

charles city permeable streetscape

charles city, iowa



Planted bump out rendering



Permeable street pavers



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The downtown historic residential district of Charles City Iowa was suffering from crumbling streets and stormwater catch basins. Charles City retained CDF to develop a comprehensive plan to address the streets and stormwater issues and evaluate the expected performance of the existing and proposed system.

Conservation Design Forum worked with the City to develop a Permeable Streets plan for a 16 block area of the City. Plan alternatives included permeable paving, parkway bioretention, bioretention intersection narrowings, and infiltration beds. CDF prepared models and conducted the hydrologic design of the system to capture runoff from streets, yards, and alleys and provide complete infiltration for the 2-year storm event. Peak discharges for the 10-year storm will be reduced by over 90%. Reduction in stormwater runoff, also reduces replacement of the existing storm sewers.

client: The City of Charles City, Iowa
project team: Conservation Design Forum
completion: Initial phase completed 2010