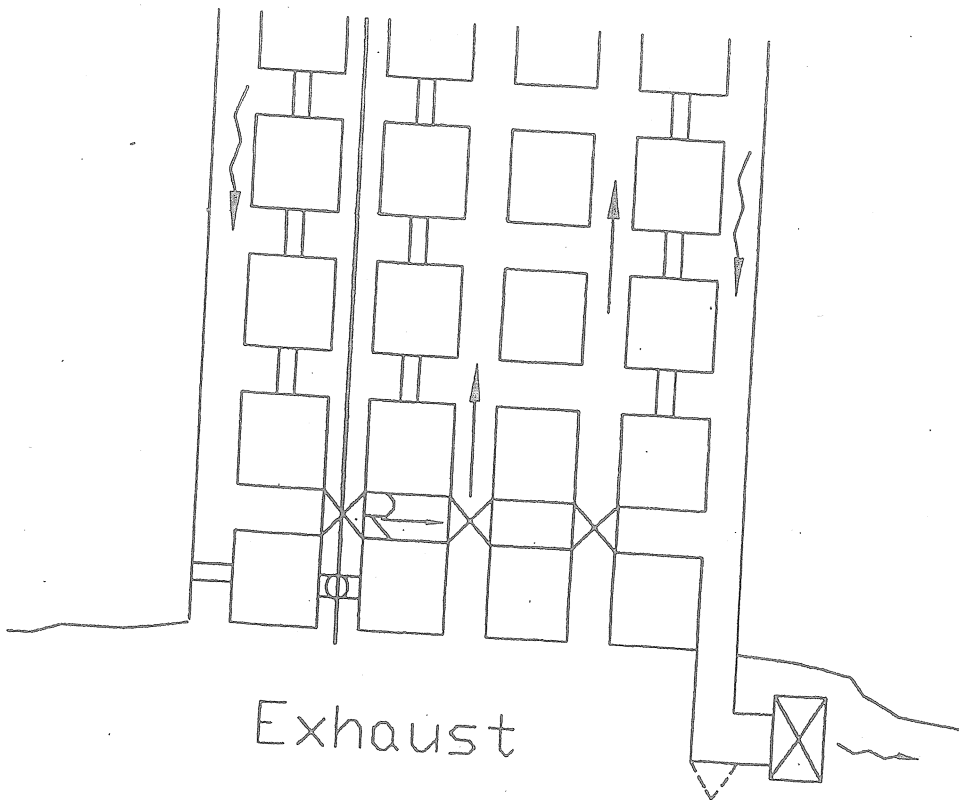
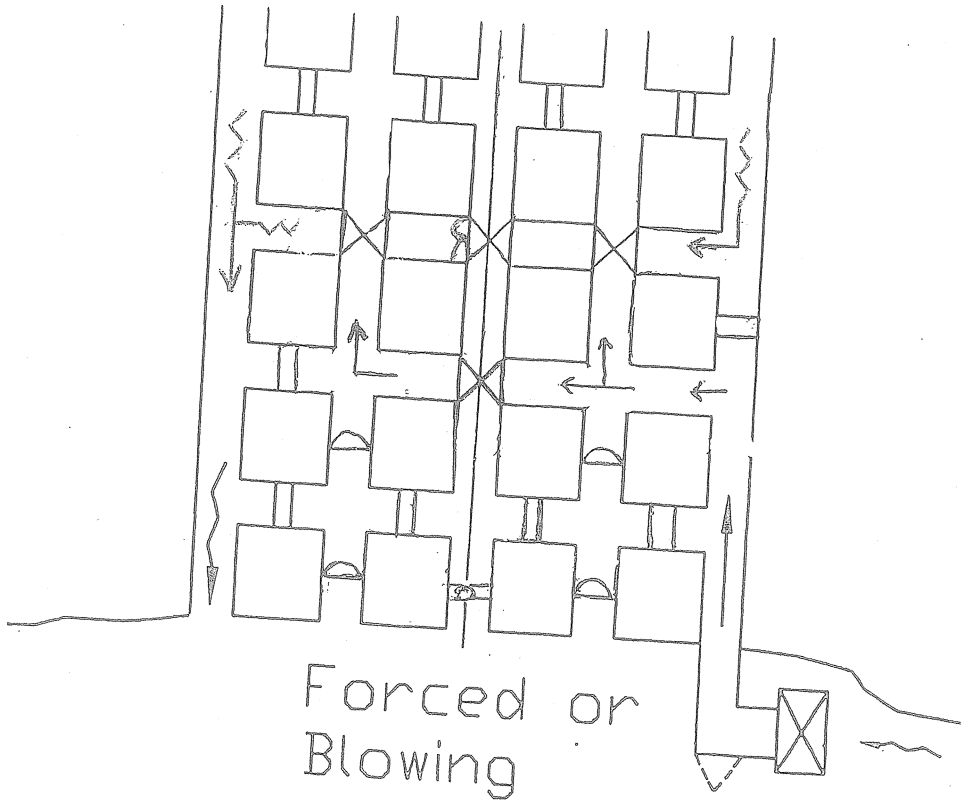


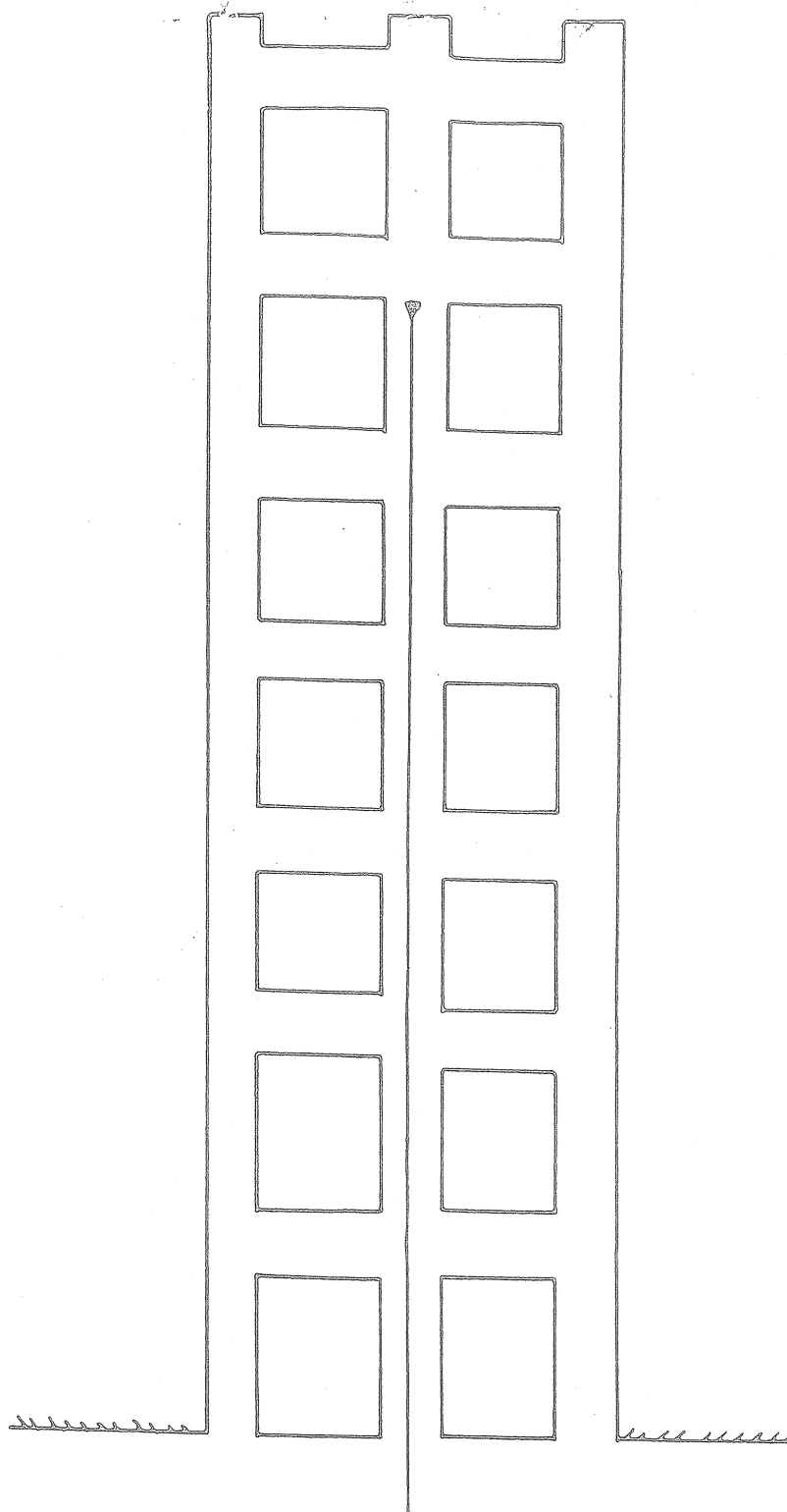
FAN REQUIREMENTS

The following Fan Requirements are listed in 22A-2-3 of the West Virginia State Mining Laws. These requirements are for all Main Fans.

