

ENTRY PERMIT

ENTRANTS, ATTENDANTS, & ENTRY SUPERVISOR HAVE BEEN TRAINED FOR PERMIT SPACE ENTRY? (YES OR NO) _____

GENERAL INFORMATION

Permit Space Location: _____

Purpose of Entry: _____

Entry Permit Valid For: Date: _____ to: Date: _____
 Time: _____ to: Time: _____

PERMIT SPACE HAZARDS

| ATMOSPHERIC | YES | NO |
|--|--------------------------|--------------------------|
| Oxygen Deficiency | <input type="checkbox"/> | <input type="checkbox"/> |
| Oxygen Enrichment | <input type="checkbox"/> | <input type="checkbox"/> |
| Explosive (Gas/Vapor) | <input type="checkbox"/> | <input type="checkbox"/> |
| Explosive Dust | <input type="checkbox"/> | <input type="checkbox"/> |
| Carbon Monoxide | <input type="checkbox"/> | <input type="checkbox"/> |
| Hydrogen Sulfide | <input type="checkbox"/> | <input type="checkbox"/> |
| Other Toxic gases/vapors | <input type="checkbox"/> | <input type="checkbox"/> |
| ENGULFMENT | <input type="checkbox"/> | <input type="checkbox"/> |
| CONFIGURATION (ENTRAPMENT) | <input type="checkbox"/> | <input type="checkbox"/> |
| MECHANICAL | <input type="checkbox"/> | <input type="checkbox"/> |
| ELECTRICAL | <input type="checkbox"/> | <input type="checkbox"/> |
| SUBSTANCE HAZARDOUS TO SKIN OR EYES | <input type="checkbox"/> | <input type="checkbox"/> |
| HEAT STRESS | <input type="checkbox"/> | <input type="checkbox"/> |
| OTHER POTENTIAL HAZARDS (e.g. radiation, noise, etc.) | <input type="checkbox"/> | <input type="checkbox"/> |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> |

PERSONNEL

| Entrant(s) | Time In | Time Out |
|------------|---------|----------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |

Attendant(s) _____

Entry Supervisor(s) _____

COMMUNICATION PROCEDURES USED by ENTRANT(S) and ATTENDANT(S) Check all that apply

- Visual
- Voice
- Other (specify) _____
- Rope
- Radio

HAZARDS HAVE BEEN EXPLAINED TO ALL APPLICABLE ENTRY PERSONNEL? (YES OR NO) _____

CONTROLS/EQUIPMENT Check all that apply

- ISOLATION
- LOCKOUT/TAGOUT
- BLANKING/BLINDING
- DOUBLE BLOCK AND-BLEED
- LINE BREAKING/MISALIGNMENT
- OTHER _____
- INERTING
- PURGE/CLEAN
- METHODS FOR SAFE COVER REMOVAL AND SECURING AREA
- ATMOSPHERIC TESTING
 - Periodic (Give interval) _____
 - Continuous
- VENTILATION
 - Natural
 - Continuous forced air
 - Local Exhaust
- ENTRY EQUIPMENT
 - Ladders
 - Other _____
- PERSONAL PROTECTIVE EQUIPMENT
 - Respiratory
 - SCBA
 - SAR
 - Air Purifying
 - Protective clothing (specify) _____
 - Eye and face protection
 - Hearing protection
- RESCUE AND RETRIEVAL EQUIPMENT
 - Full body harness
 - Lifeline
 - Tripod w/ mechanical winch
 - Explosion proof lighting
- NON-SPARKING TOOLS
- INTRINSICALLY SAFE ELECTRICAL EQUIPMENT & GFCI
- COMMUNICATION EQUIPMENT
 - Radio
 - Phone
 - Other _____
- HOT-WORK PERMIT
- FIRE EXTINGUISHERS

RESCUE and EMERGENCY SERVICES

Names _____ Phone No's. _____

Summoning Procedure: _____

RESCUE PROCEDURES

APPENDIX Q - ENTRY PERMIT FORM

ENTRY PERMIT, continued from front

ATMOSPHERIC TESTING RECORD

| CONDITION | ACCEPTABLE LEVEL | PRE-ENTRY READINGS | | | | ENTRY READINGS | | | |
|--------------------------------------|--------------------------|--------------------|--------|------------|--------|----------------|--------|------------|--------|
| | | (Reading) | (Time) | (Reading) | (Time) | (Reading) | (Time) | (Reading) | (Time) |
| OXYGEN | 19.5% - 23.5% | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| EXPLOSIVE(GAS/VAPOR) | < 10% LFL | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| EXPLOSIVE DUST | < LFL (5 Ft. Visibility) | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| CARBON MONOXIDE | 50 ppm | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| HYDROGEN SULFIDE | 10 ppm | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| OTHER HAZARDS (e.g. HEAT STRESS) | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| NAME(S) or INITIALS OF TESTER: _____ | | | | | | | | | |
| TESTING EQUIPMENT USED | | TYPE | _____ | SERIAL NO. | _____ | TYPE | _____ | SERIAL NO. | _____ |

LIST THE DATE ATMOSPHERIC TESTING EQUIPMENT WAS LAST CALIBRATED: _____

ENTRY AUTHORIZATION

ENTRY AUTHORIZED BY:

NAME _____ TIME _____
SIGNATURE _____ DATE _____

**POST ENTRY PERMIT AT ENTRANCE
TO PERMIT SPACE**

ENTRY CANCELLATION

ENTRY CANCELLED BY:

NAME _____ TIME _____
SIGNATURE _____ DATE _____

REASON FOR CANCELLATION:

- Entry Operation Completed
 - Prohibited Condition Arose (Specify) _____
- _____
- _____

DEFINITIONS

Confined Space – A space that:

- (a) Is large enough and so configured that an employee can bodily enter and perform assigned work; *and*
- (b) Has limited or restricted means for entry or exit; *and*
- (c) Is not designed for continuous employee occupancy.

Permit Required Confined Space (PRCS) – A confined space that:

- (a) Contains or has a potential to contain a hazardous atmosphere; *or*
- (b) Contains a material that has the potentials for engulfing an entrant; *or*
- (c) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section; *or*
- (d) Contains any other recognized serious safety or health hazard.

Acceptable Entry Conditions – The conditions that must exist in a permit space to allow entry and to ensure employees can safely enter into and safely work within a permit required confined space.

Acute exposures - Exposures, which occur for relatively short periods of time, generally minutes to 1-2 days. Concentrations of toxic air contaminants are high relative to there protection criteria. In addition to inhalation, airborne substances might directly contact the skin, or liquids and sludges may be splashed on the skin or into the eyes, leading to toxic effects.

Atmosphere - Refers to the air within a confined space. It should be clean, breathable air with enough oxygen for personnel to be able to enter the area, work and breathe.

Attendant - An individual stationed outside the permit-required confined space who is trained as required by this program and who monitors the authorized entrants inside the permit-required confined space and performs all attendant's duties assigned in the SUNY Fredonia Confined Space Entry Program.

Authorized Entrant - An employee who is trained as required by this program and is authorized by SUNY Fredonia to enter a permit-required confined space.

Ceiling Level - The maximum airborne concentration of a toxic agent to which an employee may be exposed for a specified period of time, usually 15 minutes. At no time must the exposure level exceed the ceiling concentration as listed in 29 CFR Part 1910 Sub Part Z.

Combustible Dust - A dust capable of undergoing combustion or burning when subjected to a source of ignition.

Contaminant - Any organic or inorganic substance, dust, fume, mist, vapor, or gas, the presence of which in air can be harmful to human beings.

Entry – The action by which a person passes through an opening into a permit required confined space. Entry is considered to occur as soon as any part of the entrant's body breaks the plane of an opening into the space. **NOTABLE EXCEPTION:** With the approval of the Department Supervisor, you may reach into a space, and not bodily enter (say to adjust a valve), and do so without an entry permit being required as long as there is NO risk of falling into or otherwise entering the permit space.

Entry Permit – The written or printed document provided by SUNY Fredonia to allow and control entry into a permit space.

Entry Supervisor – The person responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry.

Hazardous Atmosphere – An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue, injury, or acute illness from one or more of the following conditions:

- (a) Flammable gas, vapor, or mist in excess of 10% of its lower flammable limit (LFL);
- (b) Airborne combustible dust present at a concentration that meets or exceeds its LFL. (This may be approximated as a condition in which the dust obscures vision at a distance of 5 feet or less);
- (c) Atmospheric concentration of any substance for which a dose or permissible exposure limit (PEL) is published in OSHA standards; *or*
- (d) Any other atmospheric condition that is immediately dangerous to life or health.

Hot Work - Any work involving burning, welding, riveting, or similar fire-producing operations, as well as work which produces a source of ignition such as drilling, abrasive blasting and space heating. Permits for *Hot Work* must be obtained in accordance with SUNY Fredonia's safety and health programs.

Immediately Dangerous to Life or Health (IDLH) - Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects, or that would interfere with an individual's ability to escape unaided from a permit space.

Inerting - Displacement of the atmosphere by a non-reactive gas (such as Nitrogen) to such an extent that the resulting atmosphere is non-combustible.

Inerting an atmosphere produces an IDLH oxygen-deficient atmosphere.

Irritant - Any substance that will induce a local inflammatory reaction on immediate, prolonged, or repeated contact with living tissue.

Isolation - A process whereby the confined space is removed from service and completely protected against the inadvertent release of material by the following: blanking off (skillet-type metal blank between flanges), misalignment of sections of all lines and pipes, a double block and bleed system, electrical lock-out of all sources of power, and blocking or disconnecting all mechanical linkages.

Lower Explosive Limit (LEL) - The minimum concentration of a combustible gas or vapor in air (usually expressed in percent by volume at sea level), which will ignite if an ignition source (sufficient ignition energy) is present.

Non-Permit Confined Space - A confined space that does not contain, or with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen Deficiency - Refers to an atmosphere with a partial pressure of oxygen (PO₂) less than 132 mm Hg. Normal air at sea level contains approximately 21% oxygen at a PO₂ of 160 mm Hg. At an altitude of 5,280 feet, normal air contains approximately 21% O₂ at a PO₂ of 132 mm Hg. *An oxygen-deficient atmosphere is one with less than 19.5% Oxygen.*

Oxygen-Enriched Atmosphere - Any oxygen concentration greater than 25% (PO₂ - 190 mm Hg) at normal atmospheric pressure. *An oxygen-enriched atmosphere is one with greater than 23.5% Oxygen.*

Permissible Exposure Limit (PEL) - The maximum Eight-Hour, Time-Weighted Average of any airborne contaminant to which an employee may be exposed. At no time must the exposure level exceed the Ceiling concentration for that contaminant as listed in 29 CFR Part 1910 Subpart Z.

Prohibited Condition – Any condition in a permit space that is not allowed by the permit during the time when entry is authorized.

Purging - The method by which gases, vapors, or other airborne impurities are displaced from a confined space. For example, an atmosphere may be purged of a hazardous airborne contaminant by forced ventilation - followed by atmospheric or environmental testing to ensure effectiveness.

Testing – The process by which the hazards are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

APPENDIX L

**COMPLETED
CONFINED SPACE
SURVEY FORMS**

APPENDIX M

**PROGRAM UPDATE AND
DISTRIBUTION**

CONFINED SPACE PROGRAM DISTRIBUTION LIST

1. Jim Pepe – Director of Facilities Management
2. Robert Lawson – Asst. Director of Facilities Management
3. Kevin Cloos – Director of Building Services and Grounds
4. Colin Plaister – Director of ITS

