

What is civil engineering?

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What is Transportation?



Transportation

Planning | Traffic | Roadway

- Transportation and corridor planning
- Traffic impact studies
- Traffic signal design
- Traffic engineering and operations
- Bicycle and pedestrian safety
- Roadway design
- Structural engineering

1-95 Multimodal Transportation Corridor

Miami-Dade County, Florida



1-95 Multimodal Transportation Corridor

Summary

- Initially considered more than 30 alternatives for improving mobility on this heavily traveled section
- Proposed a two-lane reversible limited access HOV facility
 - Projected to increase average annual daily capacity by 40 percent
 - The gate controlled facility will help reduce weaving and congestion, improving both safety and travel times

Challenges???



1-95 Multimodal Transportation Corridor Challenges

- Proximity to downtown
- Maintaining existing traffic levels through tedious staging plans
- Constructability issues (All work being performed on existing bridge decks)



What is Land Development?



Land Development

Commercial | Retail | Residential | Big Box

- Pre-development, processing, and regulatory
- Land planning
- Transportation planning and traffic engineering
- Environmental services
- Site civil engineering

Boeing PacifiCenter Catellus Development Corporation Long Beach, California



Lower level rendering



Boeing PacifiCenter Catellus Development Corporation

Summary

- Will transform more than 200 acres of unused Boeing property into a dynamic mixed-use community of offices, commercial development, neighborhood retail, a hotel and residential neighborhoods.
- KHA Role: To provide comprehensive civil design

Challenges???



Lower level perspective
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Boeing PacifiCenter Catellus Development Corporation **Challenges**

- Proximity to existing and operating airport
- Tying new infrastructure into aging facilities
- Integrating project with adjacent 46 acres of ongoing aircraft manufacturing.
- Coordinating approvals with city, state, regional and federal agencies.



What is Aviation?



Aviation

- Runway design and rehabilitation
- Master planning
- Environmental studies
- Modeling
- People movers
- Parking studies and revenue control systems
- Pavement management
- Information systems
- Transportation plans
- Electrical
- Security

Edward H. MacNamara New Terminal Design Detroit, Michigan



Edward H. MacNamara New Terminal Design

Summary

- Complete planning and design of terminal
- Simulated passenger flow and pedestrian demand in effort to properly design for:
 - Automated People Movers (APM)
 - Escalators
 - Elevators
 - Moving Walkways
- Structural design to support the people mover on the building itself, creating a more open and attractive terminal.

What is Water Resources?



Water Resources

- Stormwater management
- Flood control and floodplain management
- Dam safety
- Water supply, treatment, distribution
- Wastewater collection, treatment, distribution
- Water resources permitting
- Security

Pembroke Pond

Virginia Beach, Virginia



Pembroke Pond

Summary

- Design of a two-acre wet detention facility which:
 - Enhances water quality
 - Controls peak runoff
- 2,000 linear feet of storm sewer improvements to convey water to and from the pond
- Integrate detention pond into surrounding area utilizing:
 - Well maintained beautiful landscaping
 - Entertaining cardio trail

What is ITS?



Intelligent Transportation Systems (ITS)

- Feasibility and planning studies
- System integration
- Communications
- ATMS / FMS
- Parking revenue control
- Traffic operation centers
- 511 management
- Security

