Creating a Spatially Enabled University

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Advancing the Spatially Enabled Smart Campus
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Outline

• University of Southern California
  o People
  o Infrastructure
  o Support & Services

• Spatial @ USC

• Spatial Projects
  o Historic District Web Maps
  o 3D Routing and Visualization
  o Geocaching
  o Reality Check LA (2002)

• Collaboration | Competition

• Questions
University of Southern California

• People
  o 3,563 faculty
  o 12,154 staff
  o 40,000 students

• Infrastructure
  o 200 campus buildings
  o 40 residence halls and apartment buildings for students
  o LA Coliseum

• Support & Services
  o Facilities Management Services
  o 375 employees
  o 300,000 CAD files
University of Southern California
City of Los Angeles Issues Draft EIR for USC Development
Largest Project in South L.A. Will Create 12,600 New Jobs; Generate $5 Billion Impact

LOS ANGELES — May 27, 2010 — The City of Los Angeles today released the Notice of Completion of a draft Environmental Impact Report for the University of Southern California development project that would create a mixed-use housing, retail, academic and entertainment complex adjacent to USC’s University Park campus.

Upon full build-out, the project will create an estimated 12,600 jobs and generate more than $1 billion in construction-related economic impact. A projected $3.8 million in tax increment to the Community Redevelopment Agency through year 2030 would make this the single largest addition of incremental tax revenue in South Los Angeles.
Spatial @ USC

• USC
  o Dornsife College
  o Graduate School
  o 17 Professional Schools
  o $3.5 billion annual budget

• Spatial Sciences Institute
  o 17 faculty
  o 14 staff
  o 232 GIST graduate students
  o 7 GeoDesign majors
  o 5 Spatial Studies minors
  o Manage Esri site license
  o $2.5 million annual budget
Mapping Historic Buildings
Mapping Historic Buildings (2)
Mapping Historic Buildings (3)
USC Walking Tour (2)
3D Routing | Visualization
3D Routing | Visualization

- Data Preparation and Acquisition
  - University Park Campus
  - Step 1 – Simplify building footprint polygons (ArcGIS)
3D Routing | Visualization

- Data Preparation and Acquisition
  - Step 2 – Subdivide these polygons into parts (ArcGIS)
3D Routing | Visualization

• Data Preparation and Acquisition
  o Step 3 – Take photographs
  o Step 4 – Crop images (CityEngine)

Almost ideal

Not ideal, but useful

Good
3D Routing | Visualization

- Data Preparation and Acquisition
  - Step 5 – Update or add building attributes (ArcGIS)

**Normal building**

- BASEELEV = BLGHEIGHT of the base building
- ROOFHEIGHT = 0
- MFHEIGHT = 0
- ROOFANGLE = 0
- ROOFTYPE = FLAT

**Additional structures on top of the building**

- GROUNDELEV = 0
- ROOF ANGLE
- BLGHEIGHT
3D Routing | Visualization

3d_example.mp4
Campus Tours | Geocaching

• Welcome Week
  o 2,650 new students every fall
  o 300 new students and 500 junior college transfers every spring

• Orientation Programs
  o Move-In Day
  o Registration
  o Signature Events
Reality Check LA (2002)

http://www.youtube.com/watch?v=-aHglh6m3ns
Other Players

- Keck School of Medicine
- Price School of Public Policy
- School of Architecture
- Viterbi School of Engineering

Burcin Becerik-Gerber
Questions ...

Project for Public Spaces
http://www.pps.org/

Placemaking plans

City-wide strategic plans

Capacity building and cultural change

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