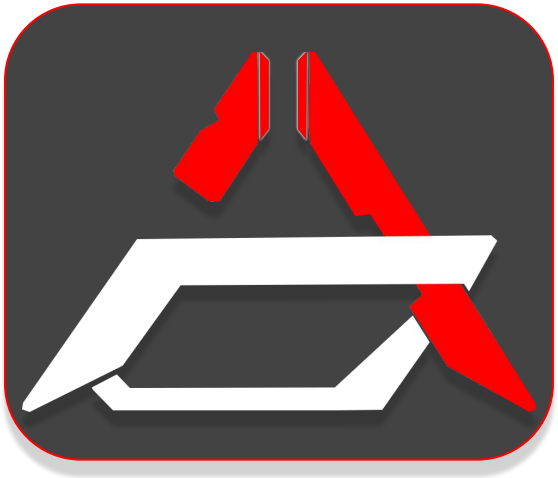
~~CONFIDENTIAL~~ ~~UNRELEASE~~

Unnamed Pipe system



M.K.E.A/PIRON

Designed by: Ligolas Neo Malicdem

Contents

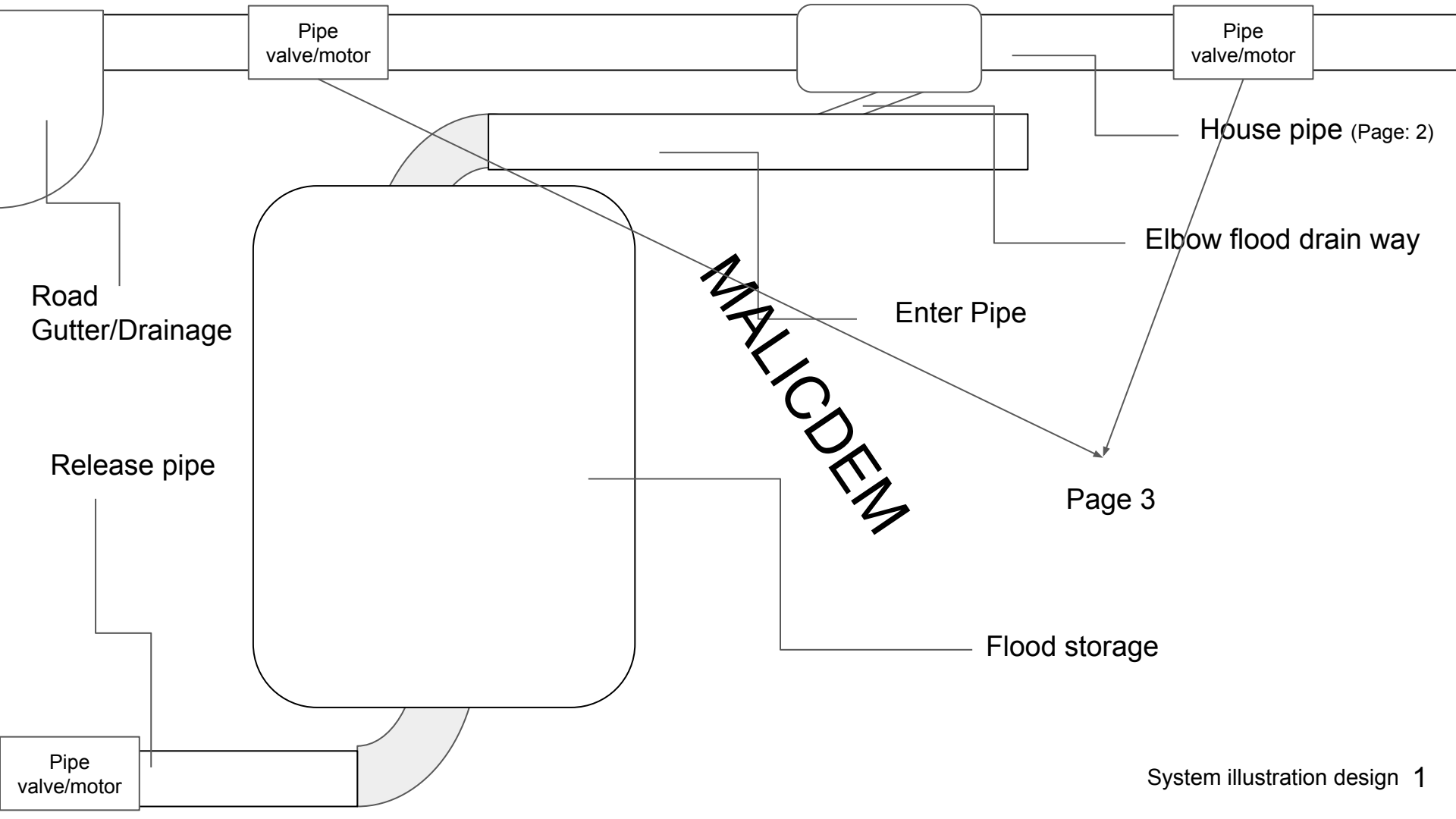
Description

This system is designed to target non-flooded free places located in the philippines or any other country to store flood to a system to avoid house being flooded. Putting a wall/barrier to prevent house flood can also be useless when the piping system is compromised as drainage system in the philippines can enter your piping system therefore having its way inside the toilet, drain pipe, and more. This design is a way to prevent those.

Credits

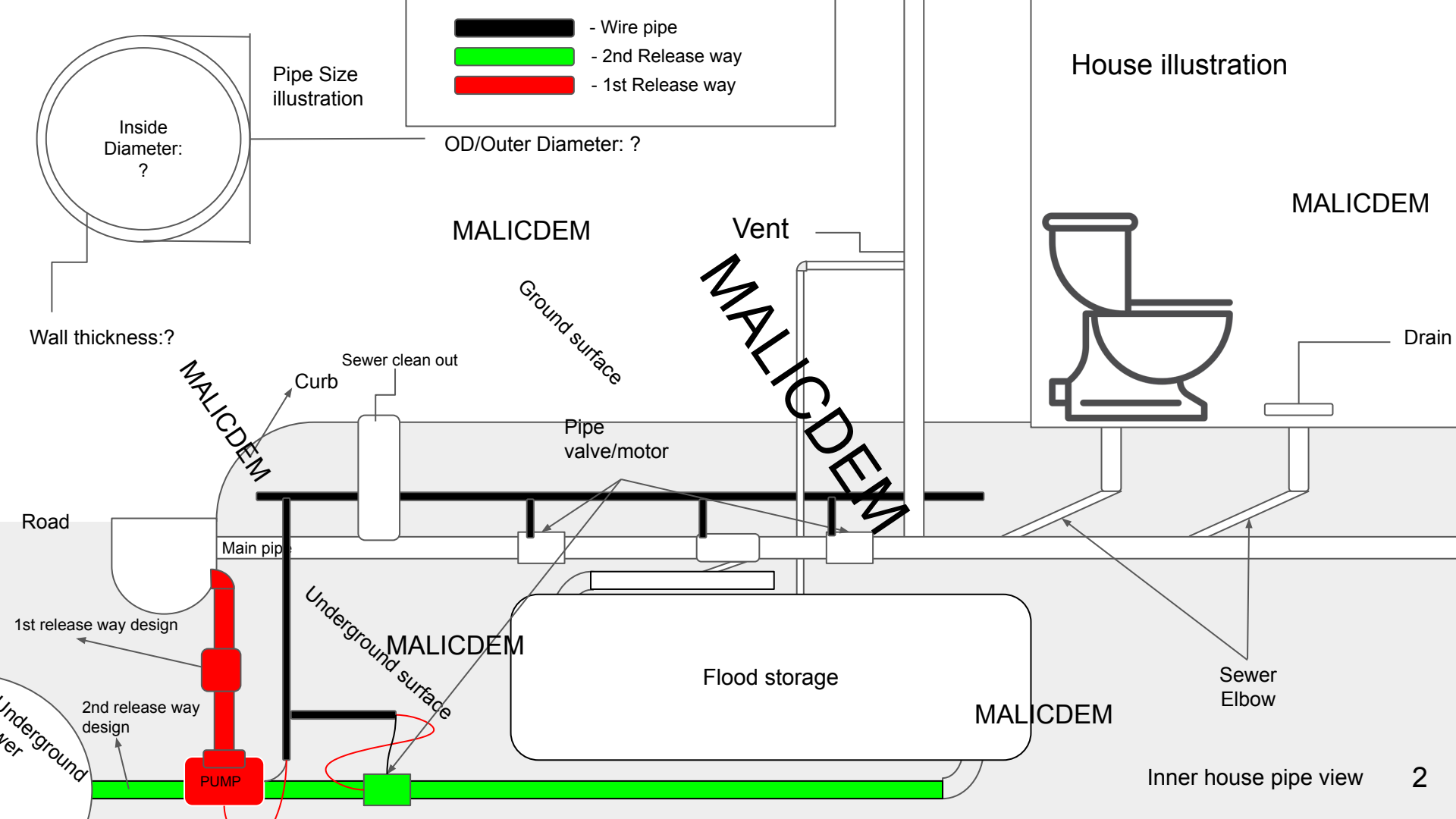
The system and the idea is designed by Ligolas Neo Malicdem.

Further Credits info: The system is designed originally on April, 1, 2021 by Ligolas Neo Malicdem. Further on that date, it was since then placed under the repository named “Unamed-Project-pipe” repository on Github created by PIRON-Group. PIRON-Group is created by Ligolas Neo Malicdem as an organization to place all of the design created by Ligolas Neo Malicdem.

