

Improvements in a Sewage Network: Discussion of the Creation of a Water Waste Pumping Station in María Grande

University:

National Technological University, Paraná Regional School.

Department:

Civil Engineering Department.

Subject:

Inglés I.



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María Grande

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UTN PARANÁ

Introduction to problem

Maria Grande has two sewage treatment pools which are at surface level.

Santa Ana neighborhood is at a lower level than these pools.



Introduction to problem

This neighborhood is not connected to the sewage network for this reason



Purpose of the presentation

-Describe the problems that the Santa Ana neighborhood has to connect their sewage pipelines.

-Analyze the problems to propose a solution.

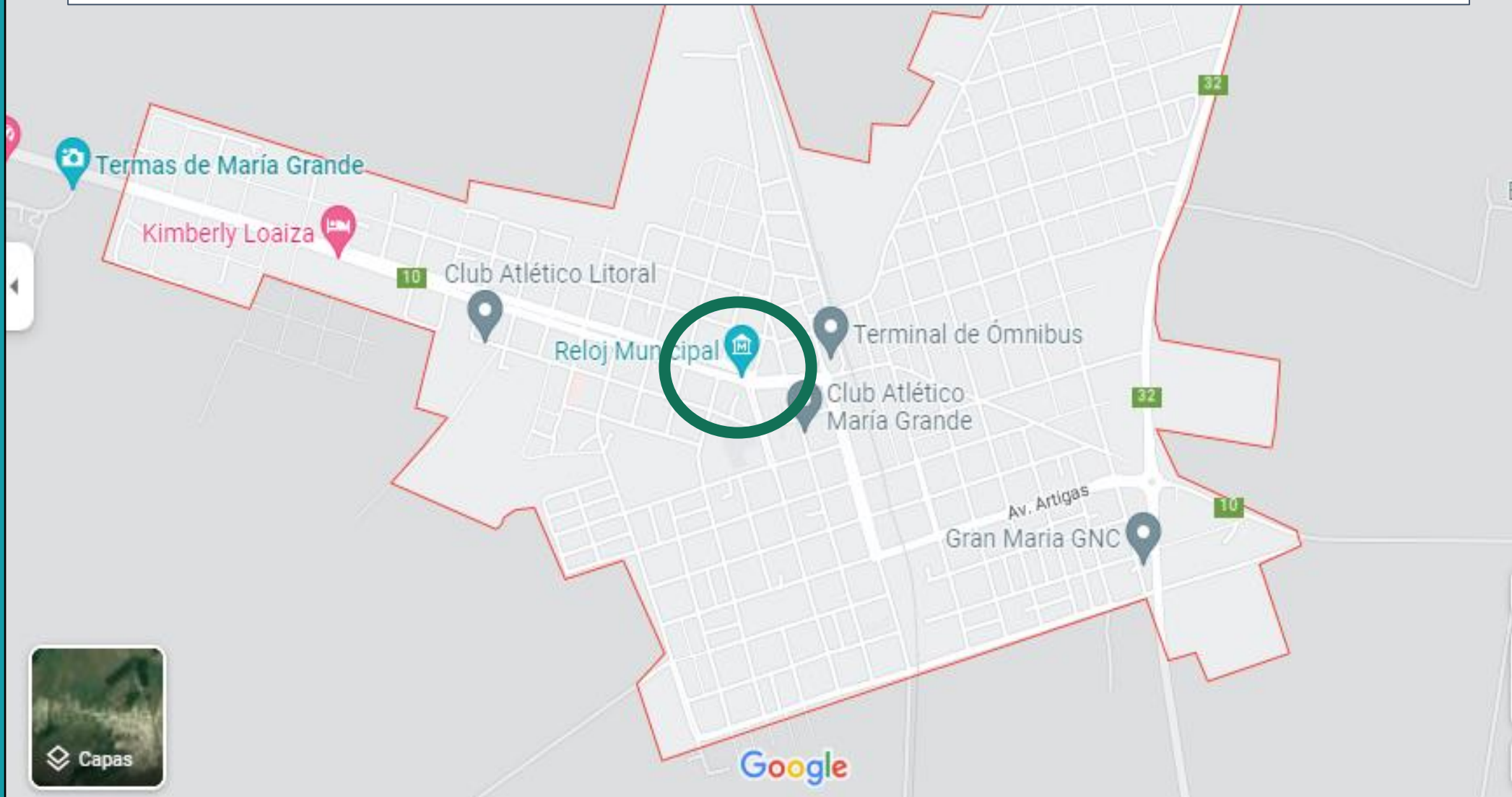


Map of presentation

- 1-Description of the context
- 2-Problem statement
- 3-Description of scenes
- 4-Causes and consequences
- 5-Problem approach
- 6-Strengths and weaknesses
- 7-Conclusion

