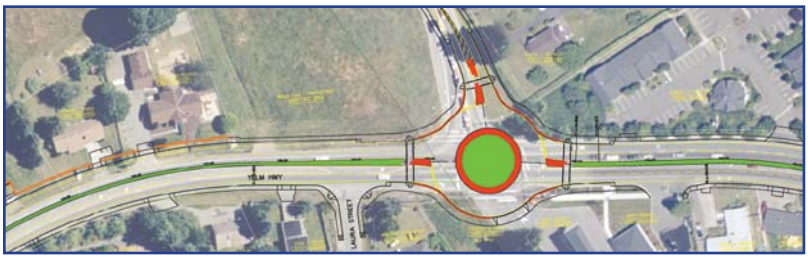
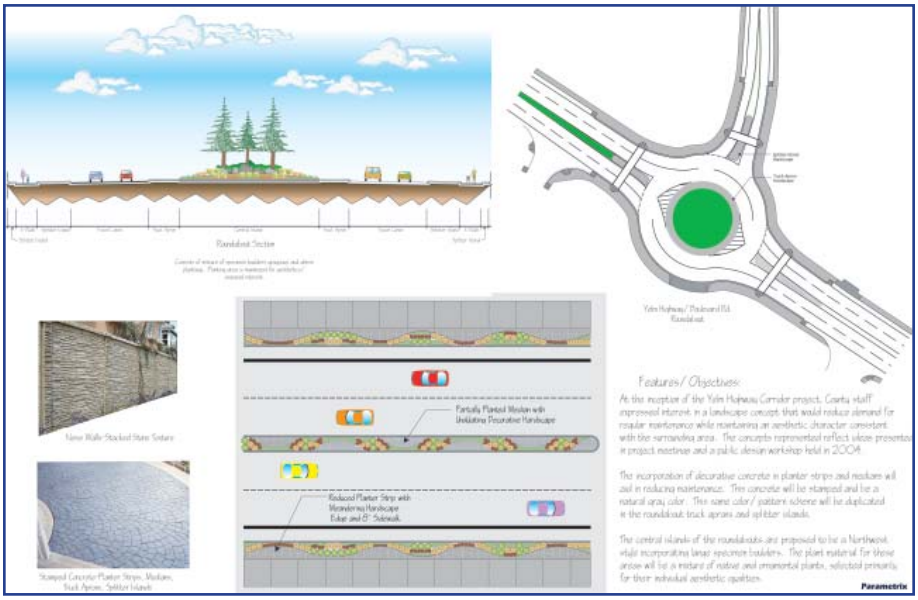
Planning

Traffic Analysis





Traffic analysis is a major element in determining if a roundabout is an appropriate intersection control option. Our staff have analyzed intersection and corridor operations for hundreds of intersections throughout the western United States. We verify whether a single or multi-lane roundabout is the right choice for an intersection and determine its appropriate geometrics. We also study the impacts of a particular roundabout on the surrounding streets and determine impacts to other intersections. Tasks associated with this phase typically include:

- Review available traffic data and confirm future volumes
- Conduct capacity and geometric analysis at the proposed intersection using RODEL and SIDRA design software
- Coordinate the operational characteristics of the roundabout with the adjacent intersections and review the project area to verify final scope of project
- Prepare an updated traffic report

Conceptual Design

Our roundabout design team prepares one or more conceptual designs of the roundabout. During this process, we seek to balance the goal of maximizing safety while considering the often competing objectives of efficiency and cost. Tasks included in this phase include:

- Using RODEL software, prepare conceptual layouts that detail the basic geometrics of the roundabout, including appropriate inscribed diameter, center island, location, entry and exit widths and radii, flare lengths, splitter islands.
- Prepare exhibits showing “fastest path” spline curves and the corresponding R1, R2, and R3 curve values for each movement.
- Using Autoturn software, prepare exhibits showing accommodation of the specified design vehicle(s) including R4 and R5.
- Present the results of the traffic analysis and conceptual design to the client for review and decision making.