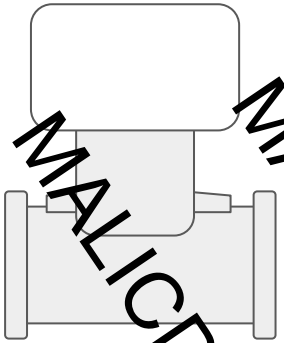

Pipe valve/motor
Pipe valve/motor
House pipe (Page: 2)
Elbow flood drain way
Road Gutter/Drainage
Enter Pipe
MALICDEM
Release pipe
Page 3
Flood storage
Pipe valve/motor

WARNING:

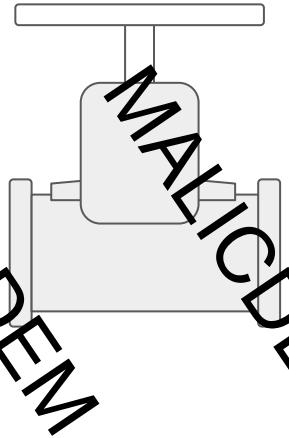
P-TRAP NOT ILLUSTRATED


- Wire pipe
- 2nd Release way
- 1st Release way
House illustration
Pipe Size illustration
Inside Diameter: ?
OD/Outer Diameter: ?
Wall thickness:?
MALICDEM
Vent
Ground surface
MALICDEM
MALICDEM
Drain
Sewer clean out
Curb
MALICDEM
Pipe valve/motor
Road
Main pipe
Underground surface
MALICDEM
1st release way design
Flood storage
Sewer Elbow
MALICDEM
2nd release way design
Underground
PUMP
Inner house pipe view
2

