Bell

0393

Mallinckrodt, Inc.

BOX 10172 LAMBERT FIELD • ST LOUIS MISSOURI 63145 • PHONE 314 291 0540

March 16, 1976

Mr. Nathan Bassin
Materials Branch
Directorate of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20545

Reference: U.S. NRC License
No. 24-04206-01

Dear Mr. Bassin:

The purpose of this letter is to provide you information pertaining to our new facility designated as Building 500. Additional information is provided in the attached Building 500 Description. An explanatory drawing of the facility and a plot plan are also attached.

The anticipated date for completion of the construction phase is late in April or early in May of 1976. The operations to be performed in Building 500 are currently being performed in various locations in Buildings 100, 200, 300 and 400.

Proper operation of all equipment, in particular, the liquid waste retention system and effluent air exhaust system, will be verified upon completion of installation. Following this, the Radiation Safety Committee will tour and inspect the facility and upon determination that design criteria have been met will release the building for occupancy and operation.

The results of surveys performed during the first few weeks of operation will be furnished to the Committee for review and possible corrective action.

The Health/Safety Department head will be directly responsible for the facility and all operations will be supervised by Health Physics staff members.

COPIES SENT TO OFF. OF
INSPECTION AND ENFORCEMENT

A/92

Mallinckrodt NUCLEAR

If you have any questions or require additional information, please contact me directly.

Sincerely yours,

MALLINCKRODT, INC.
MALLINCKRODT/NUCLEAR

Donald W. Soldan

Donald W. Soldan
Chief Radiation
Safety Officer

DWS/lm
cc: U.S. NRC Regional Director
Members Radiation Safety Committee

BUILDING 500 DESCRIPTION

This new building will be a single story cement block and steel structure contiguous to the West wall of our existing warehouse, Building 400. Approximately 5,000 square feet of additional work and storage space will be provided upon completion of the building, scheduled for early spring of 1976. The North/South dimension will be 100 feet and the East/West dimension 50 feet with a clear working height of 18 feet.

The purpose of the building is to consolidate several operations now performed in scattered locations in our present facility.

1. All incoming shipments of radioactive materials will be received and surveyed prior to final delivery for processing the materials.

2. Solid radioactive waste will be accumulated, packaged in accordance with DOT regulations, and stored prior to shipment to an authorized waste Disposal facility.

3. Liquid radioactive waste will be stored for decay in any of three compartmented 5000 gallon steel retention tanks located in a 19 foot deep basement in the Northwest corner of the building. Provisions are included for sampling the radioactive contents of any compartment and for programming the discharge to the sanitary sewer system. This 15,000 gallon capacity compares favorably with our present 6,000 gallon capacity to extend the decay period.

4. Ultra TechneKow Mo-99/Tc-99m generators returned by our customers will be received and disassembled. Reusable component parts will be cleaned and returned to inventory.

   The generator columns will be consolidated with our solid radioactive waste.

5. Other reusable component parts of finished products which have reached their expiration or calibration dates will be reclaimed and recycled. The radioactive materials will be processed as radioactive waste.

6. Lead safes which have become contaminated or oxidized will be refurbished and recycled or discarded.

7. All Type B shipping casks being transported to other licensees or returned empty to our suppliers will be surveyed and if necessary decontaminated prior to shipment.

All requisite and ancillary equipment and facilities will be furnished

to perform the above or similar operations.

1. The walls of the packaged waste storage area and the waste processing room will be constructed of solid concrete block for shielding purposes. The walls of the satellite nuclear instrument room will be similarly constructed to reduce background radiation levels.

