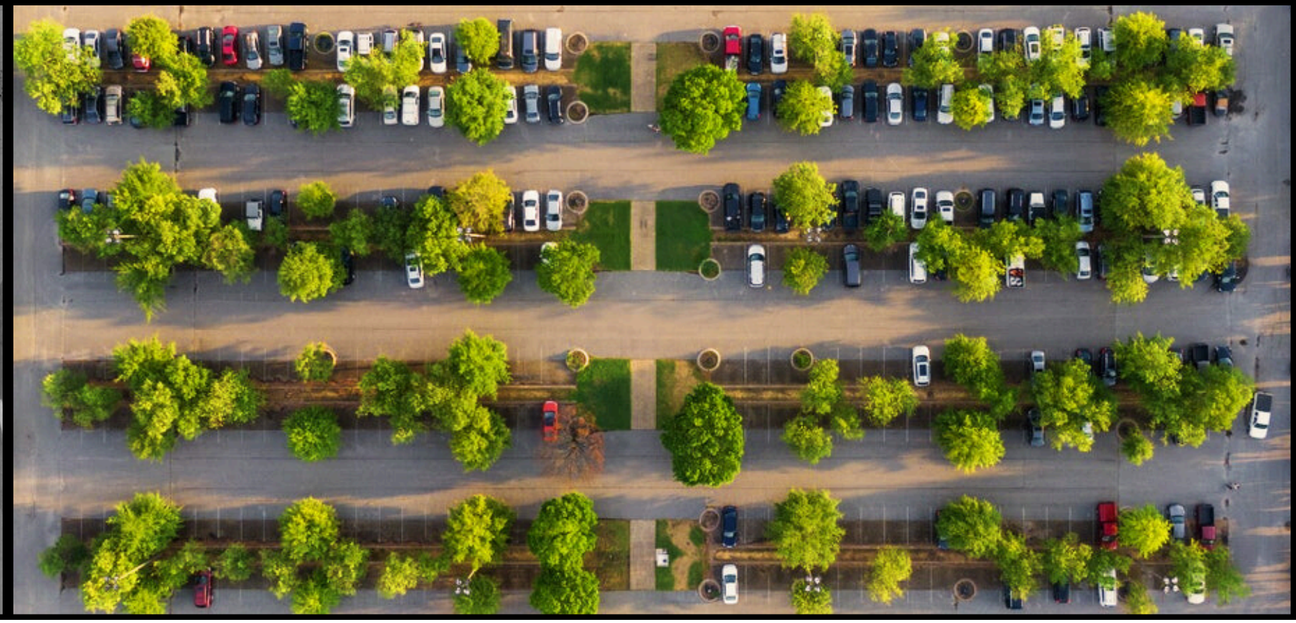


Greening Urban Spaces: Retrofitting Existing Parking Lots

Naomi Sasser, CARTEEH intern at Texas A&M Transportation Institute

Mentor: Dr. Tara Ramani

Texas A&M Transportation Institute

Background

If all parking lots in the United States were consolidated, they would take up an area of land estimated to be **the size of Connecticut and Massachusetts combined** (Davis et al., 2010).