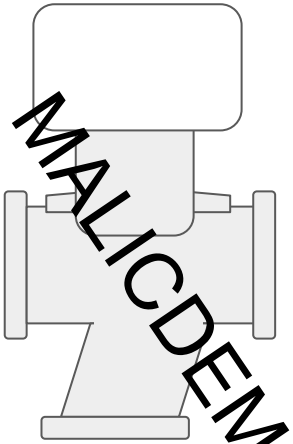
Motorized 2 way pipe valve



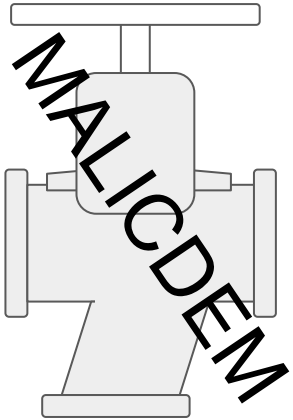
Manual 2 way pipe valve



Motorized 3 way pipe valve

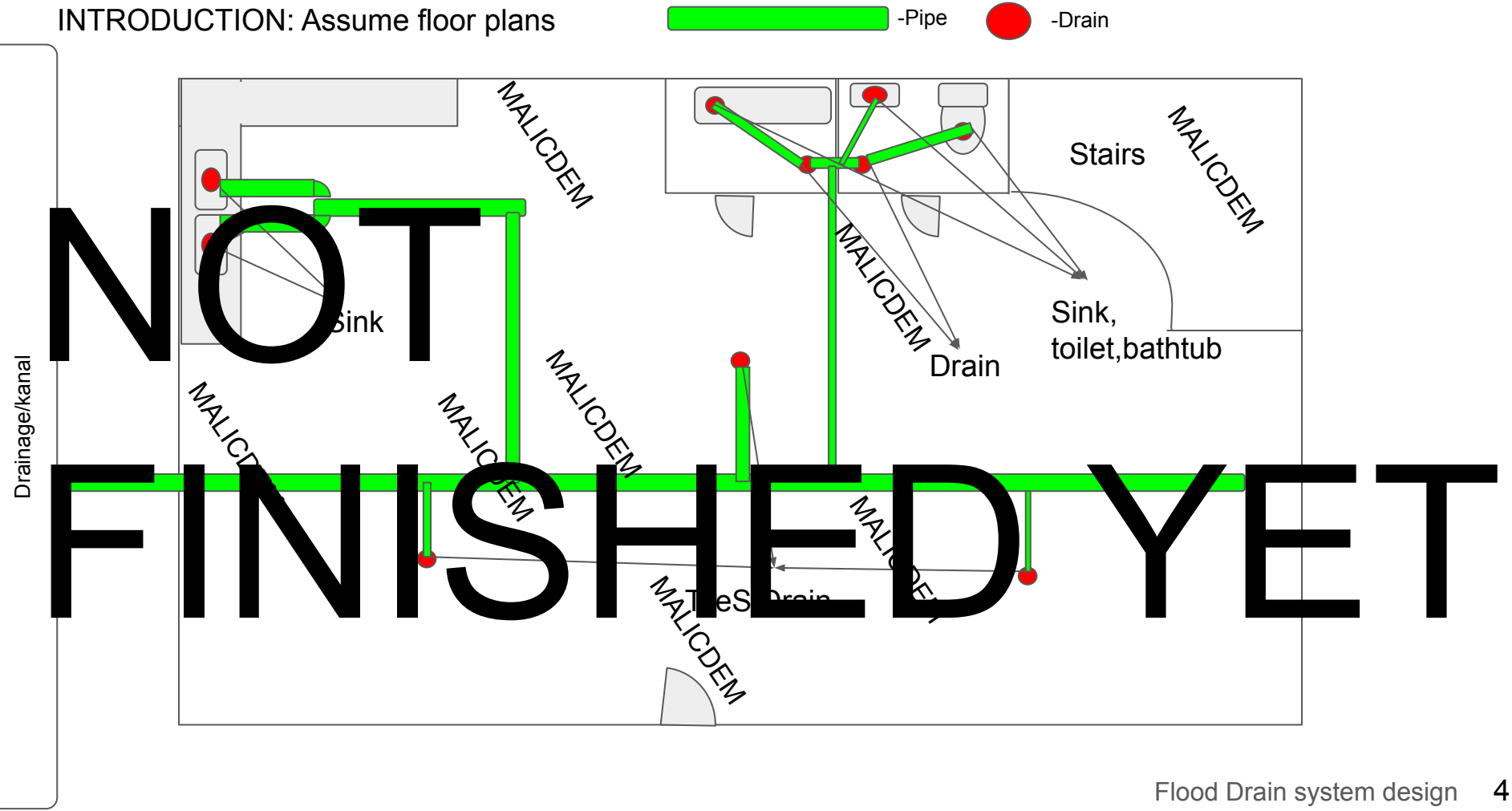


Manual 3 way pipe valve



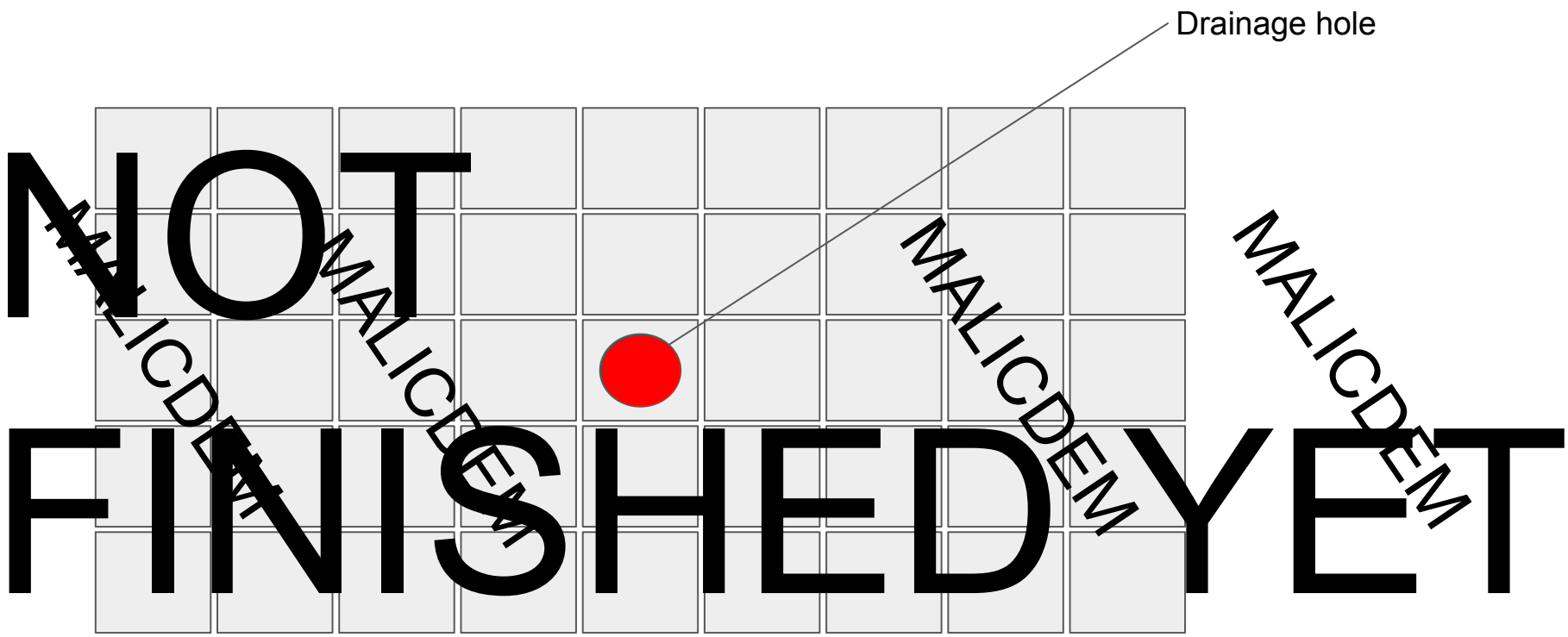
FLOOD DRAIN SYSTEM DESIGN

INTRODUCTION: Assume floor plans



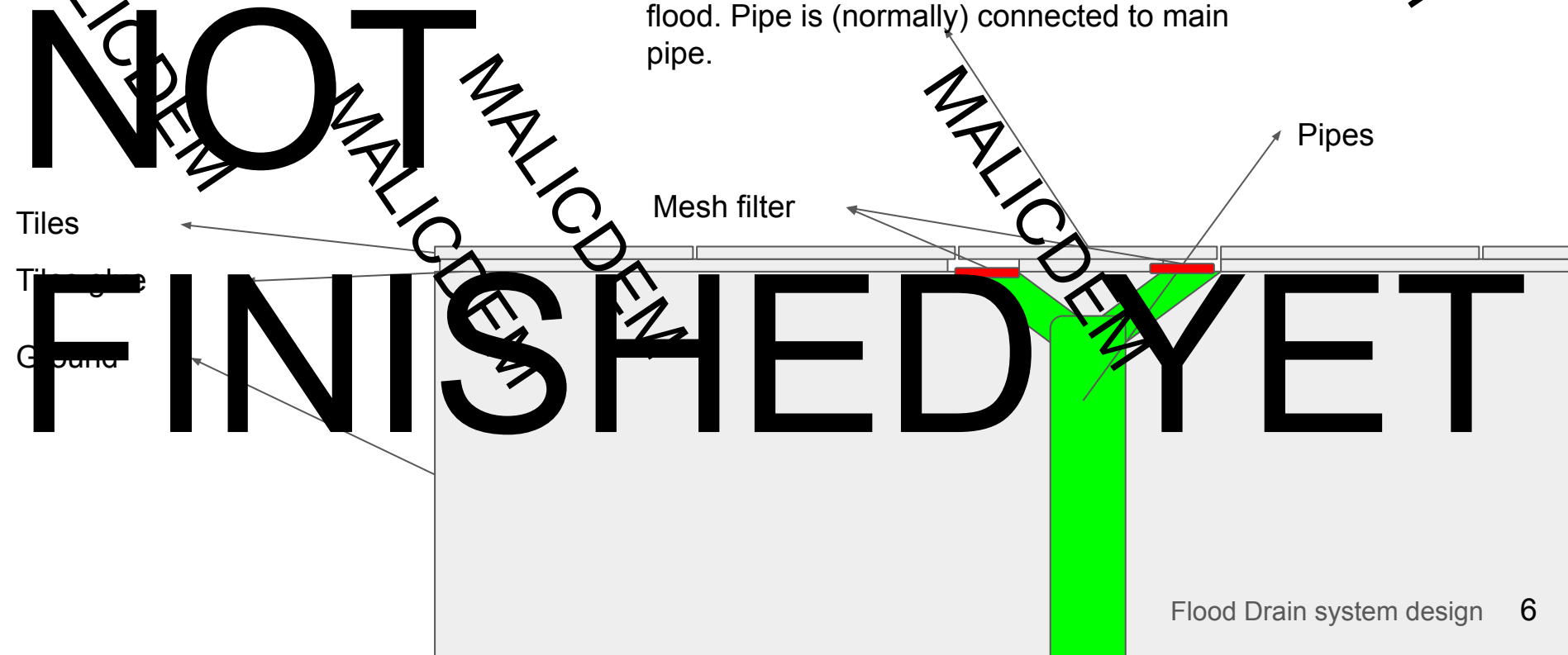
Drainage/kanal

DESIGN 1: TileS Drain Top View



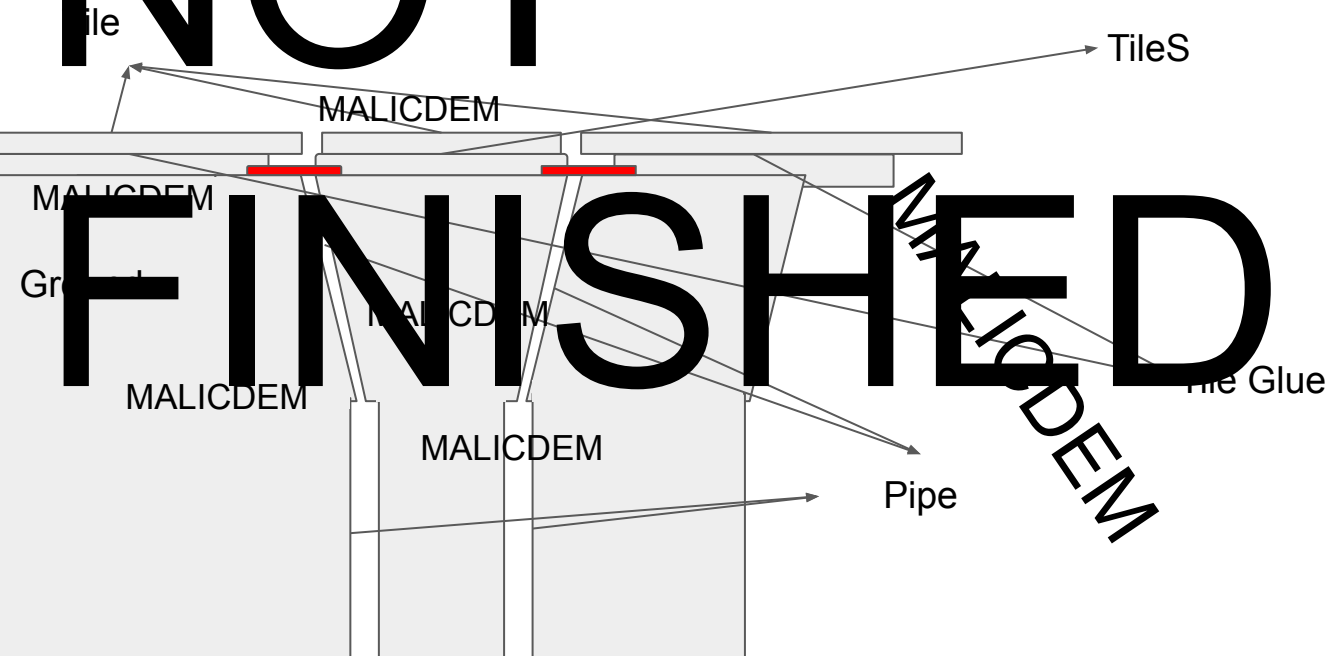
DESIGN 1: TileS Drain Side View

Hidden design drain pipe on tiles.
Designed for living room to drain possible flood. Pipe is (normally) connected to main pipe.



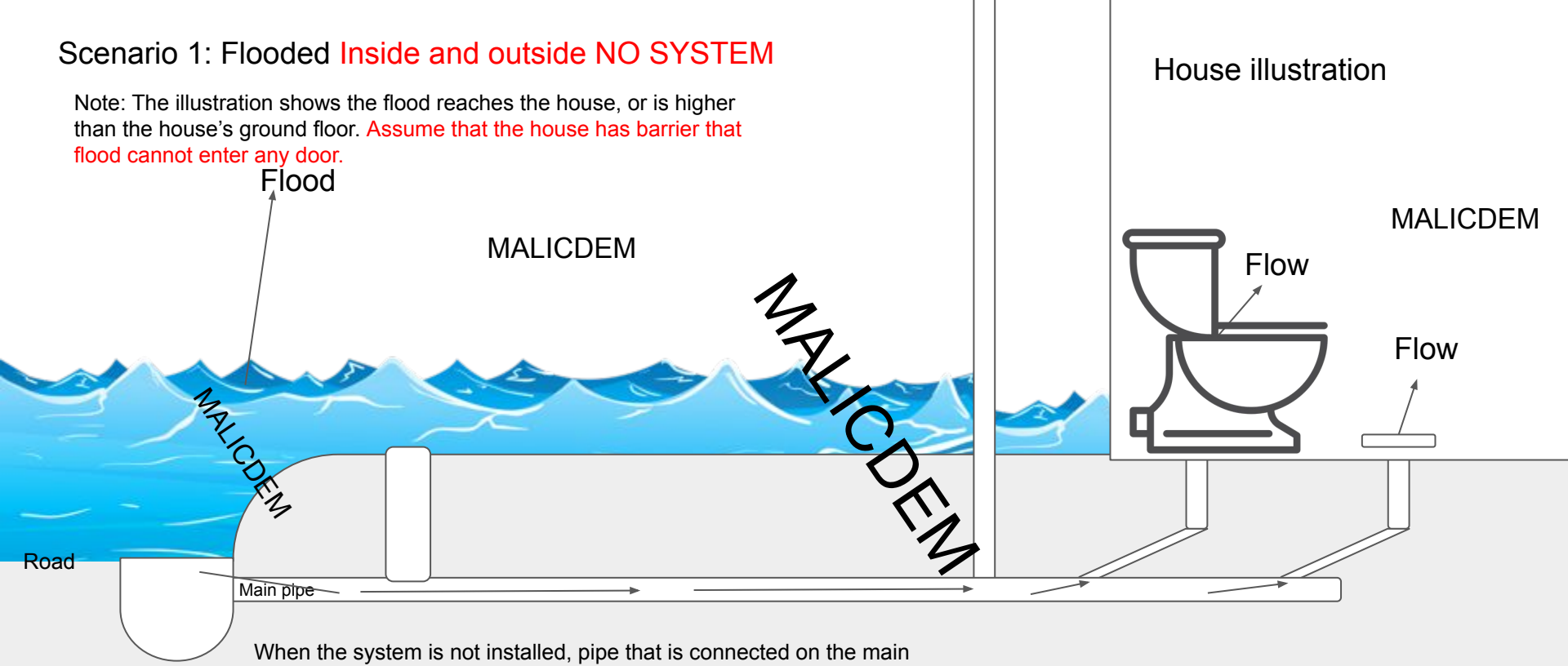
DESIGN 1: TileS Drain Documentation

TileS provides a stealth design drain pipe system designed to be placed on living room to flush out possible flood that enters the house. You glue any types of tiles on TileS to make it removable. The design features a removable mesh filter to avoid any type of insects such as worm, and dirts to escape. It is advisable to place a motorized valve on the pipe to avoid gas smell coming from the toilet or the sewer. The wiring of this motorized valve will be placed on the main pipe controller which you can see on the wiring page.