CONFINED SPACE - UPDATES AND REVISIONS

4/3/06: REVIEWED

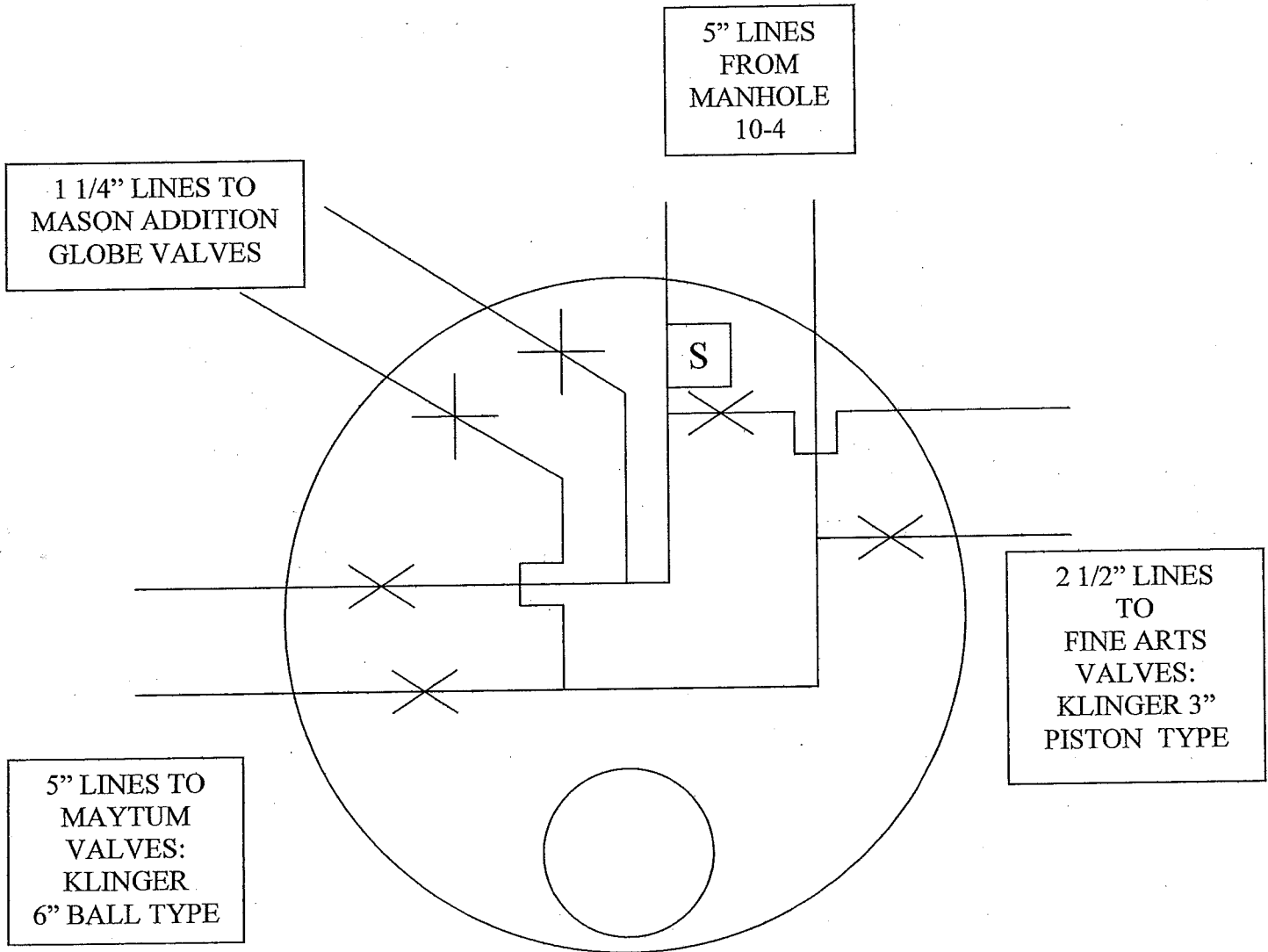
5/06: revised & distributed

6/06: Entry rescue spaces - wording updated
revised + distributed

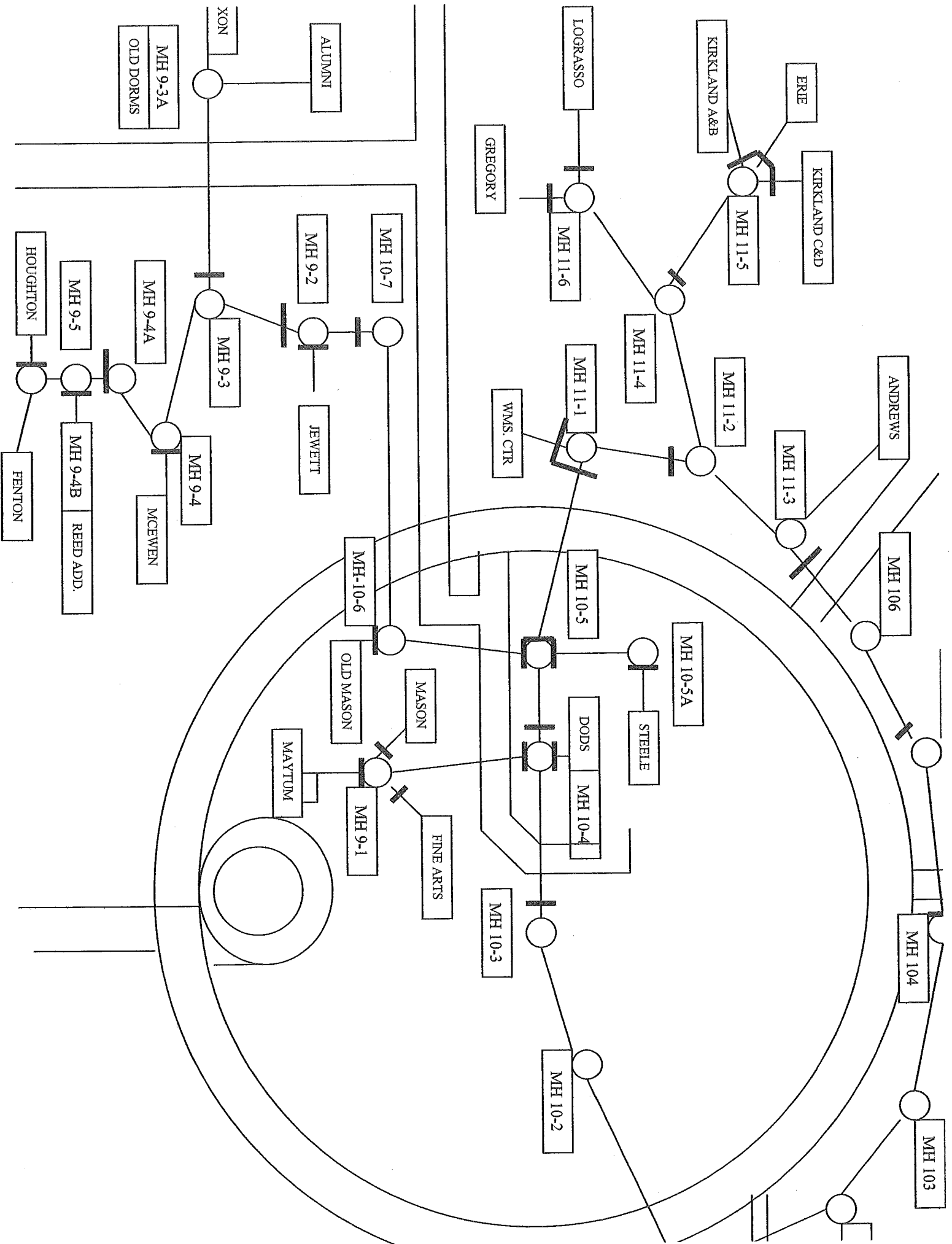


MANHOLE 9-1

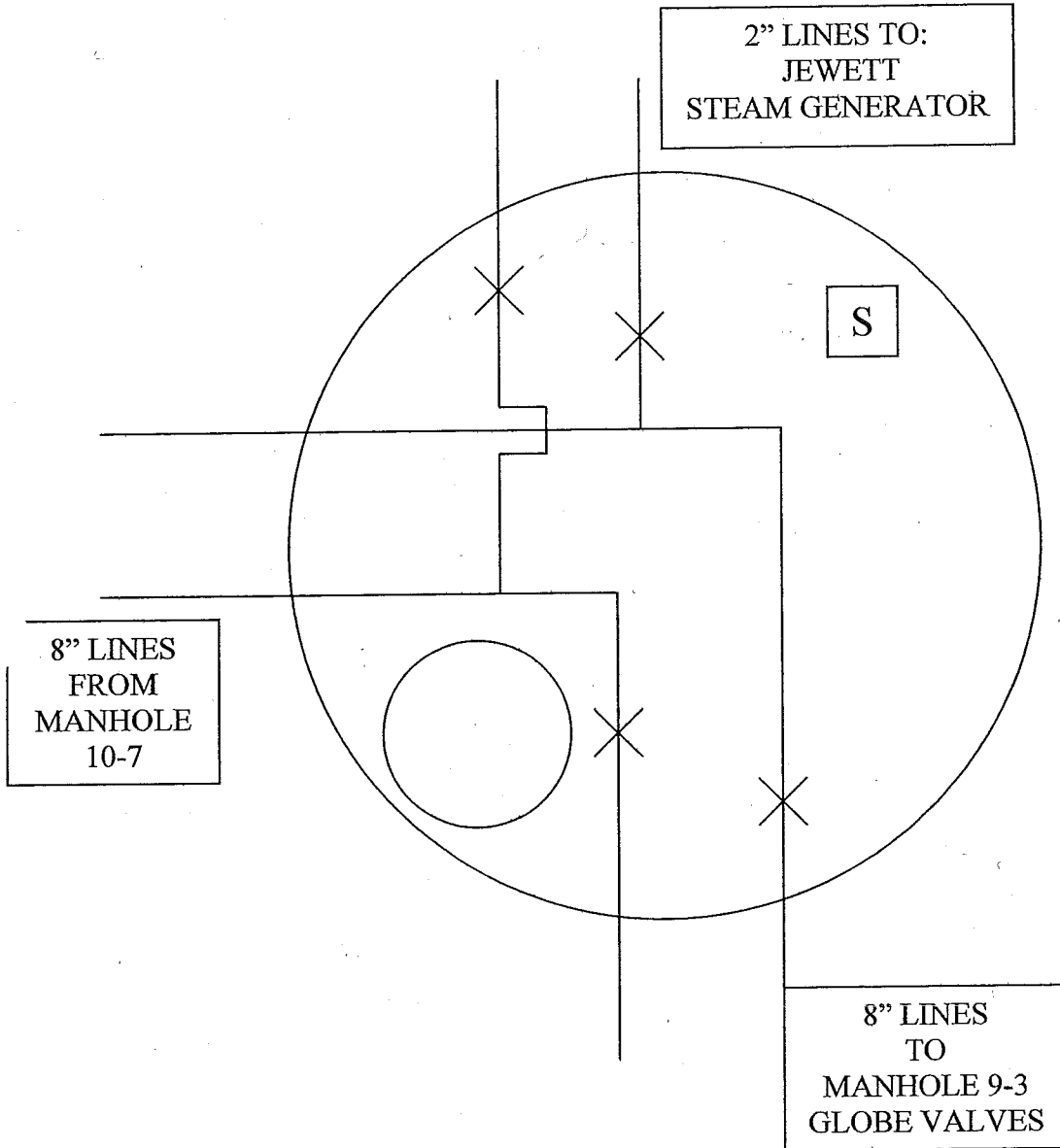
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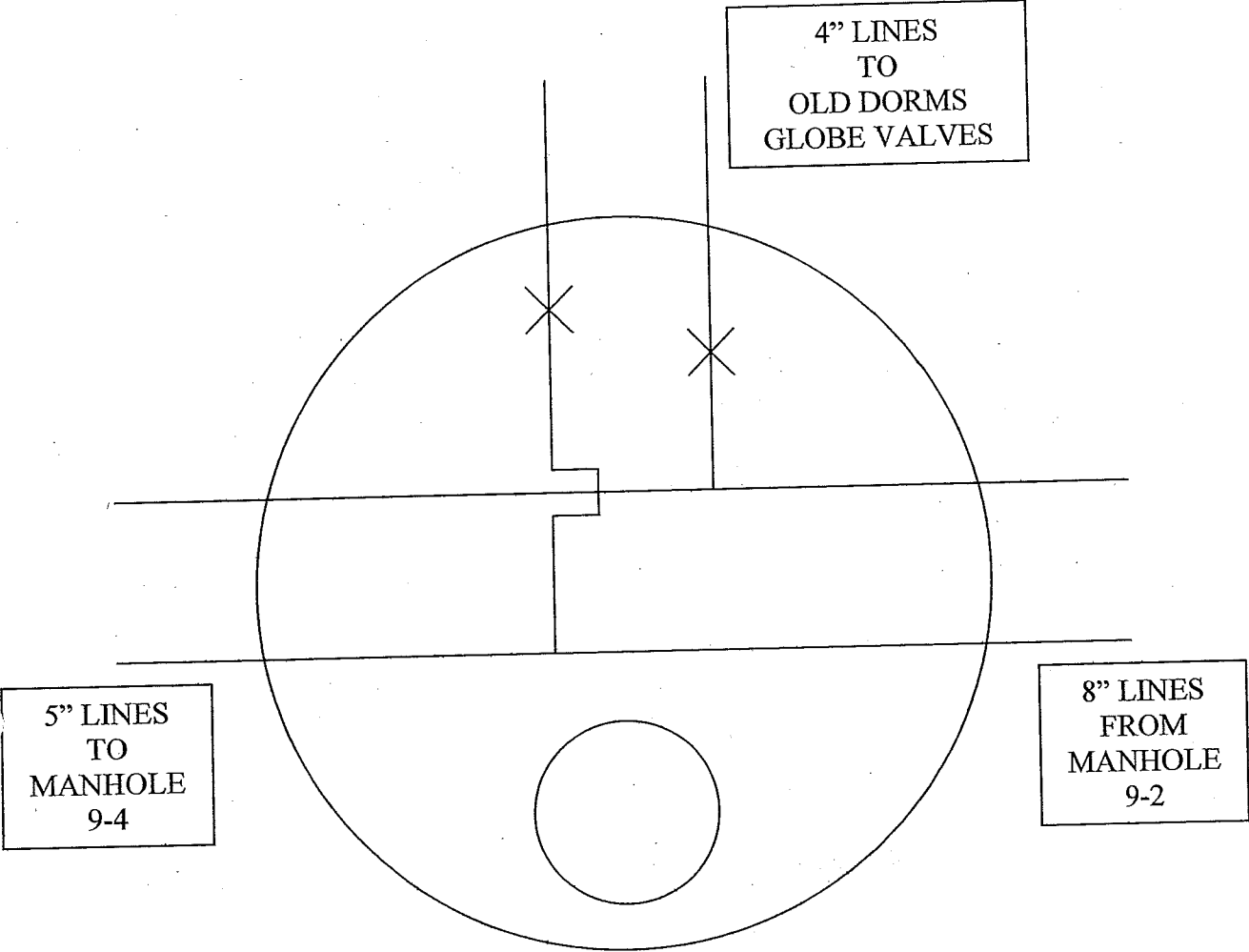
NO LINE VENTS OR DRAINS



