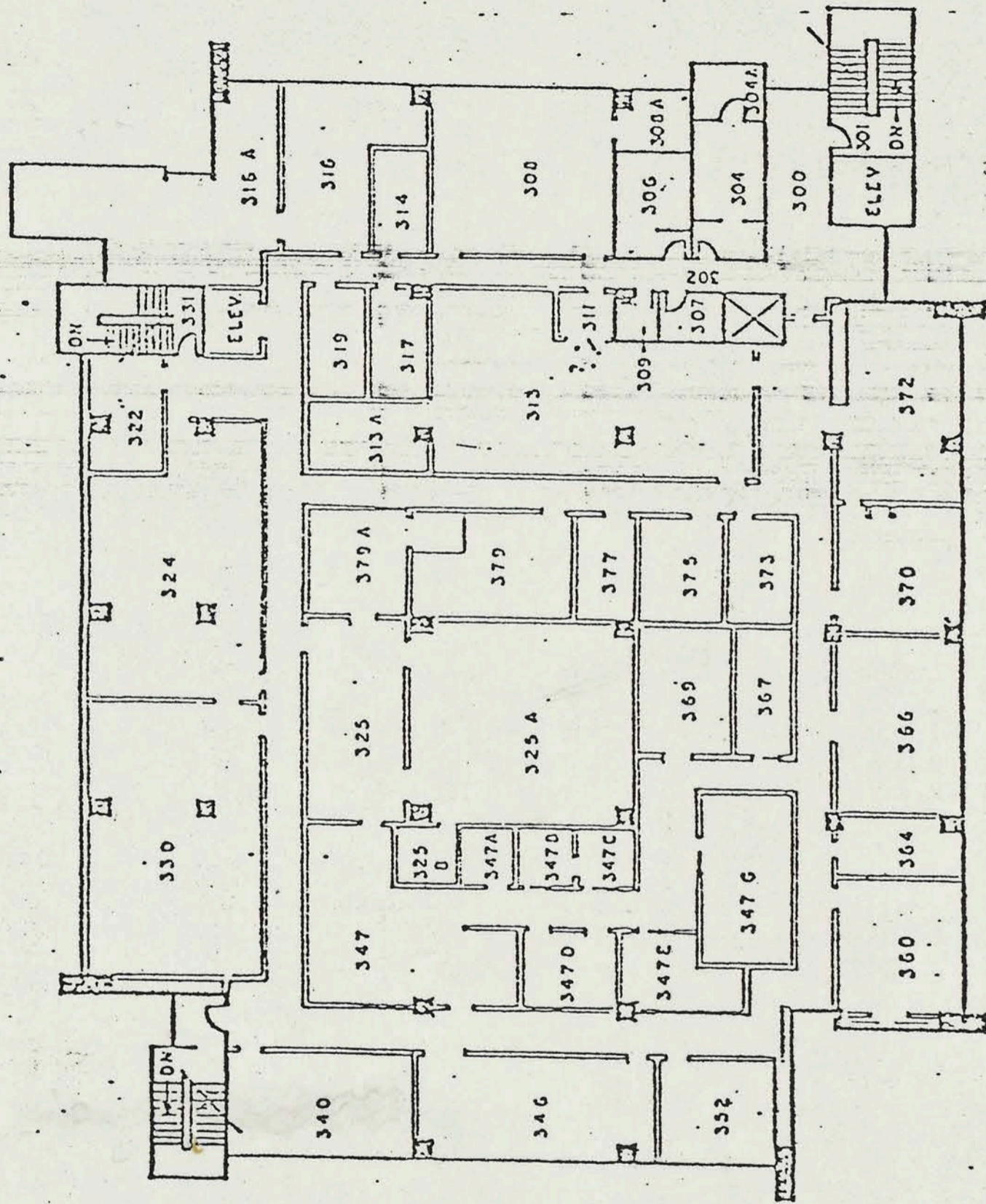
2nd FLOOR

SCALE 1" = 30'

