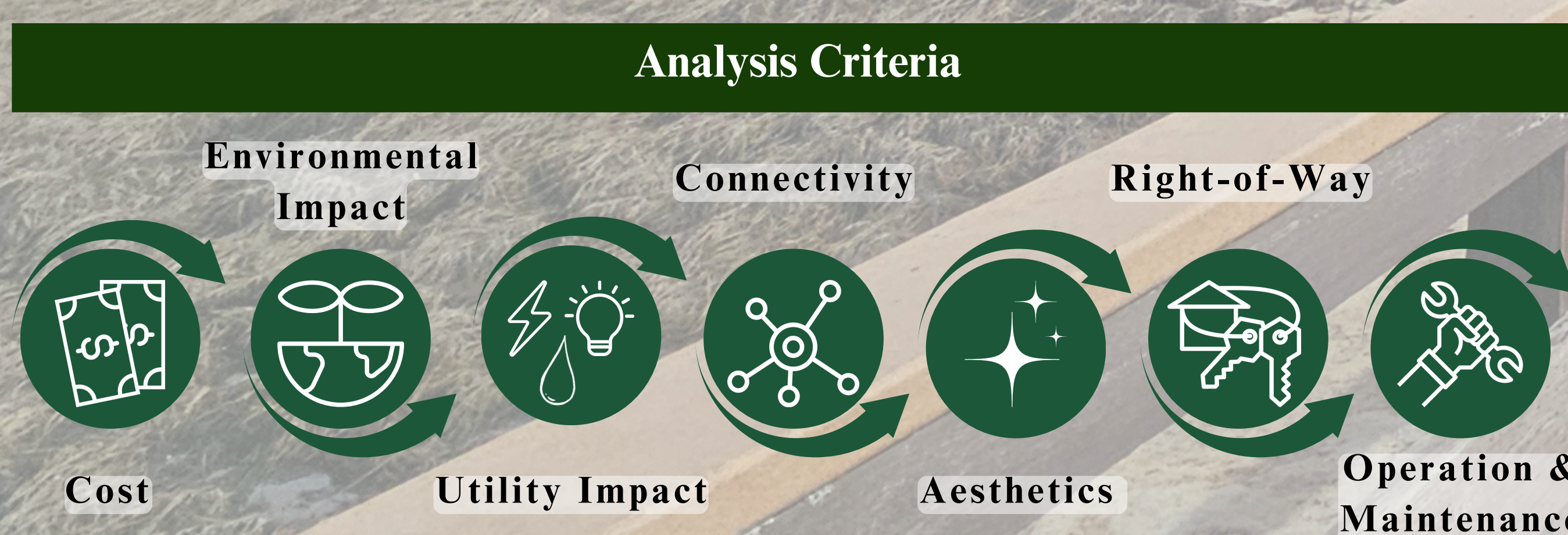




### Project Overview

Urban Forest Park Vision and Pedestrian Access Corridors Project aimed to develop alternatives to improve connectivity to the trail systems in the U-MED area. It focused on creating an "Urban Forest Park" (UFP) for recreational and educational purposes. Our primary objectives were to evaluate alternative designs to connect isolated parcel that affects non-motorized users experience negatively. Our team evaluated multiple design elements and where they should be placed. Cost-effective solutions, potential effects on the public, environment, and the existing right-of-way were taken into consideration to develop the alternative designs. After completion of our analysis, we were tasked with generating an Alternatives Analysis Report to introduce our findings; presenting a "menu" of options for our client and guiding them to the solution that best fits their needs.



### Design Criteria

Denali Consulting used Design Criteria Manual and Preconstruction Manual to design the project with safety, accessibility, and user experience in mind. Our specifications include a design speed of 20 mph, maximum longitudinal grade of 5%, shoulder width of 2 feet, shoulder grade of 3-5%, horizontal clear zone of 3 feet, and vertical clearance of 10 feet above the trail. Bridges over roads should have 20 feet of clearance height.

### Design Alternatives

#### Alternative 1 LEGEND

- EXISTING SIDEWALK
- WETLAND
- EXISTING FOOTPATH

#### Alternative 2 LEGEND

- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- WETLAND
- PROPOSED BRIDGE
- PROPOSED CROSSWALK
- RRFB
- PROPOSED TRAIL
- EXISTING FOOTPATH

#### Alternative 3 LEGEND

- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- WETLAND
- PROPOSED BRIDGE
- PROPOSED CROSSWALK
- RRFB
- PROPOSED TRAIL
- ROUNDBABOUT
- EXISTING FOOTPATH

#### Alternative 4 LEGEND

- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- WETLAND
- PROPOSED BRIDGE
- PROPOSED CROSSWALK
- RRFB
- PROPOSED TRAIL
- OVERPASS
- EXISTING FOOTPATH

Special Thanks To Our Mentors!