MANHOLE 9-2



MANHOLE 9-3



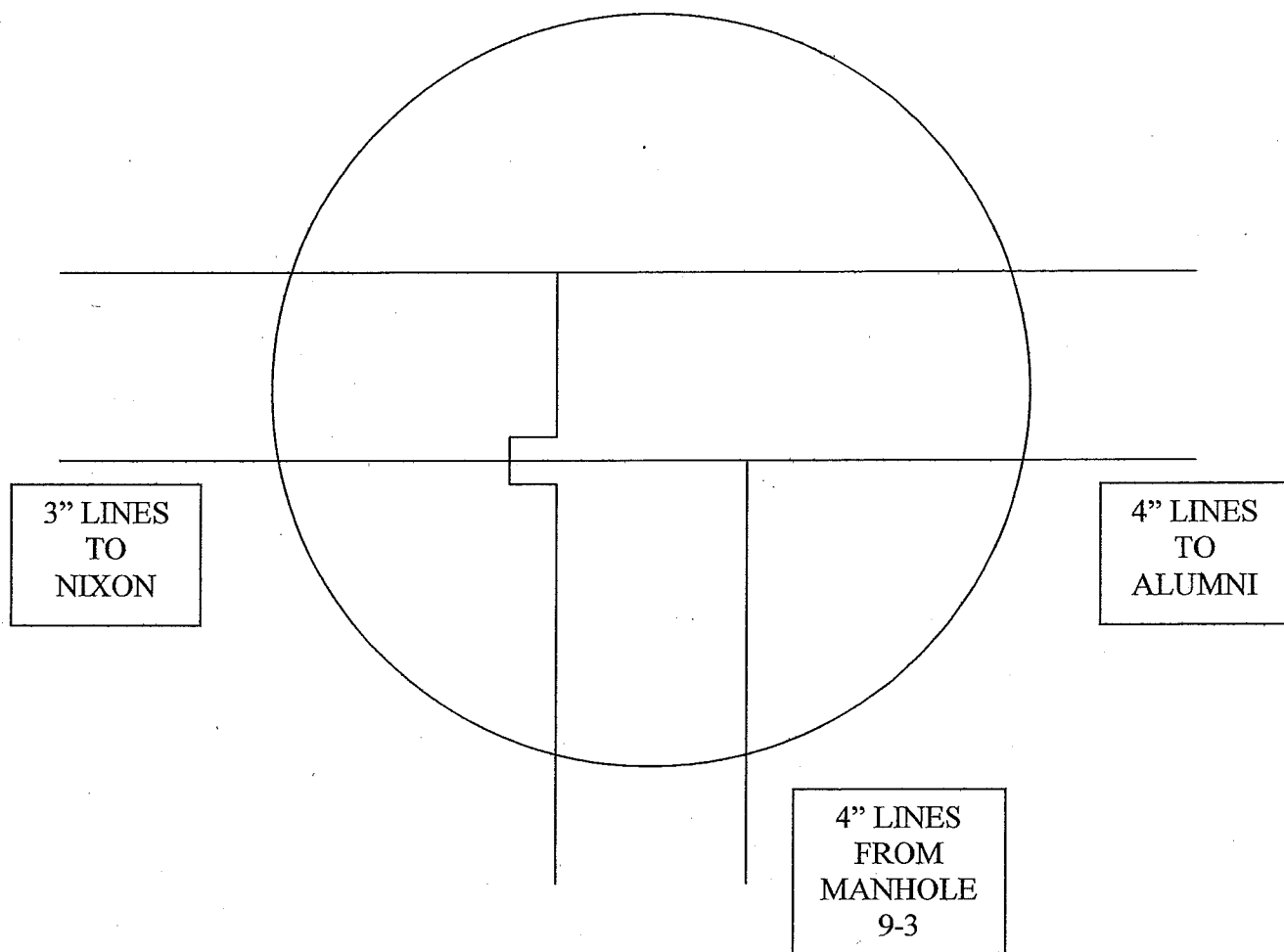
4" LINES
TO
OLD DORMS
GLOBE VALVES

5" LINES
TO
MANHOLE
9-4

8" LINES
FROM
MANHOLE
9-2

MANNHOLE 9-3A

ALL RIC-WIL THROUGH MANHOLE



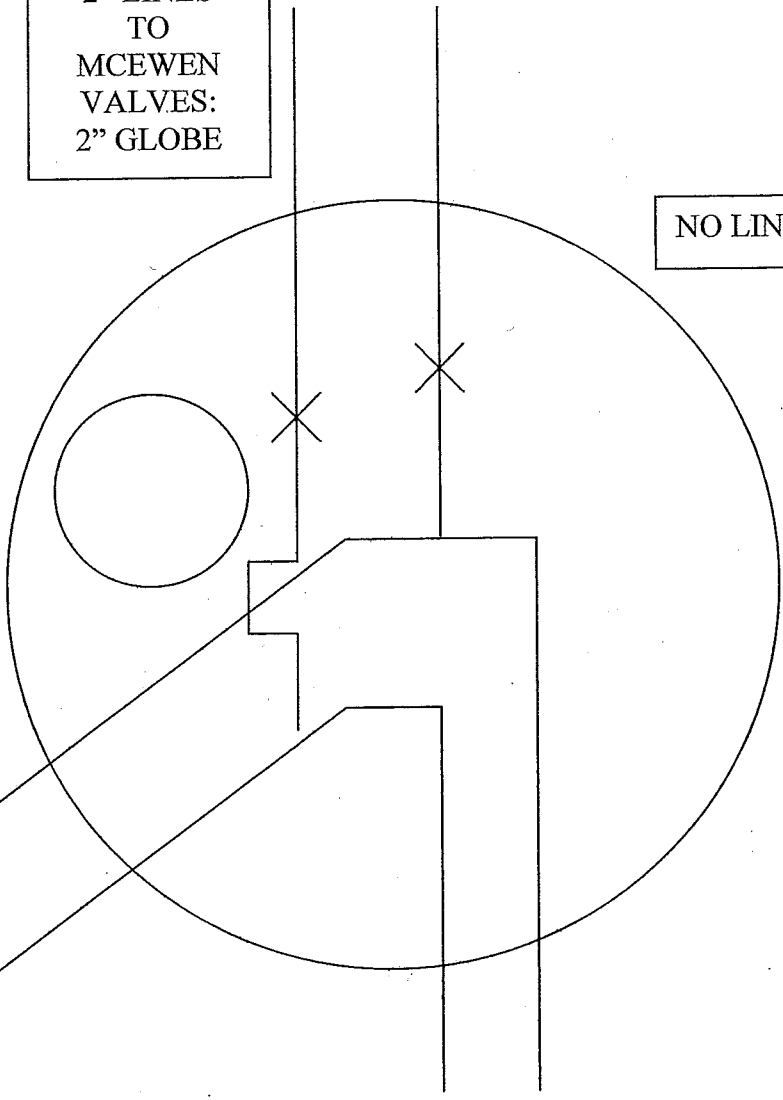
NO
entry
at ALL

MANHOLE 9-4

REHAB 2005

2" LINES
TO
MCEWEN
VALVES:
2" GLOBE

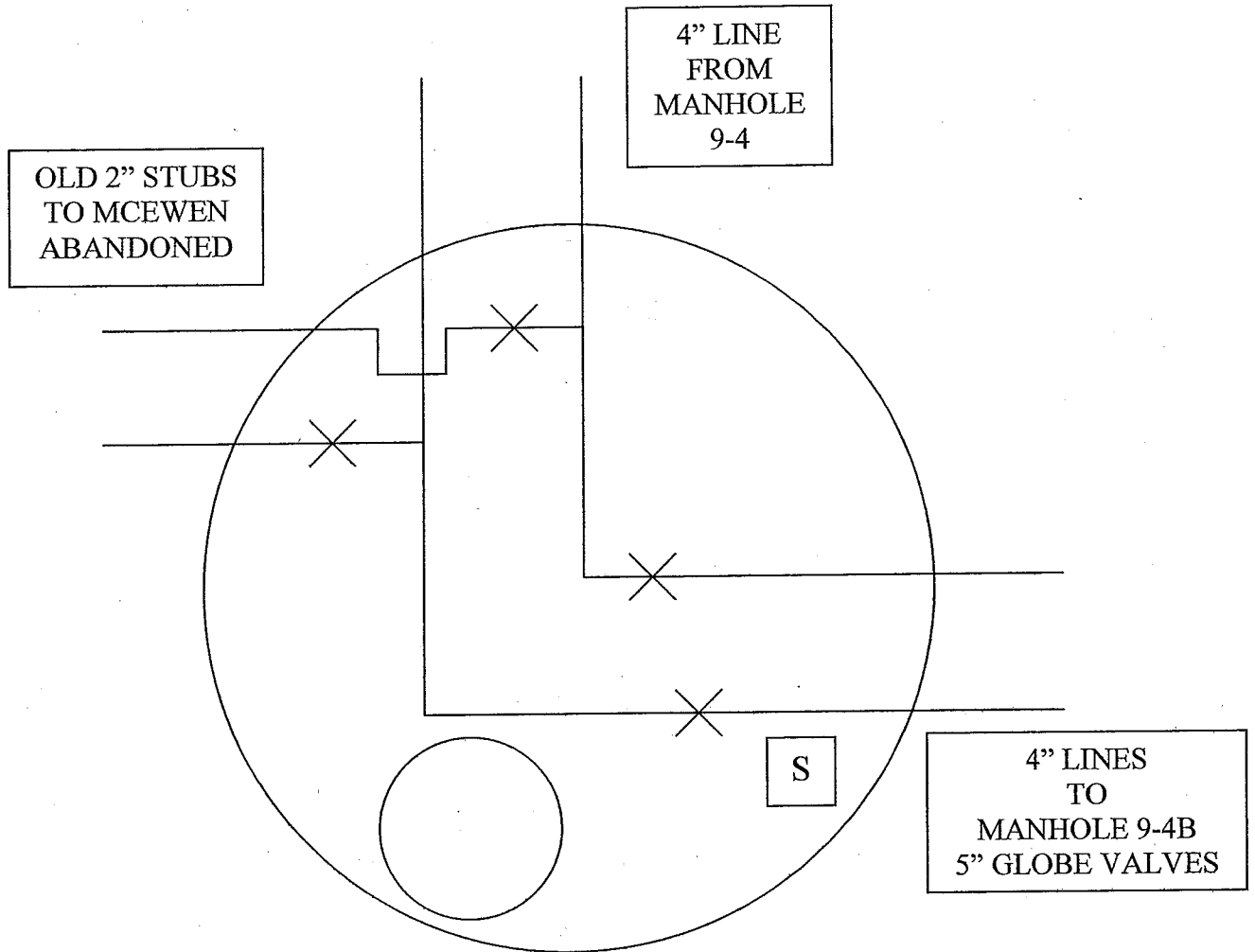
NO LINE VENTS OR DRAINS