Scenario 1: Flooded Inside and outside NO SYSTEM

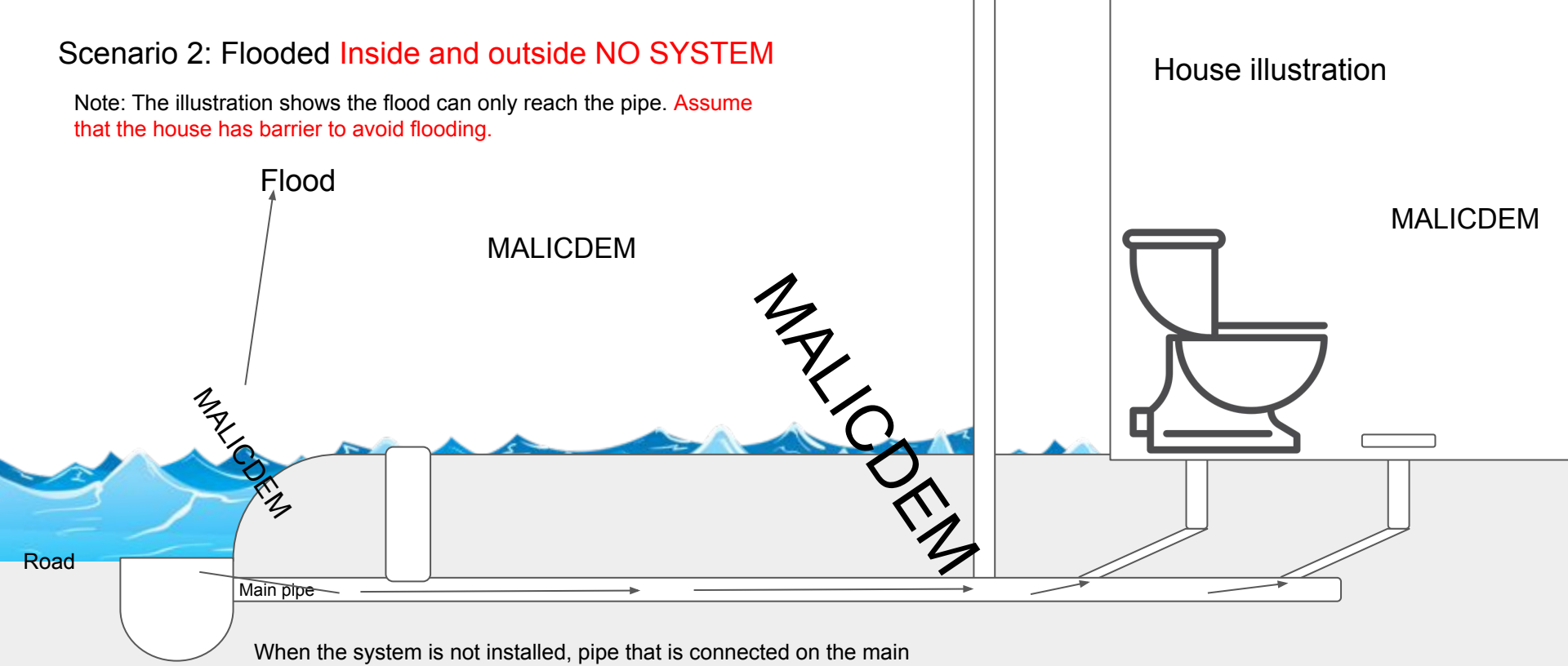
Note: The illustration shows the flood reaches the house, or is higher than the house's ground floor. Assume that the house has barrier that flood cannot enter any door.



When the system is not installed, pipe that is connected on the main city sewer or road gutter that is flooded will flow directly to the main house pipe. Following the arrow that is inside the pipe, that is how the water will flow, once inside, the water can flow directly to your drainage flooding the inside of your bathroom or lavatory. No matter how high a door barrier is to avoid flooding, the pipe itself can cause house to be flooded.

Scenario 2: Flooded Inside and outside NO SYSTEM

Note: The illustration shows the flood can only reach the pipe. Assume that the house has barrier to avoid flooding.

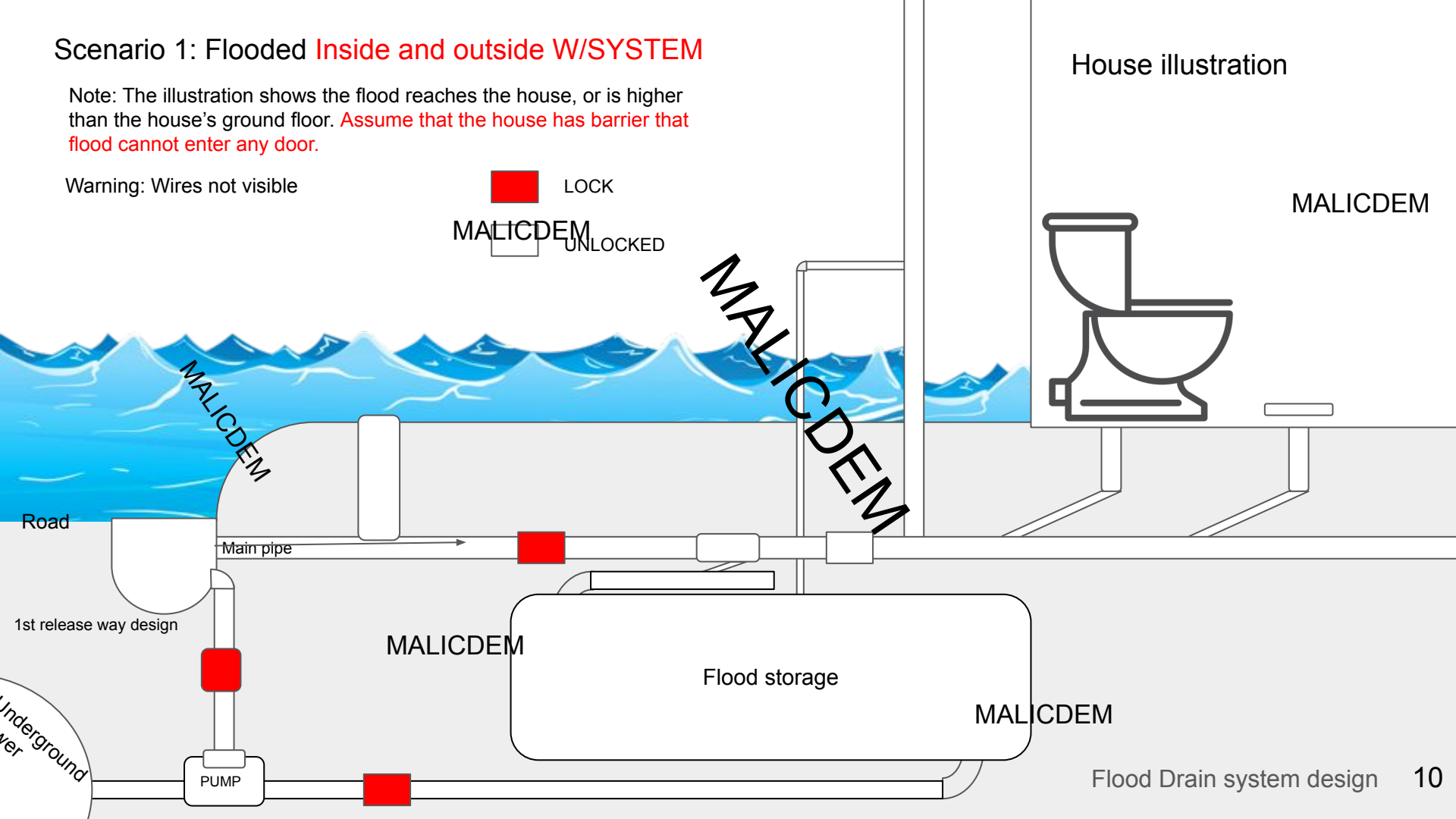


When the system is not installed, pipe that is connected on the main city sewer or road gutter that is flooded will clog the pipe and house owner, or anyone who wants to use an equipment such as toilet, sink and more, that uses the pipe won't be able to use it as it is being clogged by the water from the flood.

Scenario 1: Flooded Inside and outside W/SYSTEM

Note: The illustration shows the flood reaches the house, or is higher than the house's ground floor. Assume that the house has barrier that flood cannot enter any door.

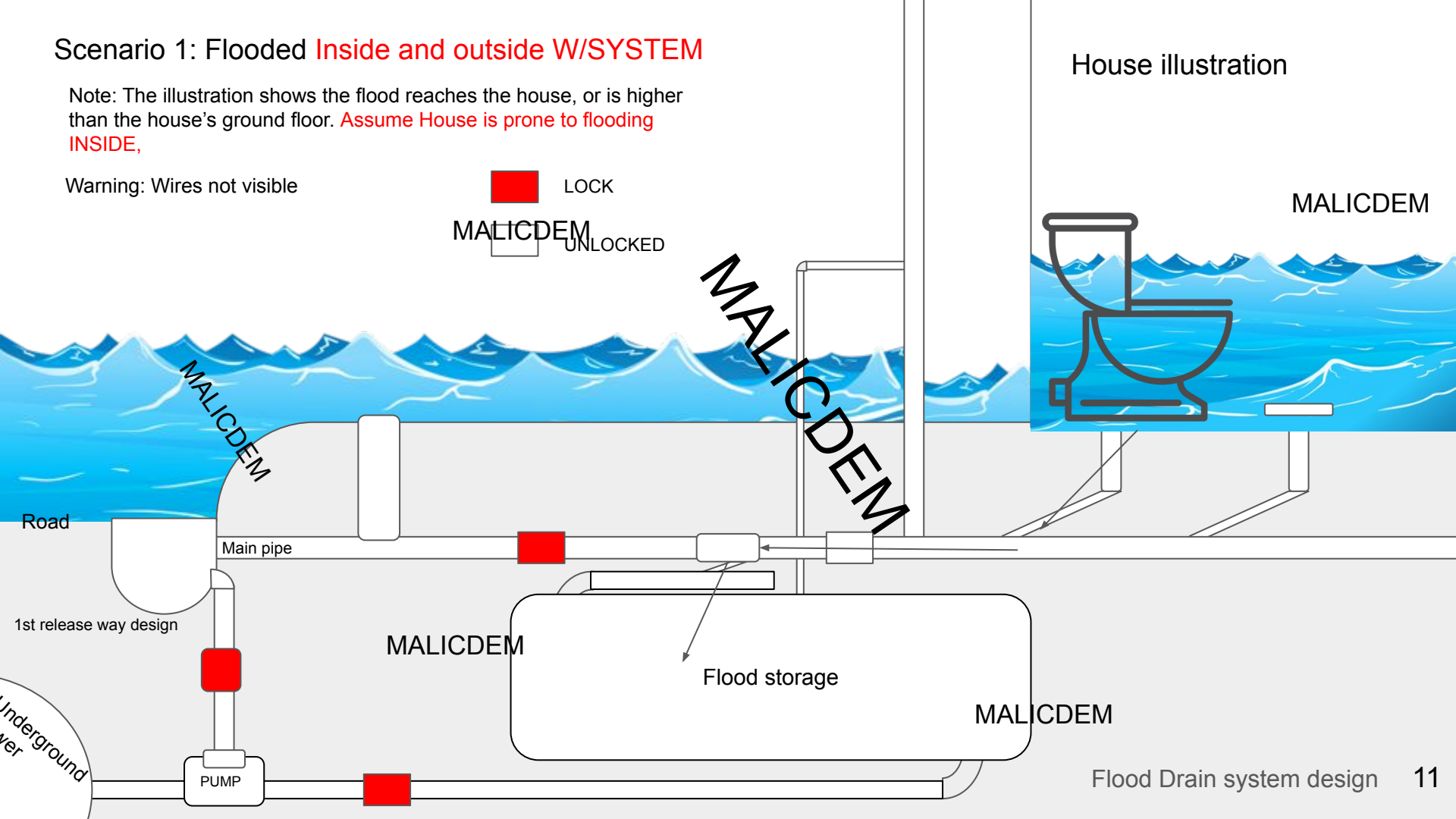
Warning: Wires not visible



Scenario 1: Flooded Inside and outside W/SYSTEM

Note: The illustration shows the flood reaches the house, or is higher than the house's ground floor. Assume House is prone to flooding INSIDE,

Warning: Wires not visible



FLOOD DRAIN RELEASE SYSTEM DESIGN

Scenario 1: RELEASE SEQUENCE

Note: The illustration shows how after the flood is gone and the pipe is calm, the pipe initiates to release mode, releasing the water stored in the Flood storage.

