

SANTA YNEZ COMMUNITY SERVICES DISTRICT

MEMORANDUM

TO: Board of Directors
FROM: Loch Dreizler, General Manager
DATE: August 17, 2022
SUBJECT: Sewer Line Soil Subsidence

Recommendation

Review and discuss the Horizon Drive sewer easement soil subsidence update

Policy Implications

On March 10, 2022, the board approved a motion to flood (*soaker hose*) the soil from Horizon Drive to Highway 246 to verify compaction on the recently installed Horizon Drive sewer line.

The District has minimum backfill and compaction requirements included in our *Design and Construction Standards for Public Sewage System Improvements*. These standards and the project construction documents included Drawing Detail S-2. Sewer pipe installations follow these requirements to minimize the potential for trench settlement.

Fiscal Implications

The contract warranty will expire on November 17, 2022

Alternatives Considered

None

Discussion

Before the board meeting, 2 of the 3 property easements will have been soaked – the Sanja Cota property remains to be completed. However, an update on work completed after this Board Memo was written will be presented at the Board meeting, along with some graphic observations.

The Board approved the Notice of Completion for the Horizon Drive sewer main project on November 17, 2021. However, during December 2021 rain events some surface soil subsidence occurred within the District's easements. In mid-February, 2022 the contractor, Specialty Construction Inc., completed warranty work to repair the subsidence. Also, the District's Construction Management consultant observed and agreed that the warranty work was complete.

When the soaker project is complete, and if there are any areas of concern, staff will consider multiple alternatives that include communicating with Specialty Construction,

the District's engineer, and construction manager, as well as communicating with and getting support from homeowners.

The adjacent homeowner(s) may prefer to see if future rainfall causes additional subsidence versus further disruptions on their property. One alternative would be for staff to approach Specialty about extending the warranty period for only the area of concern, not necessarily for the entire project. Specialty may request compensation for this warranty extension.

The soaker project, while helpful in recognizing areas of concern, should not be interpreted as the definitive approach or solution to determining future subsidence. There may be no more significant soil subsidence, and it is also possible that there could be additional soil subsidence from future rain events including a rise in nearby groundwater as previously recognized in monitoring wells during the December rain events.

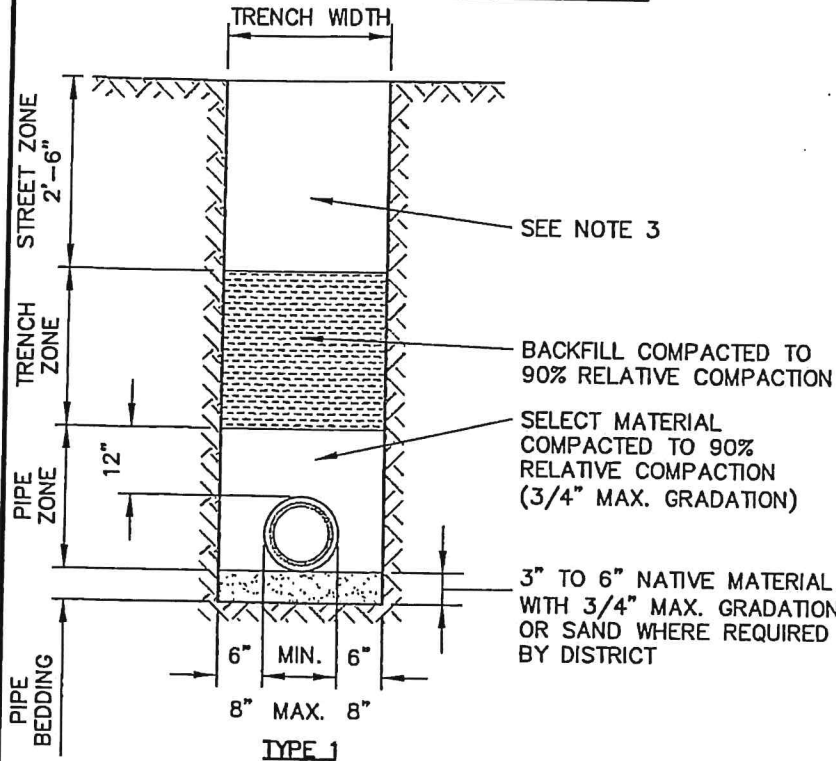
Preparation for the soaker project included:

1. Developing a strategy that considered personnel, property, and public safety
2. Using metered water from a nearby fire hydrant
3. Establishing some baseline parameters before and after soaking, including photos
4. Estimating techniques for determining the amount of water used, to be reconciled later by comparing hydrant water meter usage
5. Consulting with the District engineer for determining variables to consider
6. Communicating with the three property owners where the easements are located
7. Communicating with the surrounding neighborhood
8. Acquiring the necessary materials
9. Developing a schedule that worked around recurring tasks and necessary safety training that had been pre-scheduled.
10. A way to log, measure and graphically track the progress.

