

Abstract

The impact of architectural features in urban settings reveals priorities for its residents and the integration of social and natural environments. Good design implies not only aesthetic and economic indexes but also the promotion of healthy lives as it has been estimated that 23% of global deaths are related to the environments in which people live. We aim to characterize the most prevalent architectural features of Cameron County, Texas streetscapes and analyze their role in health promotion and healthy aging.

Hypothesis

Cameron county is the second county with the largest population in the Rio Grande Valley with significant residential and commercial areas, therefore we proposed the following hypotheses:

- Cameron county has a homogeneous architecture and streetscaping.
- A car-centric urban planning influences the streetscaping features

Methods

We studied several design attributes of the streetscapes in the cities of Brownsville, Harlingen, South Padre Island, Port Isabel, Rancho Viejo, and San Benito in Cameron County, Texas. The following elements were included:

- 1.- Site connectivity with context: Interrelationship of buildings, and open space per block.
- 2.-Pedestrian quality: parking lots along street fronts, open spaces, sidewalks, and streetscaping, and presence of utilities, dumpsters, and service areas.
- 3.-Scale of buildings: Physical design including setbacks, stepbacks, modulation, and human scale.
- 4.- Architectural elements: balconies, details, entries, roofs, colors, materials, ornaments, porches and windows.
- 5.- Landscaping: Type of biophilic elements and vegetation as framing views or providing shade.
- 6.- Signage: Commercial, cultural, wayfinding, and whether is appropriately scaled and consistent in character with the project's overall design.

Results

Some of the most frequent general features:



Figure 1. Scale of buildings, Brownsville
Most buildings are at human scale, with few buildings over 5 floors.



Figure 2. Pedestrian quality, Brownsville
Urban streetscapes are mostly designed for motorists and not for pedestrians.

Results



Figure 3. Site connectivity with context, Brownsville
There is little interrelationship between open spaces and buildings. Parking lots are usually in front of buildings.



Figure 5. Commercial architectural elements, Harlingen
In retail store buildings, we have the same style but with variation in the façade. The distribution of the spaces and the essence of the buildings, it's the same. We can find the same typology of store open space without ornamentation. The parking and the functionalism are the protagonist in the design.

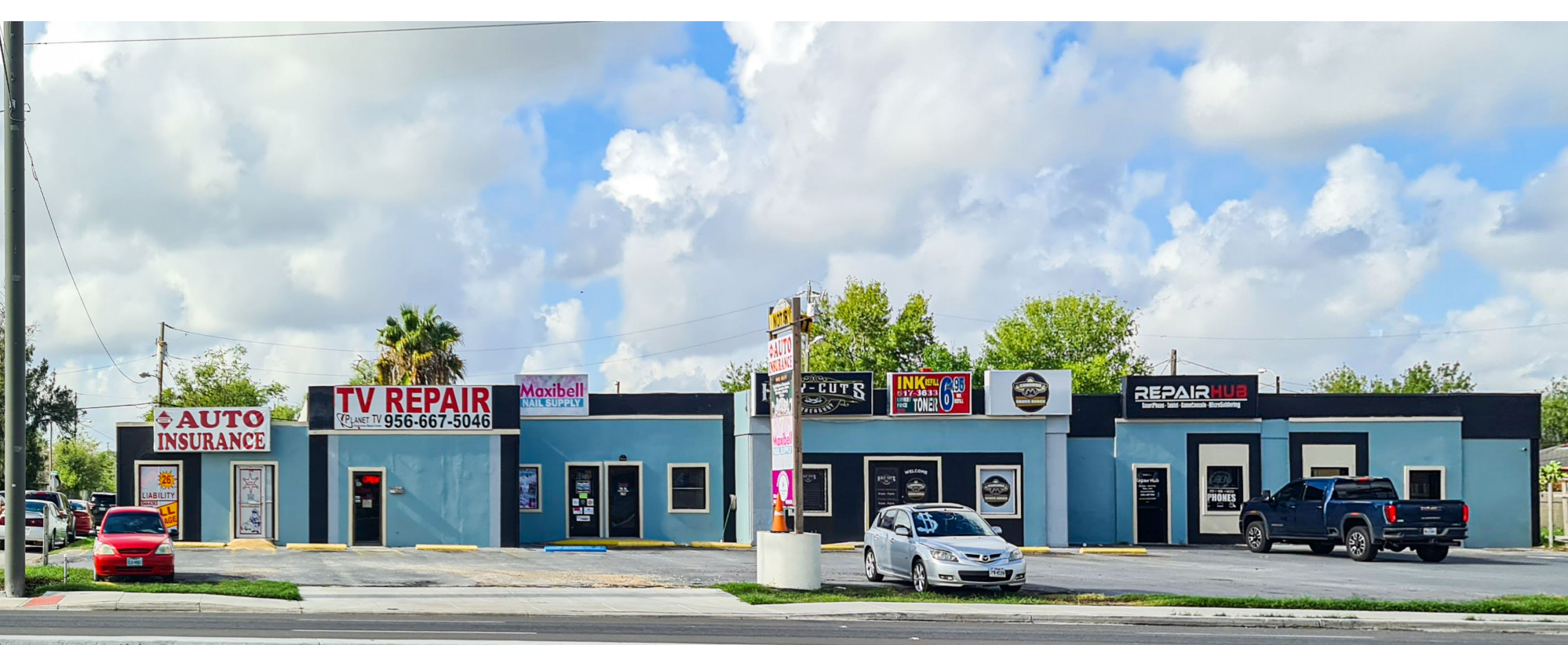


Figure 7. Signage, Harlingen
Most signage is commercial and does not enhance building character or the pedestrian experience.



Figure 9. Architectural Elements, Harlingen
The color and the material predominant in the residential buildings in the Rio Grande Valley are wood and pastel colors. Another characteristic element in the houses is the fences.



Figure 4. Residential architectural elements, San Benito
The most common residential architectural style is Ranch-Style house characterized by single-story, open space concept, almost non-existent ornaments, and low-pitch rooflines.



Figure 6. Landscaping, Brownsville
The tall palms characteristic of the region add scale to street edges; however, their canopies are high and small, and few provide shade.



Figure 8. Commercial architectural elements, Harlingen
Blank walls and the arcs in the facade are common, with few exhibiting architectural features that enhance streetscapes.



Figure 10. Architectural Elements, Harlingen
The porch is a characteristic element in the current houses in Cameron County.

Conclusions

The design of streetscapes is essential to creating safe, appealing environments that engender pedestrian activity. We identified the most frequent typologies of architectural design in Cameron County. In our assessment of the architectural features, we identified the homogeneity of the streetscape and the car-centric urban planning across the different cities assessed. This information will be particularly relevant to built environment policy and decision-makers, as well as to community residents and researchers, interested in understanding the complexity of influences on urban health.

Future Studies

- Group and rate the architectural features in the different cities of Cameron County with the purpose of creating a rating value for each city.
- Evaluate the different Architectural Features in other Counties of Rio Grande Valley.

Acknowledgements

Research reported in this publication was supported by the National Institute on Aging of the National Institutes of Health under awards DP1AG069870, P30AG059305 and 1P30AG066546-01A1. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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