Warning: Wires not visible

LOCK

UNLOCKED

MALICDEM

House illustration

MALICDEM

MALICDEM

MALICDEM

Road

Main pipe

1st release way design

MALICDEM

Flood storage

MALICDEM

Underground
wer

PUMP

ILLUSTRATION 1: RELEASE DESIGN (CLOSE VIEW)

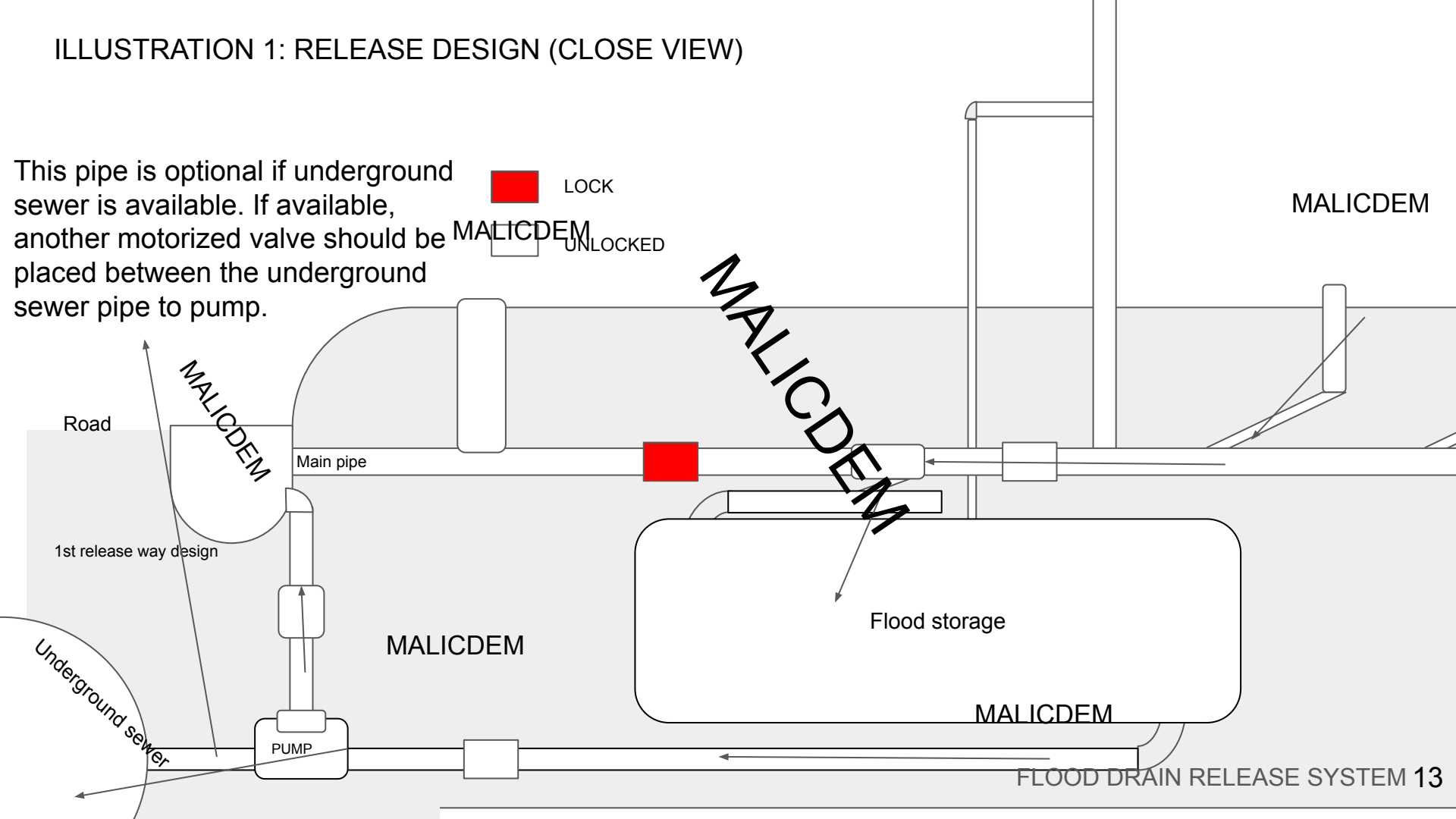


ILLUSTRATION 2: RELEASE DESIGN - BY TEXT

When releasing, the 1st valve will close/lock. The flood storage will then check the ventilation if clear through sensor detection.

MALICDEM

MALICDEM

1st valve

MALICDEM

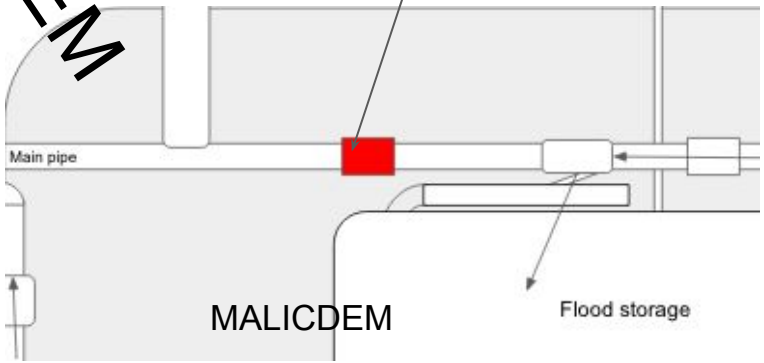
MALICDEM

The Flood storage will then start the pump initiation.

MALICDEM

The Flood storage will then unlock its pipe to release the water stored. If there are two or more Flood storage, all of them will release water by sequence, meaning the second Flood storage will not release if the first is not done.

MALICDEM



MALICDEM

FAIL DESIGN

FAIL 1: PIPE CLOG ON MAIN DURING LOCK (FLOOD OCCURING)

When the valve detected a flood, backup valve will be activated. If backup valve detects no issue upon activating, the sequence will continue. Other solution is if the valve clogged is located next to the Flood storage valve, the Flood storage will activate its lock.

MALICDEM

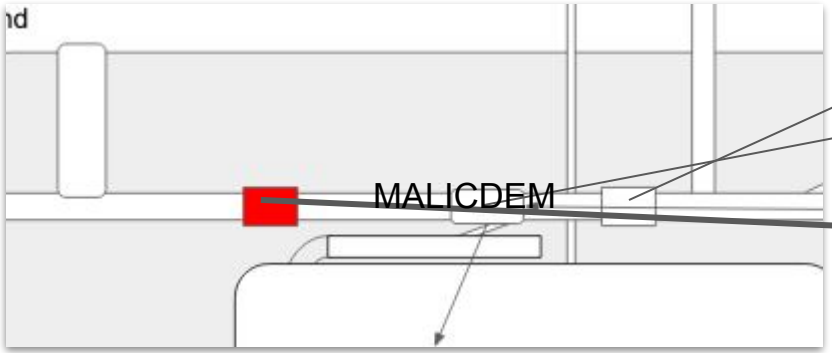
MALICDEM

FAIL 2: PIPE CLOG ON MAIN DURING LOCK (RELEASING)

When the valve detected a flood, backup valve will be activated. If backup valve detects no issue upon activating, the sequence will continue. Other solution is if the valve clogged is located next to the Flood storage valve, the Flood storage will activate its lock.

MALICDEM

MALICDEM



Backup Valve

Flood storage Valve

First Valve (Main Valve)

MALICDEM

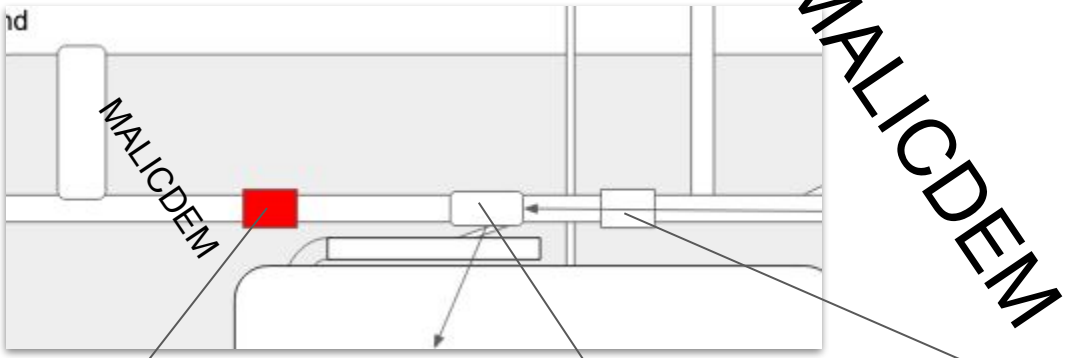
FAIL 3: PIPE CLOG ON ANY PIPE DURING LOCK (FLOOD OCCURING)

Pipe clog during lock on any pipe will result into the system algorithm looking for the best lined up or backup valve to lock.

Explanation; Illustration: If the backup valve on the main pipe is clogged, the next valve available will lock, or the valve before the backup valve.

MALICDEM

MALICDEM



If clogged too, the system/panel will alert the user/owner the event in which for the owner to prepare for a possible flow onto the toilet, drain and more.