5" LINES
FROM
MANHOLE
9-3

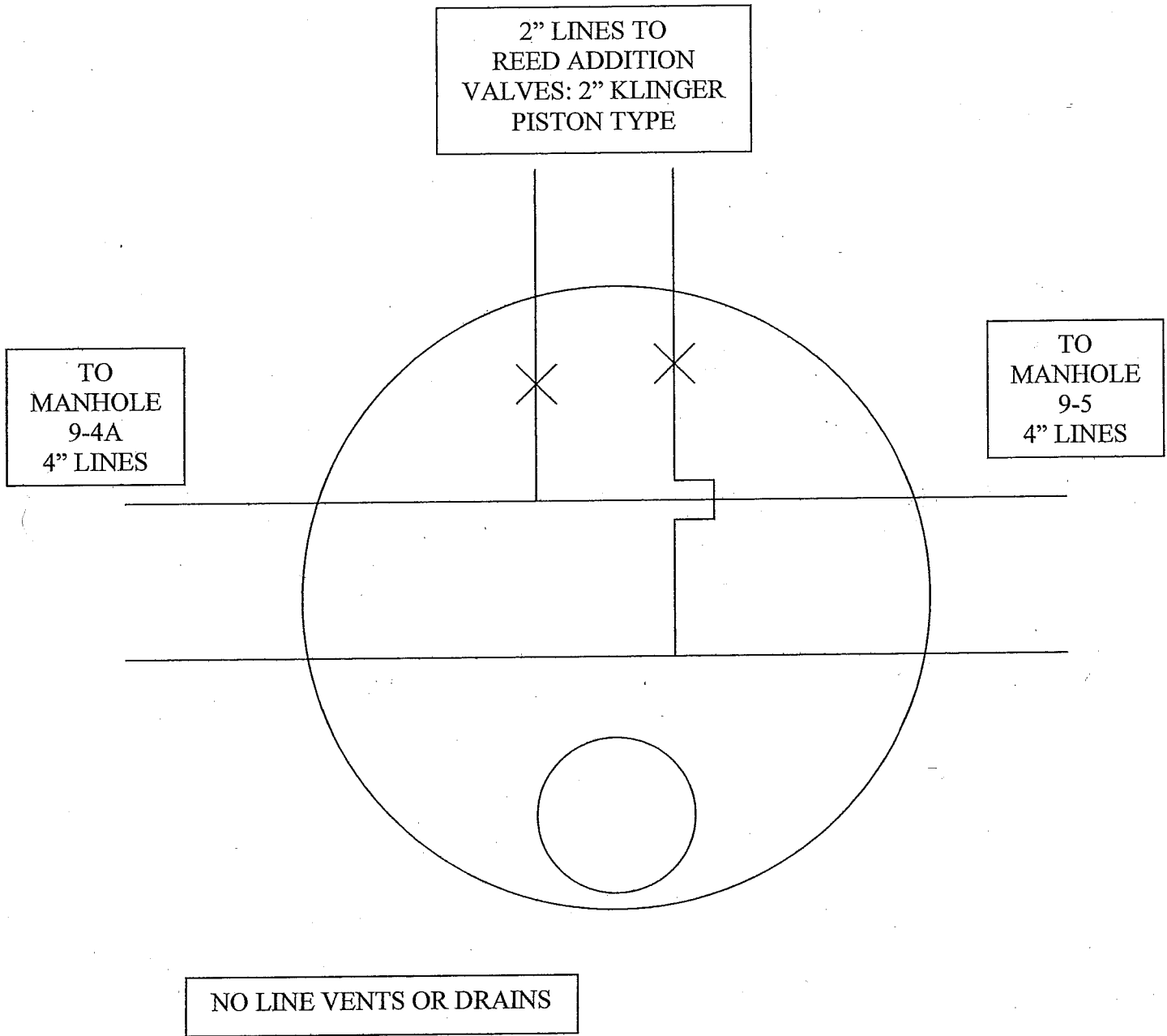
4" LINES
TO
MANHOLE
9-4A

MANHOLE 9-4A

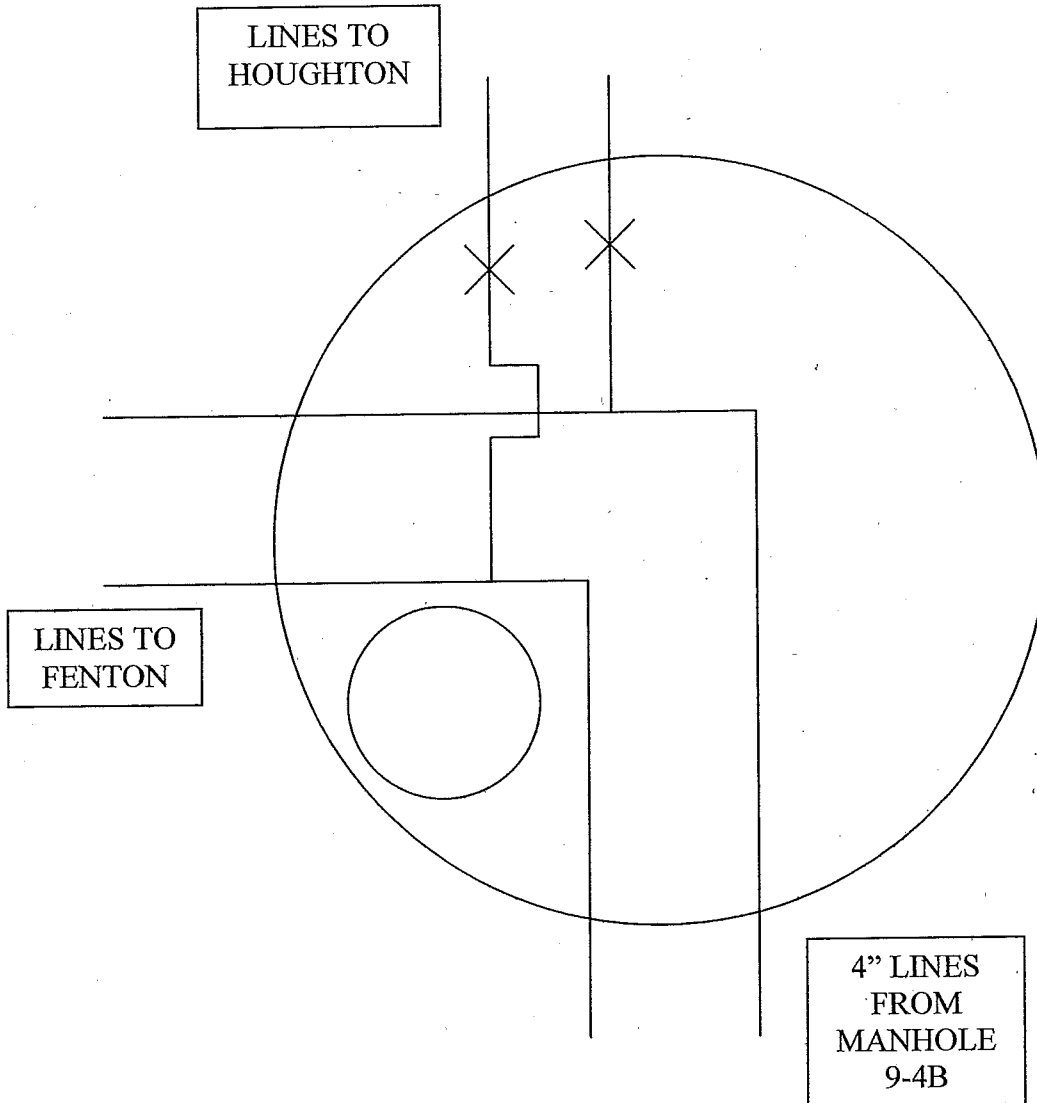


MANHOLE 9-4B

REHAB 2005

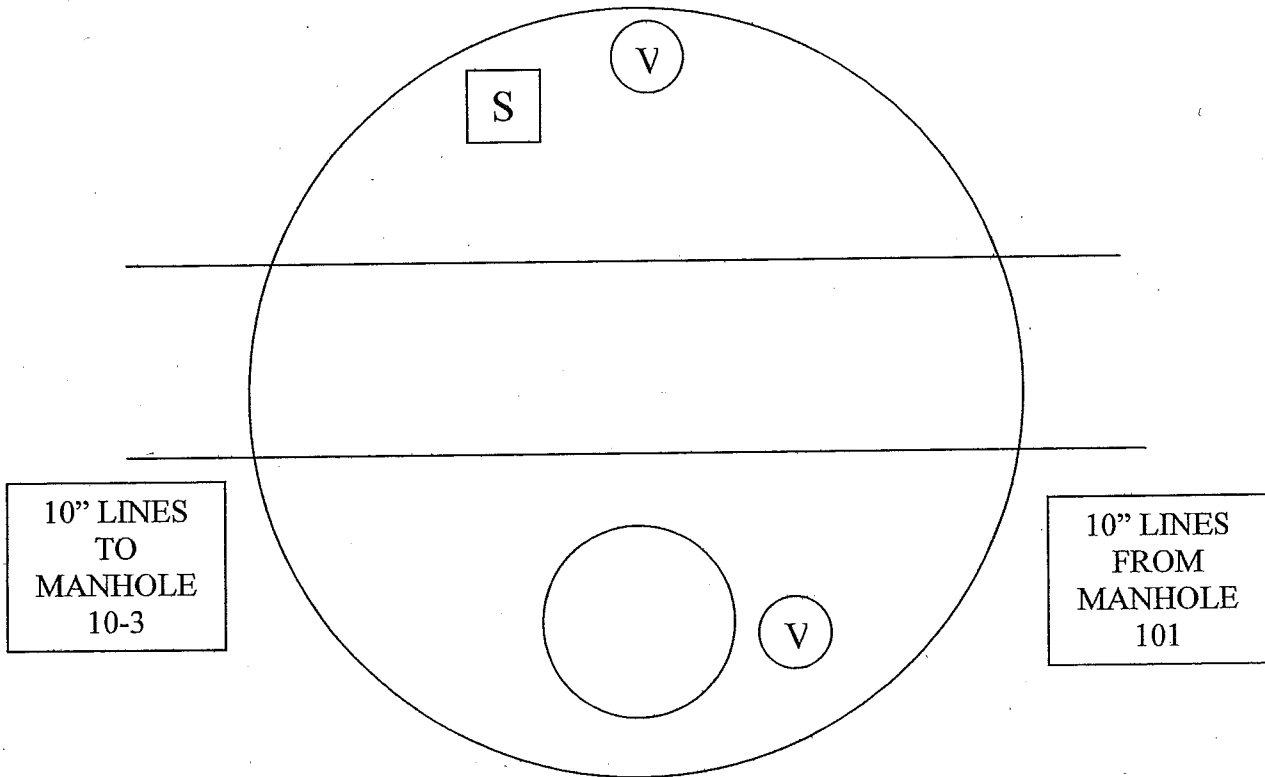


MANHOLE 9-5



MANHOLE 10-2

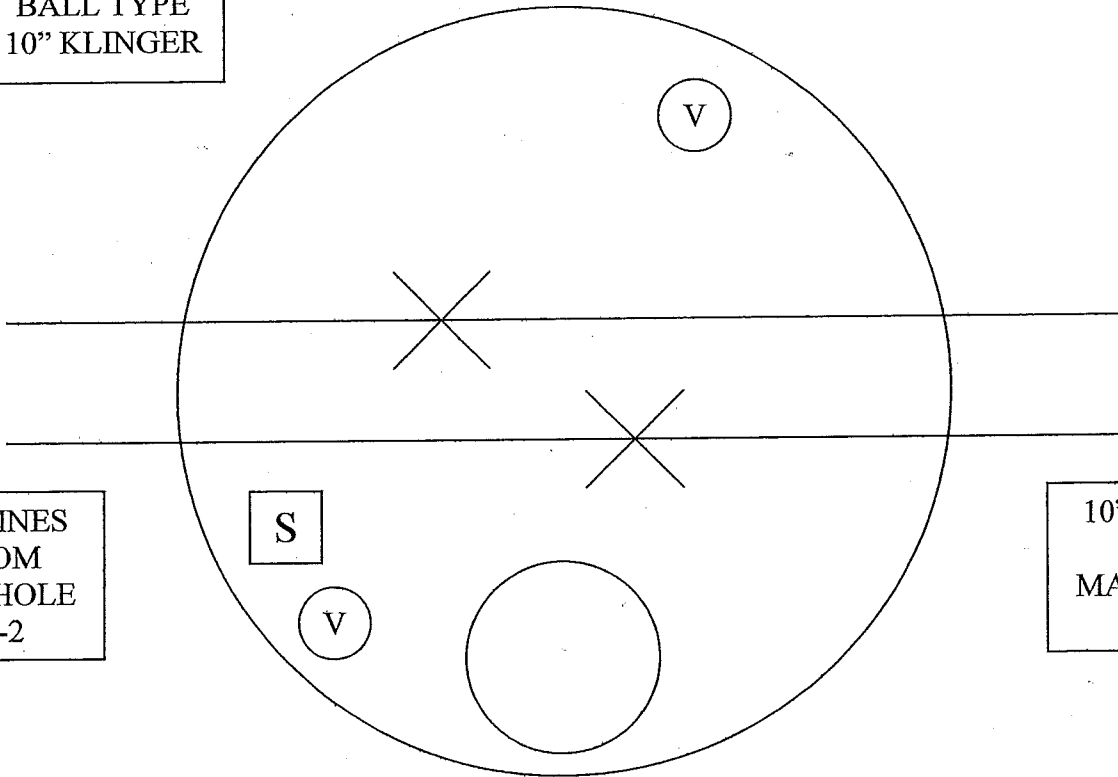
REHAB 2005



MANHOLE 10-3

REHAB 2004

VALVES:
BALL TYPE
10" KLINGER

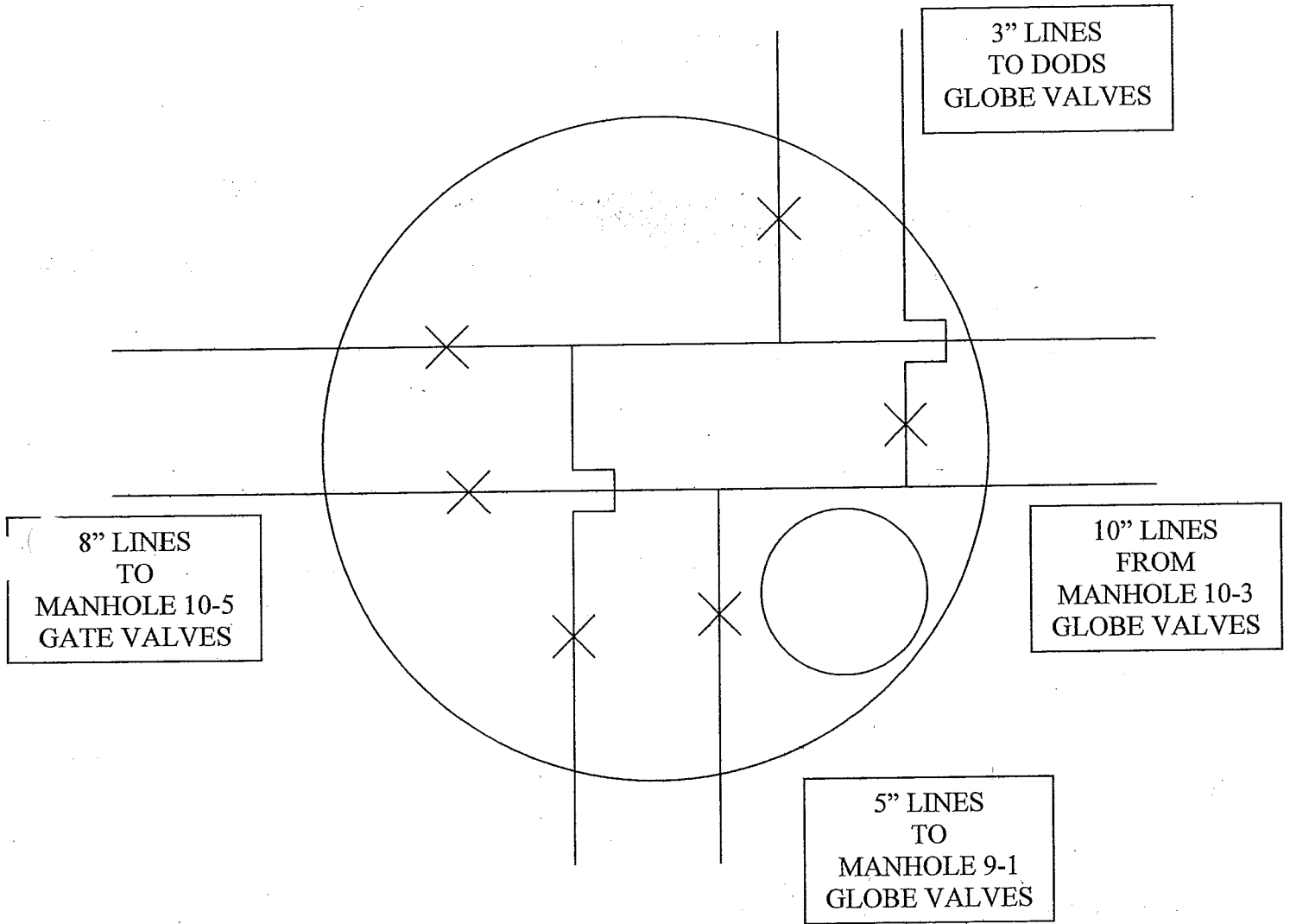