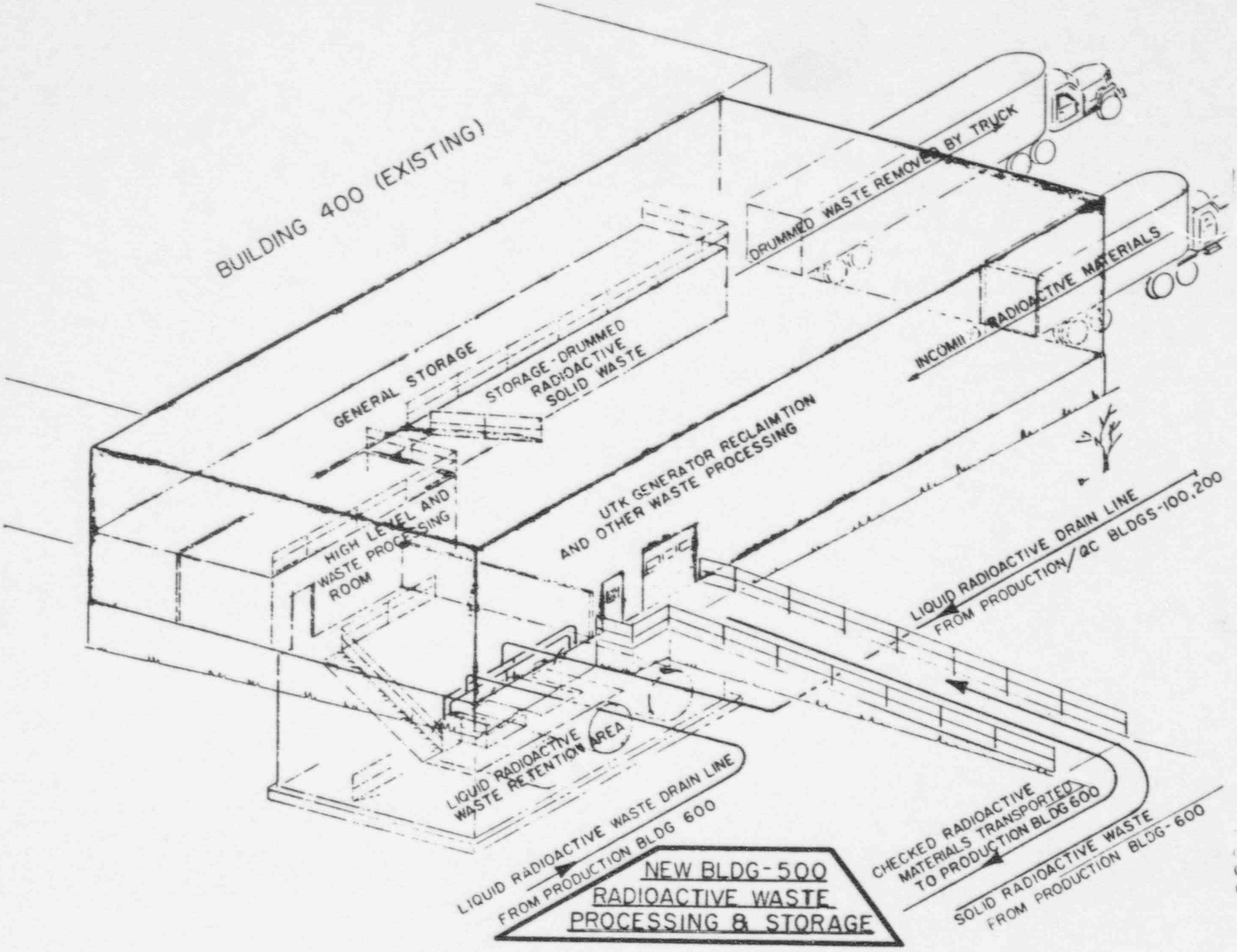
2. Enclosures will be provided in the waste processing room for solid waste compaction and liquid waste processing equipment.

