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Edgewood Dr. Extension and New Parking Garage

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Edgewood Dr. Extension and New Parking Garage

MCA³T Design

Dr. Suksawang, Dr. Heck, Dr. Cosentino, Dr. Mesa-Arango, Prof. Locurcio. Department of Civil Engineering, Florida Institute of Technology

Objectives:

- Relieve traffic congestion off of University Blvd for pedestrian safety.
- Provide extra parking spots for students, staff, and faculty.

Solutions proposed by MCA³T:

- Divert traffic to use the extension Edgewood Dr. all the way to connect with Babcock St.
- Build a new parking garage in the area of the existing Columbia Village parking garage.

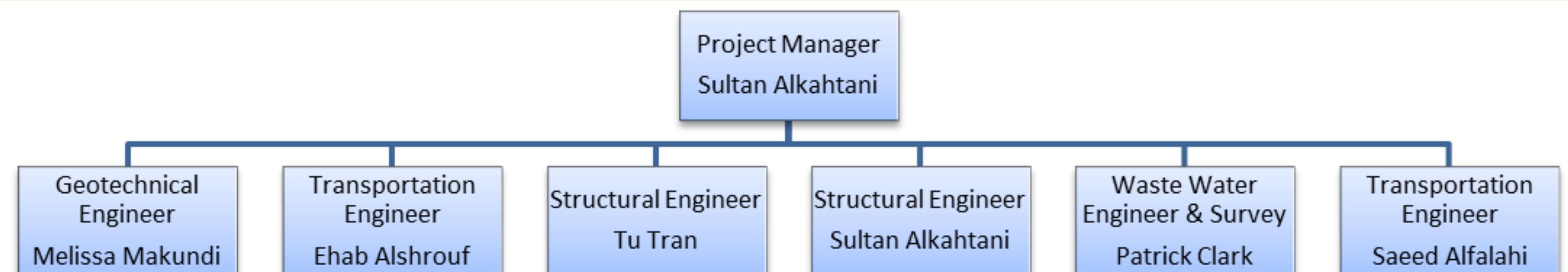


Construction Cost:

Edgewood Dr. Extension = \$554,000

New Parking Garage = \$2,200,000

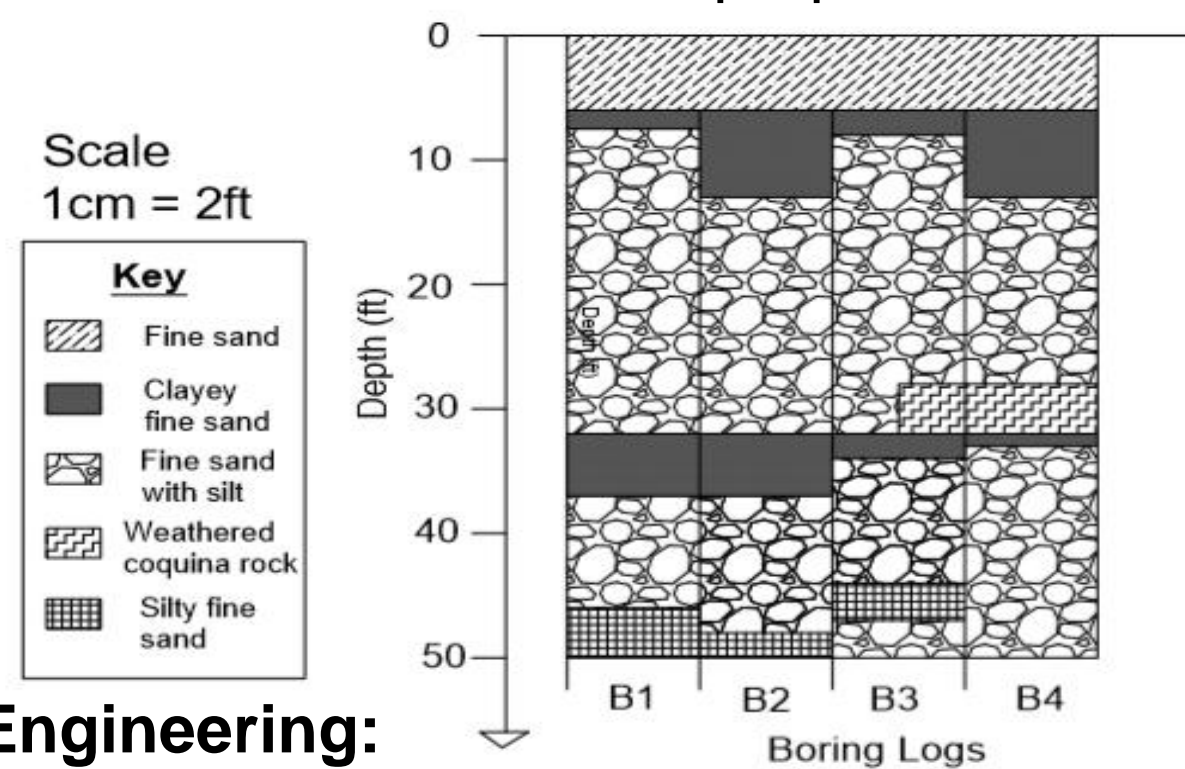
Total Project Cost = \$2,754,000



New Parking Garage:

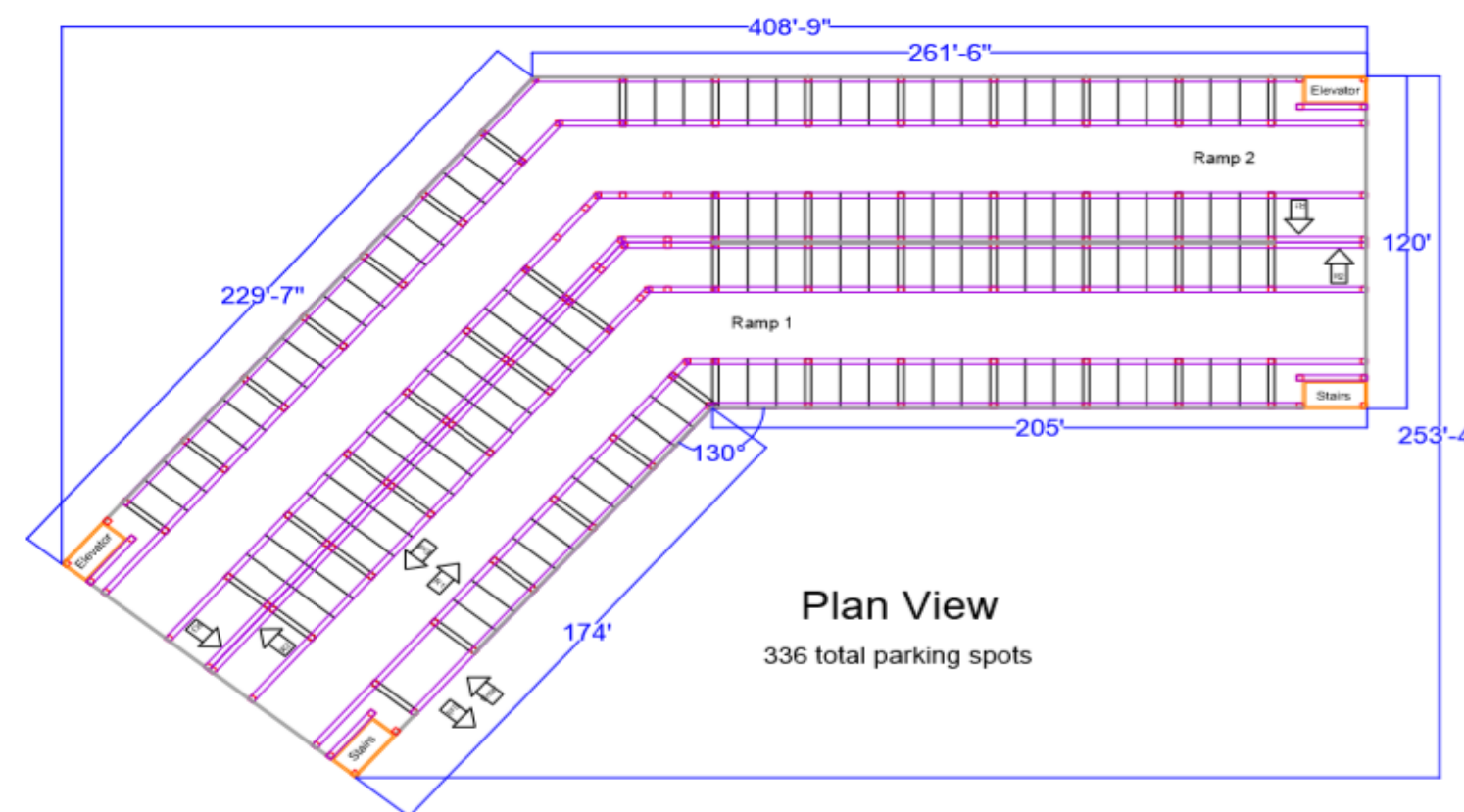
Geotechnical Engineering:

- A soil investigation of the existing soils was done, creating soil profile up to a depth of 50 ft which showcases all soil properties



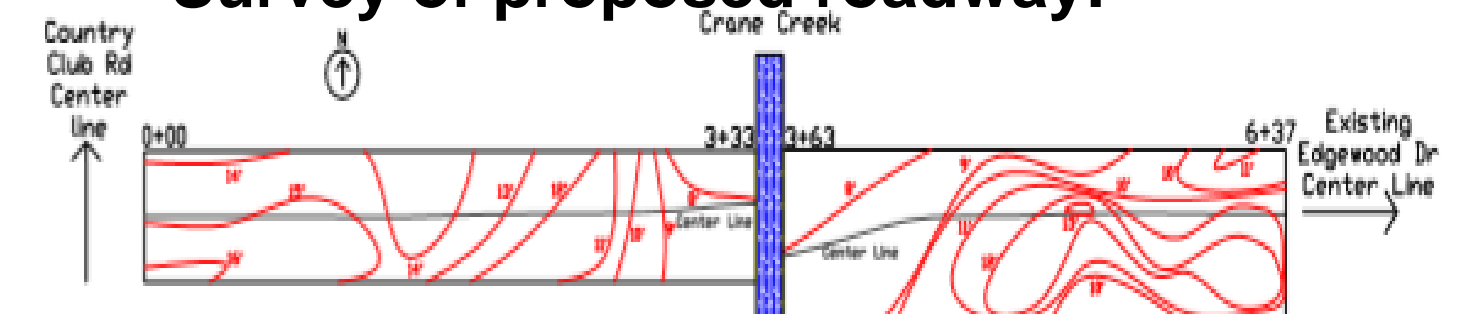
Structural Engineering:

- A reinforced concrete garage with internal ramps, adding to a total of 3 floors.
- 336 Parking spots with parking count feature, showing number of available spots on each level.



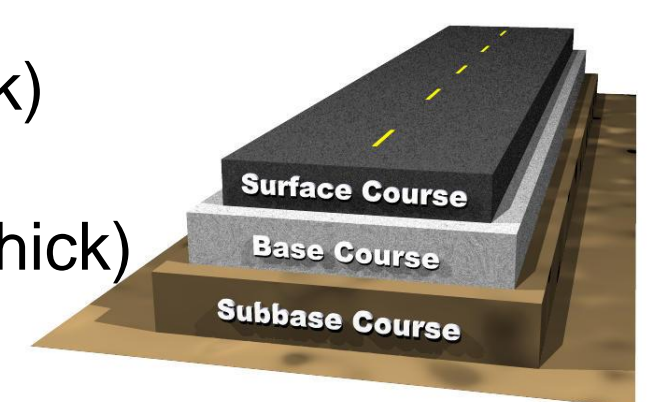
Extension of Edgewood Dr.:

- Survey of proposed roadway:

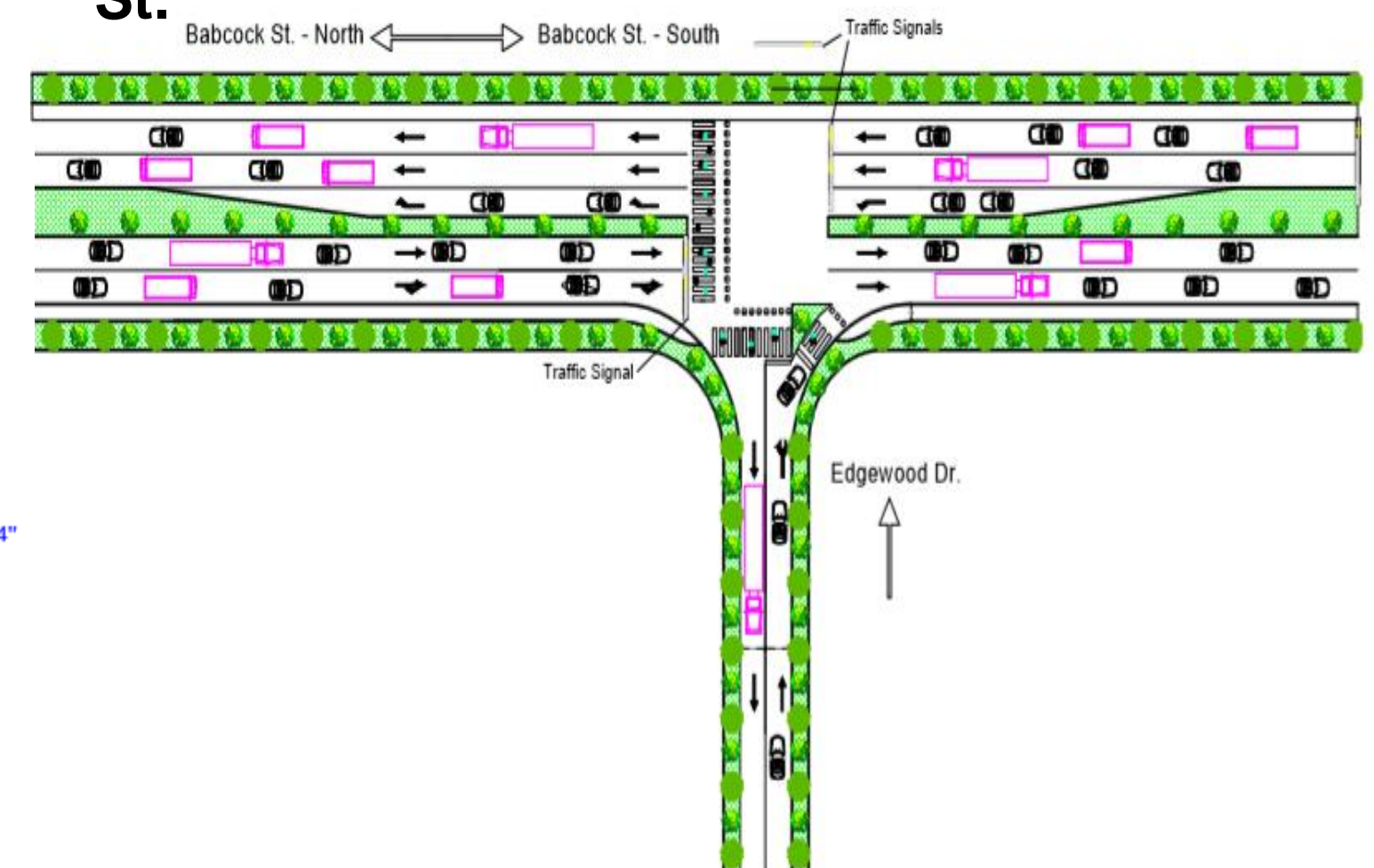


Pavement design for Edgewood Dr.:

- A two-line road pavement design with three layers.
- First layer => HMAC (4.5 in thick)
- Second => Base (10 in thick)
- Third layer => Sub base (9.5 in thick)



- Proposed Intersection and traffic signals of Edgewood Dr. and Babcock St.



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