

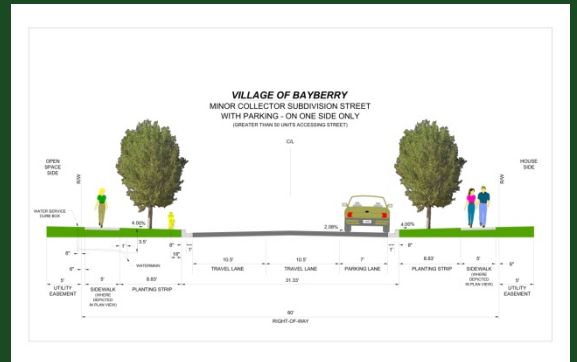


Roadway Design

Karins and Associates' Transportation Professionals prepare construction plans, provide specifications and details for the construction of subdivision streets, entrance plans for permitting purposes and improvements to roadway frontage for land development projects; off-site intersection design for safety improvements and mitigation measures required to meet level of service requirements; and design services for the construction of new roadway corridors and roadway widening/rehabilitation projects for the Department of Transportation. Our expertise in Roadway Design includes, but is not limited to the following:

- **Major / Minor Highway Design**
 - Intersection Design.
 - Geometric Design.
 - Cross-Sectional Determination.
 - Preliminary Engineering.
 - Plan and Profile.
 - Drainage Design and Permitting.
 - Flood Analysis and Studies.
 - Signing and Striping Plans.
 - Maintenance of Traffic Plans
 - Utility Relocation Plans.
 - Preparation of Exhibits.
 - Public Involvement and Presentation.
 - Construction Engineering.
 - Sediment and Stormwater Plans.
 - Erosion and Sediment.
 - Earthwork Analysis and Optimization.
 - Value Engineering.
 - Quantity Analysis and Cost Estimation.

- **Real Estate Engineering:**
 - Property Survey and Boundary Determination.
 - Establish Right-of-Way.
 - Right-of-Way Plan Preparation.
 - Metes and Bounds Description
 - Appraisal of Cost-to-Cure.
 - Damage Assessment.
 - Design Cure for Specific Needs.
 - Conceptual Planning.
 - Drainage Improvements.
 - Design to Conform to Local Code and Regulations.
 - Assess impact to Site Circulation, Parking, & Environment.
 - Land Use Analysis.
 - Expert Witness Testimony.
 - Access Management Plans.



Karins and Associates

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