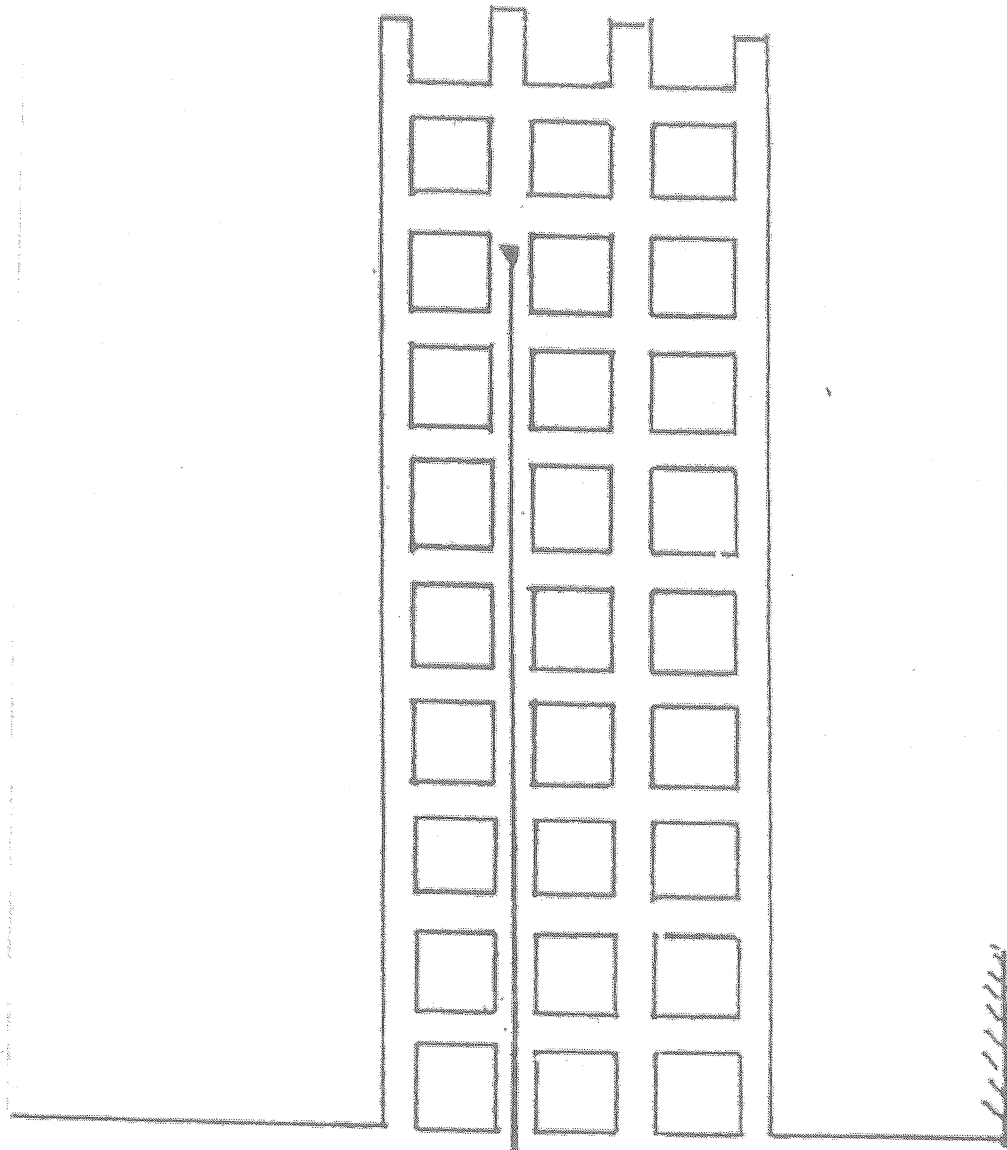
1. All main fans shall be located on the Surface.
2. All main fans shall be enclosed in Fireproof Housings.
3. All main fans shall be offset a minimum of 15 feet from the nearest mine opening.
4. All main fans shall be equipped with Fireproof Air Ducts.
5. All main fans shall be equipped with Explosion Doors or a Weak Wall.
6. All main fans shall be operated from an Independent Power Circuit.
7. All main fans shall be equipped with a Pressure Recording Gauge or a Water Gauge.
8. All main fans shall be Inspected Daily by a Certified Electrician or a Qualified Person and a Permanent Record kept.
9. All main fans shall be equipped with a Warning Device to signal an interruption to the fan.