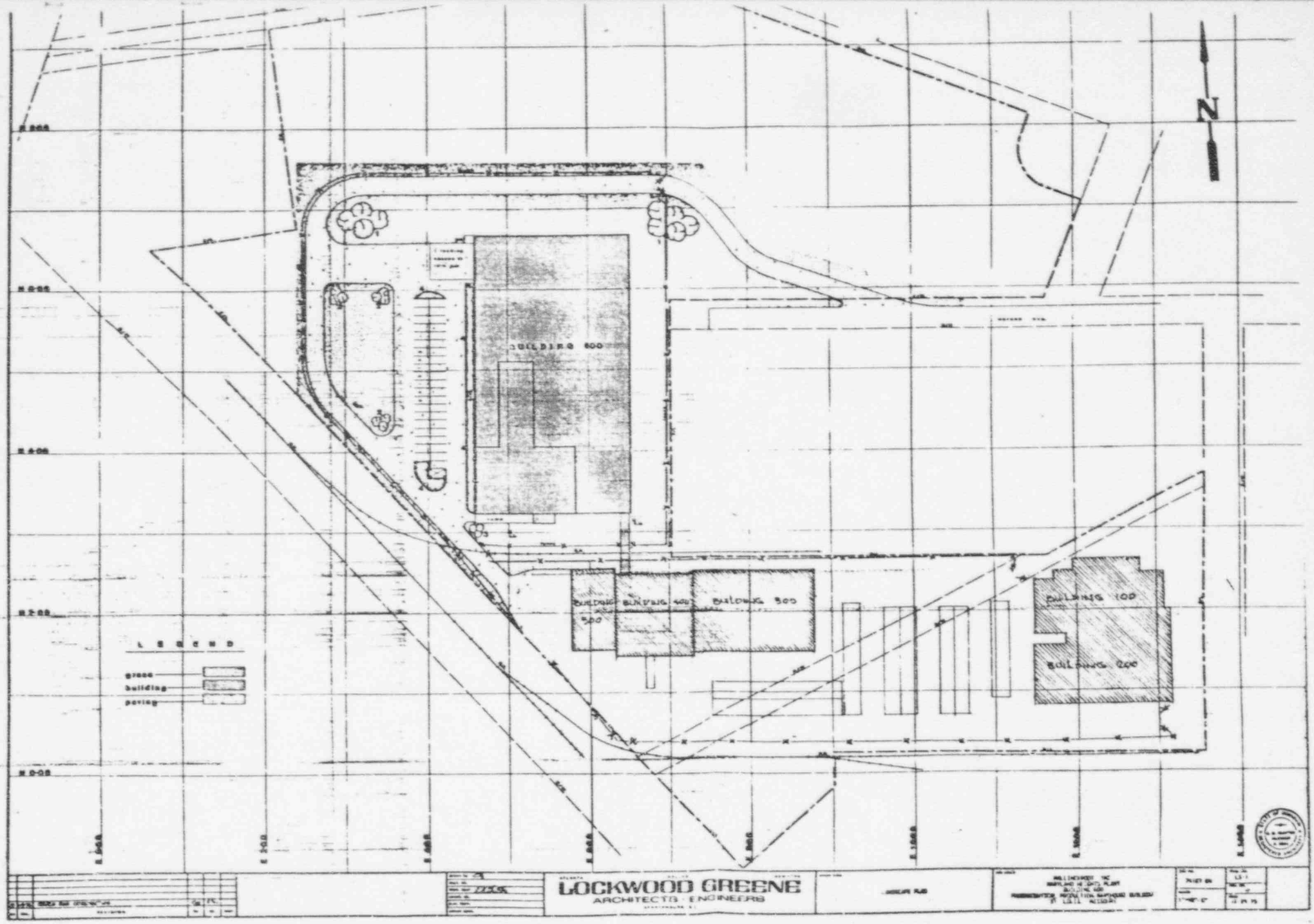
3. The above enclosures will be connected to a 3000 CFM air exhaust filtration system to provide the necessary linear face velocities and room air exchange rate. The filter bank will include both HEPA and nuclear grade charcoal filters in a series/parallel configuration. Loss of air flow through the exhaust system will be indicated by a rotating amber light.

4. Entry to either the liquid waste retention area or the packaged waste storage area will be indicated by an audible alarm and rotating red lights.