CONTEXTUALIZATION OF THE PROBLEM

MAP OF MARIA GRANDE



PHOTOGRAPH OF CENTER OF THE CITY

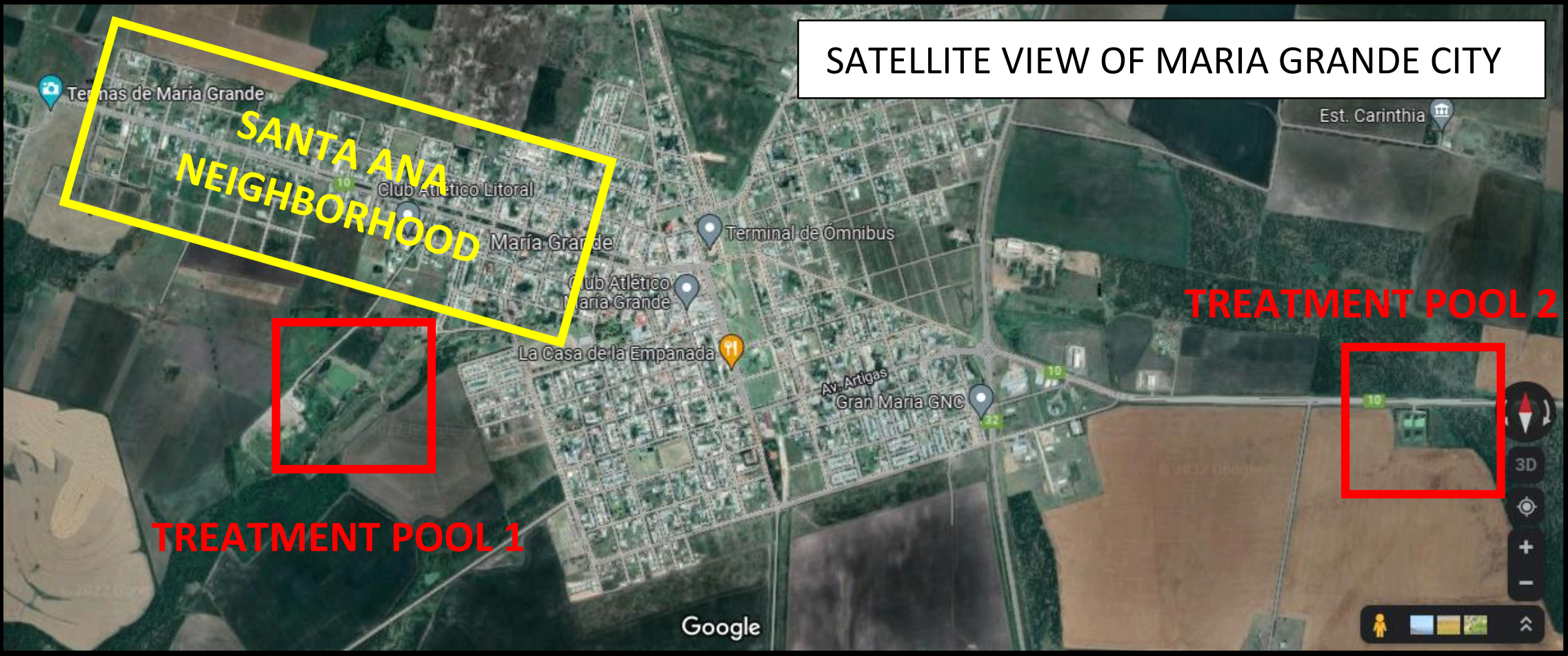


SATELLITE VIEW OF MARIA GRANDE CITY