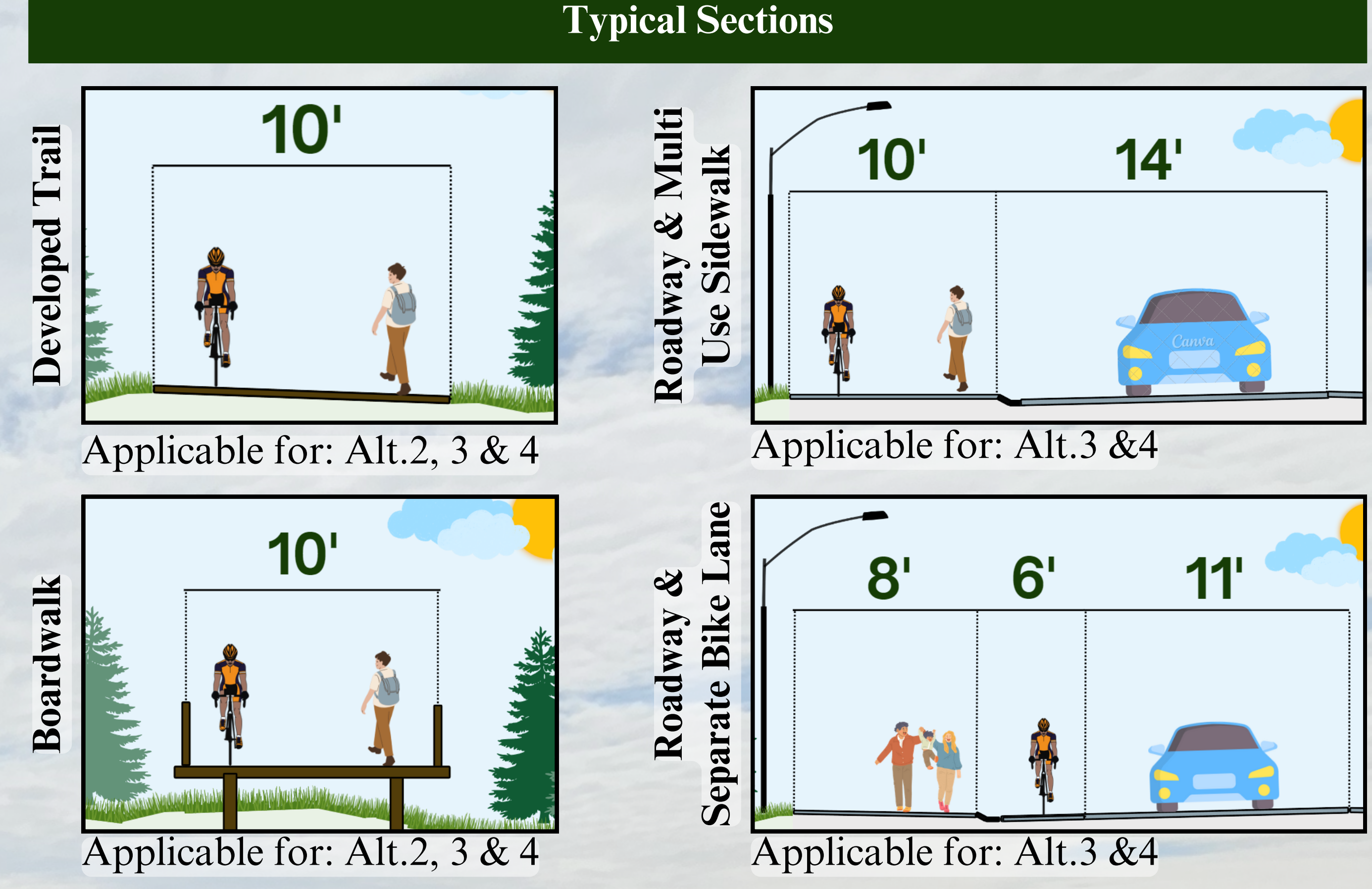
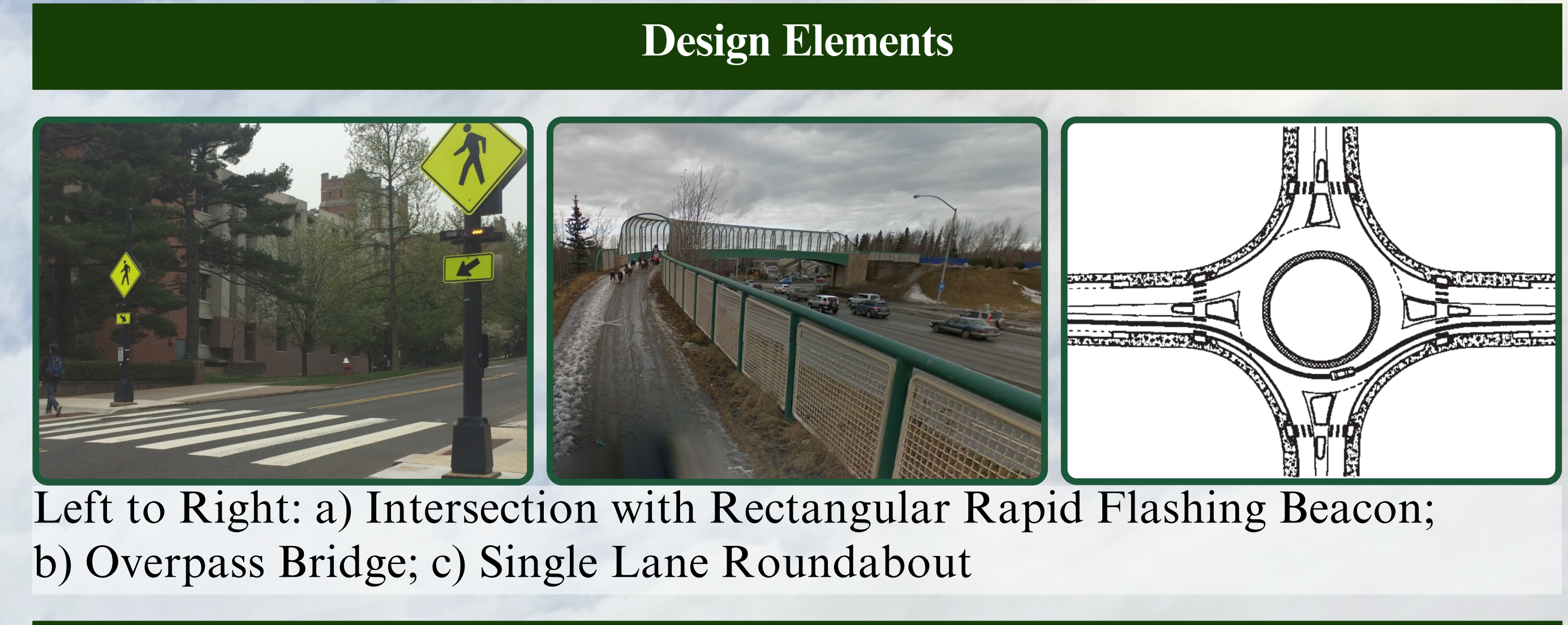
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Denali Consulting



Denali Consulting offers the client multiple customizable design options to introduce various designs.

### Decision Matrix

Alternatives	Cost	Environmental Impact	Utility Impact	Connectivity	Aesthetics	ROW	O&M
1 (No Build)	1	1	1	3	3	1	1
2	2	2	2	1	1	1	2
3	3	1	1	2	1	1	1
4	3	3	3	1	1	3	3

Impact Level: 1 = Low, 2 = Medium, 3 = High

### Alternative Analysis Report

Denali Consulting evaluated options for enhancing active transportation accessibility in the UFP. The report details four alternatives and evaluates their feasibility in terms of project needs and potential cost. The No-Build Alternative maintains the status quo with minimal financial and environmental impact, but does not meet the need of the project. The Roundabout Alternative proposes improved traffic flow and pedestrian safety with minimal wetland disruption. The Northern Lights Bridge Alternative offers extensive connectivity at a higher financial and environmental cost. Lastly, the Multi-Way Alternative maximizes connectivity but presents significant environmental, utility and financial considerations. The analysis discusses connectivity, safety, environmental impact, and cost-effectiveness for each alternative, while adhering to current design standards and community planning goals.