Attachment:

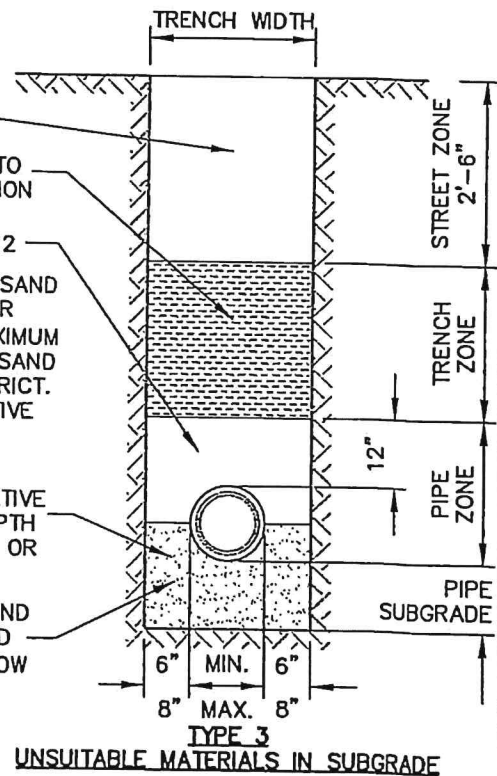
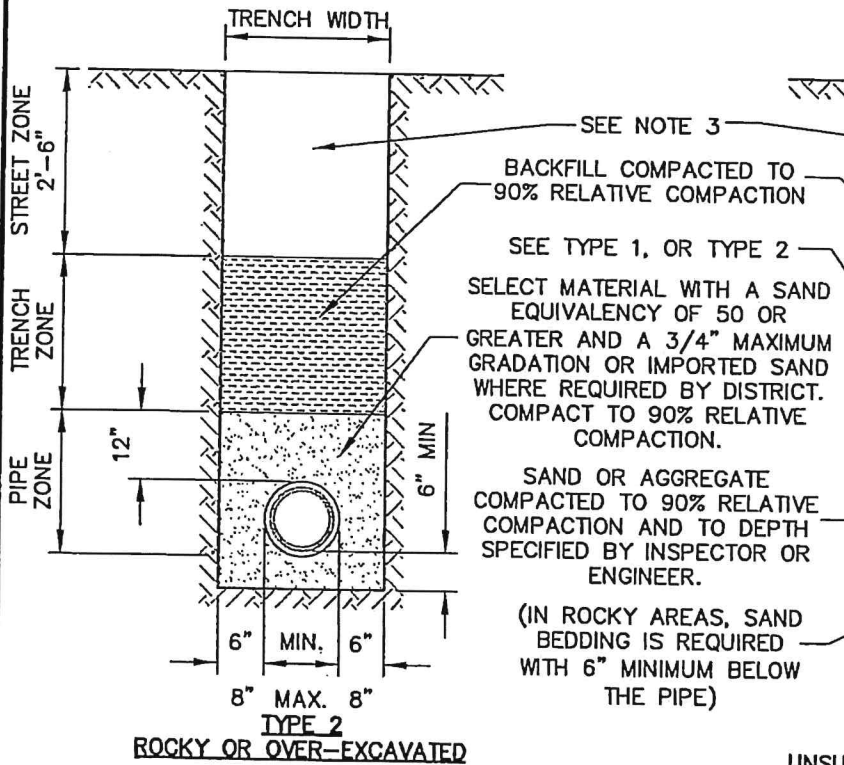
1. Drawing S-2, Sewer Pipe Bedding and Backfill Details

REVISIONS			
DESCRIPTIONS	BY	DATE	APPROVED



NOTES:

1. SAND AND SELECT MATERIAL SHALL BE PER STANDARD SPECIFICATIONS FOR EARTHWORK.
2. SEE STANDARD SPECIFICATIONS FOR EARTHWORK IF TRENCH WIDTH EXCEEDS THE MAXIMUM SHOWN ON THIS DRAWING.
3. STREET ZONE TO BE COMPACTED TO 95% RELATIVE COMPACTION IF WITHIN ROADBED OR TO 90% RELATIVE COMPACTION IF OUTSIDE OF ROADBED. SEE STANDARD SPECIFICATIONS FOR EARTHWORK.
4. MINIMUM COVER OVER ALL SEWER MAINS TO BE 6' AS MEASURED FROM FINISHED GRADE.
5. PERCENT RELATIVE COMPACTION IS THE PERCENT OF THE MAX. DRY DENSITY AS DETERMINED BY ASTM D-1557 (5 LAYER)
6. PAVEMENT, BASE, AND SUBBASE SHALL BE REPLACED IN STREET ZONE PER STANDARD SPECIFICATIONS.



DATE	SANTA YNEZ COMMUNITY SERVICES DISTRICT	DRAWING NO.
JANUARY 2007	SEWER PIPE BEDDING AND BACKFILL DETAILS	S-2

