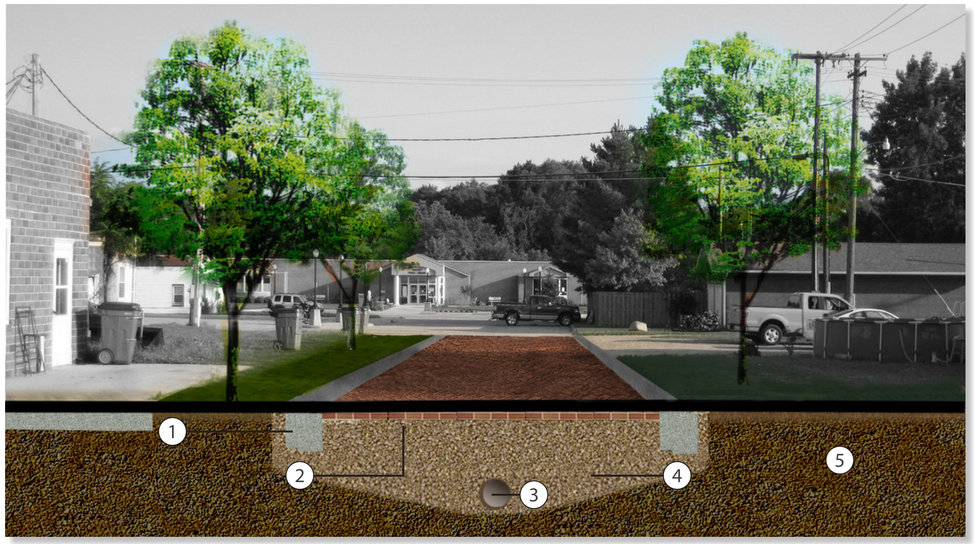
Existing: This downtown alley is currently a gravel drive that is not as aesthetically pleasing as the downtown buildings surrounding it.



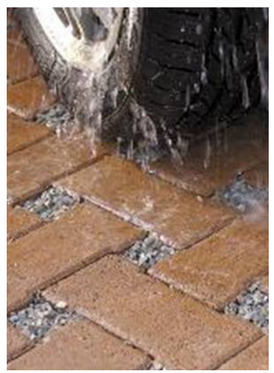
This image shows permeable pavement on the entire alleyway. This would provide water with the maximum area to infiltrate into the ground. It would be the most effective in managing stormwater runoff.

LEGEND

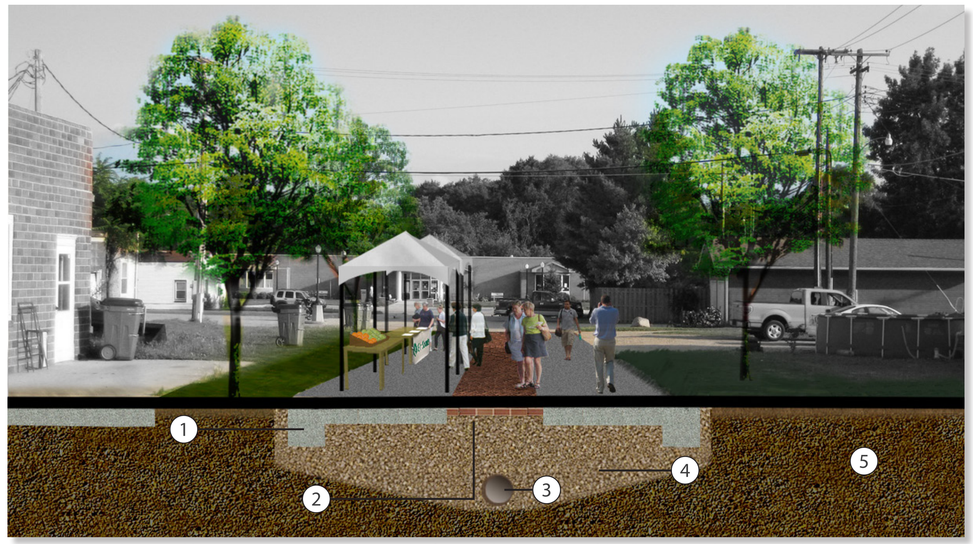
1. Concrete
2. Permeable Pavers
3. Perforated Drainage Pipe
4. Aggregate
5. Soil

The City of Madrid is interested in paving the alley between State Street and Water Street. This will allow for improved access to surrounding businesses, residences, and the library. Paving this area, however, will generate additional runoff during heavy rainfalls.

The design proposal for the alley is 20 feet wide and approximately 130 feet long. If the alley was simply paved with concrete, stormwater would be directed to adjacent low points, potentially causing localized standing water. To address this issue, it may be sensible to use permeable paving.



Permeable pavers are useful for managing stormwater runoff. In this alley, water would drain towards the center of the alley and be infiltrated into the subgrade instead of being directed along the alley. Once stormwater has infiltrated through the pavers, it is captured in an aggregate storage area below. The porous aggregate would allow water to seep into the soil below or be carried away by a perforated pipe to a nearby storm sewer.



This image shows the permeable pavement area as an approximately 4 foot strip down the center of the alley. Though this option would not give water as much area to infiltrate, it would cut down on cost of materials and maintainence.

Whether paved with permeable pavement or not, the alley could be closed during specific times and used for block-party type events in conjunction with adjoining areas of downtown. The new paved alley would be an ideal place for market tents and vendor booths because it has paved access to nearby streets and parking.

Madrid

Downtown Alley

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