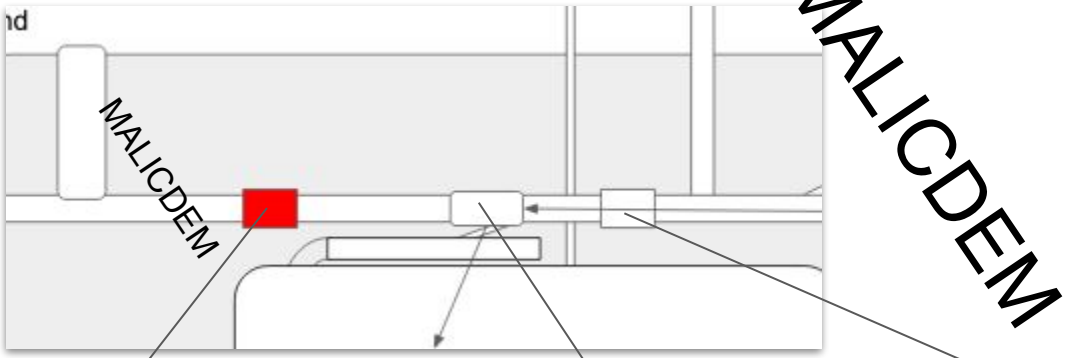
FAIL 3: PIPE CLOG ON ANY PIPE DURING LOCK (RELEASING)

Pipe clog during lock on any pipe will result into the system algorithm looking for the best lined up or backup valve to lock.

Explanation; Illustration: If the backup valve on the main pipe is clogged, the next valve available will lock, or the valve before the backup valve.

MALICDEM

MALICDEM



If clogged too, the system/panel will alert the user/owner the event, this will require service to check for the cause of clog.

FAIL 4: PIPE VALVE WON'T LOCK - NO CLOG(BOTH EVENT)

This will follow the procedure of 1,2, and 3. Service is required,

FAIL 5: VENT NOT GOOD(RELEASING)

The procedure will continue. The warning/detection is just to assess the user of the occurrence.

FAIL 6: FLOOD STORAGE IS FULL(FLOOD OCCURING)

If two or more flood storage is available, the system will redirect(This design is available on GitHub) the pipe to the other system. If full, the system may try to check if it can temporarily release to sewer available, otherwise it will lock main pipe, and its own valve. The user can also initiate override to activate flush release on the sewer during flood, the flush release will provide pressure during releasing to fight the flood.

FAIL 7: VALVES ARE NOT WORKING (FLOOD EVENT)

When valves are not working during the flood event, the backup inflatable rubbers will be inflated to seal the pipes. While sealed, the system will look for what is wrong.

MALICDEM

MALICDEM

(Designed for the integrated panel only)
Detailed:

MALICDEM

V-NC01=Valve connection shorted
V-NC02=Valve connection is cut
V-C00=Valve is clogged

MALICDEM

FAIL 8: VALVES ARE NOT WORKING (RELEASING)

This will deflate the rubber seal. (when inflated upon flood event)
Service required.
Manual check connection for valve

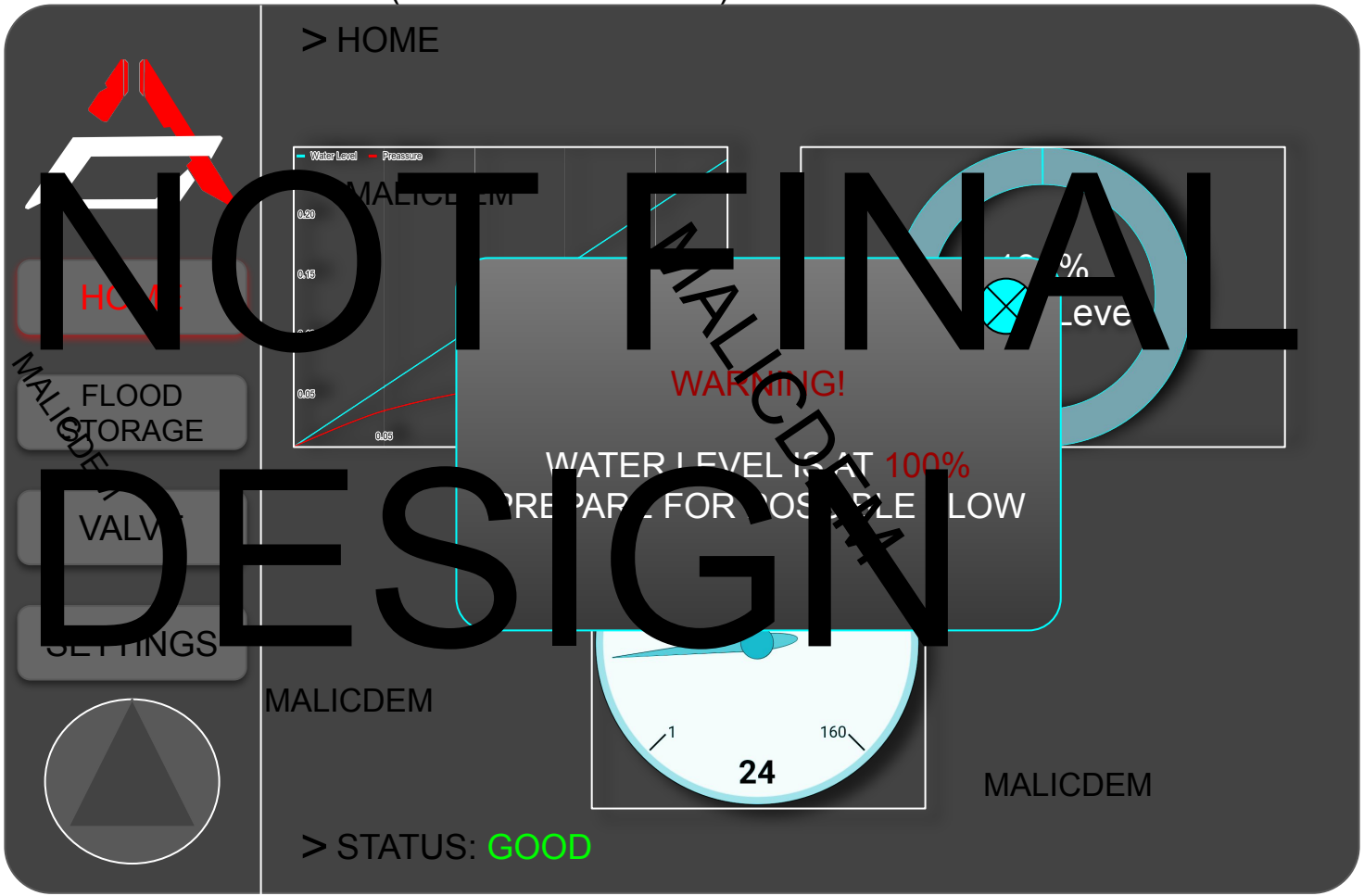
MALICDEM

FAIL 9: INFLATABLE RUBBER UNSUCCESSFUL INFLATE(BOTH EVENT)

Manual check connection for valve
Service required.

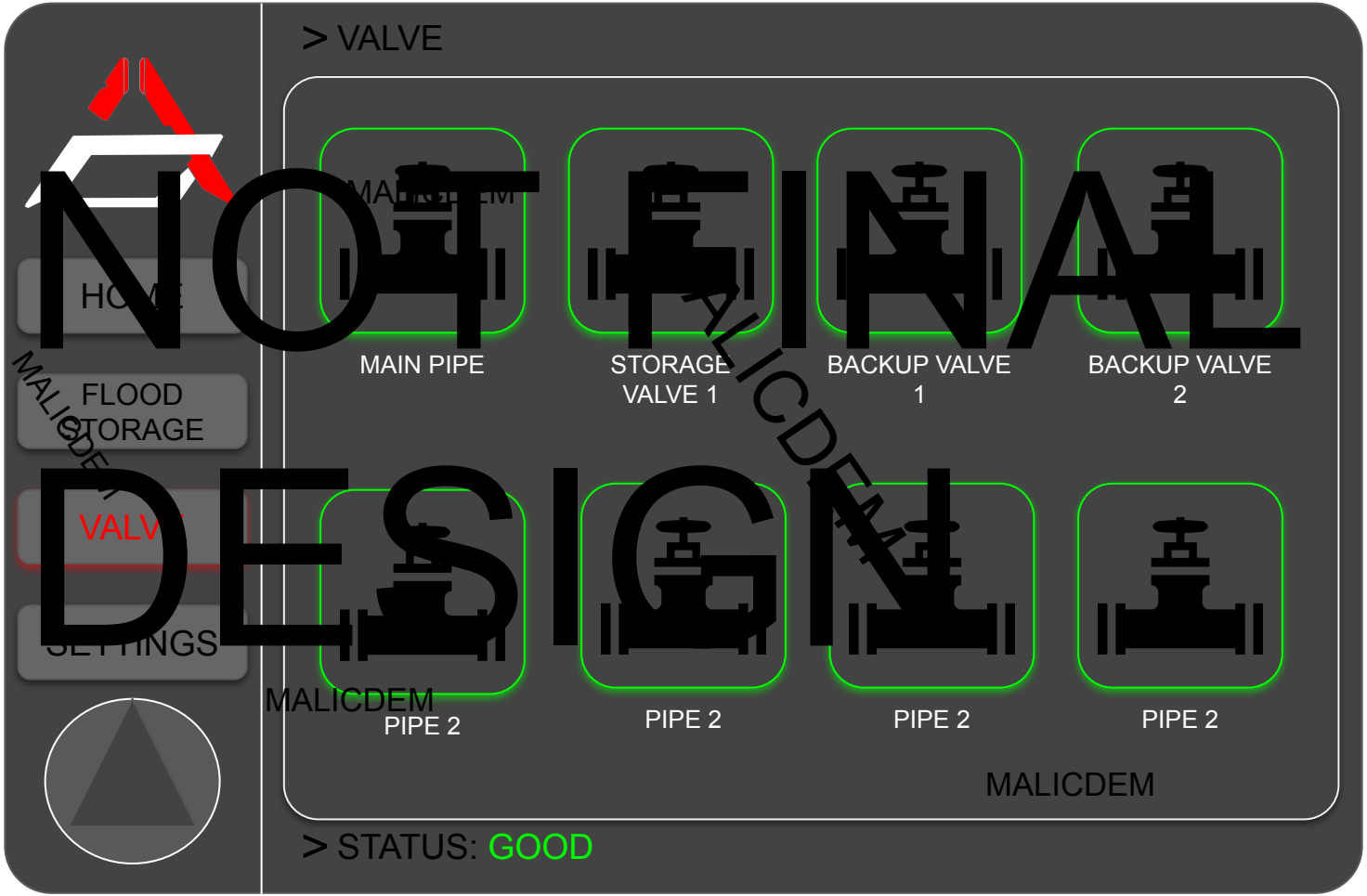
MALICDEM

FAIL 6: FLOOD STORAGE IS FULL(FLOOD OCCURING)