Tallahassee Advanced Transportation Management System

Tallahassee, Florida



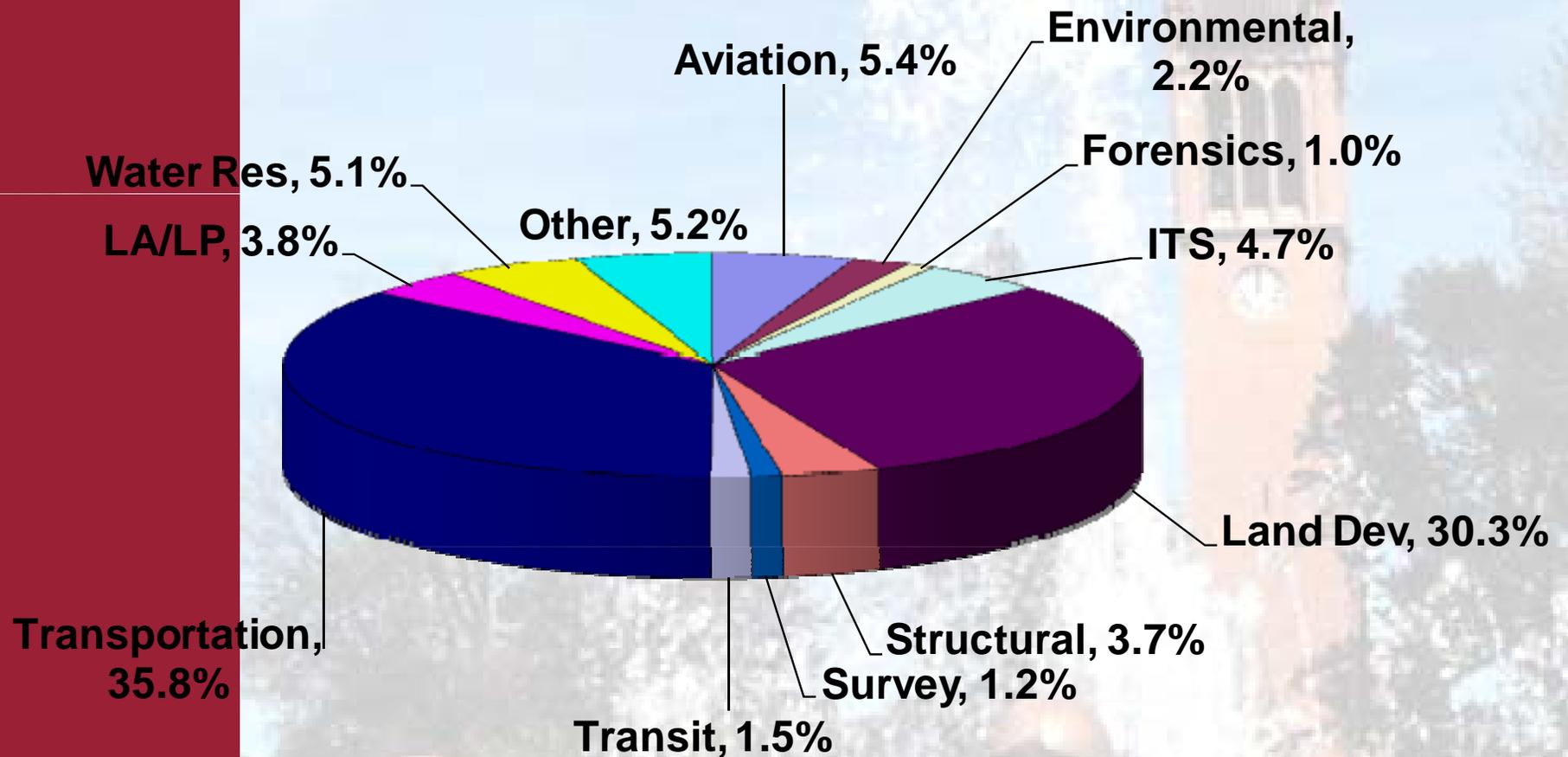
Tallahassee Advanced Transportation Management System

Summary

- Linked a wide range of traffic system elements using fiber optics to a single user interface
- New traffic control system incorporates:
 - 260 signalized intersections
 - 62 traffic monitoring cameras
 - CCTV surveillance
 - Changeable message signs (CMS)
 - Flood detection and warning system
 - Traffic advisory radio system

Who is Kimley-Horn?

Full Service Consultants



Fast Growing National Firm



- Roughly 50+ offices coast to coast
- Currently have approximately 2,000 employees on board to satisfy the needs of our clients. To put it into perspective, we had approximately 500 employees in early 1994.

How We Stack Up....

2008 ENR Firm Rankings:

- 1 - Retail
 - 1 - Multi-unit residential
 - 10 - Airports
 - 10 - General building
 - 11 - Highways
 - 11 - “Pure” design
 - 11 - Transportation
 - 31 - Overall
-
- Fortune 100 Best places to work 2005, 2006, 2007

A Thought To Leave You With

- Learn the engineering principals in your introductory classes (soils, transportation, fluids, environmental, structures). Even if you don't practice in that field, you will need to know the principals.
- Most of your time will not be spent doing "engineering," so learn how to write well.