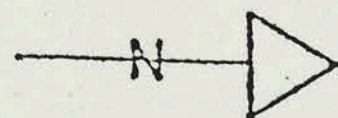
DEC. 13, 1977

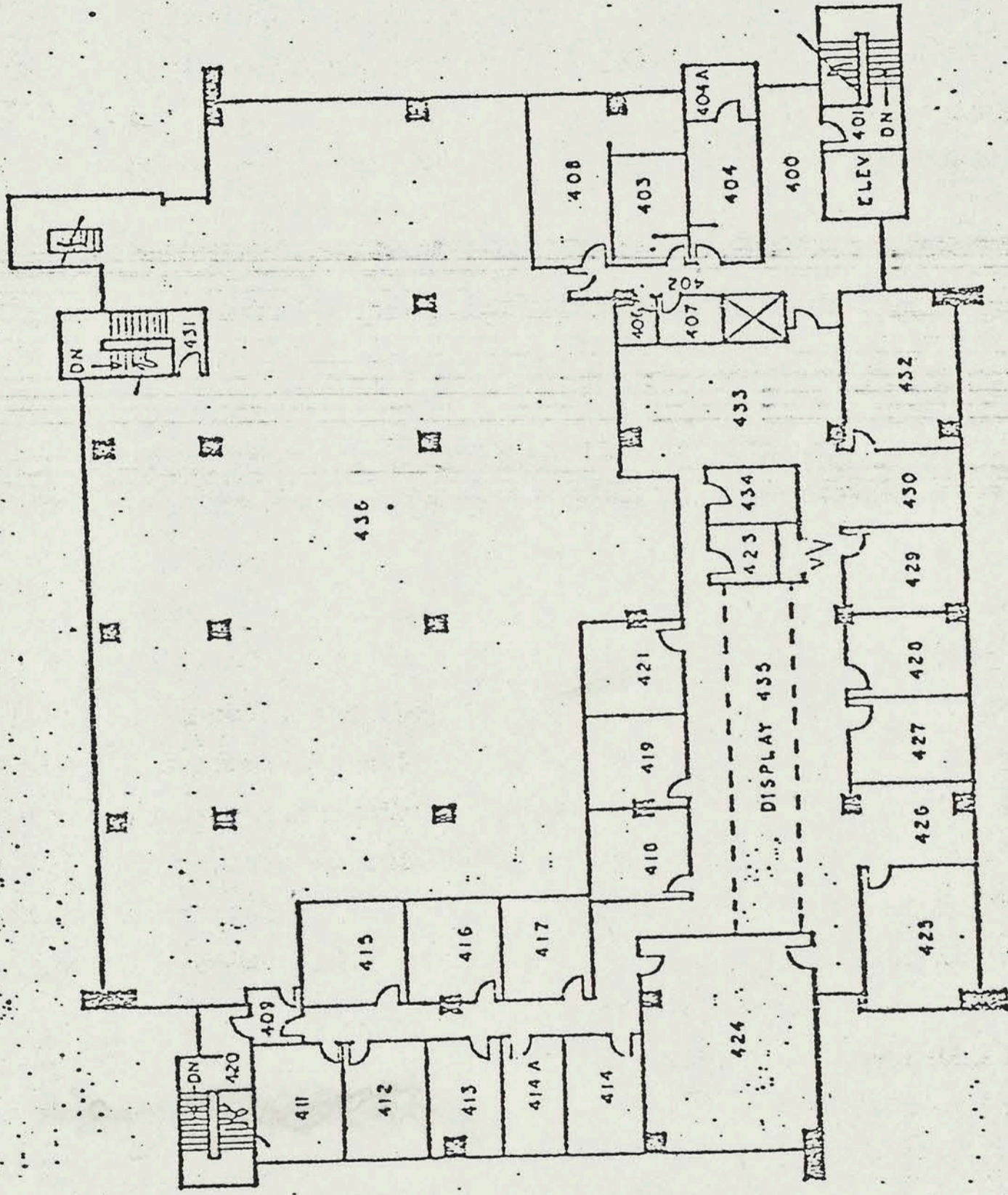
REVISED

ZONES 1-27



3rd FLOOR





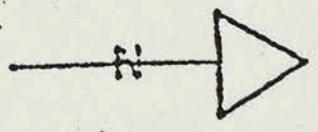
4th FLOOR (INCOMPLETE)

SEPT. 28, 1978

REVISED

DEC. 13, 1977

SCALE 1" = 30'



C. Summary of Responses to the Questionnaire.

The categories dealt with are:

- a) Temperature (questions 2, 3, 4, 17)
- b) Humidity (question 8)
- c) Circulation of air (questions 7, 5, 6)
- d) Particle filtration, odours and fumes (questions 9, 10, 11, 12)
- e) Lighting (questions 18-20, 25, 26)
- f) Noise (questions 22c, 23)
- g) Sickroom facilities (question 28)
- h) Staffroom (questions 29, 30)
- i) Health and safety hazards (questions 21, 21a)
- j) Furniture and space (questions 22, 24)
- k) VDTs (question 27)
- l) Response to complaints

a) Temperature.

