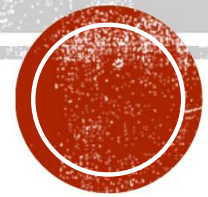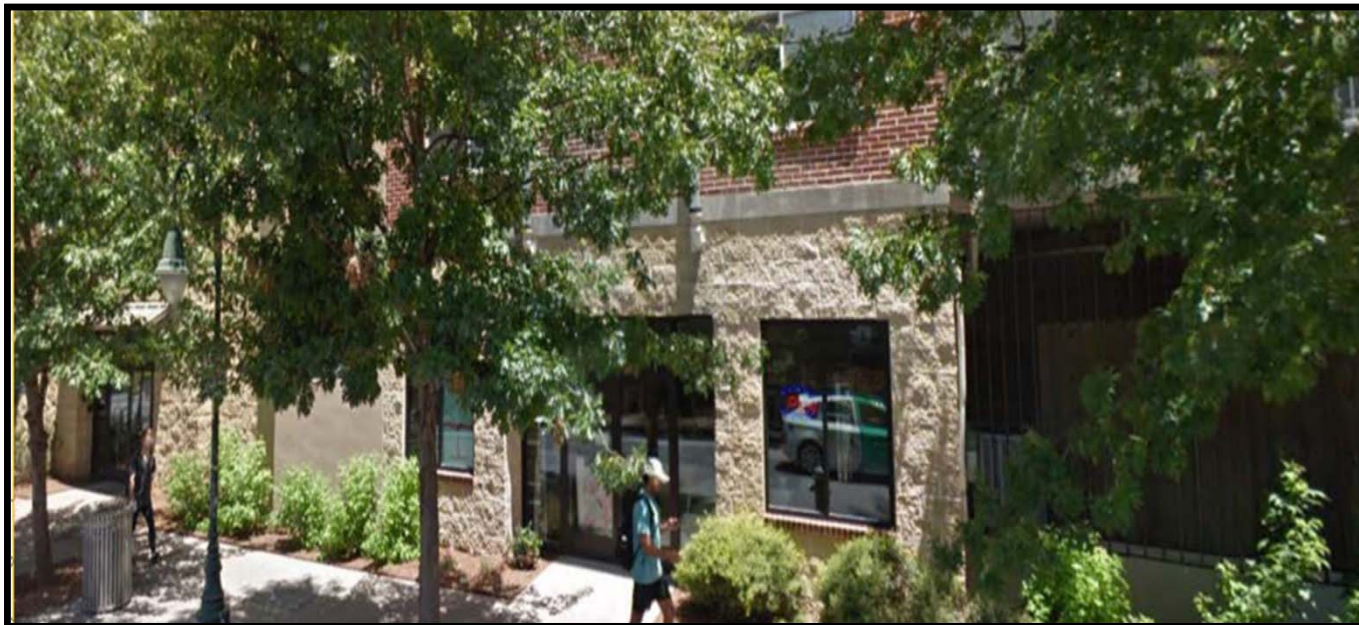# FUNCTIONAL GREEN