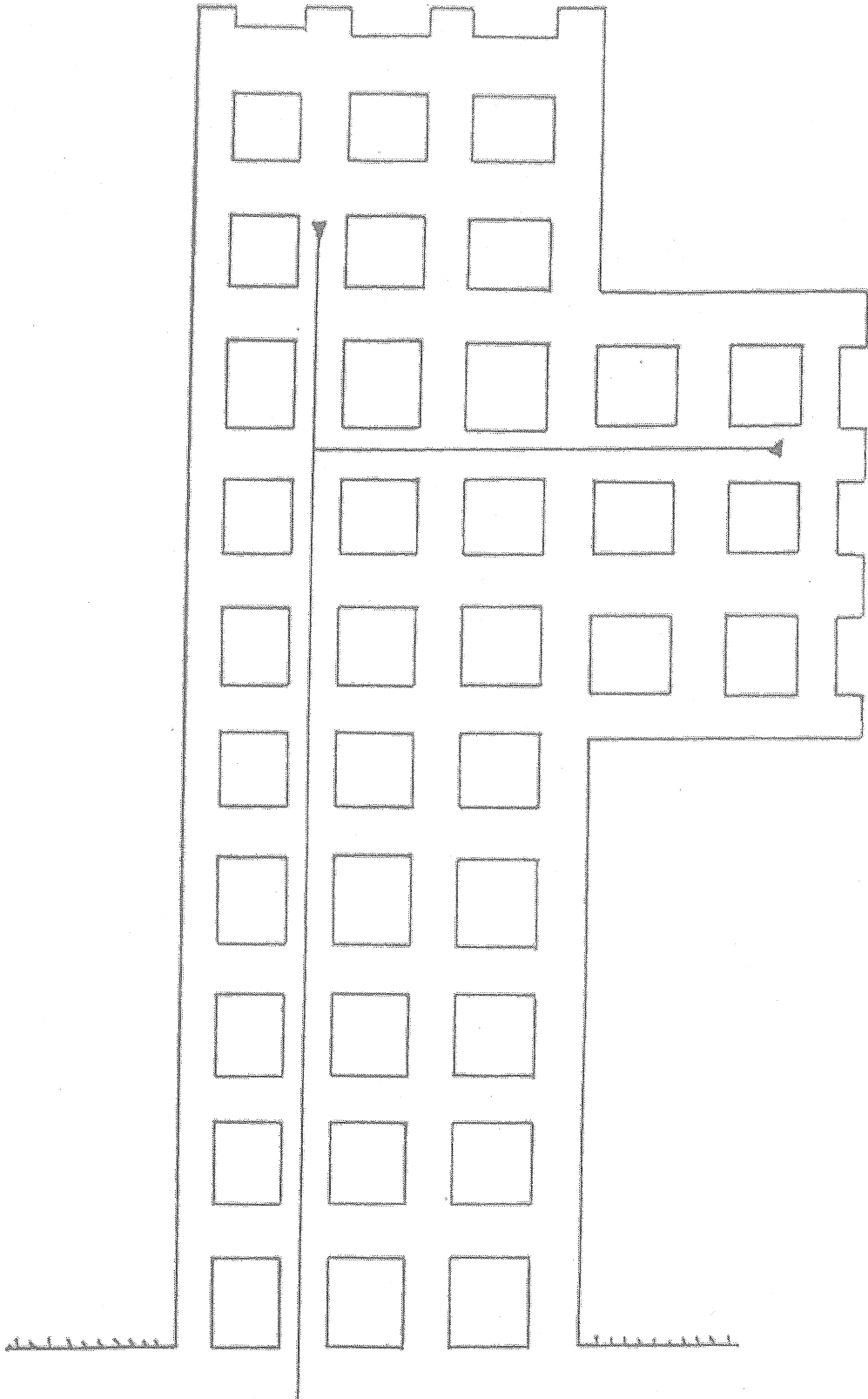
Portal Area

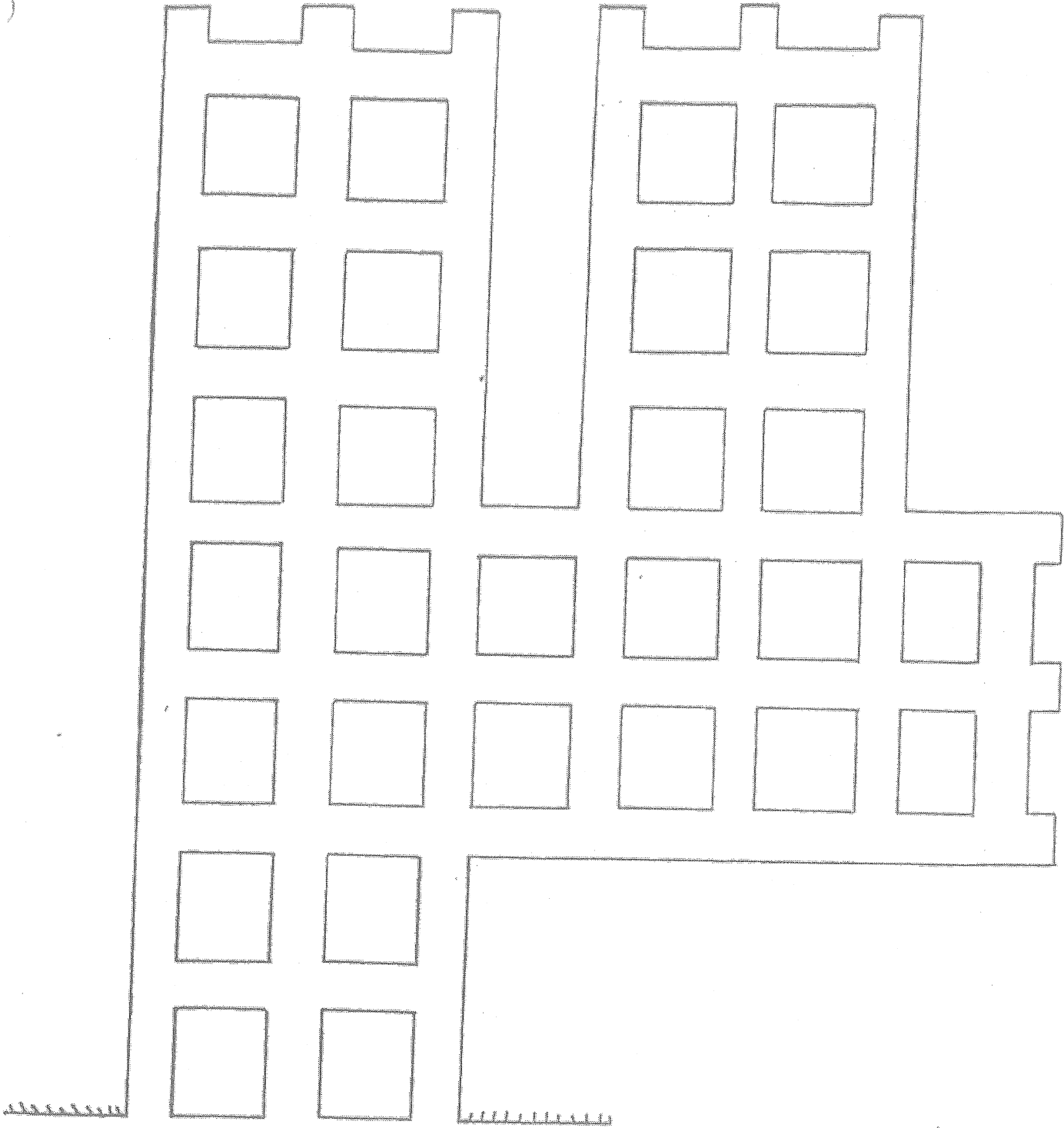


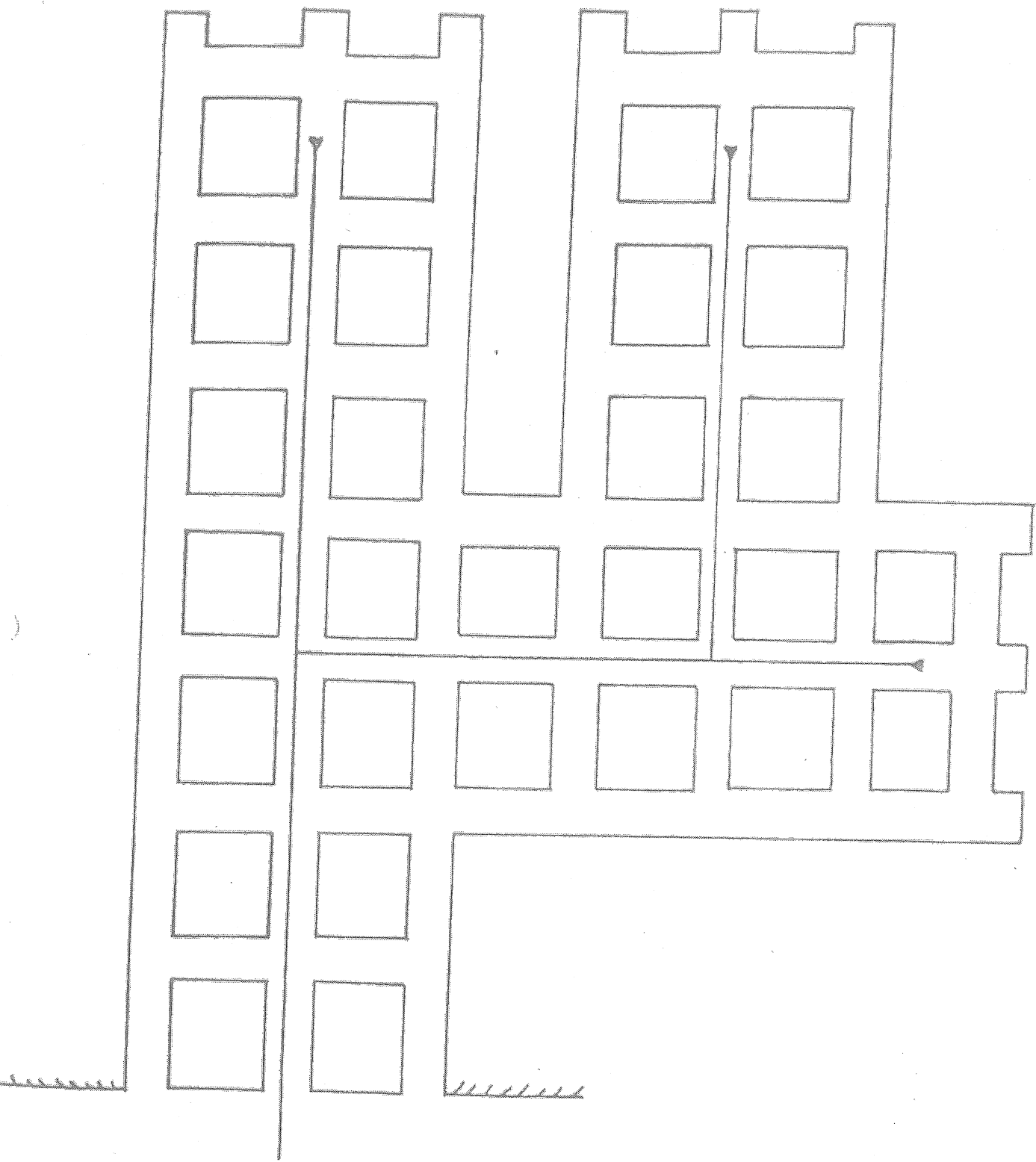


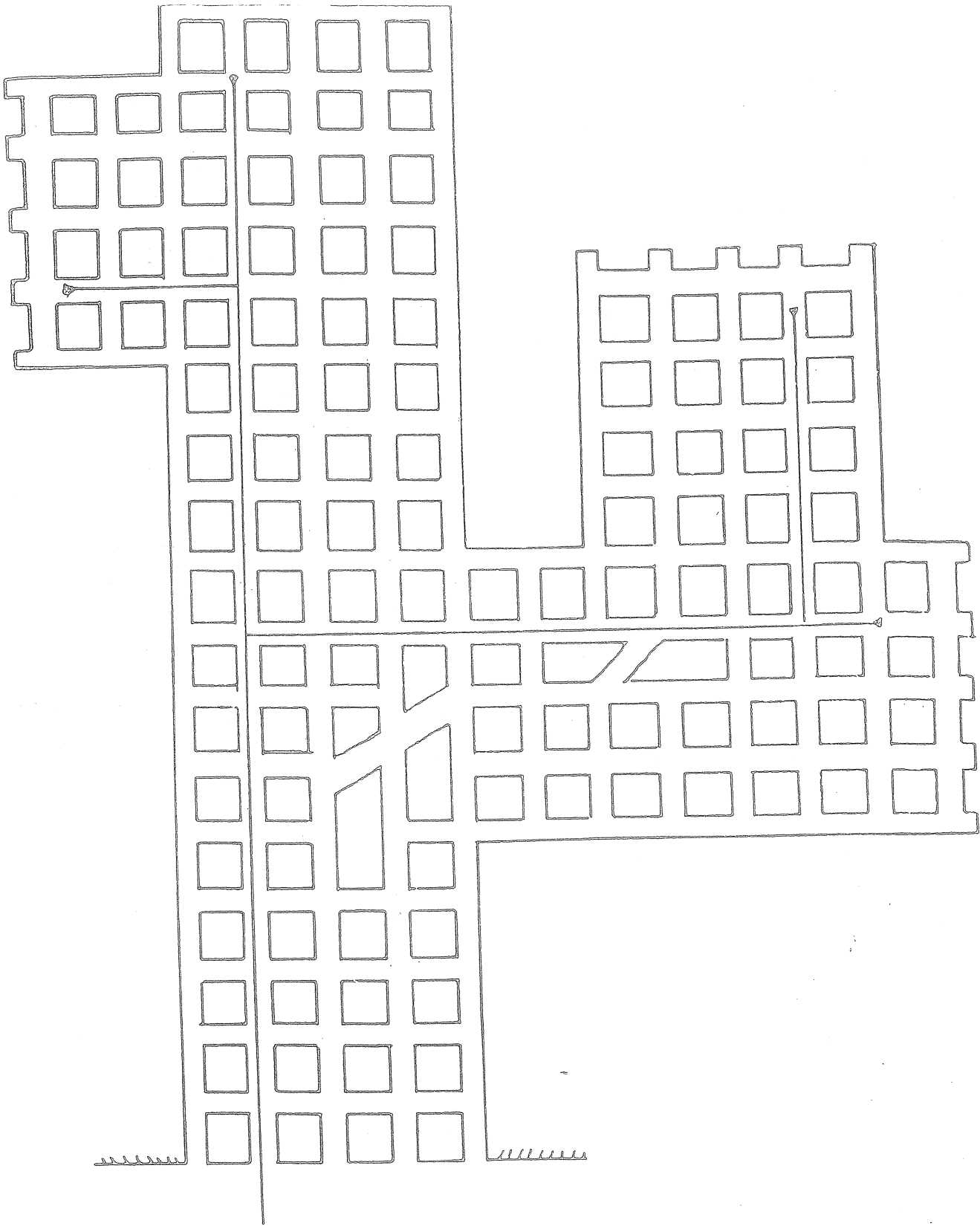
Jim Kincaid



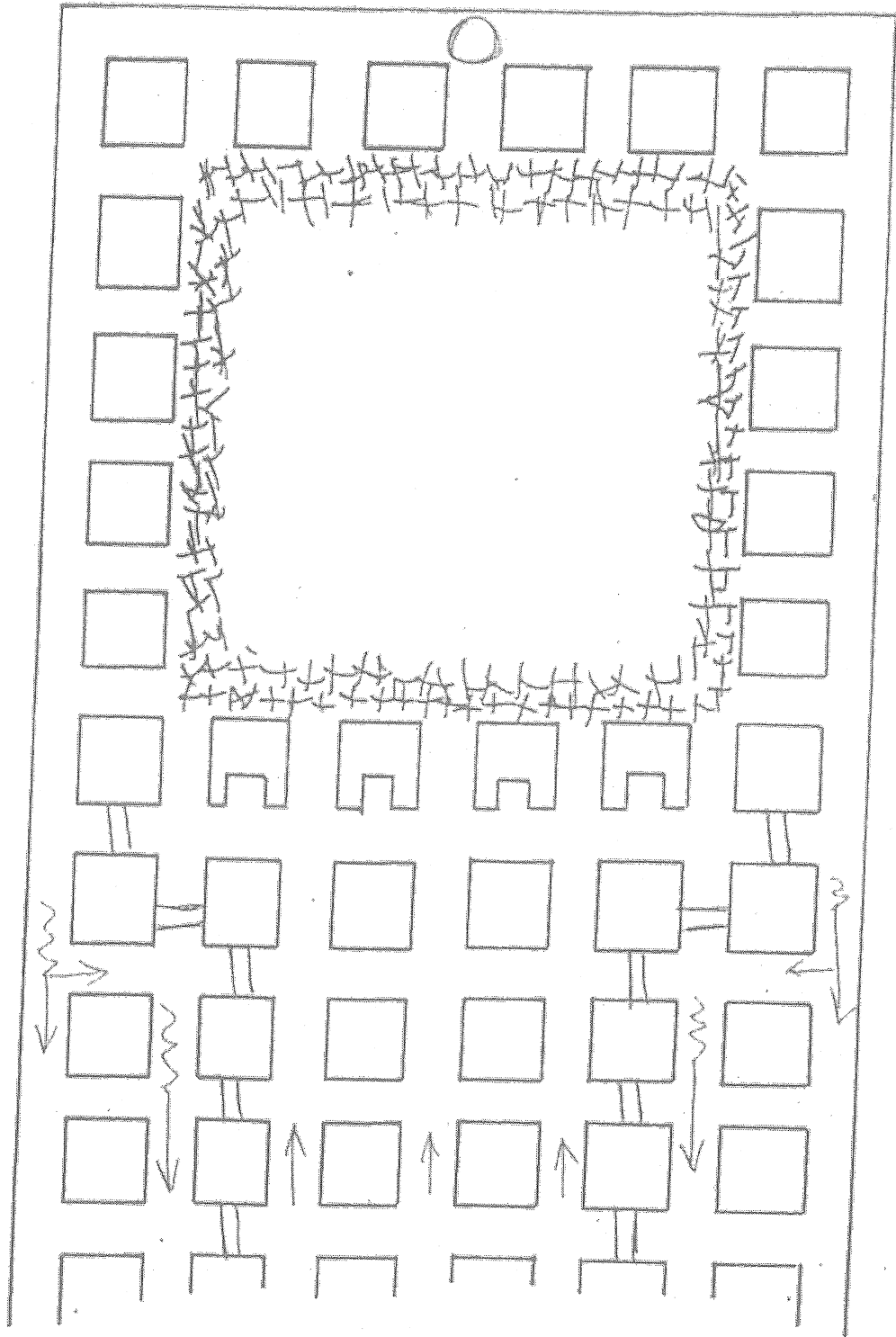


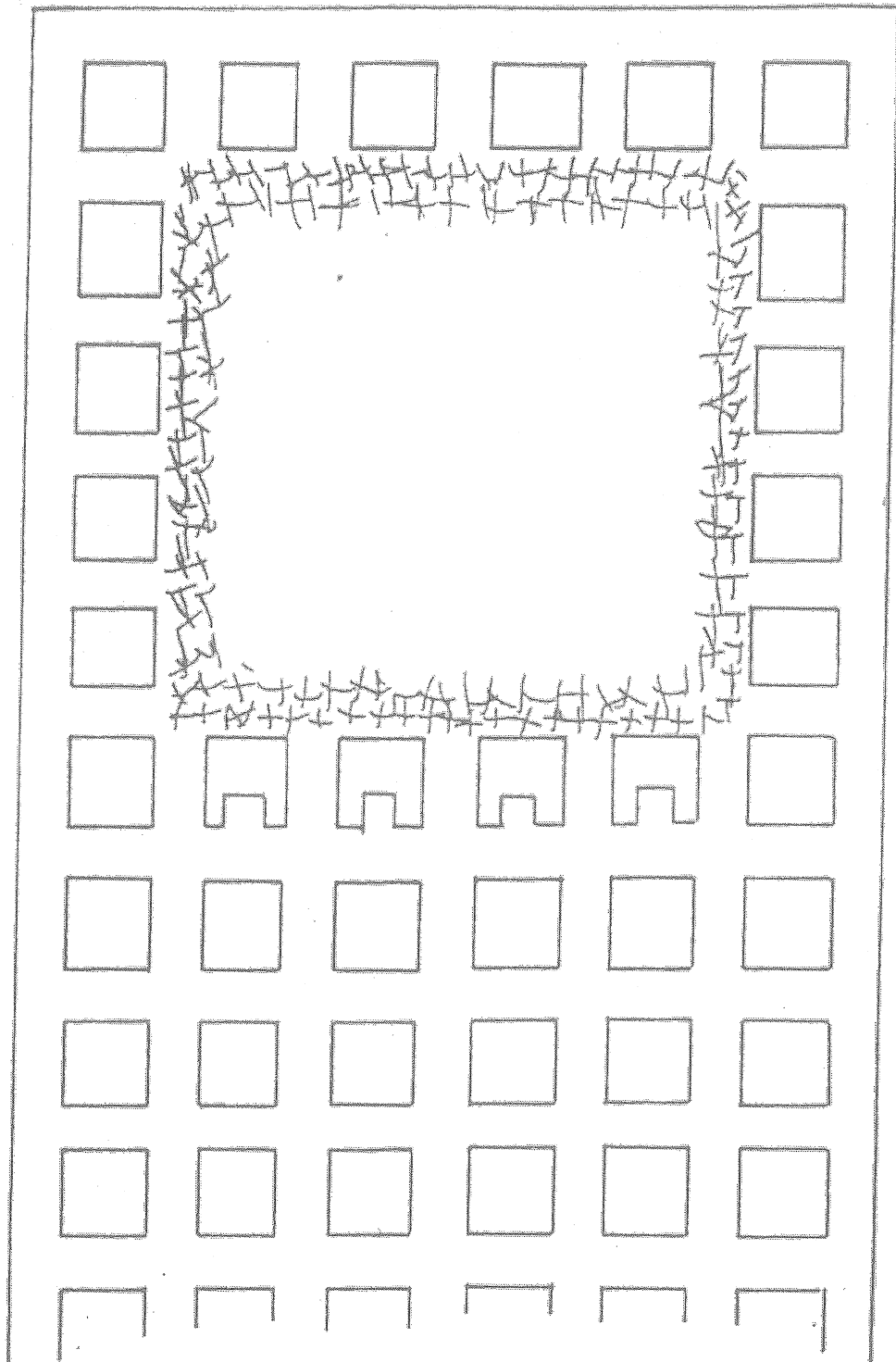


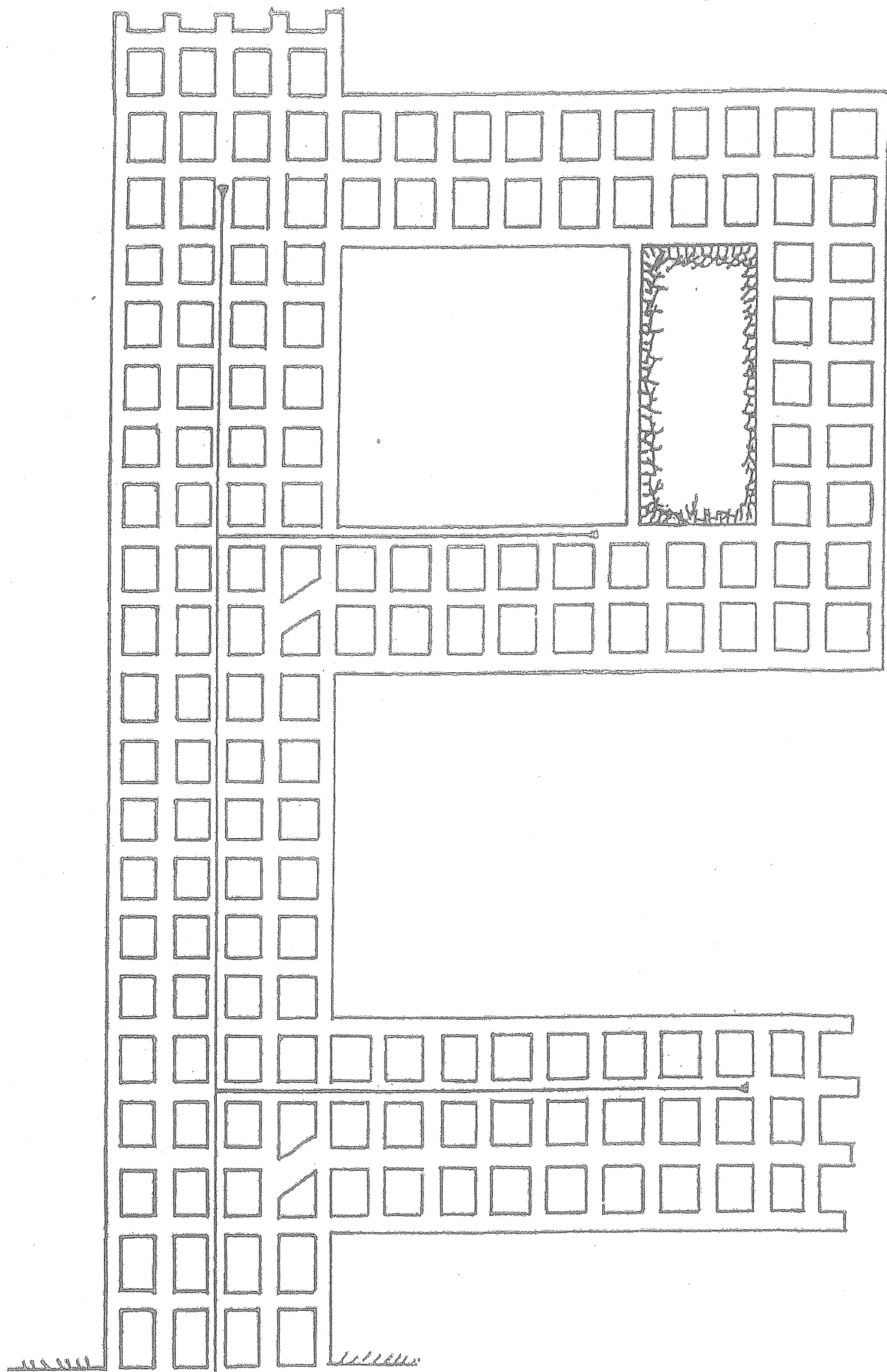


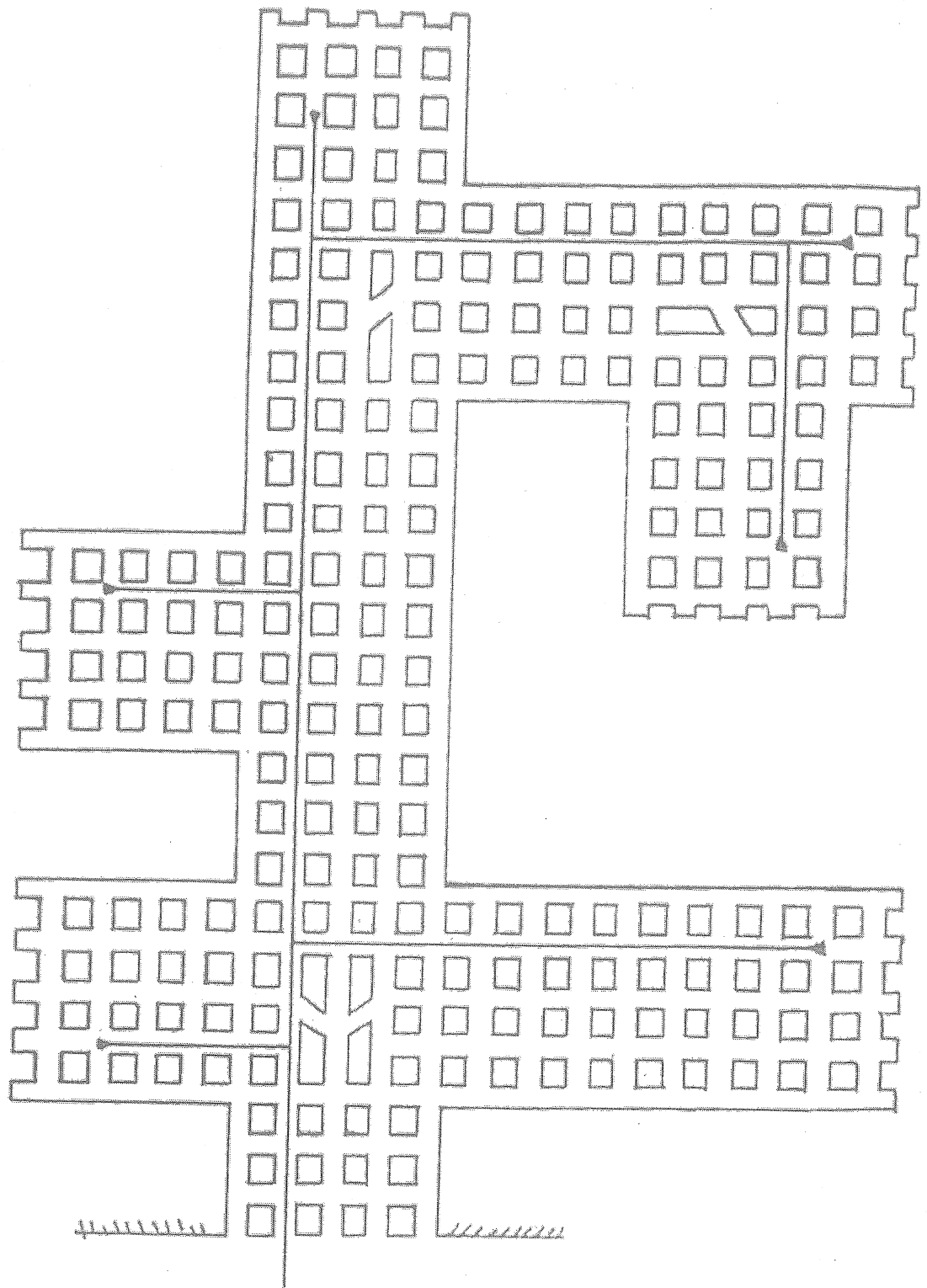


Jim Kincaid









Use sweep ventilation

Show the direction of air-flow in each working face and the direction of air flow in the last open crosscut.

Show the direction of airflow with arrows.

Use a line curtain to direct the air into the face. This should be within 10 feet of the working face.

