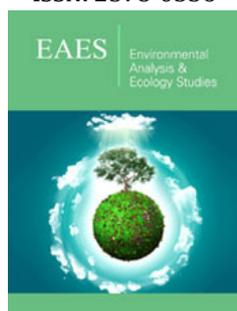


Good Practices of The City Hall of Curitiba 2019

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Title of Good Practice

Drainage system performed in the road requalification of Av. Manoel Ribas including rainwater retention and infiltration.

Goal of Good Practice

The objective is to retain and infiltrate part of the rainwater from the pavement of Avenida Manoel Ribas in order to mitigate the flow of rainwater downstream specifically at two points where the piping in the downstream lots where these valley bottoms pass was already undersized.

Description of Good Practice

For the implementation of the drainage project on av. Manoel Ribas at two points where there was a forecast of rainwater discharge in the bottom of valleys, these were with undersized pipes, which could compromise the flow in these places and with the reflux, flooding could occur in the road (av. Manoel Ribas) and in bordering lots.

Studies were carried out in order to divert these funds from valleys through the cross streets until the connection of these waters in the blocks below, however in addition to the onerous cost, these costs were not foreseen in the original budget. It was then that Eng. Manuela do Amaral Marqueno da Cunha of the paving and tax department of this work, asked our department for a solution or alternative for the case.

This retention and infiltration system was then added to the pipe drainage system, provided for in av. Manoel Ribas as follows: the tubes would be above the retention and infiltration ditch and the water would enter through the wolf's mouths, first filling the infiltration ditch below, filled with gravel and wrapped with geotextile blanket and when this ditch filled, the flow of overflow and would normally go through the pipe.

Description of Result of Good Practice

This system allows not only the delay of the flow in the intense rains, mitigating the flow downstream, as well as providing the infiltration of rainwater, essential to the recharge of the water table, which feeds the streams in times of droughts. It is a local solution, but with a positive impact on the entire downstream river basin, mitigating flooding and preserving the existing downstream pipelines without the need to replace them with larger pipelines and also without the need for high investments for the diversion of part of the flows through the streets parallel to the valley bottoms, which would solve the problem only in these deviated blocks, transferring the flow downstream and the problem would probably be repeated. Anyway, we can say that this drainage system seeks to meet the desire for a more environmentally sustainable solution.



Figure 1

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