FUNCTIONAL GREEN

Imagine Austin Core Principles

- Integrate green into the city

- Sustainably manage water, energy, and other environmental resources

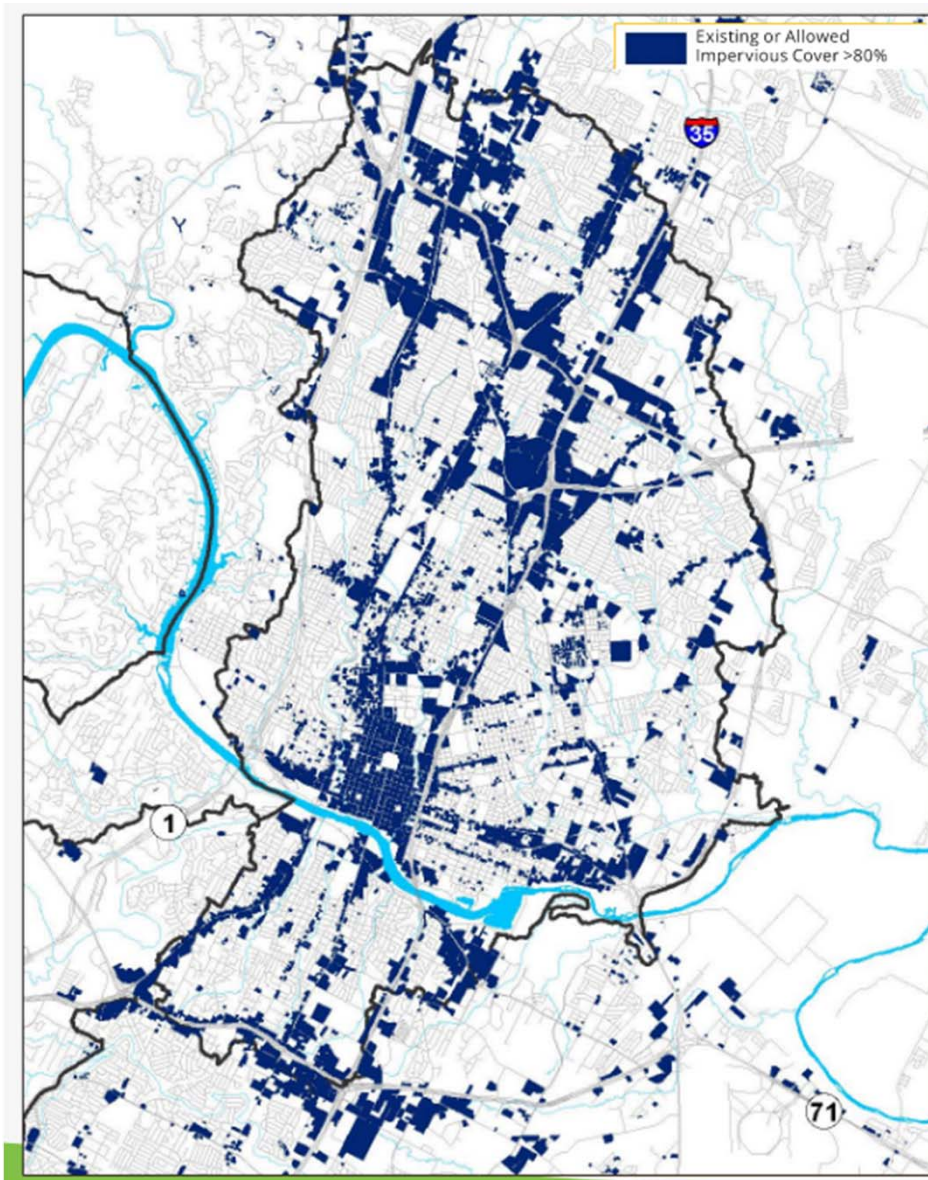- Develop as an affordable and healthy community

Council Resolution #20220609-061

Implement Functional Green … which requires green infrastructure in urban settings where traditional landscape requirements are not possible.

2

③ HOW IT WORKS

Existing or Allowed Impervious Cover >80%

APPLICABILITY

In an **Urban watershed**, for a site with a zoning impervious cover limit greater than 80% as allowed in LDC 25-2.

- Applies to qualifying DMU & CBD sites

In a watershed other than Urban, for a site with total allowable impervious cover greater than 80% gross site area as per LDC 25-8.

4

Landscape element		Multiplier
	PLANTINGS	
A	Existing tree	0.8
B.1	Large, newly planted tree (mature width 40' or greater)	0.6
B.2	Medium, newly planted tree (mature width 20-39')	0.5
B.3	Small, newly planted tree (mature width 10- 19')	0.4
C.1	Large shrubs, ornamental grasses, or perennial forbs	0.3
C.2	Small shrubs, ornamental grasses, or perennial forbs	0.3
D	Groundcover	0.2
E	Turf	0.1
F	Vegetated wall	0.5
	SPECIALIZED MEDIA	
G	Intensive vegetated (green) roof media (depth 12" or greater)	0.6
H.1	Extensive vegetated (green) roof media (depth 6-11.9")	0.5
H.2	Rain garden Media	0.3
	ADDITIONAL ELEMENTS	
I	Irrigation with alternative water source	0.2
J	Porous pavement	0.2
K	Suspended pavement system	0.2
	BONUS OPTIONS	
L	Bonus: Pollinator resources	0.1
M	Bonus: Publicly Accessible Green	0.1

MULTIPLIER TABLE

Target score = 0.3

Multiply the square feet, or equivalent square footage where applicable, of each landscape element by the multiplier provided for that element.