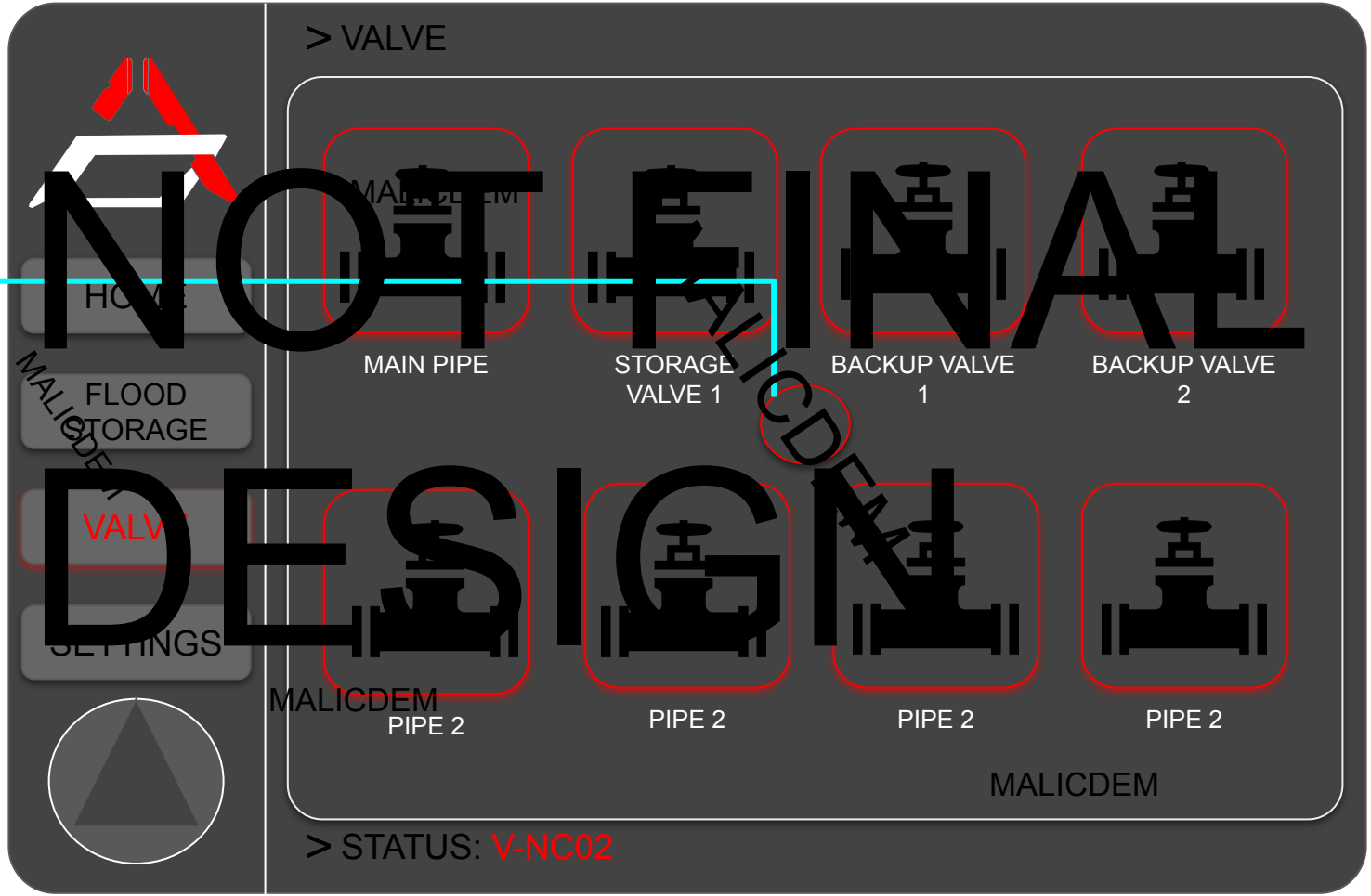


NOT FINAL DESIGN

FAIL 7 ILLUSTRATION: VALVES NOT WORKING(BOTH EVENT - GOOD STATUS)



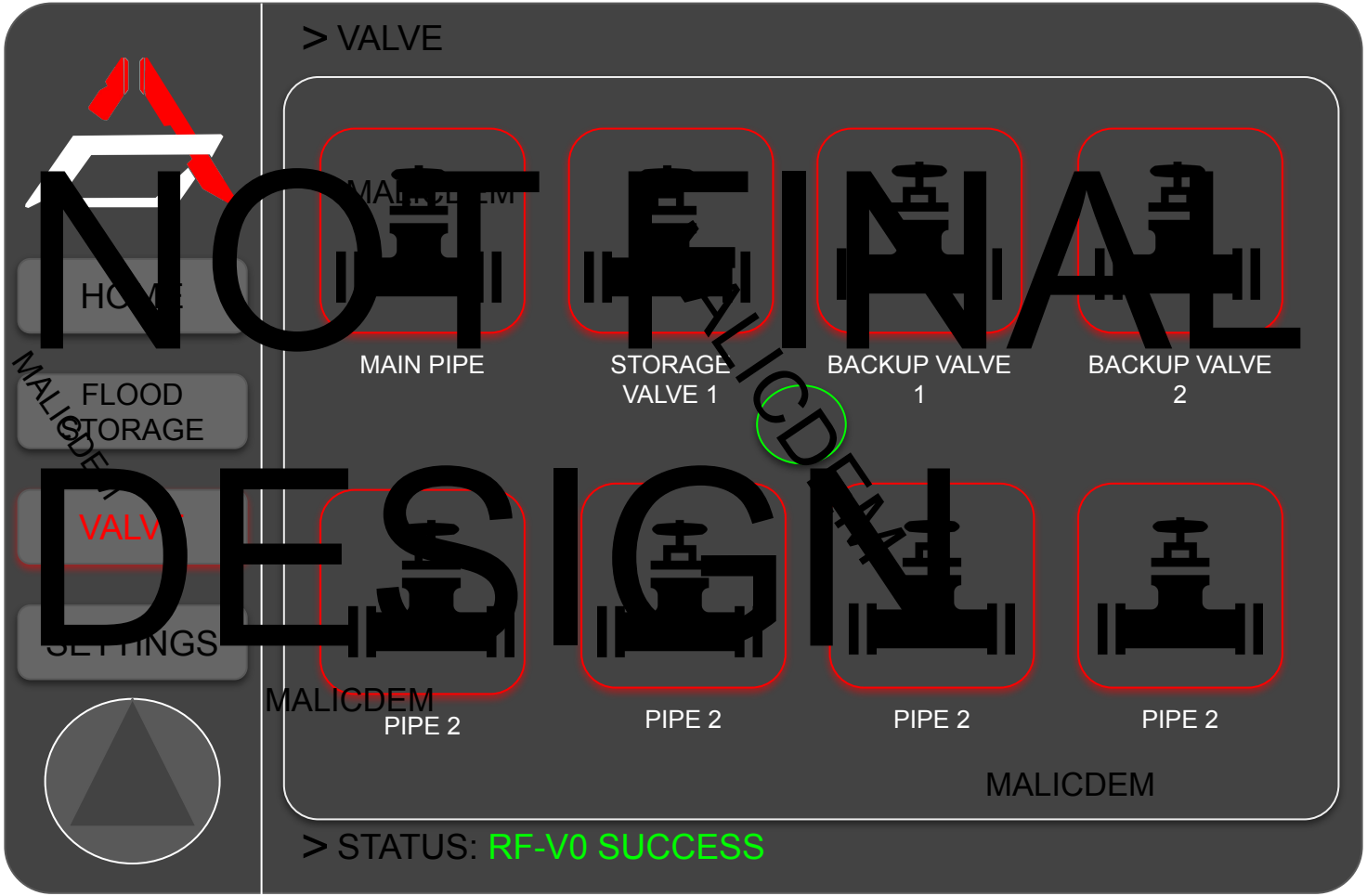
FAIL 7 ILLUSTRATION: VALVES NOT WORKING(BOTH EVENT - BAD STATUS)



NOT FINAL DESIGN

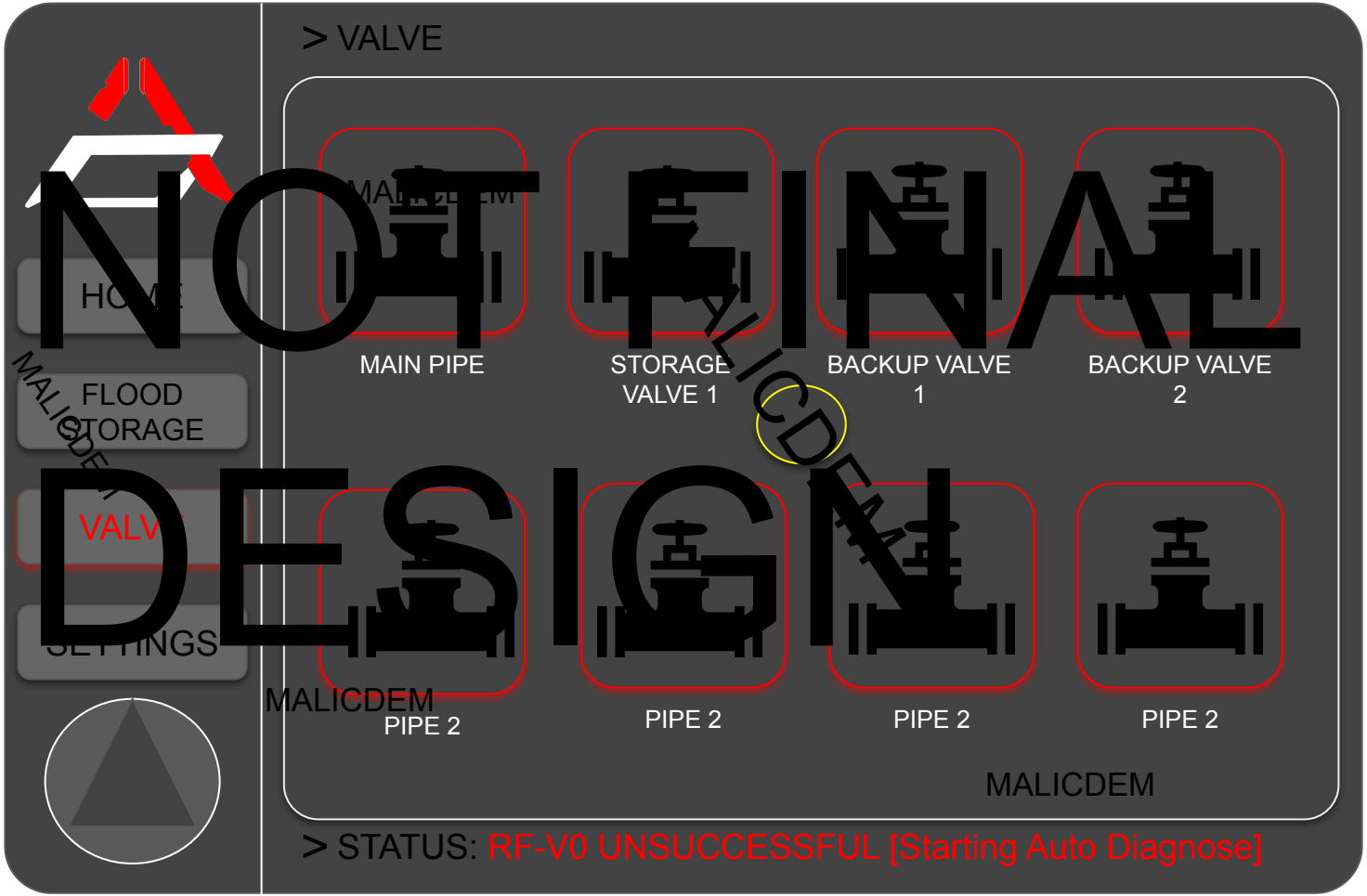
Button for Inflatable Rubber Available When Status is bad.