10" LINES
FROM
MANHOLE
10-2

10" LINES
TO
MANHOLE
10-4

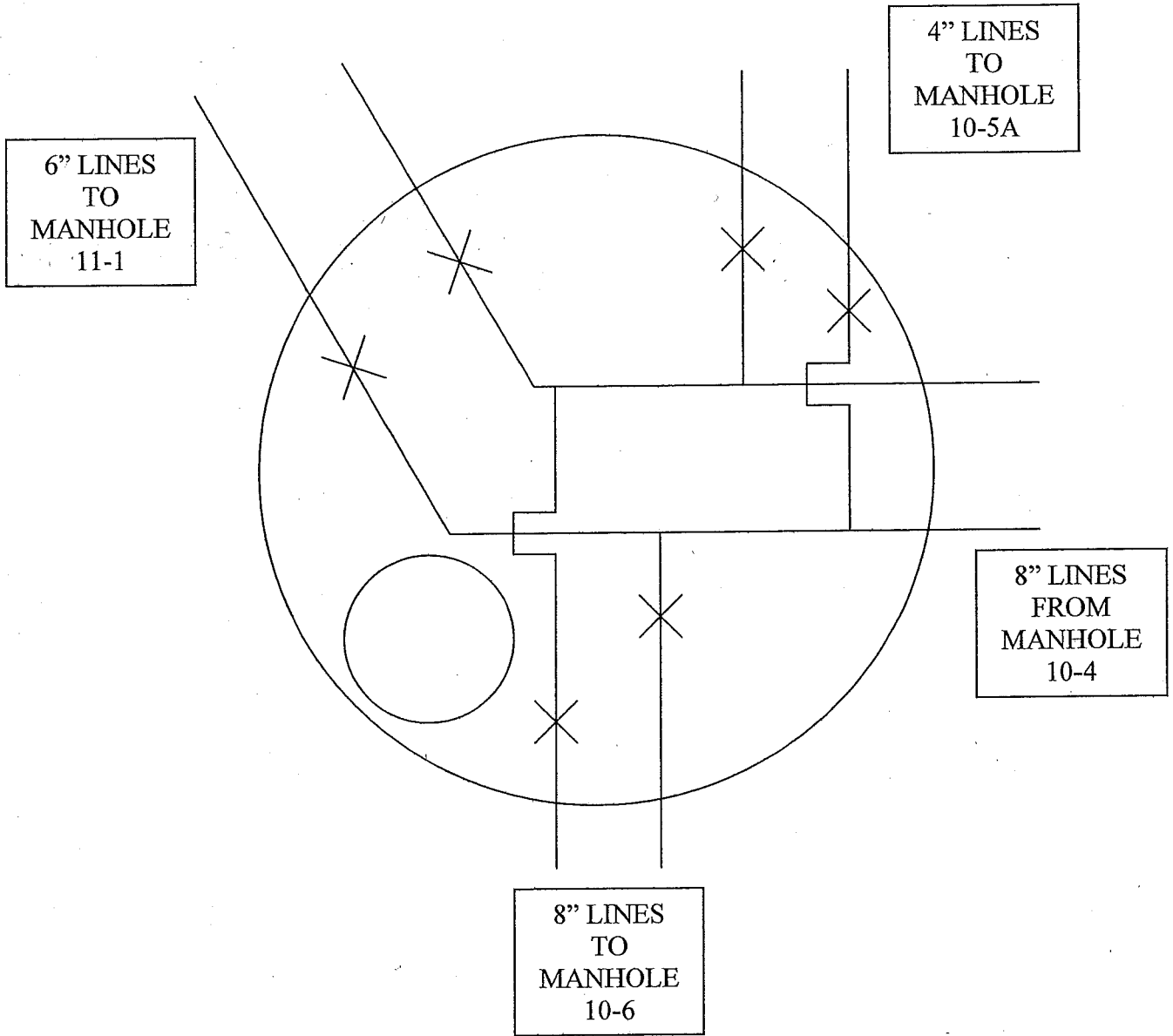
MANHOLE 10-4

REHAB 1997



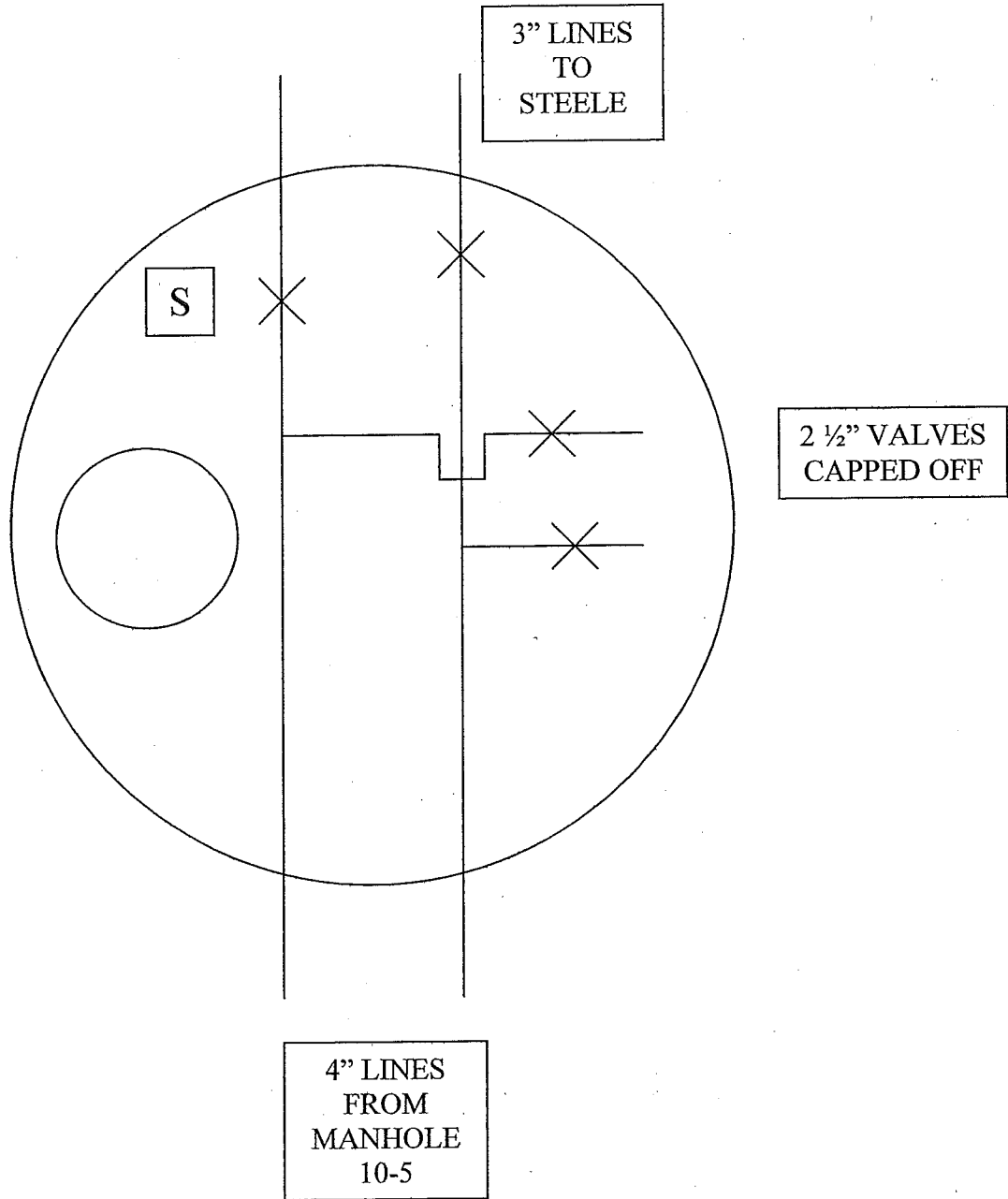
MANHOLE 10-5

NEW 1997

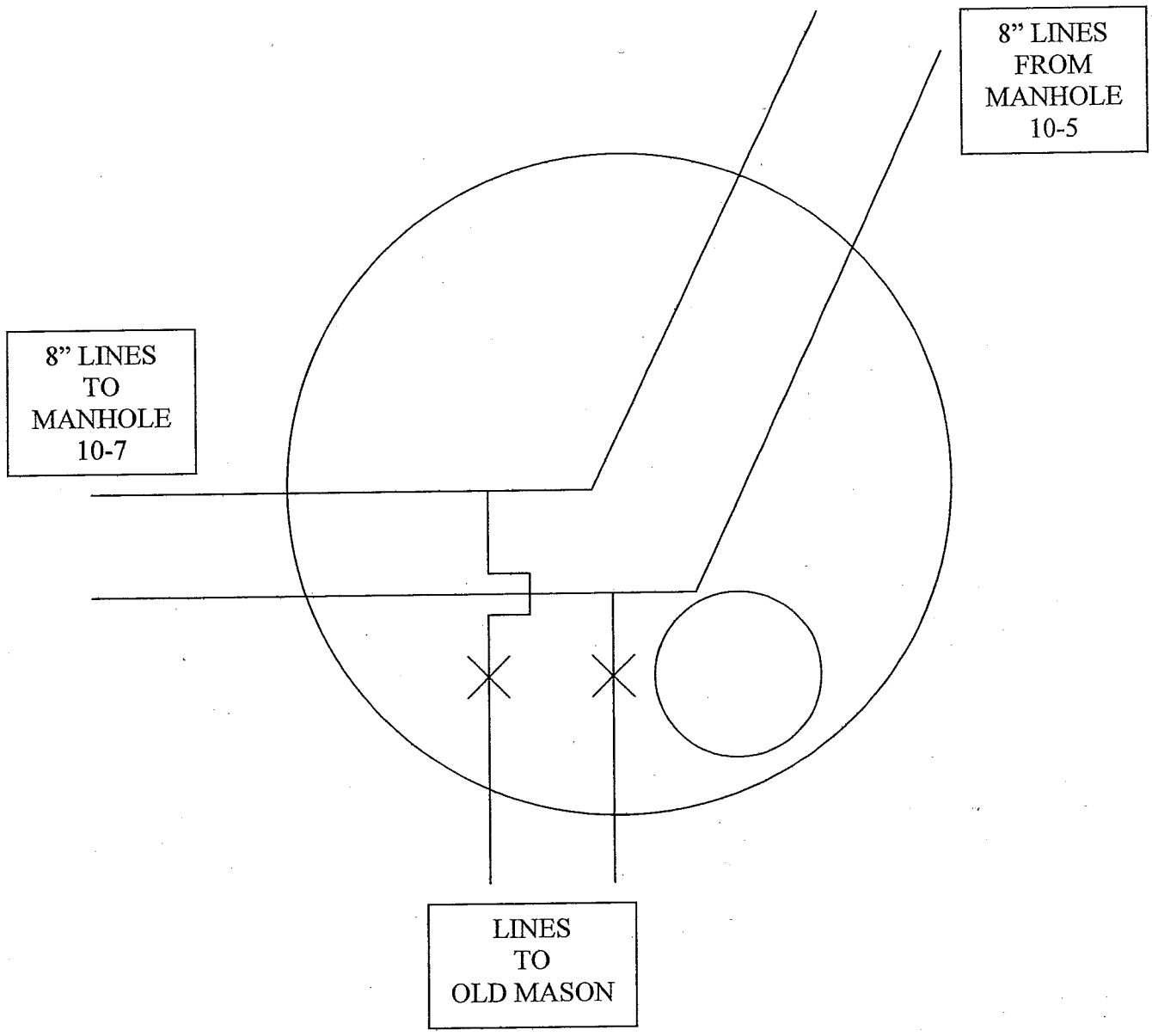


MANHOLE 10-5A

NEW 1997



MANHOLE 10-6

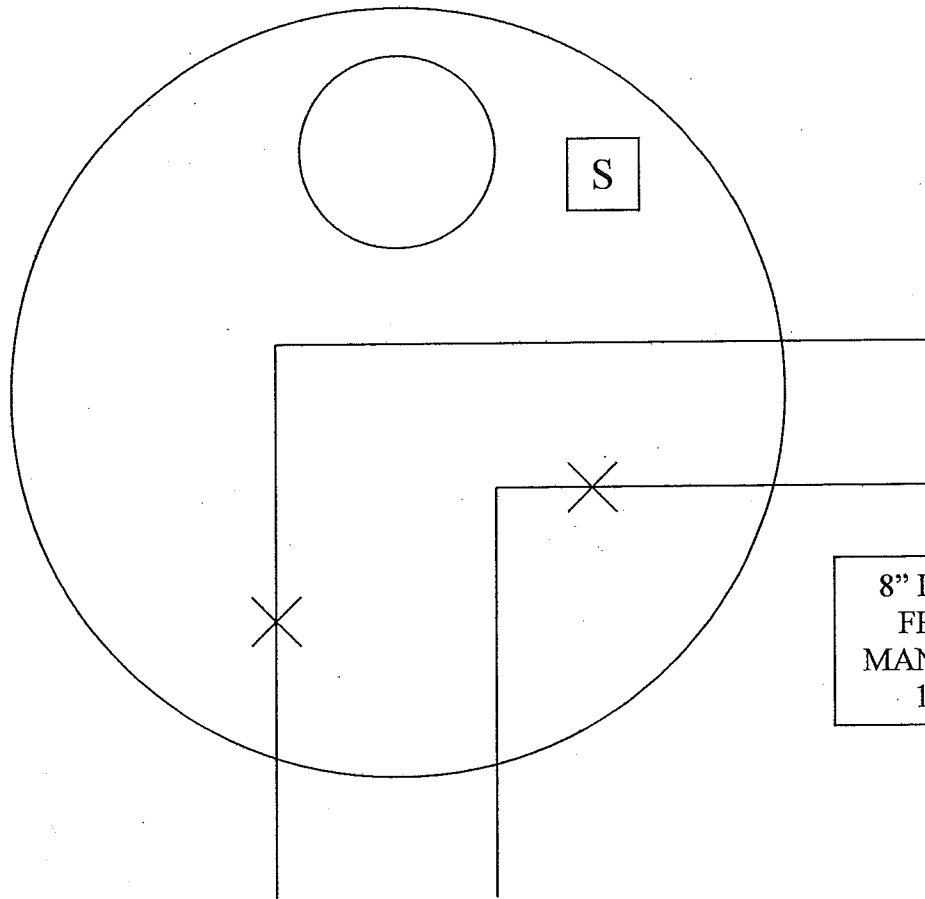


MANHOLE 10-7

REHAB 2004

NO LINE VENTS OR DRAINS