Texas A&M Transportation Institute

Background

Parking Minimums

Vehicle Reliant Infrastructure

Private Vs. Municipal

Texas A&M Transportation Institute

Parking Lot Characteristics

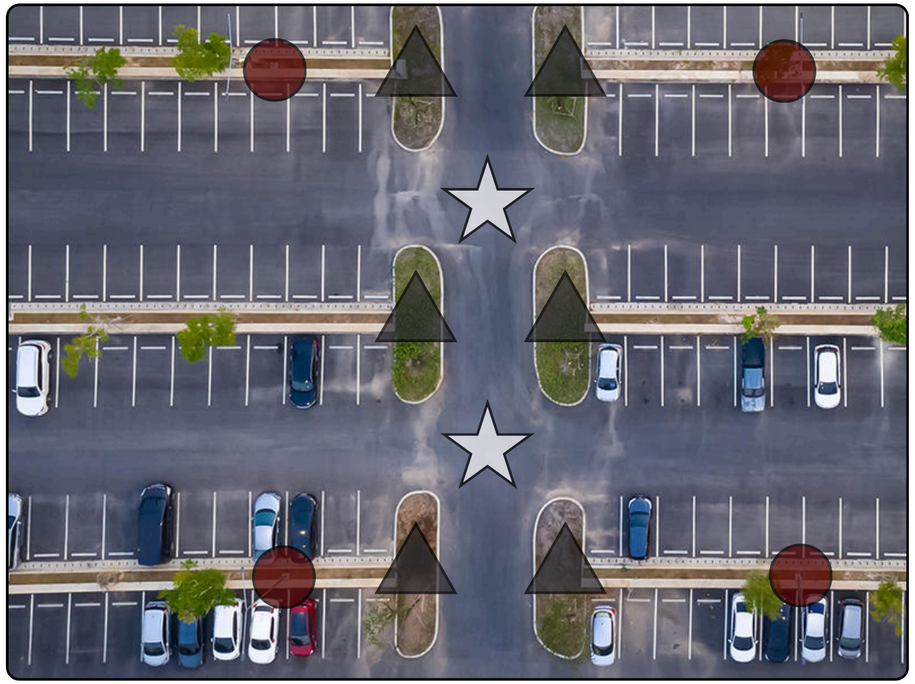
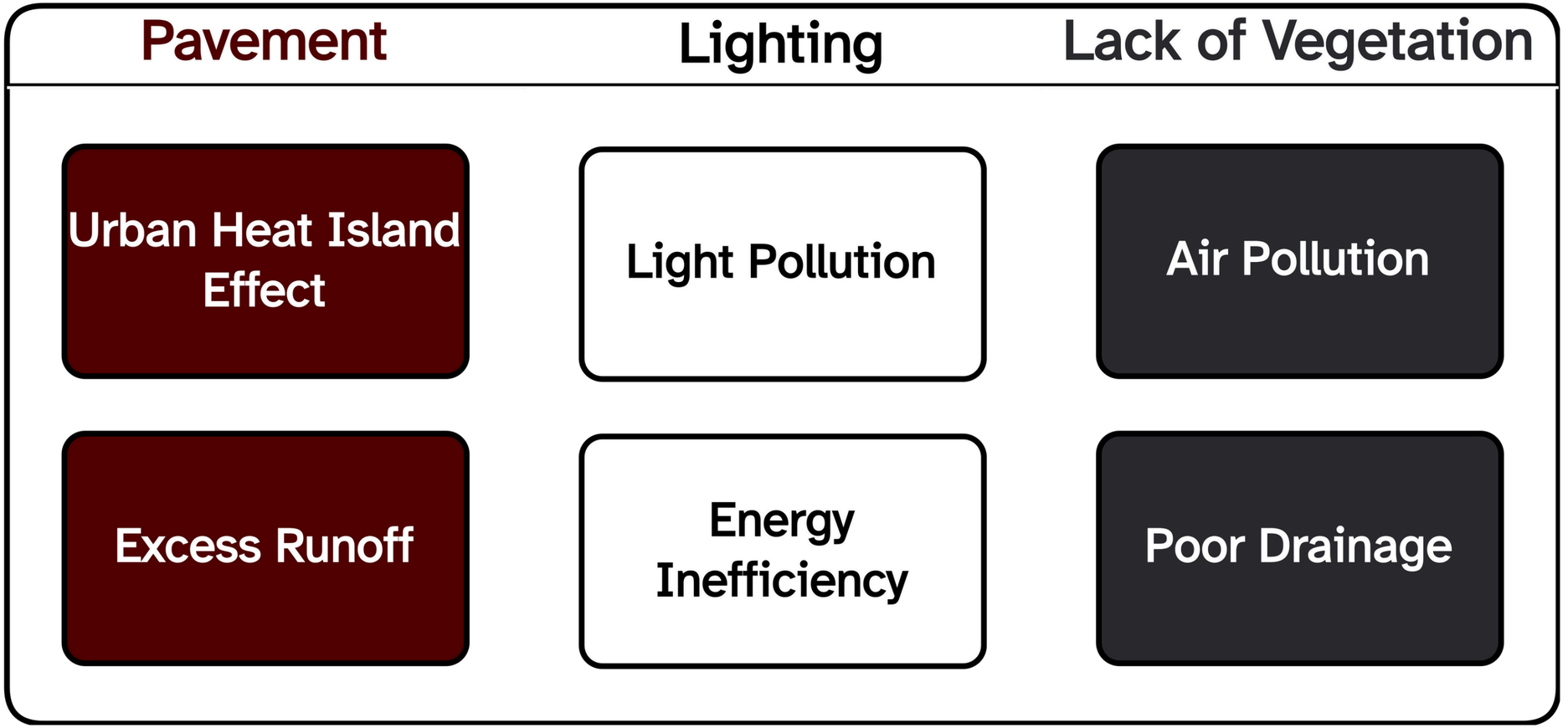


Photo of a standard parking lot

Photo of a parking lot at TTI-Rellis

Texas A&M Transportation Institute

Environmental Impacts



Texas A&M Transportation Institute

What is the Solution?

Reconstruction vs. Retrofitting

- Costly
- Time Consuming
- Resource Intensive

- Inexpensive
- Efficient

Texas A&M Transportation Institute

Retrofitting Pavement

Pavement Retrofitting Variables			
	Maintains Roadway	Guaranteed High Albedo	Cost Effective
Resurfacing	✓		✓
Reflective Paint		✓	

Resurfacing

Reflective Paints

Texas A&M Transportation Institute

Retrofitting Lighting

Side by side parking lots lit by LED and HPS lights (*LED outdoor area lighting fact sheet, 2008).*

- LED Replacement
- Frequency & Brightness
- Timing

Texas A&M Transportation Institute

Retrofitting Lack of Vegetation

- Shade Bearing Trees
- Perennial Vegetation
- Shading Structures

Texas A&M Transportation Institute

Recommendations

Assess Individual Project needs

Modify Future Parking Lot Design

Further Parking Lot Research

Texas A&M Transportation Institute

Thank you!

Questions?

Texas A&M Transportation Institute