A majority of the respondents on the first floor consider the temperature too cold, and they feel that this is the case all day long. 58 out of 65 respondents said that the temperature varies from area to area and many specified which areas are too cold and which are too hot. 41 out of 75 people have tried personally to remedy the problem by adjusting thermostats, taping air ducts, opening doors and so forth.

On the second floor, a small majority also feel that it is too warm. There is no consensus about the time of day. But 51 out of 58 respondents said that the temperature varies throughout the floor. Half of the people on the floor have tried to make adjustments to the system.

On the third and fourth floors, the answers to the question on temperature is evenly distributed between warm, cold and normal. However, the situation is quite different there. The space is divided into small enclosed units, with perhaps an air-conditioner for every two offices. The majority did feel that the temperature varies from area to area.

b) Humidity

The question on humidity was poorly framed. Rather than being asked if they felt the air was dry, people were asked if they were dehydrated. Nevertheless, 53 out of 163 people feel that they are dehydrated, and they specify dry throats, skin, nasal passages, and eyes as problem areas.

c) Circulation of air.

An overwhelming majority find the air stuffy — 116 out of 168. And 86 out of 160 respondents state that they are aware of drafts. These drafts originate both with the air-conditioning vents, which are situated in the ceiling and often blow directly down on people, and with changes in the outdoor temperature of the wind direction.

d) Particle filtration, odours and fumes.

A large number of people are bothered by dust: 46 out of 113. Approximately half the people on each floor, except the top floor where a large majority are not bothered by dust. 54 out of 149 people were bothered by 'irritants', a category which is not defined in the questionnaire, and which may overlap considerably with 'dust'. People mention specifically, cigarette smoke, paper dust, perfume, cooking odours, and fibres. Chemicals are felt to be a serious problem by people in A.V., where chemicals are used. They mention aerosol spray, un-vented machines, glues and paint. On the other floors a few people are bothered by chemicals, they mention fumes from the third floor (A.V.), and the xerox machines. Some people on the second and fourth floors state that the system seems to circulate odours from one area to another (air freshener, medicinal smells, 'noxious odours', etc.)

e) Lighting.

L.P.C. workers overwhelmingly find lighting to be unsatisfactory. Overall, only 31 per cent find lighting satisfactory.

On all floors, the majority do not find favour with the lighting. The highest is the first floor, where 39 per cent find the lighting satisfactory. The floor found most wanting is the fourth floor where only 1 of the 19 people responding are satisfied.

71 per cent of all surveyed complain of eyestrain. Only 50 per cent of workers on the third floor complain of this, compared to 100 per cent (15/15) of the workers on the fourth floor. Floors one and two are quite close to the average (67 and 72 per cent, respectively).

The reasons given for eyestrain vary greatly between the first and second floors, and the third and fourth floors. The explanation of this is that the two major causes of eyestrain, microfiche readers and video display terminals, are rare on floors three and four. Overall, 78 per cent complain of glare. Again, on floor four, a 100 per cent positive response was given to this query. 66 per cent complain of this on the first and third floors, while 81 per cent find glare a problem on the second floor. Microfiche readers and video display terminals, as mentioned above, are significant factors in causing eyestrain. These are found to be more of a problem on the second floor than on the first, just as lighting is found generally to be more unsatisfactory on the second floor. On the first floor, 57 per cent think microfiche readers a problem, and 61 per cent find terminals irritating. On the second floor, 80 per cent find microfiche readers a problem, which 90 per cent think the same of terminals. Between the two floors the averages are 66 per cent and 74 per cent respectively, for microfiche and terminal dissatisfaction.

f) Noise.

A clear majority overall (60 per cent) found noise levels to be disturbing. The floor worst in this respect was the second floor (69 per cent). On the first and fourth floors, 56 per cent find noise levels disturbing, as compared to only 40 per cent on the third floor. The reasons for the extreme disquiet on the second floor is, in all probability, the greatest^v levels of machine use. Specifically, printers and the crowding of a large number of workers in the small spaces which

surround the unmanned central portion of the floor.

The particular reasons for noisiness cited by those surveyed are, in decreasing order of importance; machinery, people's voices, heat and air-conditioning systems, and telephones. Machinery is a major problem on the first and second floors, but virtually a non-existent one on the third and fourth floors. Almost all (89 per cent) of those on the first and second floors who think noise excessive, mention machinery as a culprit. In fact, over half (57 per cent) of all surveyed on the first and second floors, complain of machinery noise. 29 per cent of all workers surveyed on all floors find human noise excessive; this is worst on the fourth floor where exactly half complain of this. 21 per cent of all surveyed on all floors (30 per cent on floor three) complain of noise from heat and air-conditioning systems, while only 12 per cent overall complain of telephone noise, although this is considerably higher on the fourth floor (28 per cent).