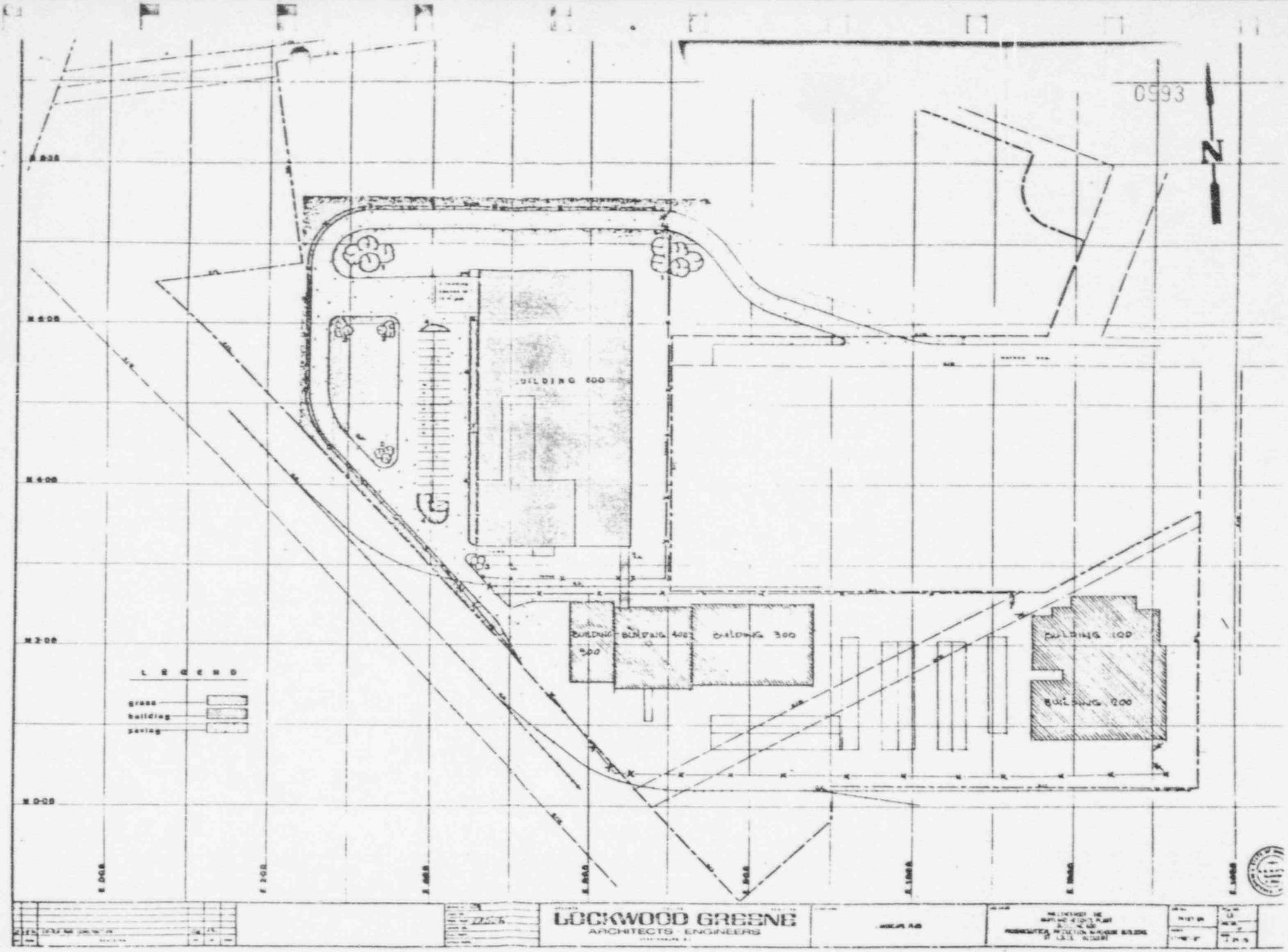
5. Additional provisions include truck docks and a fork truck ramp.