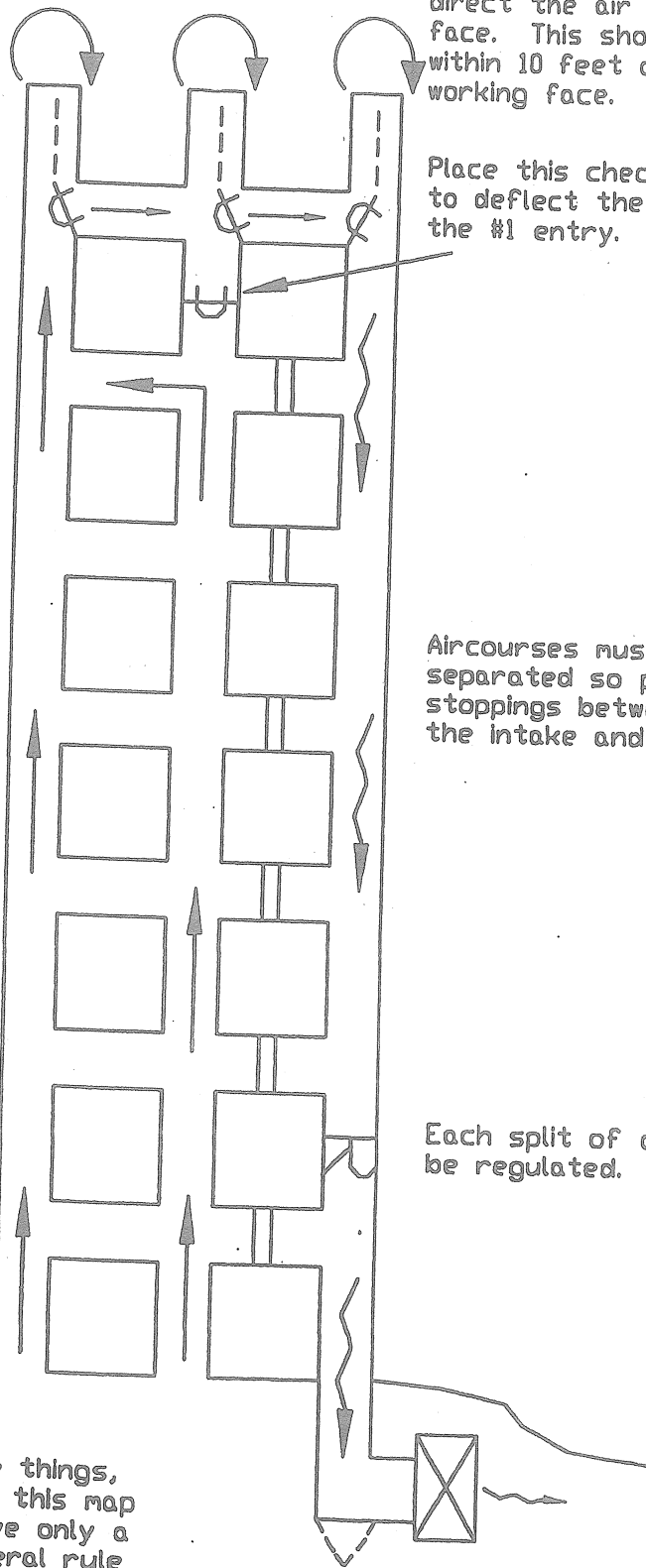
Place this check curtain to deflect the air into the #1 entry.

Aircourses must be separated so place stoppings between the intake and return.

Each split of air must be regulated.

Entries can be one of three things, intake, return or belt. Since this map does not have a belt we have only a intake and return. As a general rule we will use one return on a map so we have two intakes and one return on this map.

Set the fan in the entry that you want to make the return. Do not let the fan touch the outcrop line.



Use split ventilation

Show the direction of air-flow in each working face and the direction of air flow in the last open crosscut.