Add together all the products calculated under the Multiplier Table to determine the Functional Green numerator.
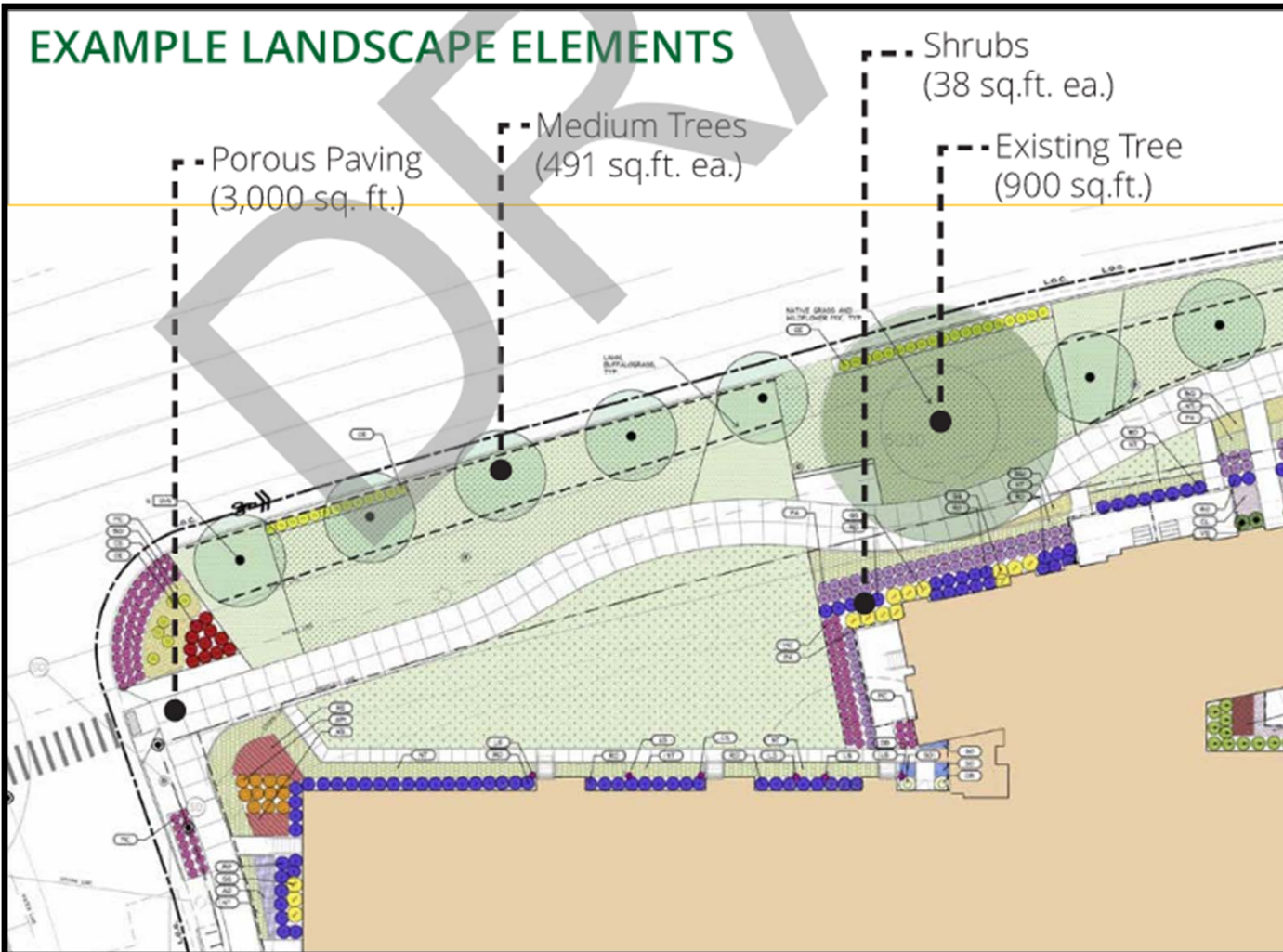
If multiple elements listed on the Multiplier Table occupy the same area, count the full square footage or equivalent square footage of each element.

EXAMPLE LANDSCAPE ELEMENTS

Shrubs (38 sq.ft. ea.)

Medium Trees (491 sq.ft. ea.)

Existing Tree (900 sq.ft.)

Porous Paving (3,000 sq. ft.)

SCORE

Landscaping elements in the **right-of-way** between the lot line and the roadway may be counted.

> The right-of-way is not included in the total site area.

Elements provided to satisfy **any other requirements** of another City of Austin regulation or rule may be counted.