OLD STUB LINES CAPPED

VALVES:
8" KLINGER
BALL TYPE

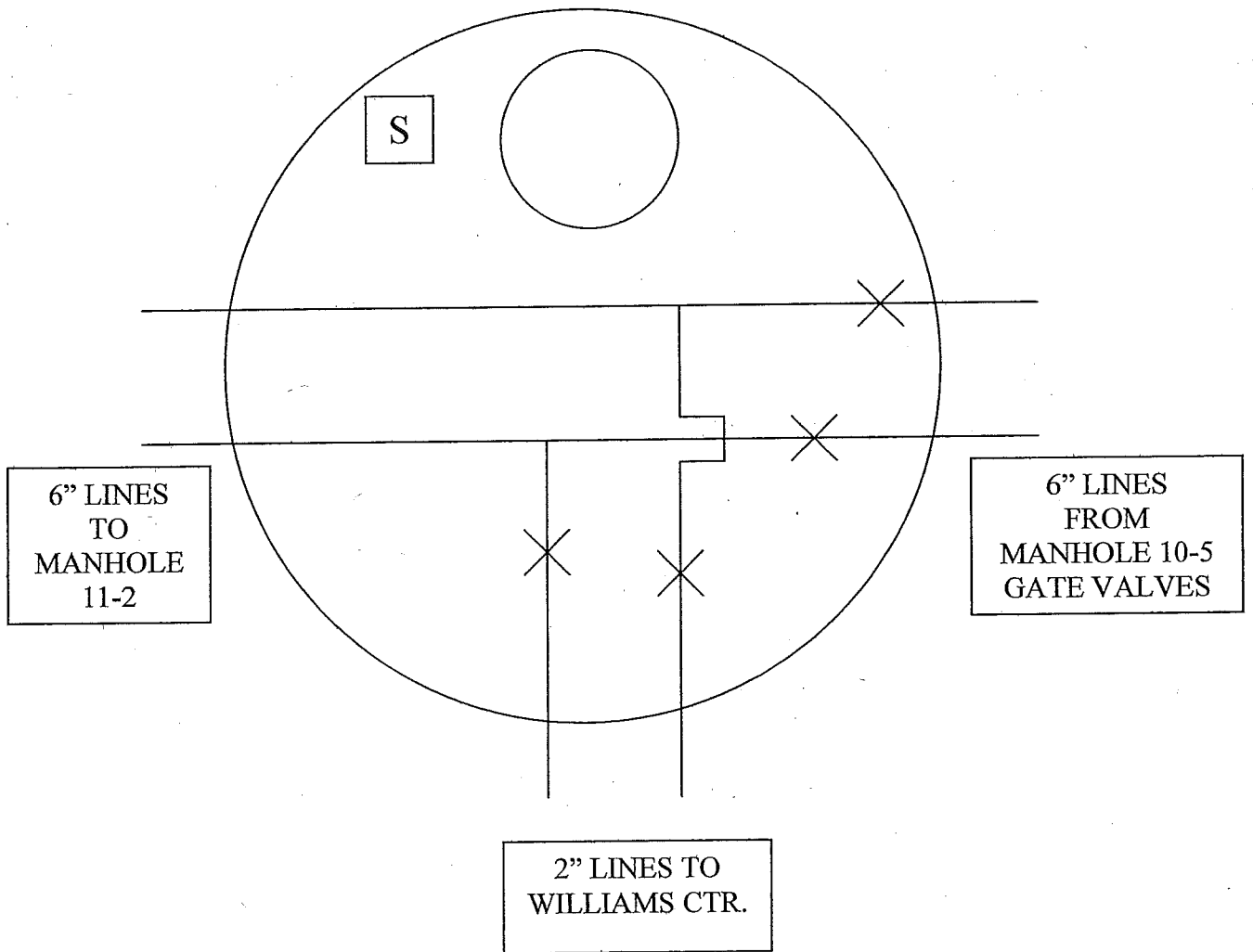


8" LINES
FROM
MANHOLE
10-6

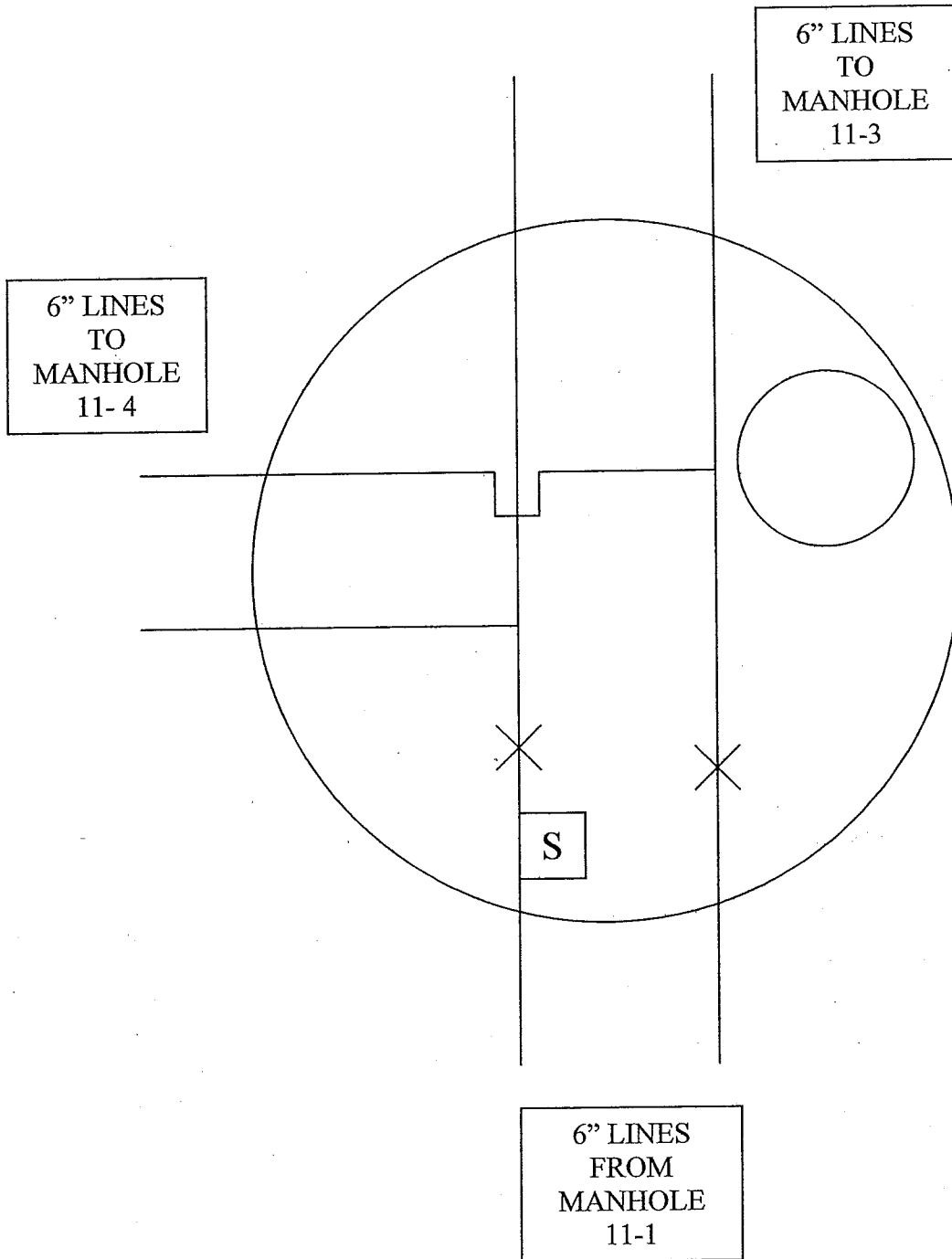
8" LINES
TO
MANHOLE
9-2

MANHOLE 11-1

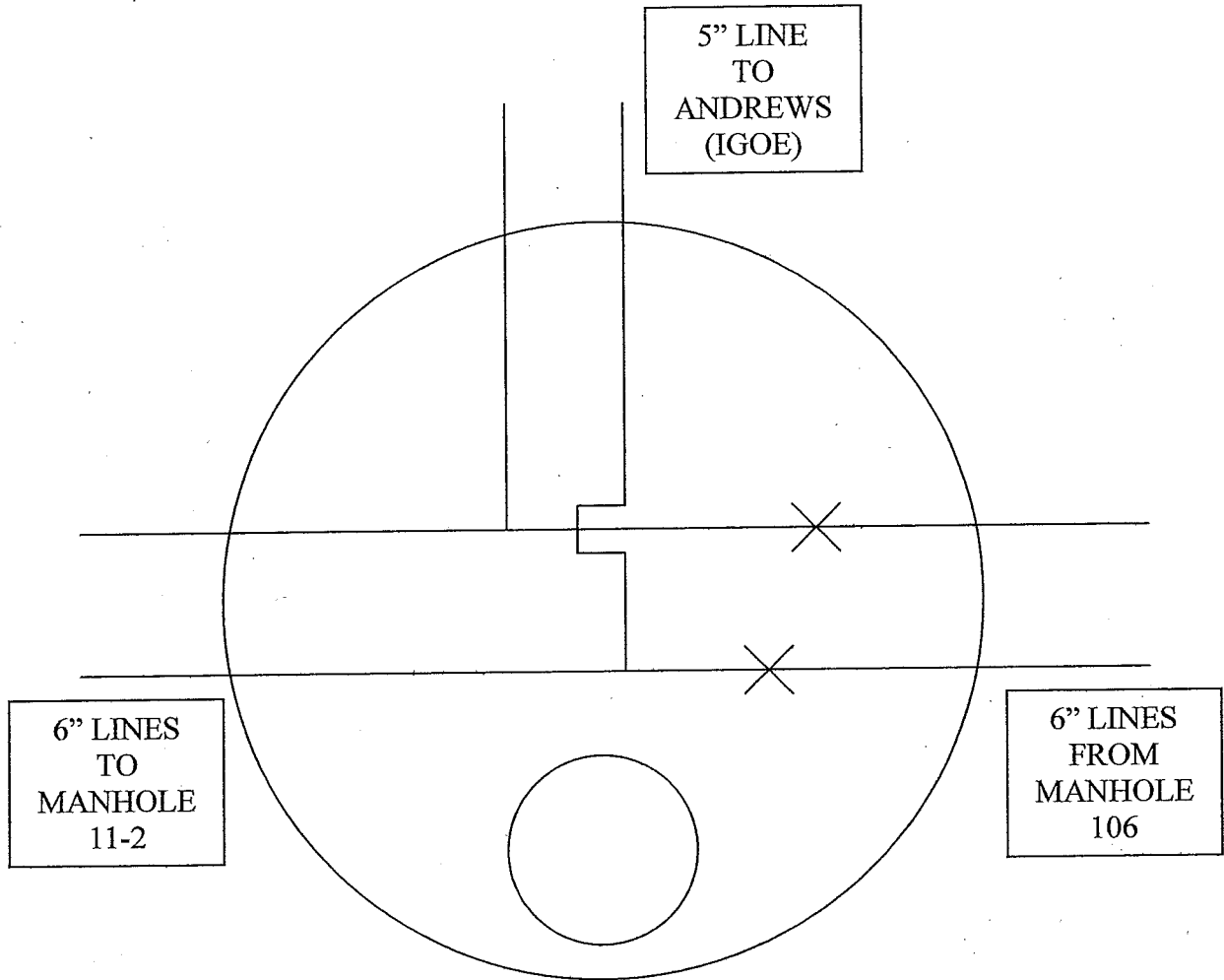
REHAB 1997



MANHOLE 11-2



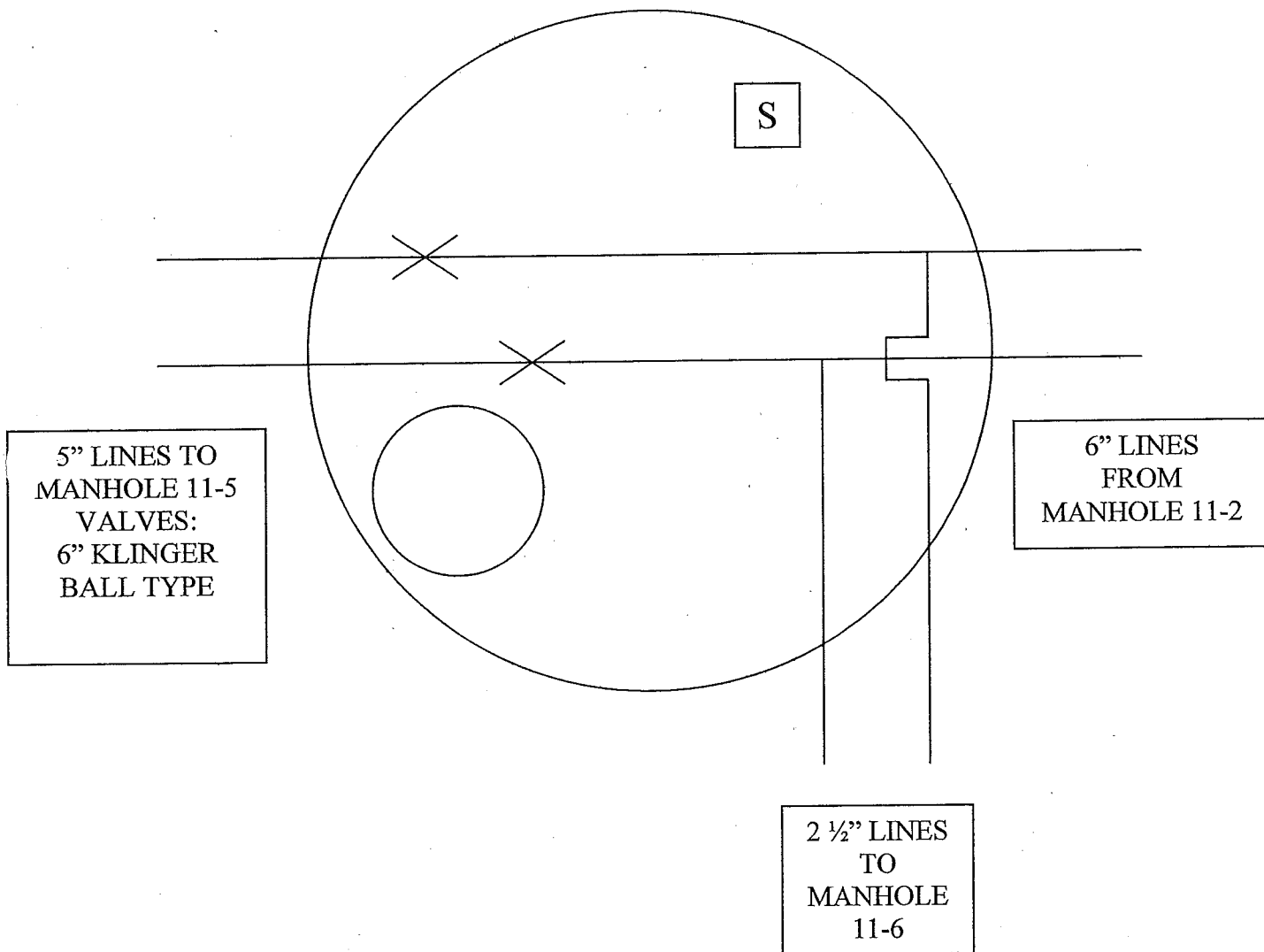
MANHOLE 11-3



MANHOLE 11-4

REHAB 2004

NO LINE VENTS OR DRAINS