Show the direction of airflow with arrows.

Overcasts are used to get the return air over the intake air. Note that the return air hits the head wall of the overcast.

Entries can be one of three things, intake, return or belt. Since this map does not have a belt we have only a intake and return. With split ventilation we will have one intake and two returns.

Use a line curtain to direct the air into the face. This should be within 10 feet of the working face.

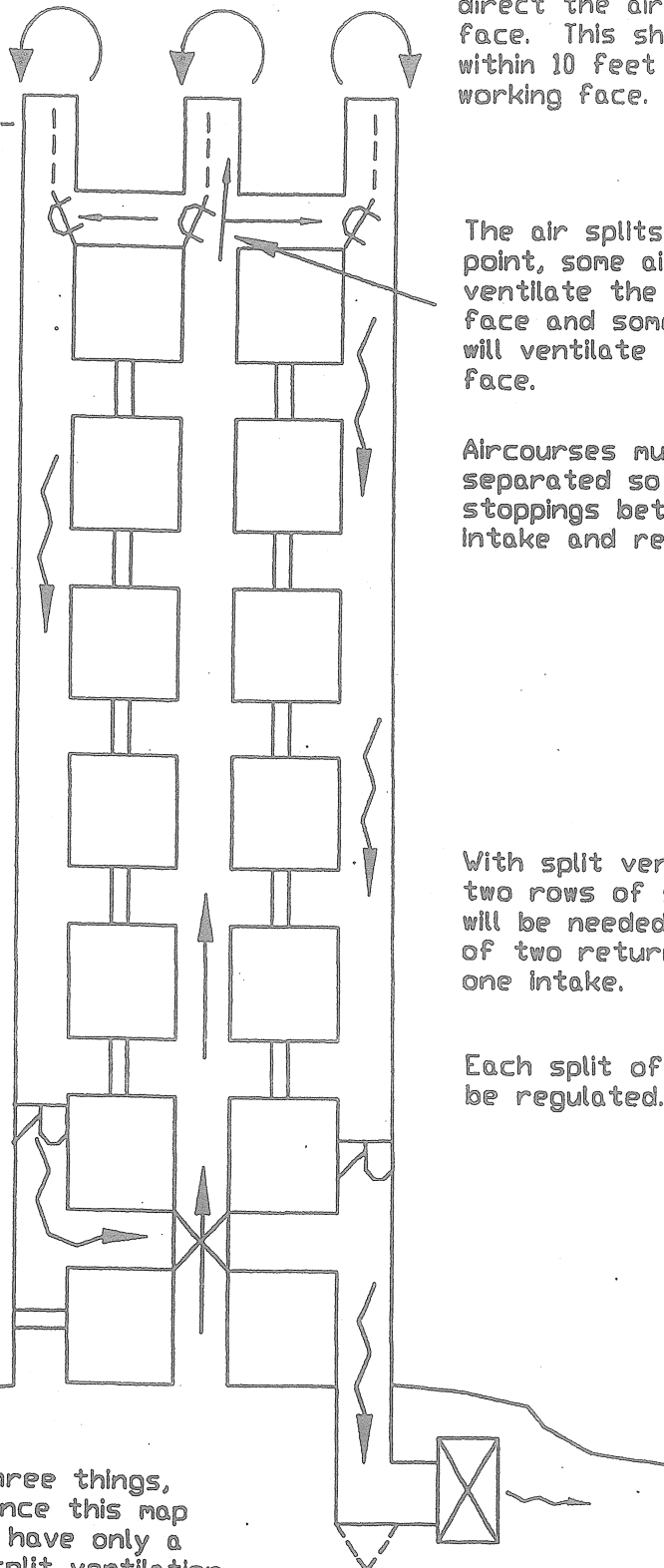
The air splits at this point, some air will ventilate the #1 and #2 face and some air will ventilate the #3 face.