DWSoldan/lm
3/16/76

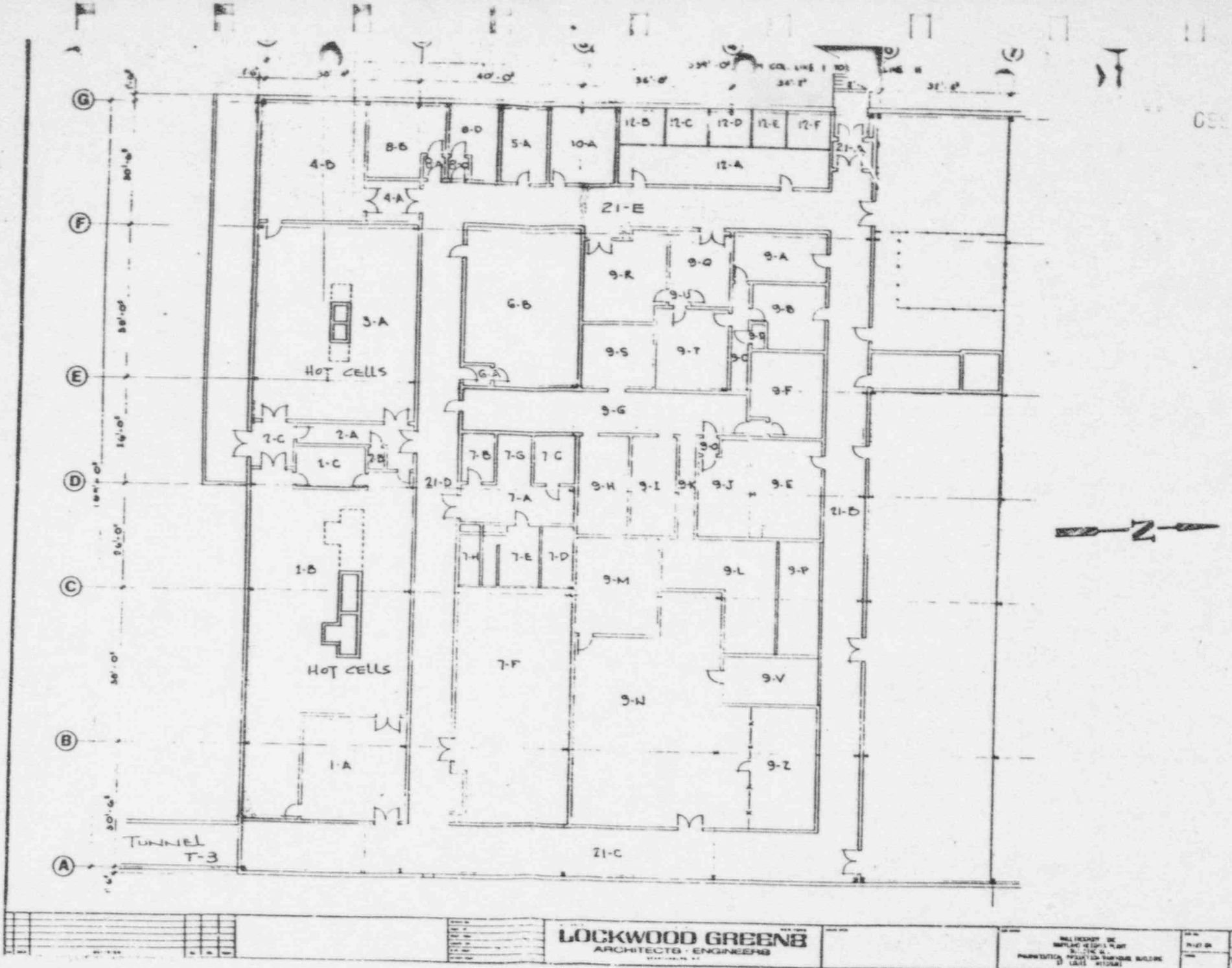

BUILDING 400 (EXISTING)
GENERAL STORAGE
STORAGE - DRUMMED RADIOACTIVE SOLID WASTE
DRUMMED WASTE REMOVED BY TRUCK
INCOMING RADIOACTIVE MATERIALS
UTK GENERATOR RECLAIMTION AND OTHER WASTE PROCESSING
HIGH LEVEL AND WASTE PROCESSING ROOM
LIQUID RADIOACTIVE WASTE RETENTION AREA
LIQUID RADIOACTIVE DRAIN LINE FROM PRODUCTION/QC BLDGS-100,200
LIQUID RADIOACTIVE WASTE DRAIN LINE FROM PRODUCTION BLDG 600
CHECKED RADIOACTIVE MATERIALS TRANSPORTED TO PRODUCTION BLDG 600
SOLID RADIOACTIVE WASTE FROM PRODUCTION BLDG-600
NEW BLDG-500
RADIOACTIVE WASTE
PROCESSING & STORAGE