FUNCTIONAL GREEN DEVELOPMENT PROCESS

Analyses & Case Studies by the CodeNEXT consultant team

Heather Venhaus, Regenerative Environmental Design

Amy Belaire, PhD

Ed MacMullan and Sarah Reich, ECONorthwest

DEVELOPMENT PROCESS

Research provided a **rating** for each landscape element based on its **ecological** and **economic** performance. The ratings indicate the performance of each landscape element relative to the others.

9

LITERATURE REVIEW & ANALYSIS

Reviewed research from **120 published studies**

Reviewed **data** on each of the landscape elements

1. Biophysical benefits
2. Economic values
3. Beneficiaries
4. Costs of implementation

Technical and **economic** analysis of landscape elements

- Range of the likely biophysical benefits and economic costs and benefits
- Estimated performance

PERFORMANCE CRITERIA

Biophysical

Ecosystem services

1. Microclimate regulation and mitigation of urban heat island effects
2. Carbon storage and sequestration
3. Air pollutant removal
4. Stormwater retention and runoff reduction
5. Water filtration
6. Biodiversity benefits

Economic

Property development and use

1. Human health and well-being
2. Effects on property values
3. Effects on developable area

12 CASE STUDIES

Case studies rated selected test sites using the FG score.

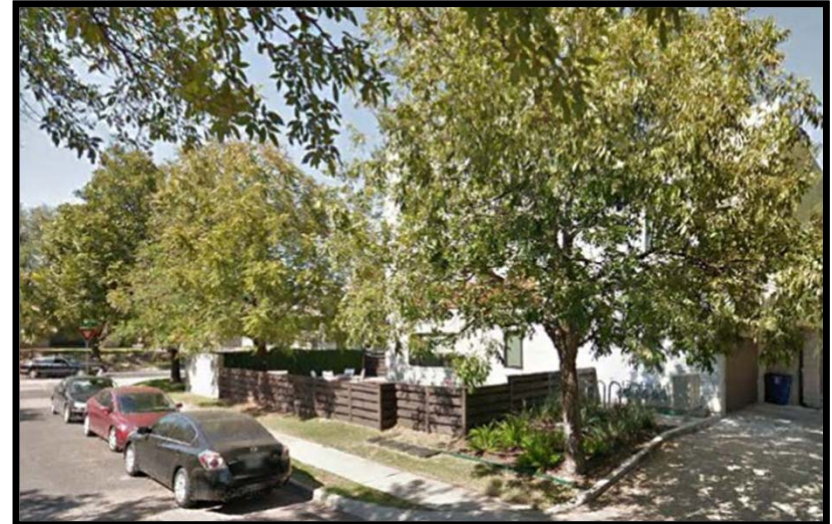# STANDARD LANDSCAPE
VILLAS OF 55TH
502 W 55TH STREET

- Size: 0.28

- IC: 59%

- **FG Score: 0.44**

Landscape elements:

- Existing trees (1,257)

- Planted trees (7,775)

- Shrubs (813)

- Groundcover (417)

- Turf (5,424)

- Native plants (1,257)

STANDARD LANDSCAPE
BALCONES RANCH APARTMENTS
13145 N US 183 HIGHWAY

- Size: 12.17 acres

- IC: 55%

- **FG Score: 0.22**

Landscape elements:

- Existing trees (88,083)

- Newly planted trees (56,549)

- Shrubs (9686)

- Groundcover (11,230)

- Turf (50,060)

- Native plants (88,083)

Existing Trees - 88083.39 Sq. Feet
Shade Tree - 26155.36 Sq. Feet
Building - 112545.52 Sq. Feet
Ornamental Tree - 23075.48 Sq. Feet
Shrub - 9868.91 Sq. Feet