Aircourses must be separated so place stoppings between the intake and return.

With split ventilation two rows of stoppings will be needed because of two returns and one intake.

Each split of air must be regulated.

Set the fan in the entry that you want to make the return. Do not let the fan touch the outcrop line.



Use split ventilation

Show the direction of air-flow in each working face and the direction of air flow in the last open crosscut.

Always be careful with the placement of regulators to ensure there is not double regulation.

Use this method to ventilate a power center or battery charger. In the mine this is most likely a stopping with a small hole in it to allow air flow. Sometimes a small diameter pipe will be installed through the stopping to allow airflow through the pipe.

Use a line curtain to direct the air into the face. This should be within 10 feet of the working face.

Show the direction of airflow with arrows.

- All belts must be:
1. Isolated
 2. Box checked at each end
 3. Regulated

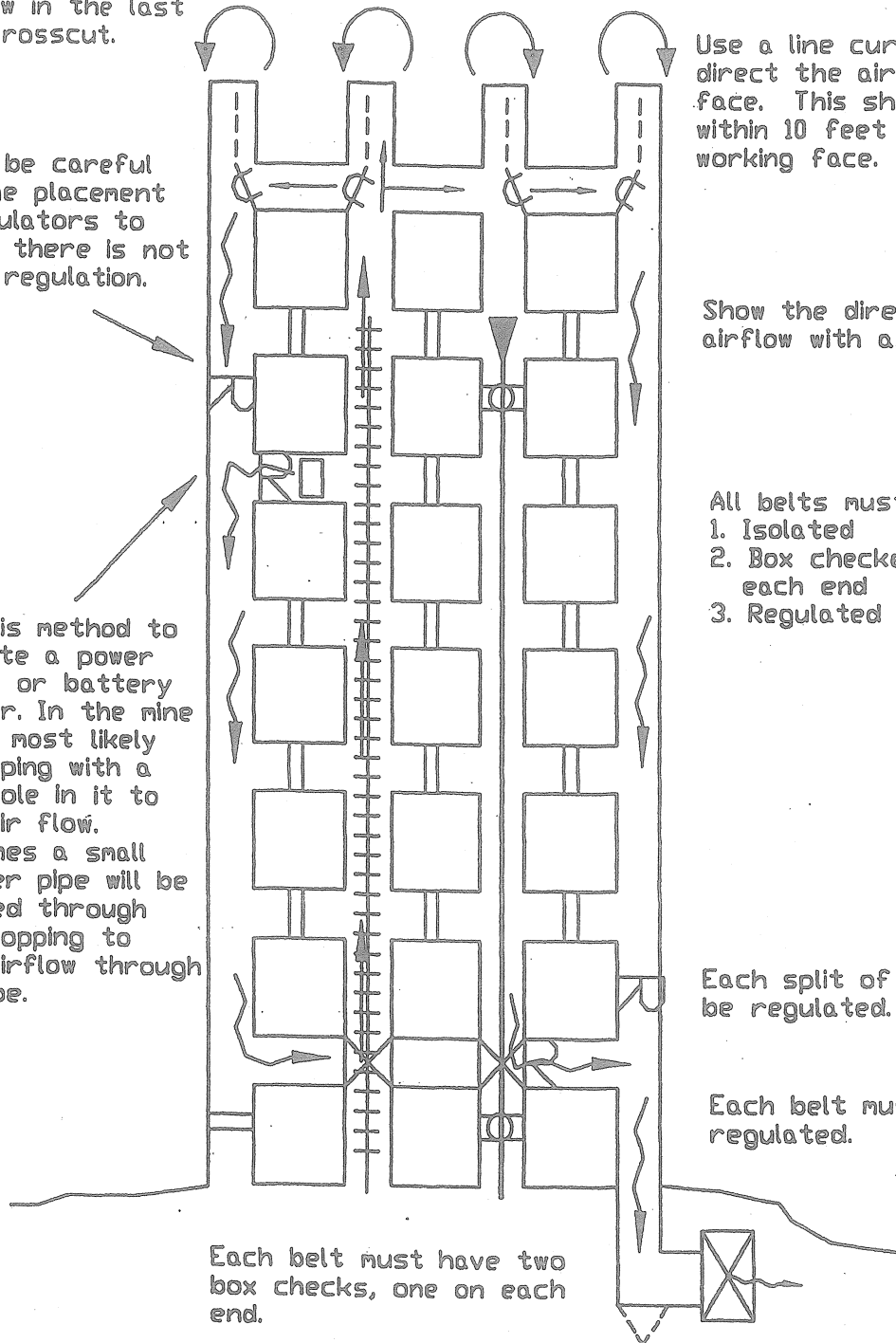
Each split of air must be regulated.

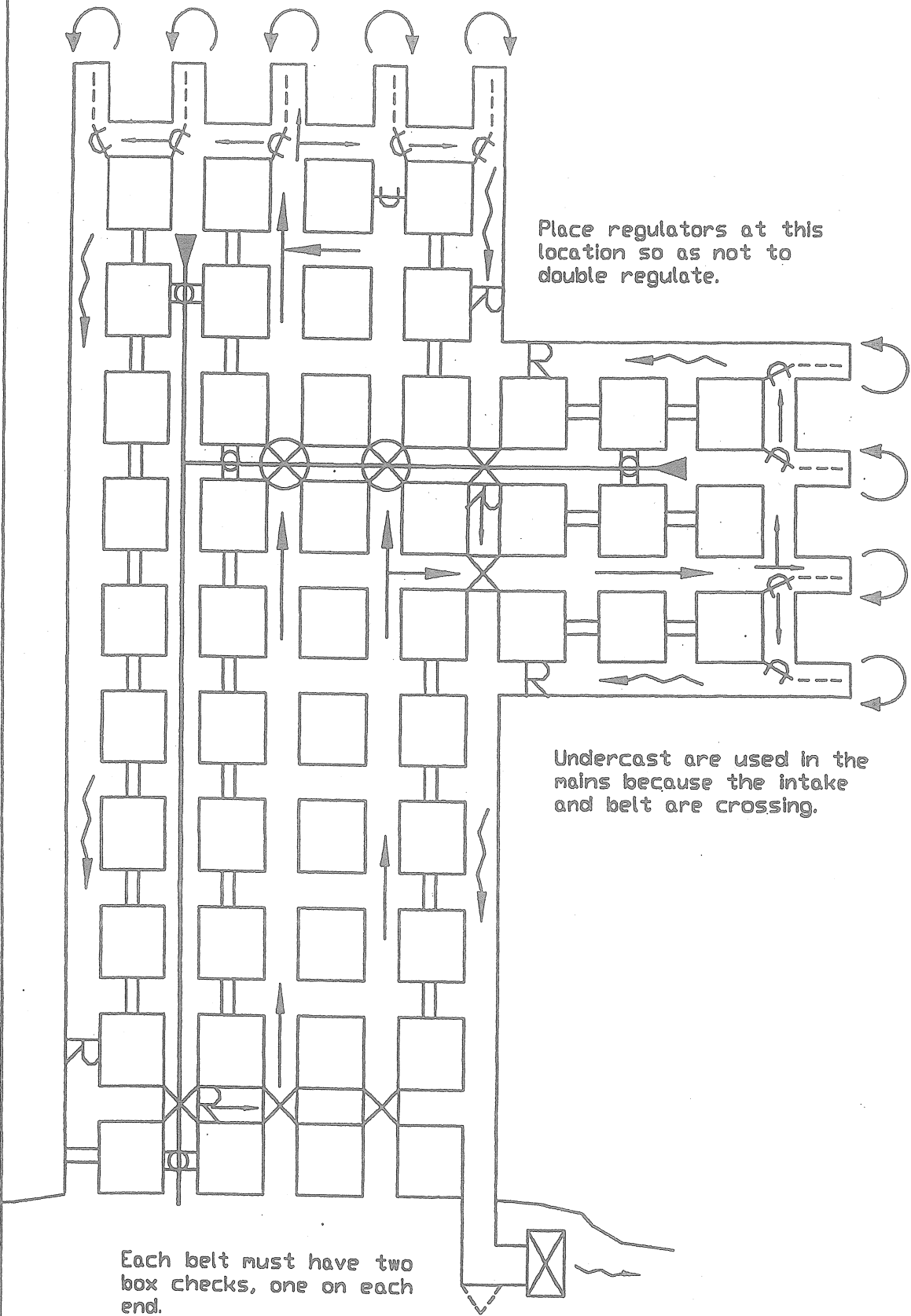
Each belt must be regulated.

Each belt must have two box checks, one on each end.

Entries can be on of three things, intake, return or belt. Since this map has a belt we have one intake which is also the track, a belt entry and two returns.

Set the fan in the entry that you want to make the return. Do not let the fan touch the outcrop line.