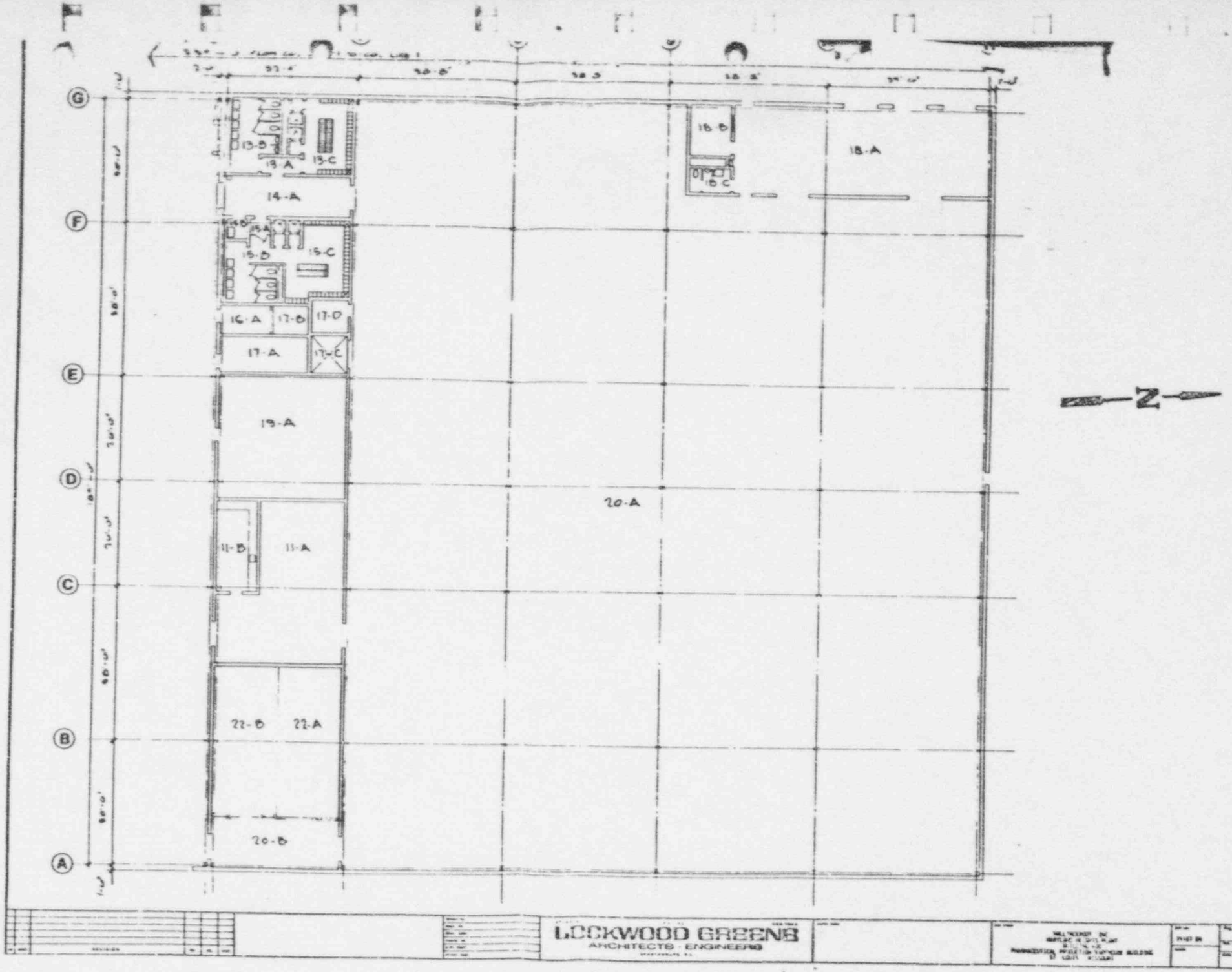
PLOT PLAN - FIGURE 1



PLOT PLAN - FIGURE 1



SOUTH HALF OF BLDG. 600
FIGURE 2



NORTH HALF OF BUILDING 600
FIGURE 3