as - 24754.99 Sq. Feet
Detention Pond - 25305.15 Sq. Feet
WQ sand filters - 7842.79 Sq. Feet
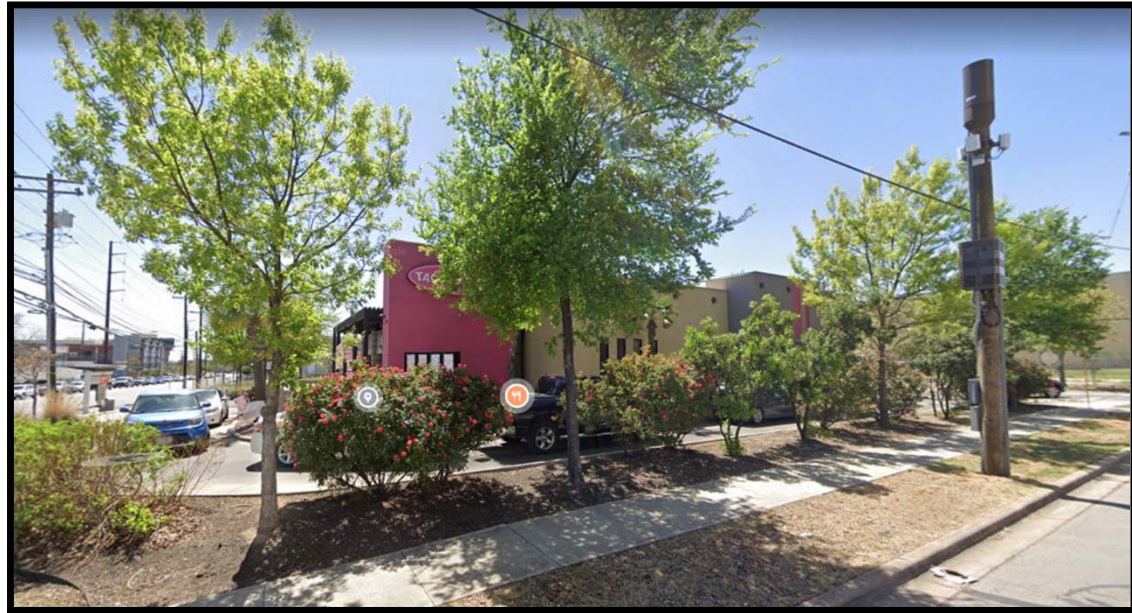
STANDARD LANDSCAPE
TACO CABANA
5242 N LAMAR BOULEVARD

- Size: 0.87 acre

- IC: 72%

- **FG Score: 0.34**

Landscape elements:

- Existing trees (5,281)

- Planted trees (16,258)

- Shrubs (1,059)

- Groundcover (1,934)

- Native plants (5,281)

FUNCTIONAL GREEN LANDSCAPE
SKYHOUSE
51 RAINEY ST

- Size: 1.6 acres

- IC: 86%

- **FG Score: 0.28**

Landscape elements

- Existing trees (2,513)

- Planted trees (23,287)

- Shrubs (1,108)

- Groundcover (4,167)

- Native plants (20,106)

FUNCTIONAL GREEN LANDSCAPE

AMLI
5350 BURNET

- Size: 2.4 acres

- IC: 87%

- **FG Score: 0.13**

Landscape elements

- Planted trees (18,476)

- Shrubs (2,600)

- Groundcover (2,000)

- Turf (2,000)

- Rain garden (1000)
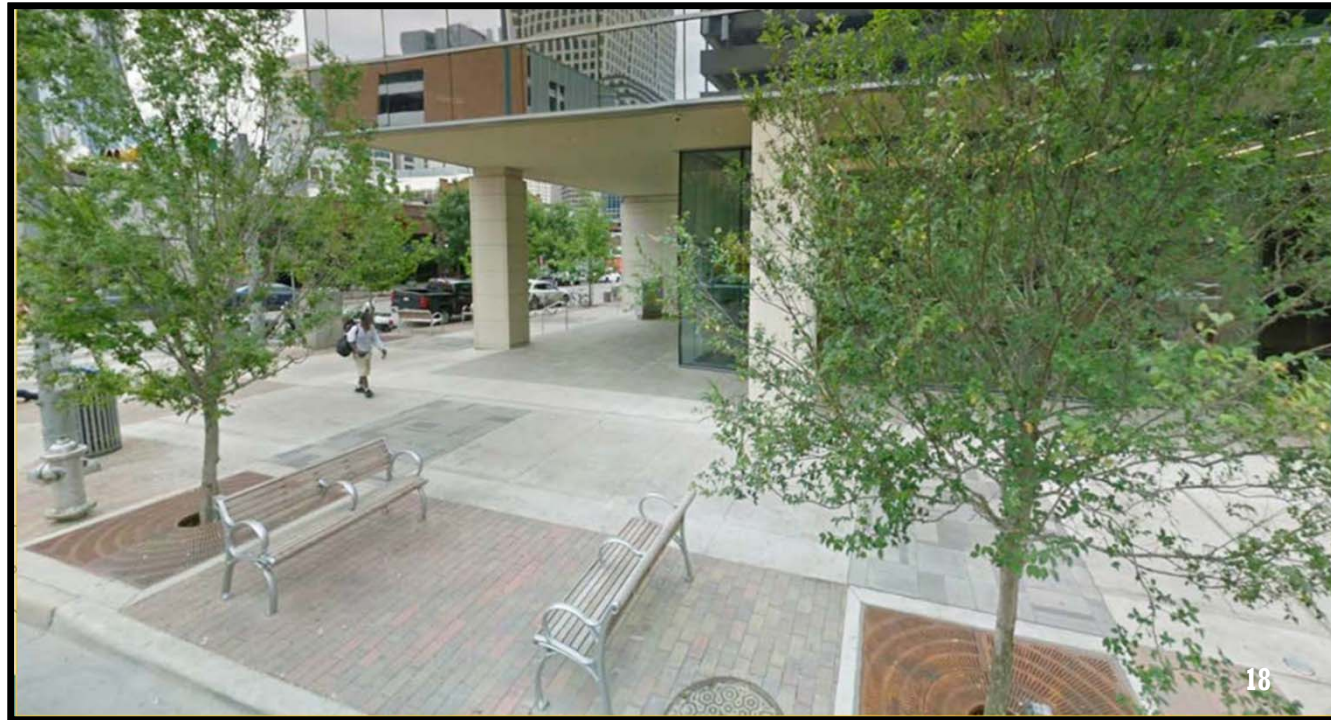
- Native plants (18,476)