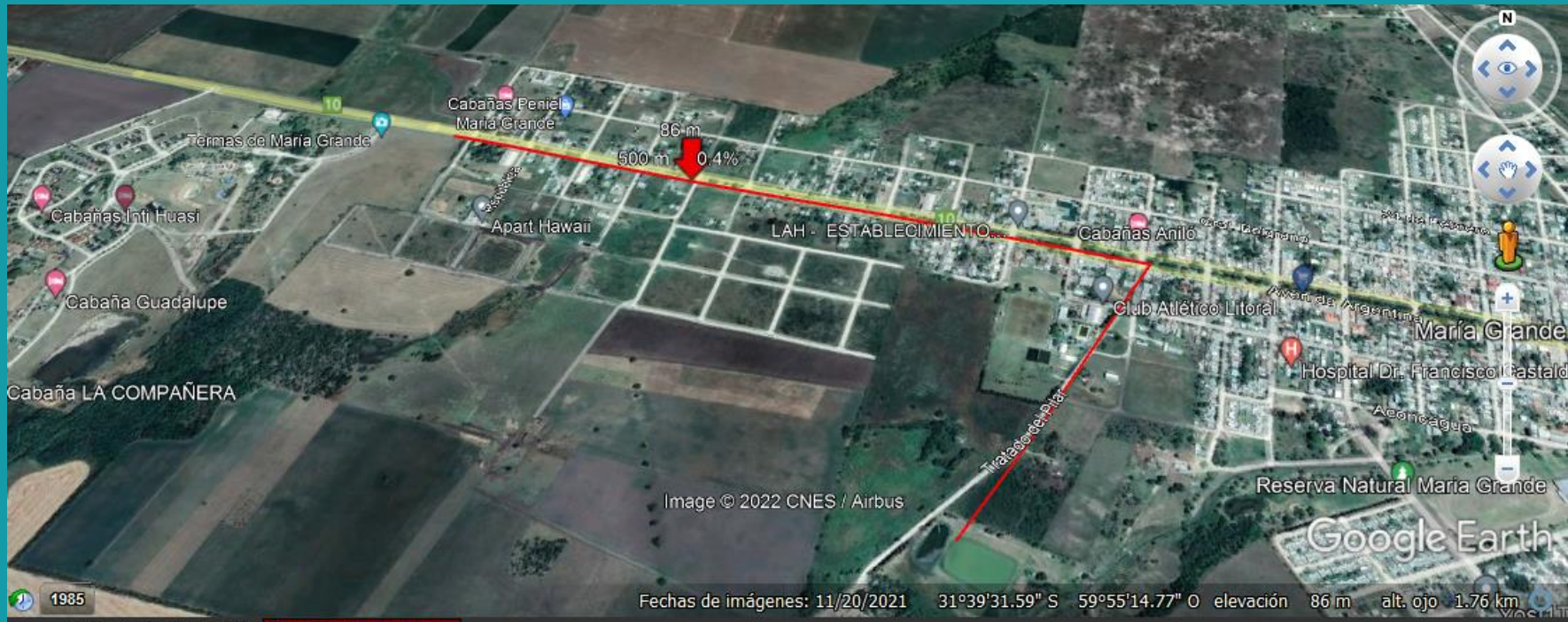
SANTA ANA
NEIGHBORHOOD

TREATMENT POOL 2

TREATMENT POOL 1



A part of Santa Ana neighborhood is approximately is at about 86 meters above sea level