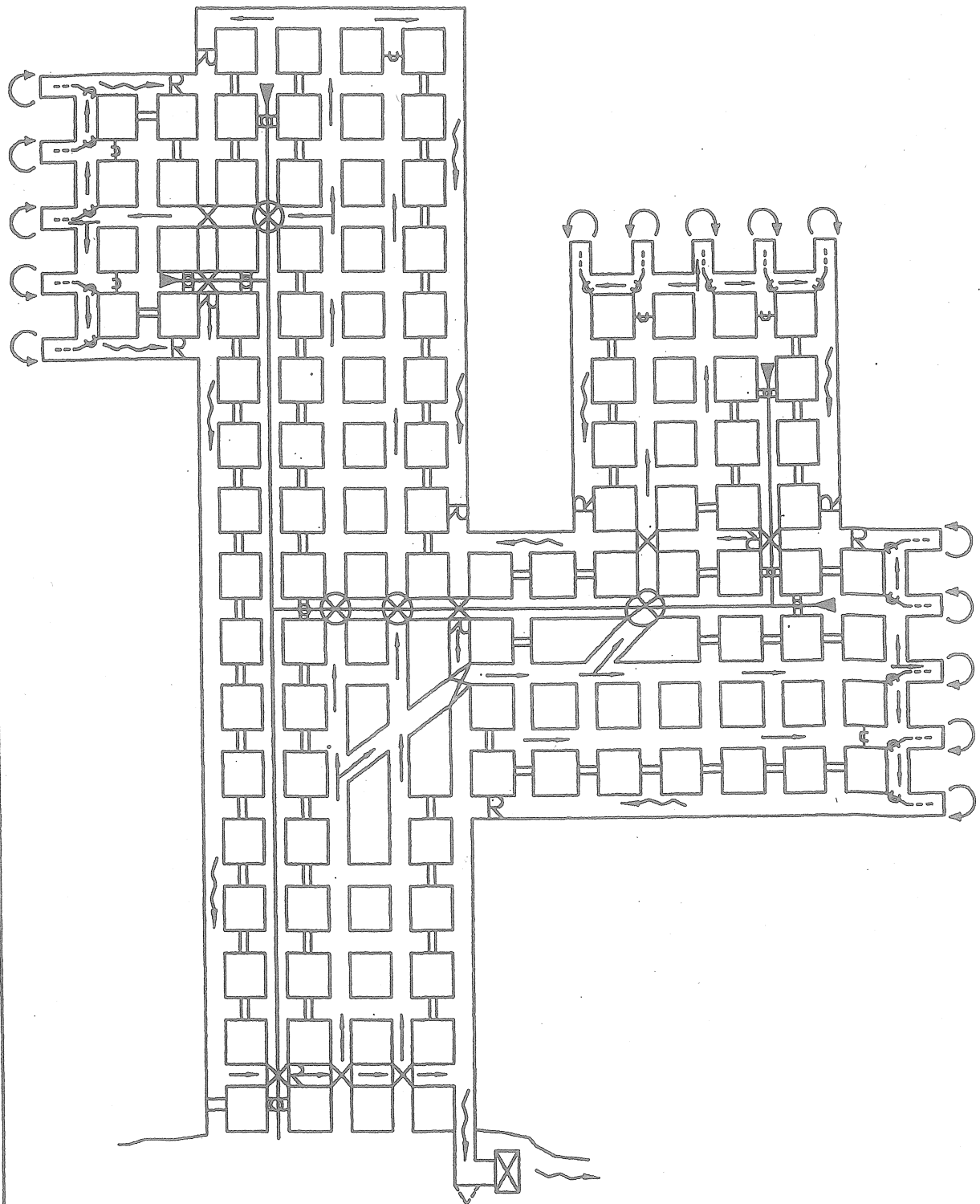




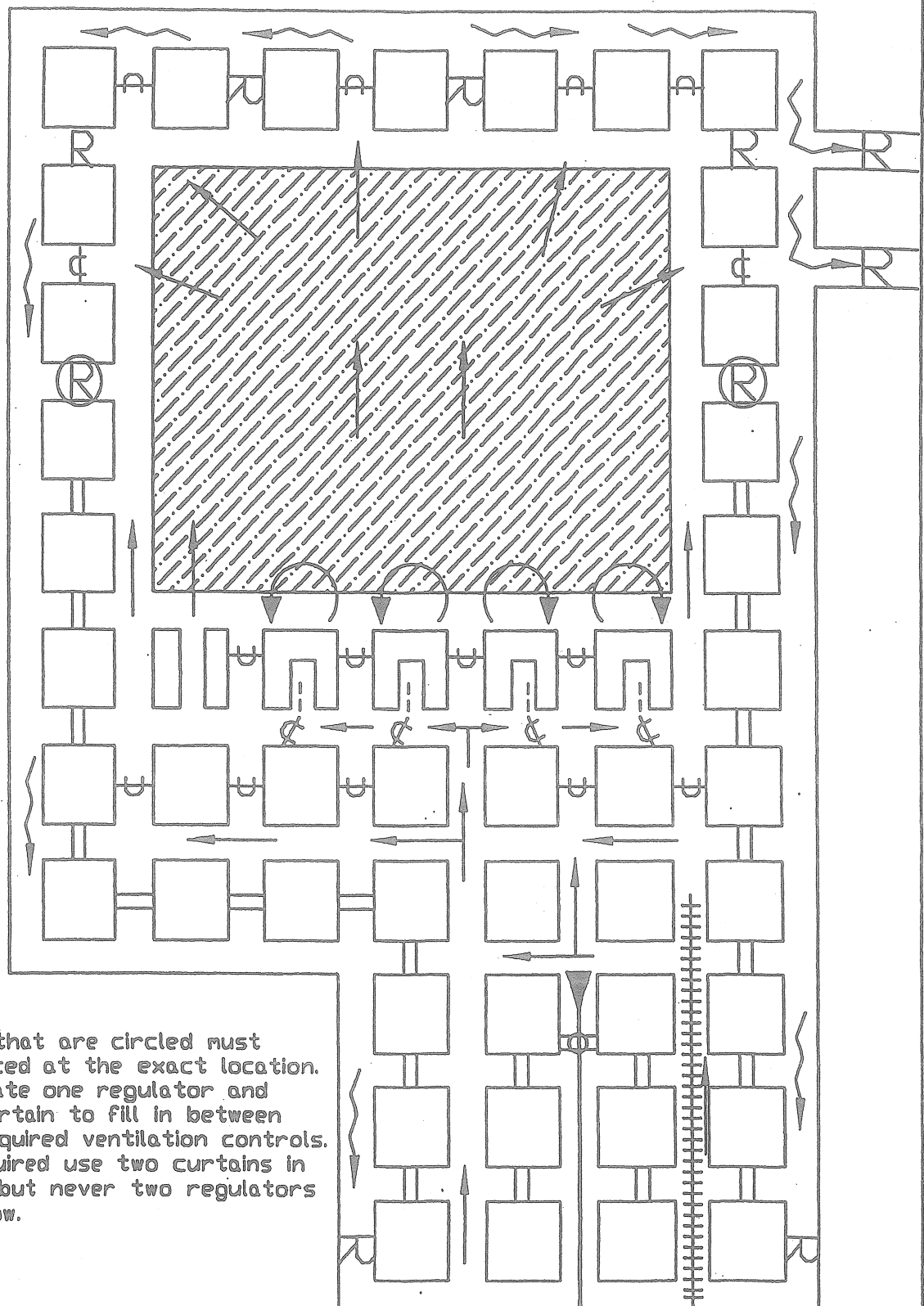
Place regulators at this location so as not to double regulate.

Undercast are used in the mains because the intake and belt are crossing.

Each belt must have two box checks, one on each end.