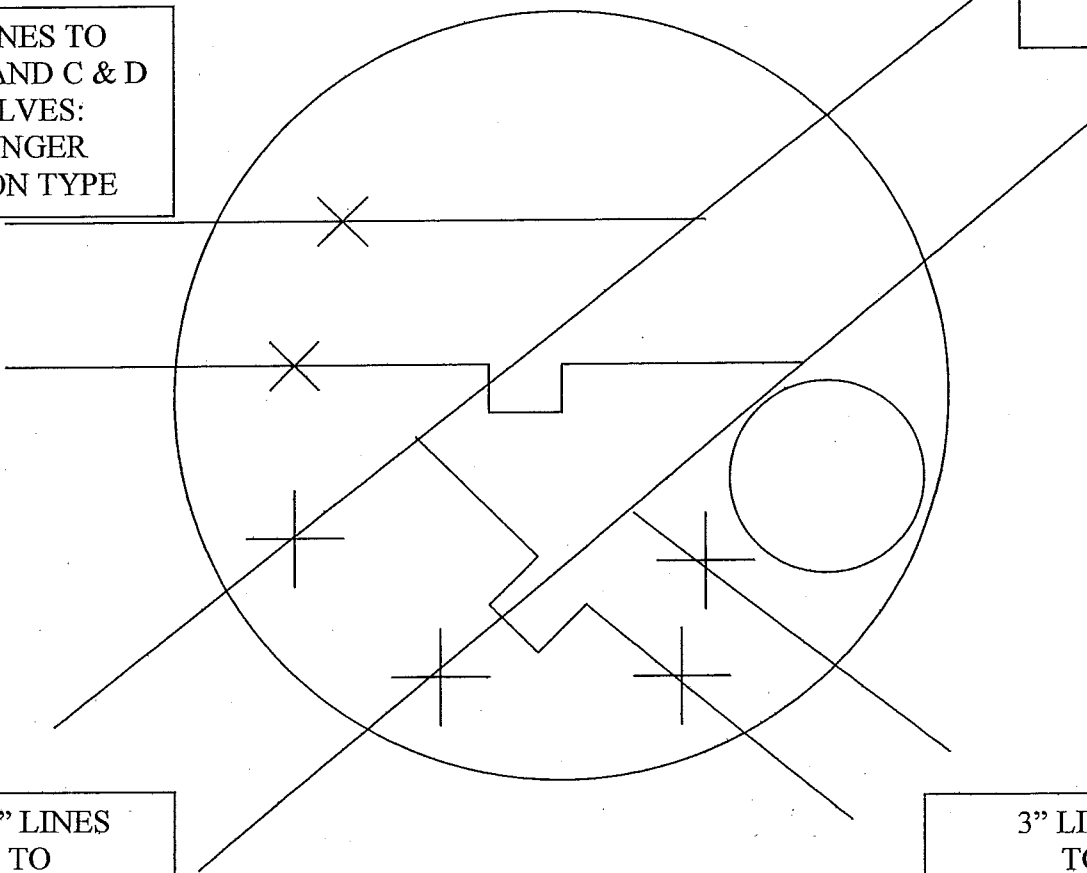
MANHOLE 11-5

REHAB 2005

NO LINE VENTS OR DRAINS

5" LINES
FROM
MANHOLE
11-4

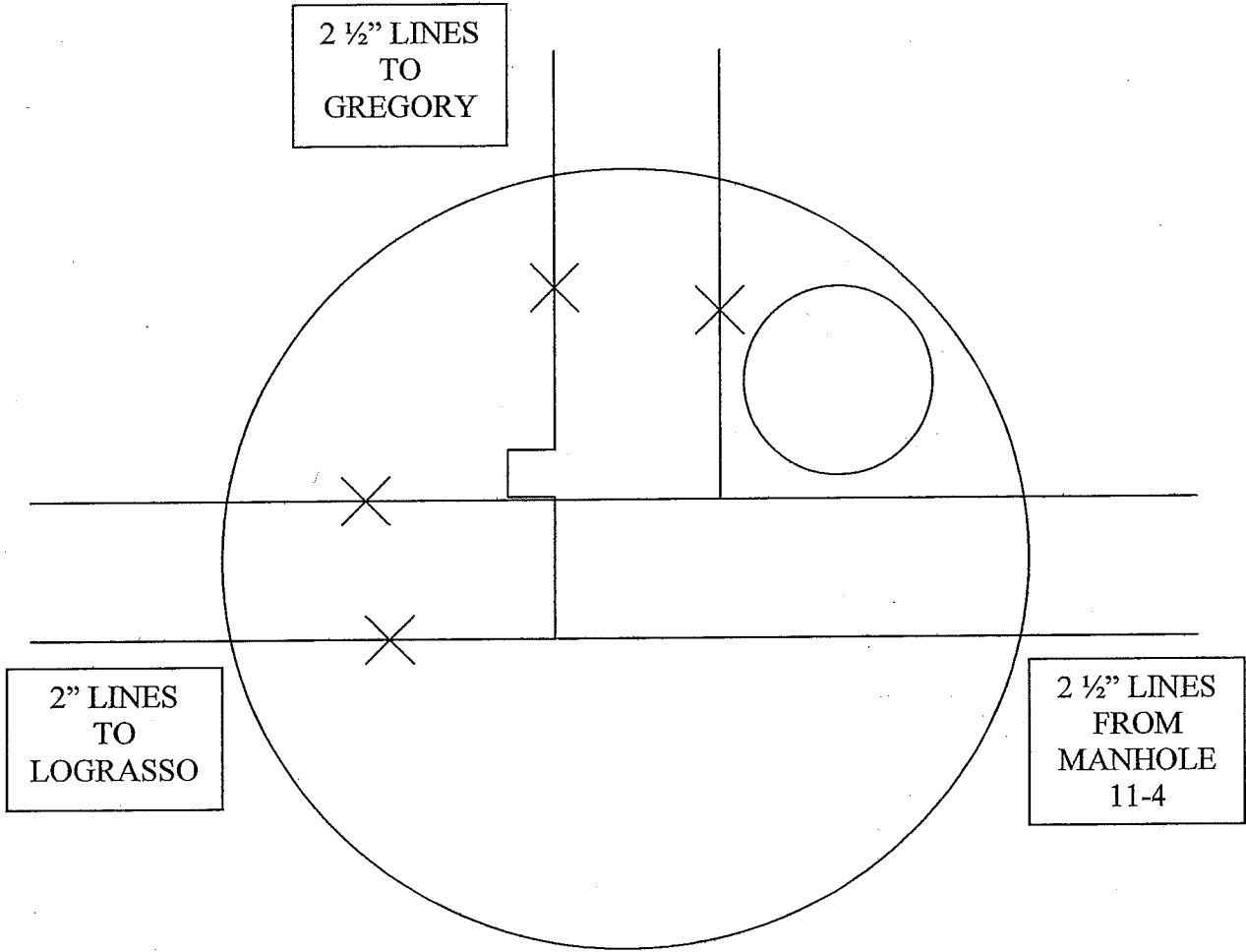
3" LINES TO
KIRKLAND C & D
VALVES:
KLINGER
PISTON TYPE



2 1/2" LINES
TO
ERIE HALL
VALVES:
KLINGER
PISTON TYPE

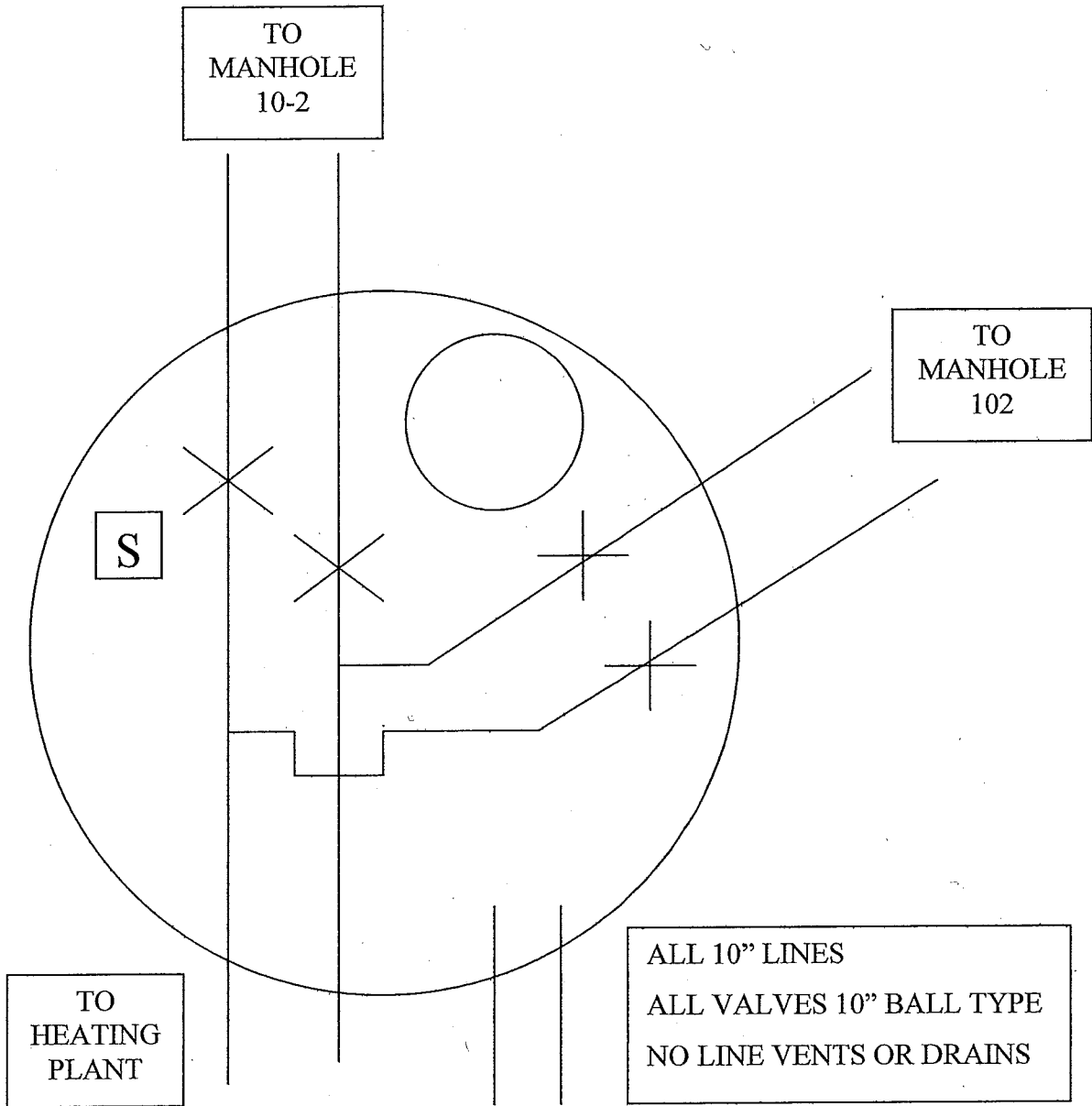
3" LINES
TO
KIRKLAND A & B
VALVES:
KLINGER
PISTON TYPE

MANHOLE 11-6

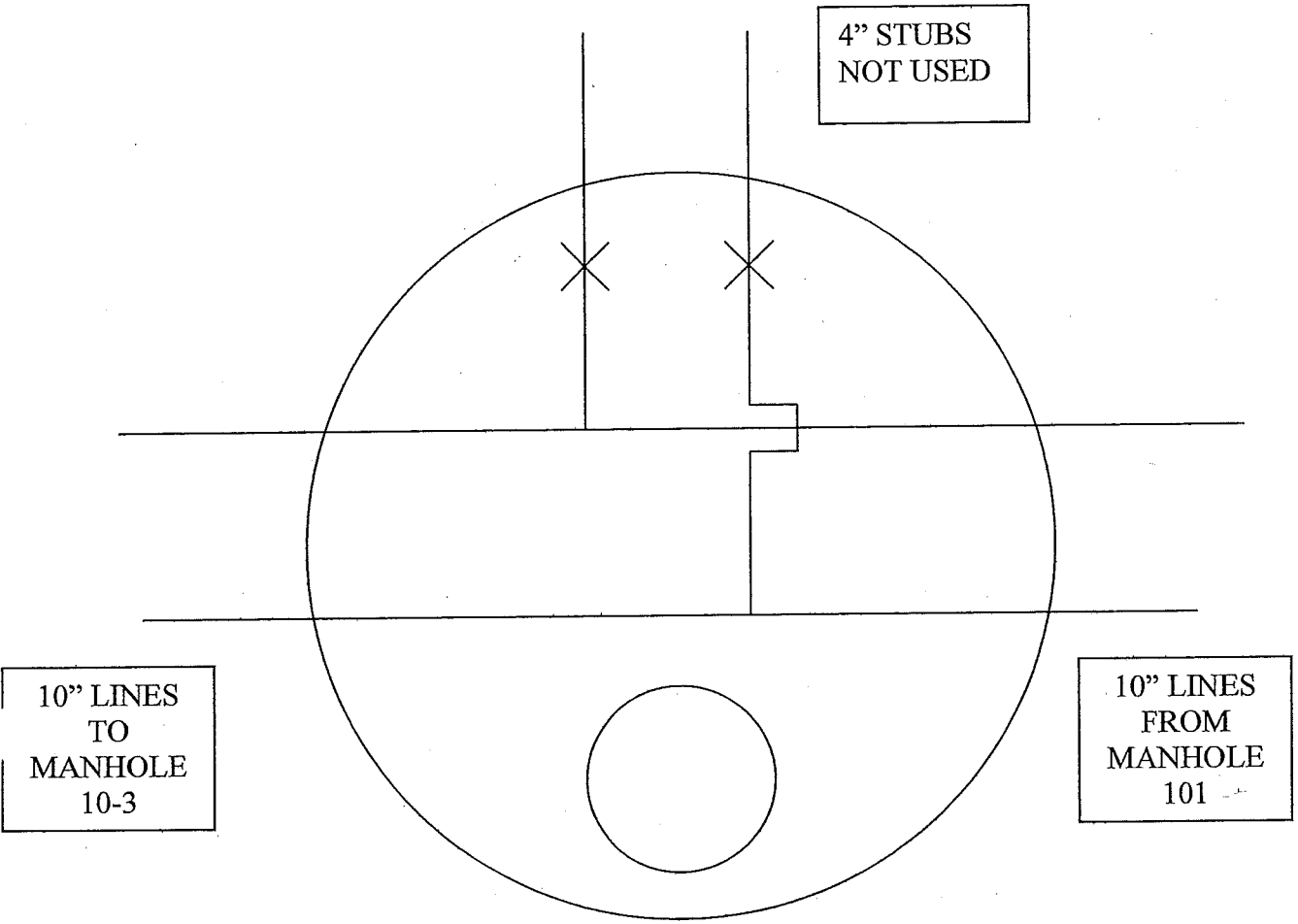