Many people suggest partial solutions for the noise problem. The most popular are sound-absorbing room dividers, carpeting and sound-proofed rooms for terminals and printers.

g) Sickroom facilities.

73 out of 95 of the respondents would like to see sick room facilities improved. This question prompted alot of comments. They can be roughly grouped:

- those that suggest either that the sickroom and washroom facilities be completely separated, or that better ventilation and a source of fresh air be provided.
- those that suggest additions or changes to the contents or fittings of the room.
- those that note the absence of such a facility for men.
- those from the third and fourth floors noting the absence of such a facility altogether.

h) Staffroom.

Two-thirds of the respondents are not satisfied with the contents of the vending machines in the staffroom. The primary request

for a better variety is parallel in the variety of the comments which include requests for: fresh fruit, dairy products, straws for canned beverages, less pastries, more and fresher sandwiches, a stronger emphasis on 'natural' snacks, (eg. salads, cheese and crackers), protein food, sugar-free gum, unsalted nuts, muffins, brown bread, etc. There are complaints about stale items and requests that the name or description of an item, as well as the expiry date, be visible. Also there are several requests that the coffee machine be cleaned more often. A small but vocal group came out in favour of junk food.

i) Health and safety hazards.

A large percentage of people (54 out of 132) are aware of health of safety hazards. 11 people specify exposed wires, 43 say protruding electrical outlets, 14 people cite phone boxes, 4 claim unstable shelving and 13 people note 'other'. The hazards, judging from the answers and comments, fall into three loose categories:

- 1) problems with built-in fixtures of the building
- 2) problems resulting from over-crowding
- 3) problems with furniture and equipment

Included in the first category are recessed floor electrical outlets, which are a problem because there are not enough of them, because they will not accept many of the existing appliance plugs, making it even more necessary for more extension cords and cube taps, which can be a further hazard especially when the debris is metallic (paper clips and staples). Protruding telephone boxes, mostly mounted on columns, in areas that have become heavy-traffic routes are also mentioned.

j) Furniture and space.

Results for floors one and two are combined. 76 out of 111 respondents felt that the furnishings are 'suitable'. A similar majority feel that the chairs are comfortable. A few people attribute backache to the chairs. However, since the chairs are not of a standard kind, it is impossible to draw general conclusions from these opinions. The book trucks are considered unstable by 25 people (87 responded). This response is also hard to evaluate because it is not known how many of

these people frequently use the trucks. Since probably less than the total number responding actually use the trucks frequently, the percentage is more significant than it appears. Most people are satisfied with their desks (99 yes, 14 no). There are a number of specific suggestions that will be dealt with under Recommendations. The suggestions for improvement of the 'environment' are legion, and are not restricted to furniture and space.

On floor three, 4 of the 8 respondents feel that the furnishings are unsuitable, but aside from one unsuitable chair, they are not specific about the problems. Nobody feels that the trucks or desks are a problem, and only one person feels that any of the other furnishings are unsuitable, but again without specifying which.

On floor four, 5 of the 17 respondents feel that the furnishings are unsuitable. The chairs seem to be the main problem. Some people mention the need of book shelves and coat hooks. There are many suggestions for improving the environment.

k) VDTs.

In retrospect, the question seems to be poorly framed. The problem is not 'legibility', but the effect of the work on the worker: eyestrain, drowsiness, etc. This aspect is partially addressed by question 20, the answers to which are summarized in e) Lighting (qv.) Elsewhere in the questionnaire, a number of respondents say that the tables and chairs used for terminal work are often mismatched in size.

l) Response to complaints.

Many people feel that the response to the complaints about temperature, lighting, etc. is inadequate. There is a general feeling that when solutions are attempted by the maintenance people, they are usually solutions of the band-aid sort--ineffective minor adjustments. Some feel that the complaints get lost and never reach anyone who can respond. A couple of people said that they feel the people involved in maintaining the air-conditioning system have an inadequate understanding of that system. There is a great deal of displeasure arising from the feeling that Physical Plant, in particular, is not taking the

complaints seriously enough. A number of respondents relate that Physical Plant staff members are of the opinion that complaints from female L.P.C. employees about the air-conditioning system are frivolous and unwarranted and as such, could be safely ignored. Such an attitude on the part of the Physical Plant staff is hardly conducive to a healthy relationship between them and the workers in the L.P.C.

