

Pocket Neighborhood

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Site Location

The proposed pocket neighborhood is located in Maquoketa, IA, 52060, just off of intersecting highways 61 and 64. More specifically, at the intersection of German St and Crestlane Dr. A pocket neighborhood is a compact, cluster of homes all sharing an open area of common space.

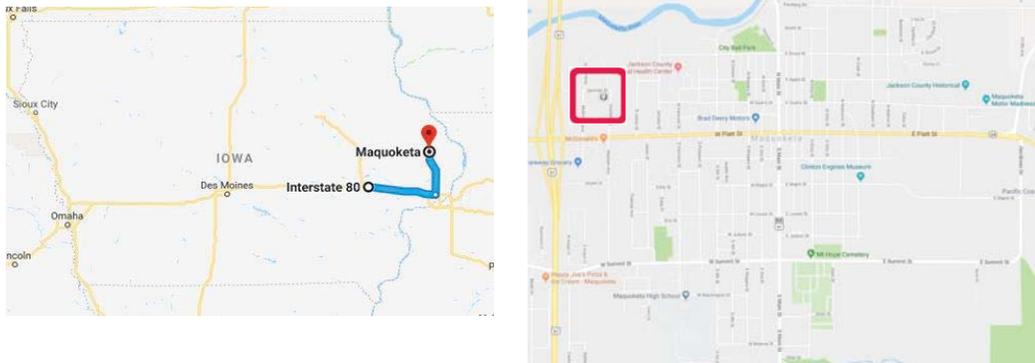


Figure 1. Site location and Layout

Access Road

The access road into the neighborhood acts as an extended driveway for the residents to access their homes at the south side of the site. The road consists of a 24 foot wide pavement with parking permitted on the outer lane for visiting guests. The road has a standard crown in the middle set at a 2% grade sloping in each direction to allow storm water to runoff into grate inlets draining into the storm water sewer system. The new contours after grading are also shown below. As shown in the figure, a channel was created in the middle of the site for storm water to drain into rain gardens.

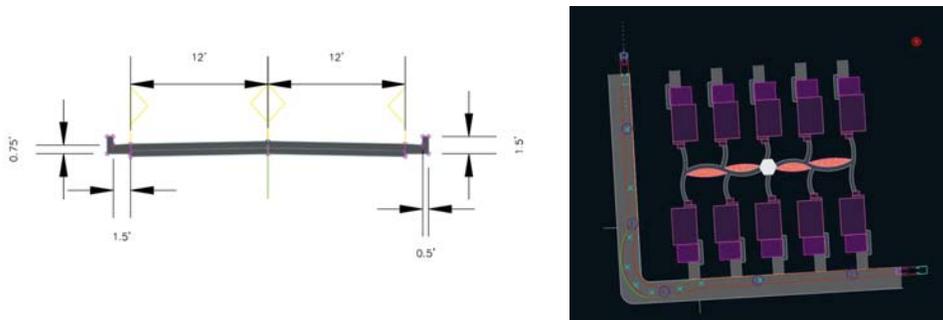


Figure 2. Road cross section and swept path analysis.

Utilities

The utility plan for this site includes sanitary sewer extensions to each house along with water main extensions to each house as well. Storm water sewer lines flow along the middle of the site under each rain garden and out the North East corner of the site. The water main pipe system is set at a depth of 5-feet below the surface to prevent frost and freezing of the pipes in the winter. The storm sewer system is set at a depth of 7.5-feet below the surface while the sanitary sewer pipe network is set at a depth of 10.5-feet to allow for proper cover between the systems. The depth of the sanitary sewer system is required to permit gravity flow out of the basements.

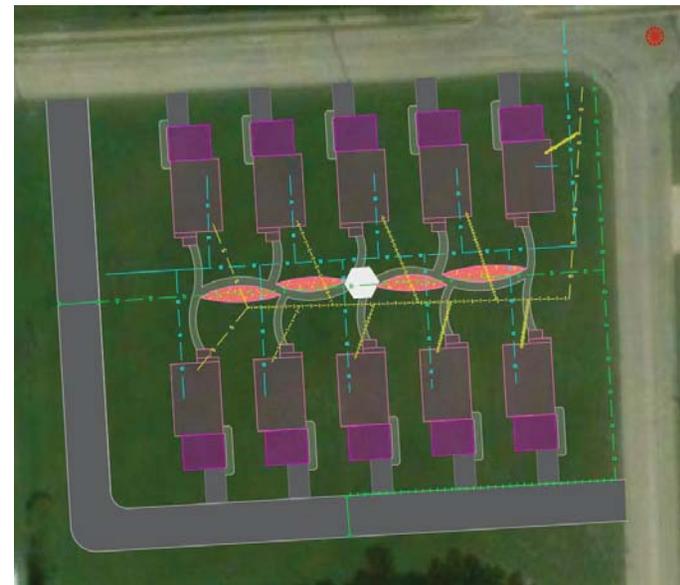


Figure 3. Utility plan view of the site

Cost Estimate

The estimated cost of the site work for the project is estimated at \$327,700 including grading, concrete and asphalt pavement, rain gardens, and piping costs. The cost of each housing unit is projected to be \$163,900 through an RS MEANS cost estimate including shrubs, trees, and mulching. The total cost estimate for the entire project is \$2,212,525.

References:

- SUDAS Design manual: Chapters 2-5
- Iowa Rain Garden Design Manual
- Means online residential housing analysis