FAIL 7 ILLUSTRATION: VALVES NOT WORKING(BOTH EVENT - BAD STATUS - Inflate Success)

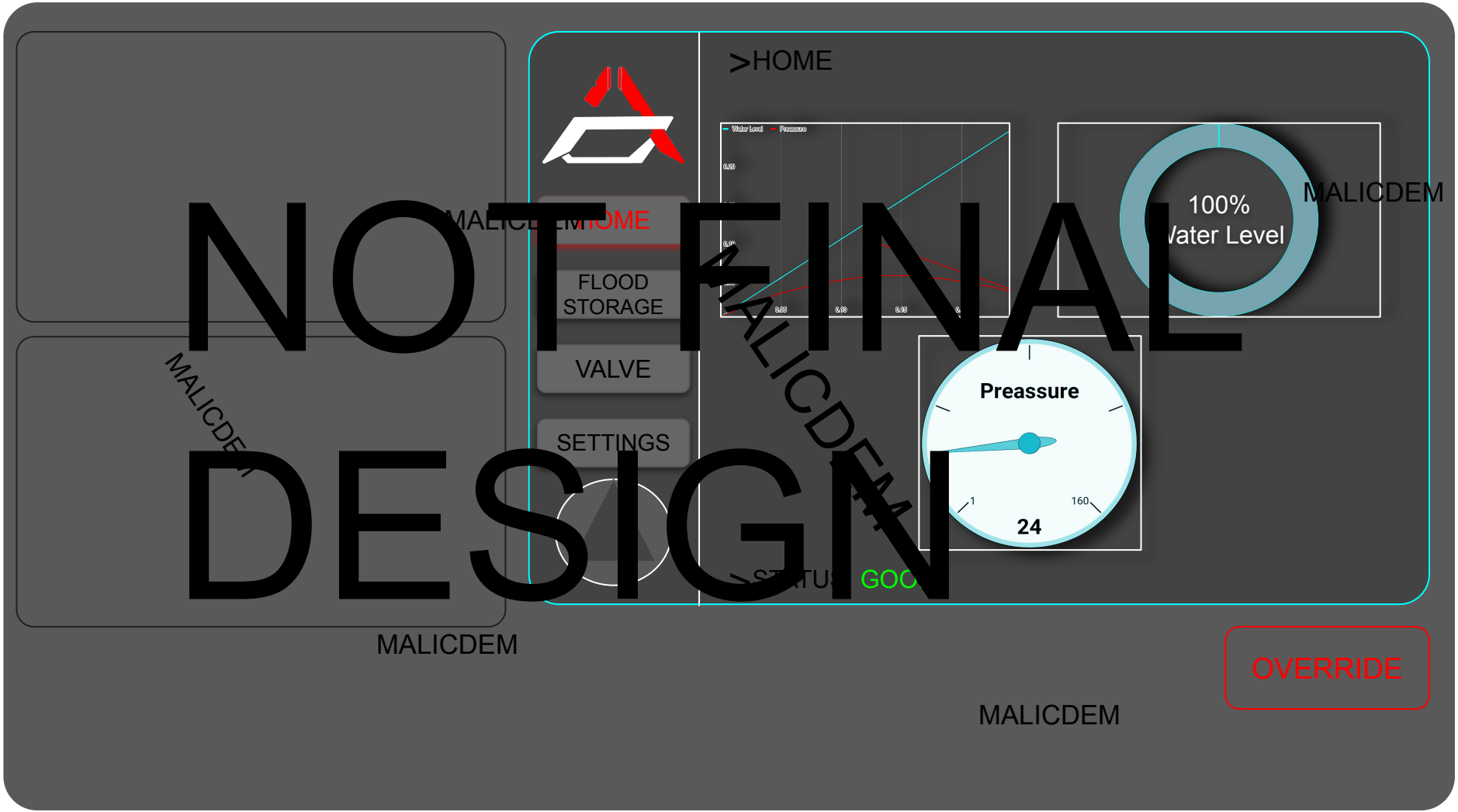


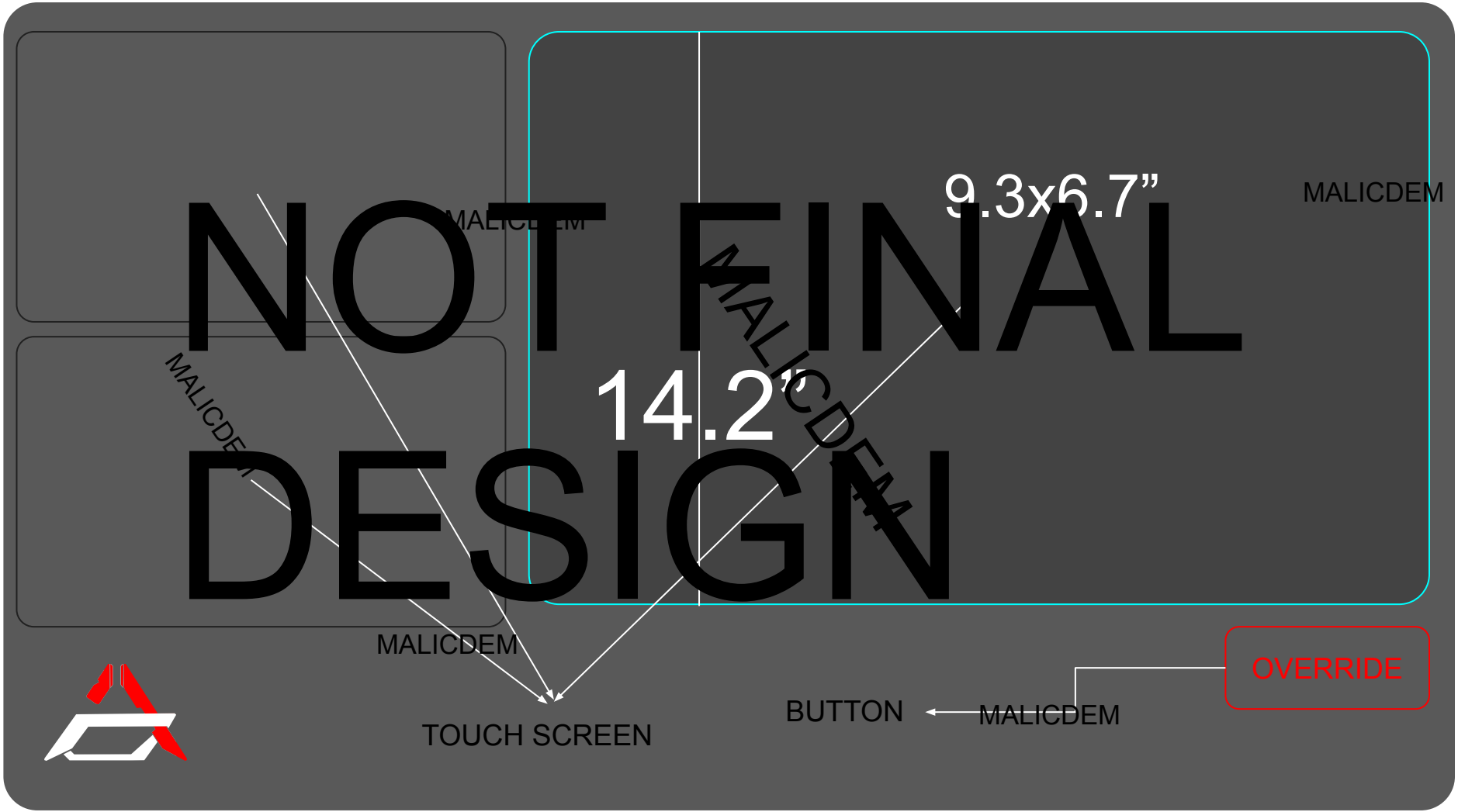
MALICDEM

FAIL 7 ILLUSTRATION: VALVES NOT WORKING(BOTH EVENT - BAD STATUS - Inflate Unsuccessful)



PANEL DESIGN


>HOME
HOME
FLOOD STORAGE
VALVE
SETTINGS
100%
Water Level
Preassure
1
160
24
>STATUS GOOD
OVERRIDE
MALICDEM
NOT FINAL
DESIGN


NOT FINAL
DESIGN
9.3x6.7”
14.2”
MALICDEM
MALICDEM
MALICDEM
MALICDEM
MALICDEM
TOUCH SCREEN
BUTTON
MALICDEM
OVERRIDE

UPDATES ON GITHUB