MANHOLE 101

REHAB 2005



MANHOLE 102

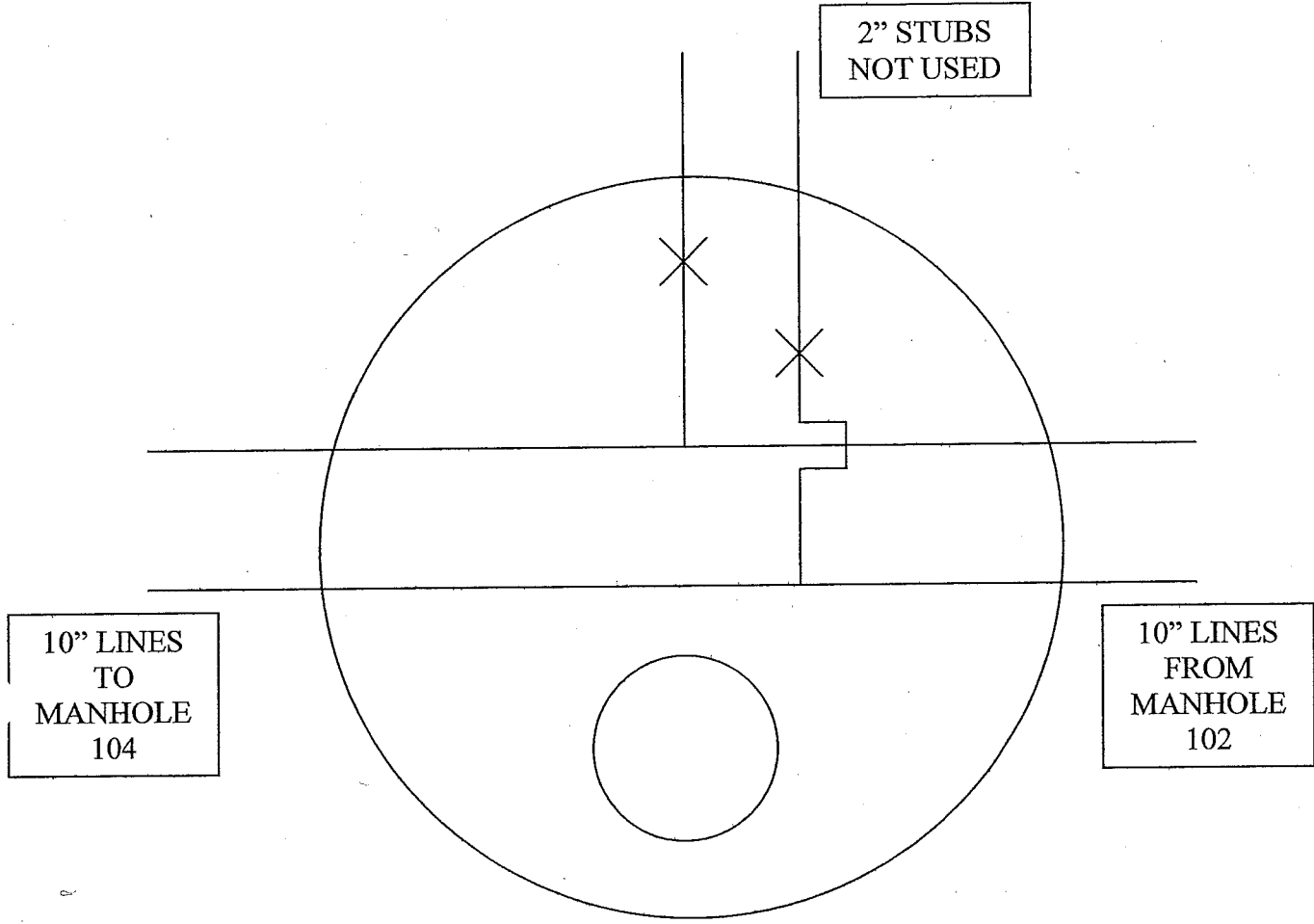


10" LINES
TO
MANHOLE
10-3

4" STUBS
NOT USED

10" LINES
FROM
MANHOLE
101

MANHOLE 103

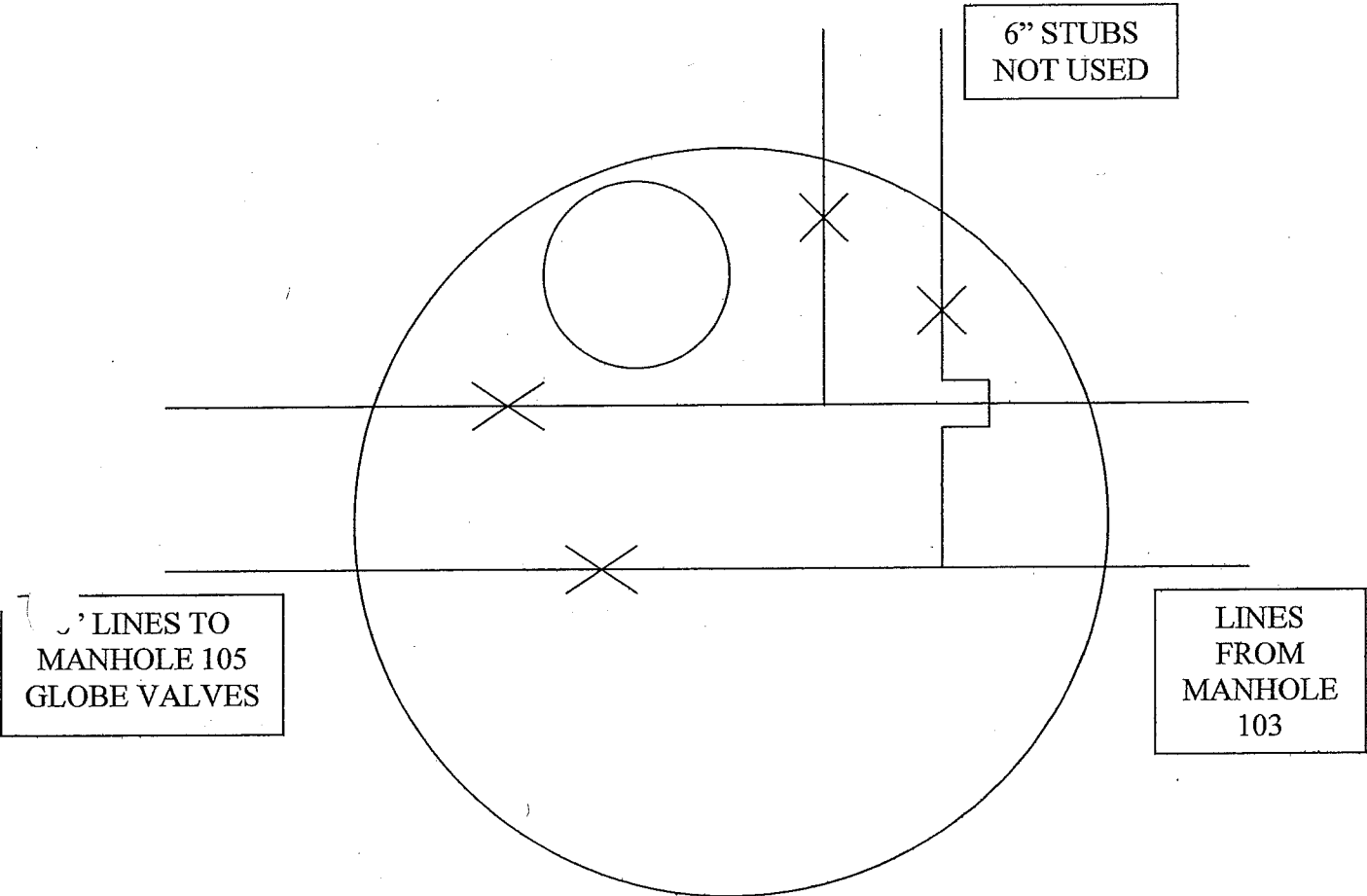


10" LINES
TO
MANHOLE
104

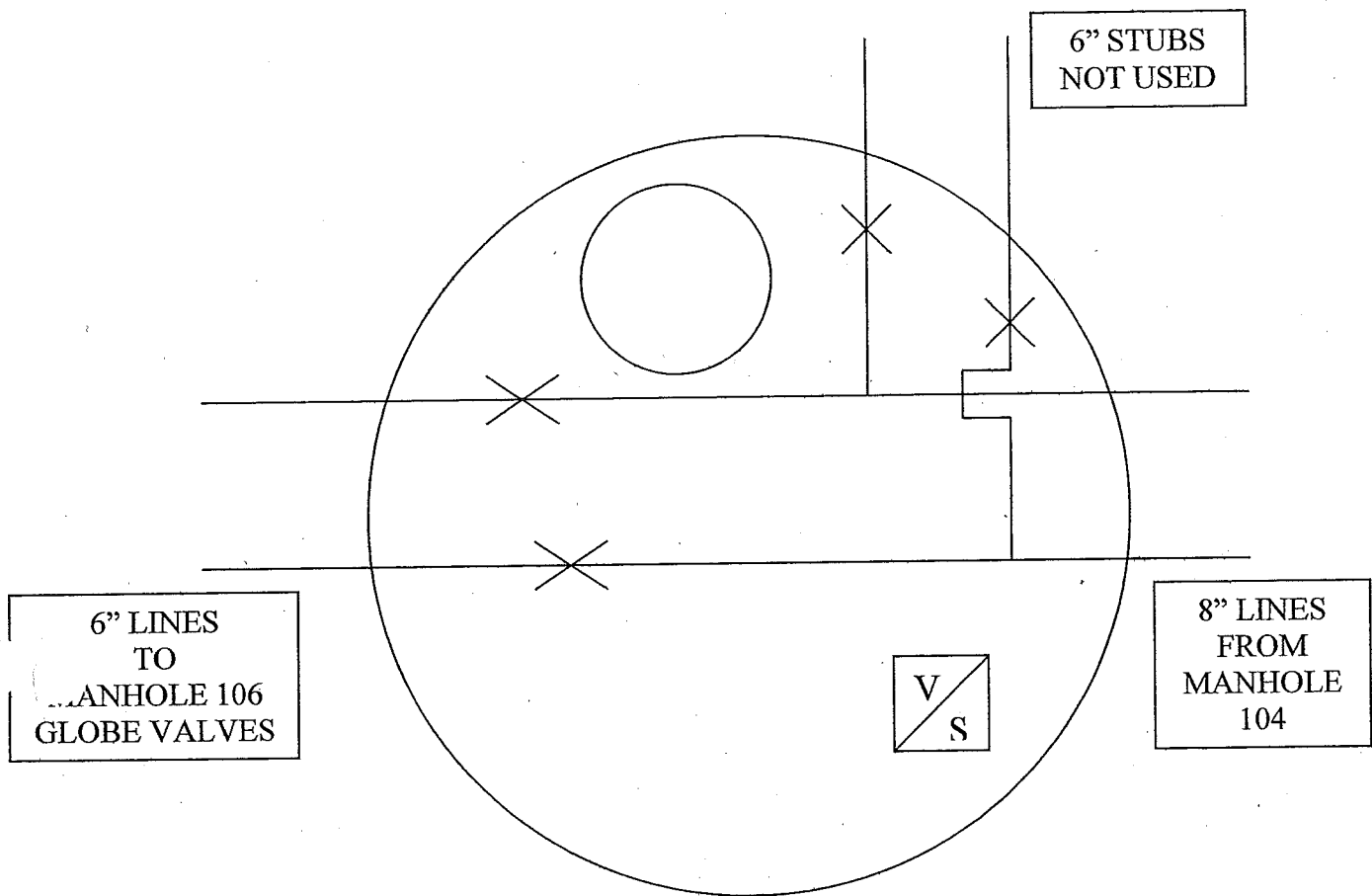
2" STUBS
NOT USED

10" LINES
FROM
MANHOLE
102

MANHOLE 104



MANHOLE 105



MANHOLE 106