E. Recommendations

It is the primary recommendation that the instructions in Mr. Robson's report, and the suggestions in his letter to Bob MacDonald be promptly acted on and that the Library Processing Centre Environmental Task Force Committee be thoroughly informed of such actions and consulted where appropriate.

In order to facilitate the continued improvement of conditions in the L.P.C., it is strongly recommended that the L.P.C. Environment Committee be restructured as a permanent library committee. While it is anticipated that meetings of a permanent committee will not be as frequent as those of the temporary committee, this new committee is required for the following reasons:

- 1) to see that the recommendations of Mr. Robson's report are carried out as fully as possible.
- 2) to see that the recommendations of the L.P.C. committee, and the conditions that spawned these recommendations are given the fullest consideration.
- 3) to monitor and report any new conditions as they arise.
- 4) to serve as a liason between management and staff on a question of considerable importance to both groups.

The following recommendations are additional to those specifically dealt with by the officer from the Occupational Health Branch. They are drawn directly from the questionnaire results, from other sources consulted by the committee, and from committee discussions. These recommendations will be arranged under the same headings used in section C.

a) Temperature.

In addition to the specific recommendations in Mr. Robson's report, it is recommended that, whenever possible, the maintenance staff attempt to satisfy the particular problems of individual areas. For example, closing certain vents which are blowing air directly down on the people beneath them (some people have taped these vents themselves), or adjusting the temperature to satisfy a

a consensus formed by the people in a particular area.

b) Humidity.

The degree of humidity in the building matches the standard, according to Mr. Robson, but the standard does not suit our climate. The sensation of dryness results from the difference between the humidity outside and that inside. Raising the humidity in the building will solve this problem.

c,d) Circulation of air and Particle filtration, odours and fumes.

If the filters and dampers are properly maintained, as Mr. Robson recommends, the problem with dust and staleness of air will be ameliorated. This may also help solve the problem of circulating odours and fumes. As for the fumes originating specifically with the equipment located on the third floor, individual remedies must be applied; for example, better venting. The problem of fumes coming from the xerox machines can also be dealt with. Especially the escape of ozone, which represents a danger, can be rectified by proper servicing. It is also recommended that there is more frequent vacuuming of shelves and floors to reduce dust accumulation.

e) Lights.

The problem of lighting requires attention directed towards individual workers and their needs. For those who feel the lighting is too strong (a majority) and obvious solution is to remove some of the light tubes within their work space, or to remove them all and provide desk lamps. Another possibility is to replace all of the fluorescent lighting with some kind of full-spectrum lighting, more suitable for people.

Further information from the Occupational Health Branch regarding lighting around the terminals is forthcoming.

The old-style fiche readers should be replaced with the new 'Micron' readers which are easier on the eyes.

f) Noise.

The strongest recommendation is the provision of more sound-absorbing room dividers. Also recommended is carpeting, if not on the entire first two floors, at least on the high traffic areas and corridors.

g) Sickroom facilities.

There should be facilities for men. Either that or the sick room should be another room (not of the Ladies washroom) so that all can use it. Additions recommended for the present facility are curtains for the window, pillow and blanket, waste basket with plastic liner, kleenex and a small table. Accessories that are not necessary, but desirable, include: and 'occupied' sign for the door, a lock for the door, another bed, an armchair, a heating pad, a small sink and a small (low-light) lamp.

h) Staffroom.

The vending machines should supply more natural foods, and all perishable foods should have the expiry date clearly visible to the buyer.

i) Health and safety hazards.

Faster responses to Department Heads' requests for removal of dangerous fixtures is required.. It is recommended that recessed floor electrical outlets be cleaned and caps put in. There should be an extra supply of these since they get lost. More electrical outlets should be obtained to eliminate the need for extension cords.

j) Furniture and space.

The chairs in the conference rooms should be checked for rough edges (just underneath the seat) and these edges smoothed off. As more time is spent at the terminals, the quality of the chairs should be improved. Chairs need to be adjustable. There appears to be mis-matches between tables and chairs on floor one and two. The furniture should

be pooled and swaps made. Floor four needs coat hooks for doors and book shelves. Other recommendations are plants and more colourful interior painting to improve work space appearance.

k) VDTs.

Please refer to Mr. Robson's report.

l) Response to complaints.

Better communication is necessary. Workers should know who to report complaints to and get some sort of feedback.

F. Conclusion.

Worker dissatisfaction with the Library Processing Centre has been intense. This dissatisfaction has been manifested both in health conditions and worker attitudes. It is a certainty, that if working conditions do not improve in the L.P.C., satisfaction with the workplace and the jobs themselves will continue to deteriorate and become an even more serious problem that it is at present. It is strongly urged that this trend be reversed.