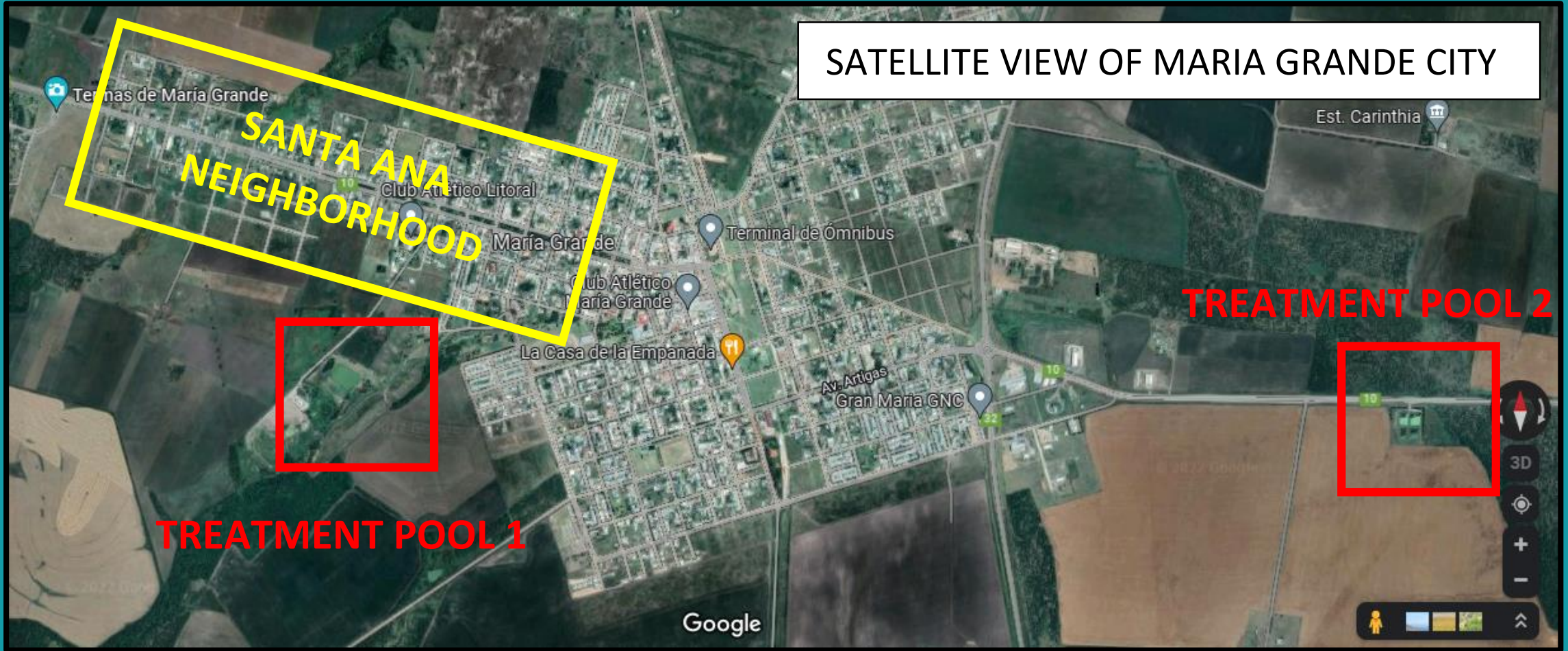
Almost all of the residents have a cesspool for their waste in their properties

SATELLITE VIEW OF MARIA GRANDE CITY

**SANTA ANA
NEIGHBORHOOD**

TREATMENT POOL 2

TREATMENT POOL 1



PHOTOGRAPH OF SANTA ANA NEIGHBORHOOD



PHOTOGRAPH OF SANTA ANA NEIGHBORHOOD



The functioning principle of the sewage network for conducting the waste is gravity

The data of surface level is important right now. These data were extracted from Google Earth and the measuring has an error of 0.5 meters approximately

The surface level of the treatment pool that is nearer Santa Ana is at about 87 meters above sea level, which makes it impossible for this neighborhood to conduct its waste here.