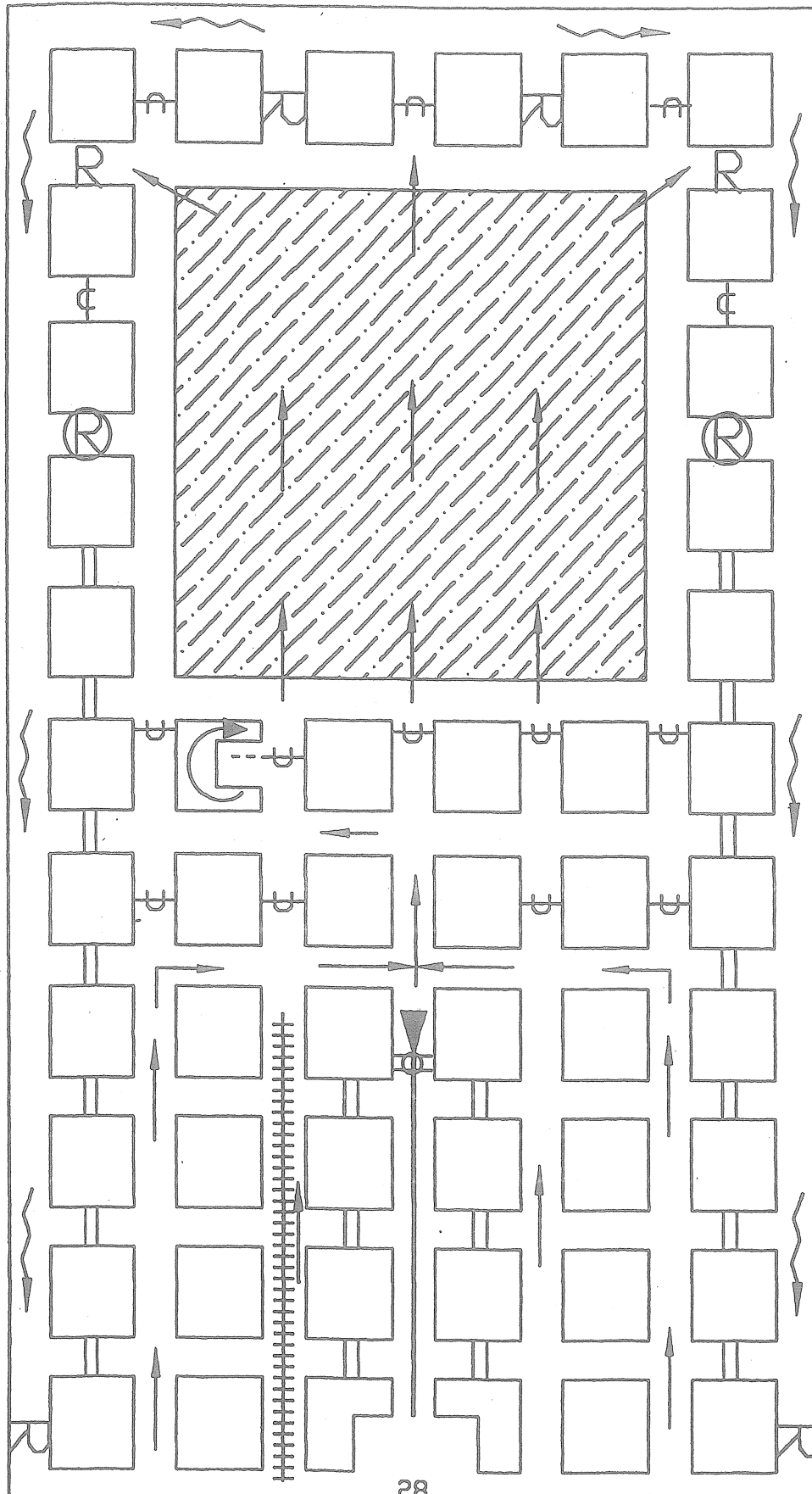


Pillar Line Ventilation



Items that are circled must be placed at the exact location. Alternate one regulator and one curtain to fill in between the required ventilation controls. If required use two curtains in a row but never two regulators in a row.

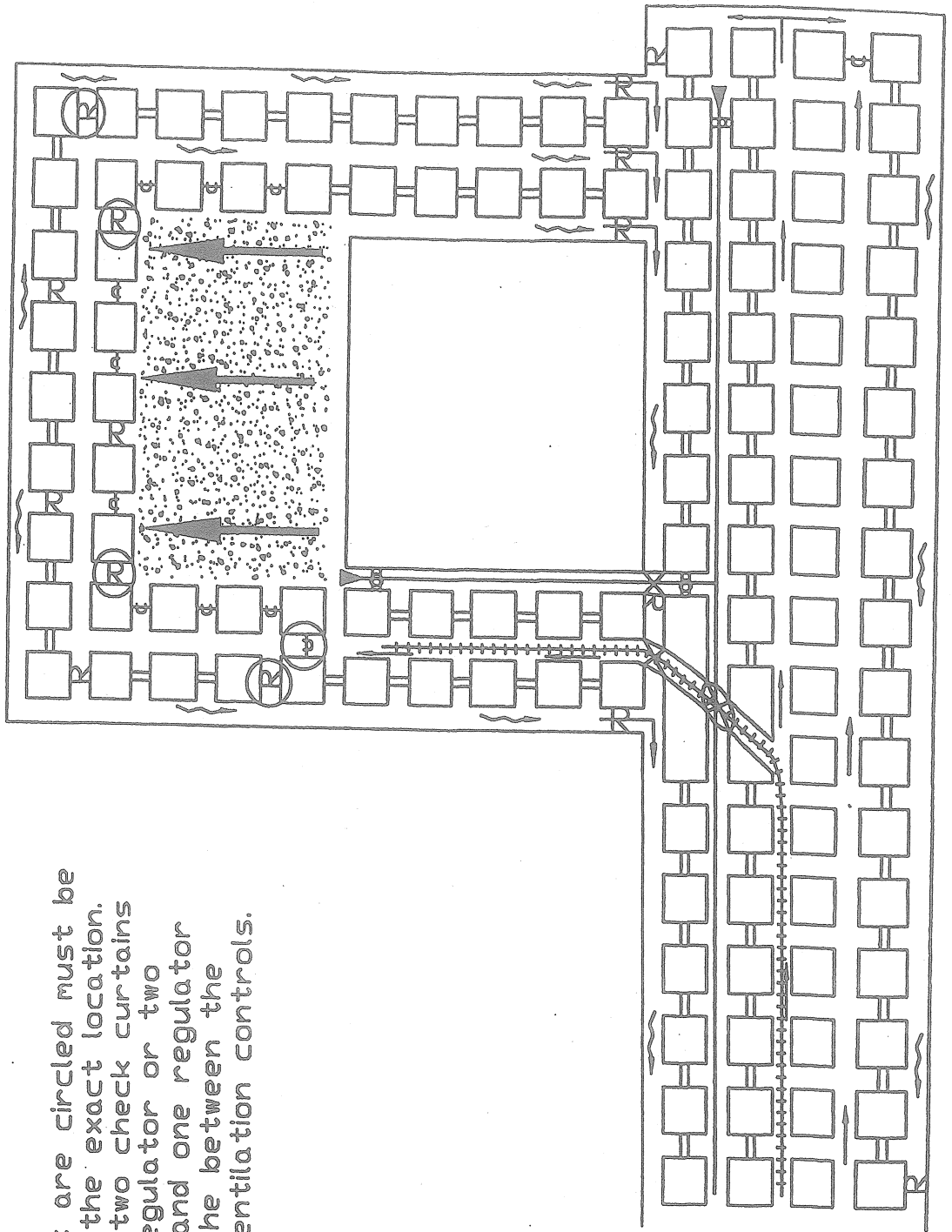
Pillar Line Ventilation



○ Items that are circled must be placed at the exact location. Alternate one regulator and one curtain to fill in between the required ventilation controls. If required use two curtains in a row but never two regulators in a row.

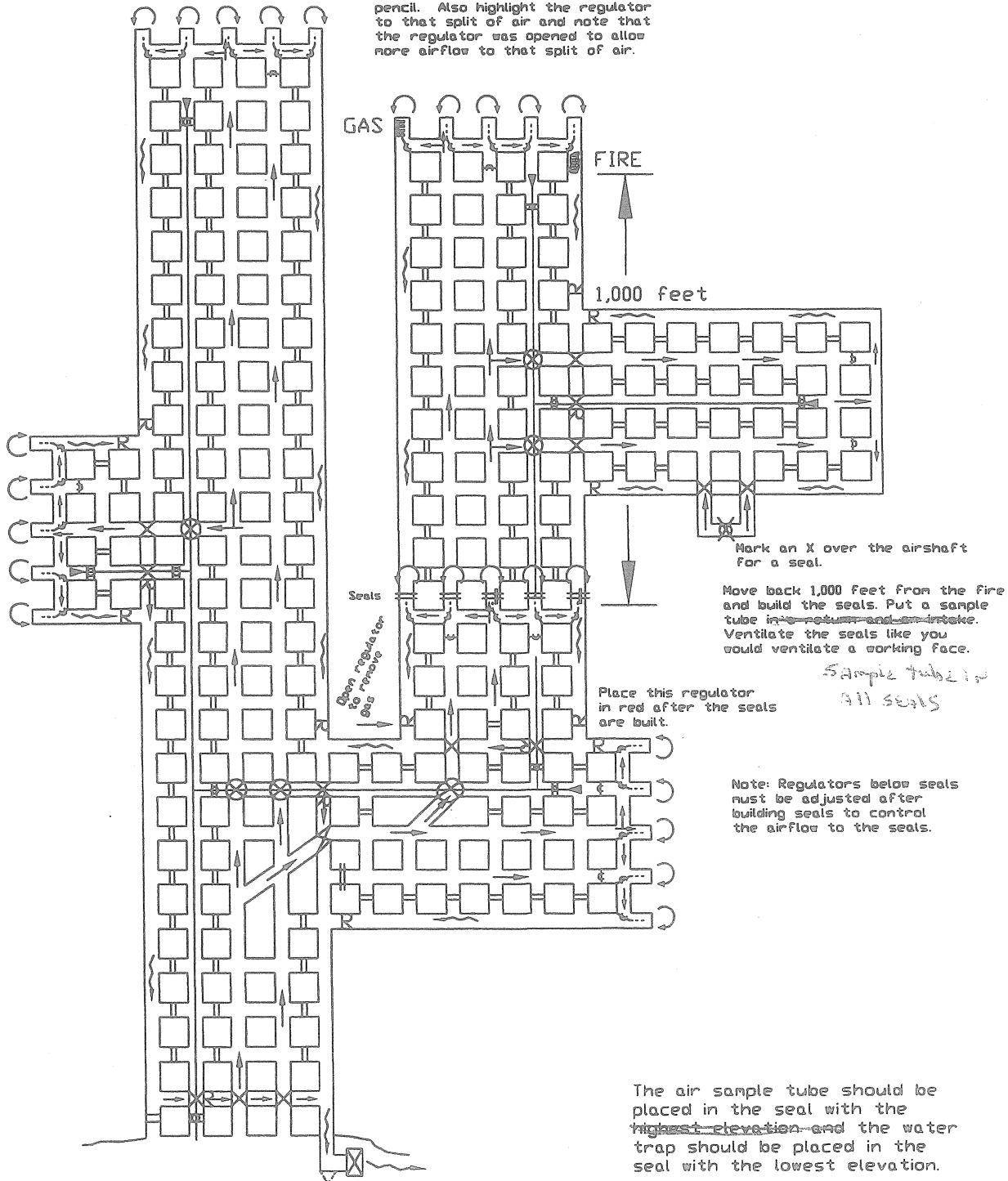
Longwall Ventilation

- Items that are circled must be placed at the exact location. Alternate two check curtains and one regulator or two stoppings and one regulator to fill in the between the required ventilation controls.



Mine Fire and Gas Map

To remove gas show that you tightened the curtains on that split of air by highlighting the check and line curtains with a red pencil. Also highlight the regulator to that split of air and note that the regulator was opened to allow more airflow to that split of air.



Mark an X over the airshaft for a seal.

Move back 1,000 feet from the fire and build the seals. Put a sample tube in ~~return and intake~~. Ventilate the seals like you would ventilate a working face.

Sample tube in all seals

Place this regulator in red after the seals are built.

Note: Regulators below seals must be adjusted after building seals to control the airflow to the seals.

The air sample tube should be placed in the seal with the ~~highest elevation~~ and the water trap should be placed in the seal with the lowest elevation.

Each butt must have two base checks, one on each end.