PHOTOGRAPH OF TREATMENT POOL 1- THE POOL NEARER SANTA ANA



Identification and description of the consequences

1-The life conditions of the Santa Ana residents

2-The budget of the people of the neighborhood

3-The real contaminant

Problem approach

Water waste pumping station



Different forms and dimensions



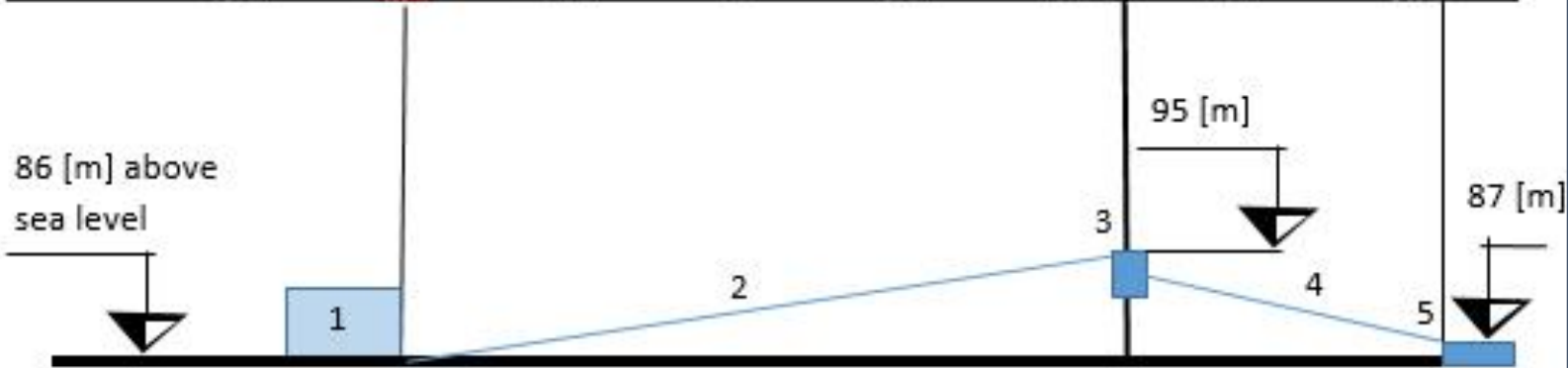
Estimate of the number of people

Problem approach

This station should be built in a place that is at a lower surface level

Problem approach

- 1-Building of the pipeline
- 2-Installation of the electronic control system
- 3-Setting of the characteristic of the pumps
- 4-Construction of the infrastructure
- 5-Building of the gravity manhole
- 6-Connection to the gravity manhole



1-Water waste pumping station

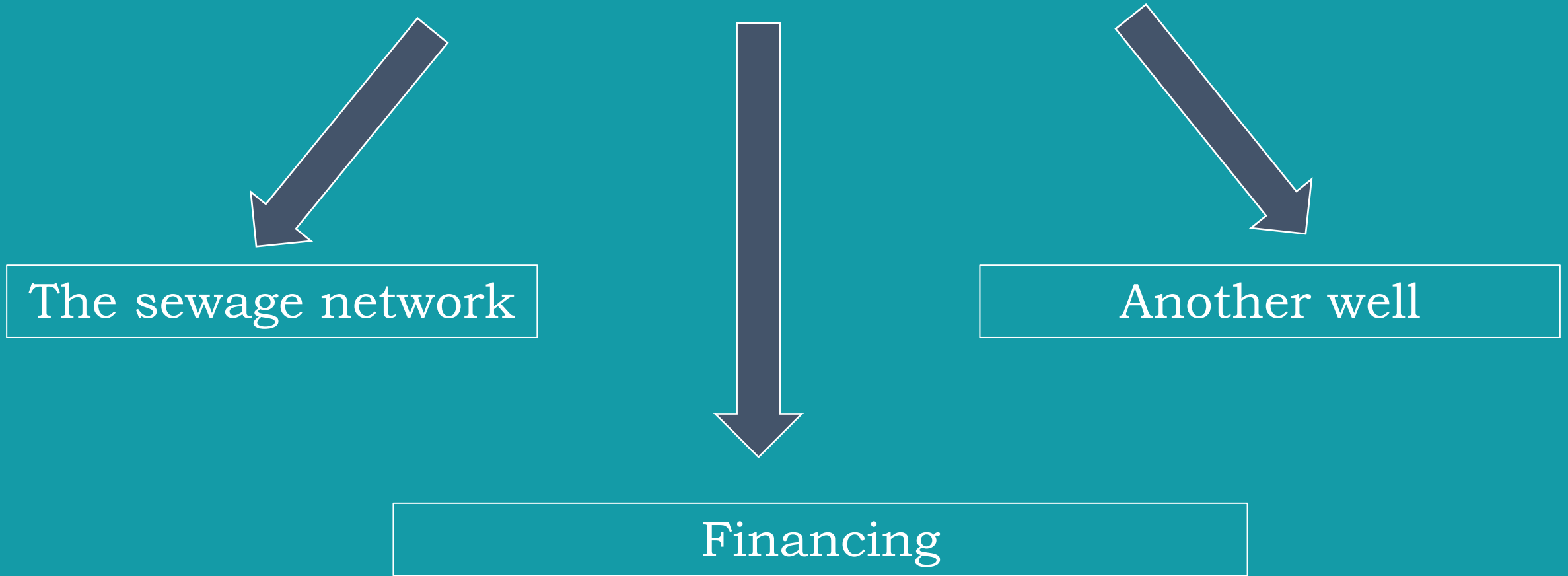
2- Pressure pipe

3-Gravity manhole

4-Atmosphere pressure pipe

5-Treatment pipelines

Weaknesses of the Proposal



Strengths of the Proposal



It saves energy



It is easy to expand

Other treatment pipelines are not
necessary

Conclusion

This proposal may solve a major problem in the city.

It is cost-effective, saves energy and saves the environment.

**Thanks so much for your
attention!**