FUNCTIONAL GREEN LANDSCAPE
5TH & COLORADO
218 W 5TH ST

- Size: 0.66

- IC: 100%

- **FG Score: 0.16**

Landscape elements

- Planted trees (6,362)

- Native plants (6,362)

FUNCTIONAL GREEN LANDSCAPE
SEVEN RIO
615 W 7TH ST

- Size: 0.75 acre

- IC: 100%

- **FG Score: 0.18**

Landscape elements

- Planted trees (5,655)

- Shrubs (820)

- Groundcover (820)

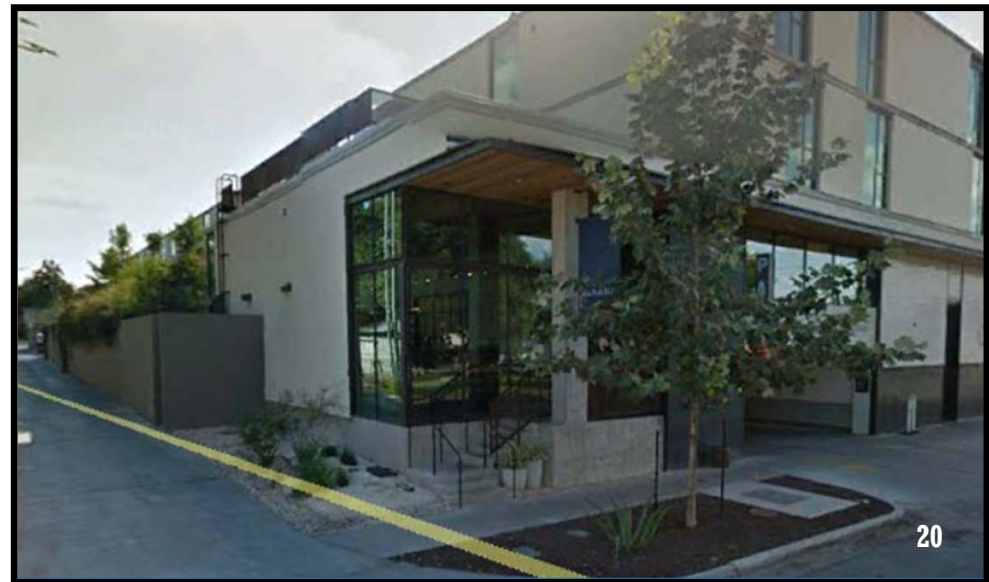- Native plants (5,662)

FUNCTIONAL GREEN LANDSCAPE
SOUTH CONGRESS HOTEL
1603 S CONGRESS AVE

- Size: 0.95 acre

- IC: 95%

- **FG Score: 0.33**

Landscape elements

- Planted trees (19,792)

- Green wall (2,343)

- Shrubs (4,991)

- Groundcover (539)

- Native plants (9,879)

FUNCTIONAL GREEN LANDSCAPE
AUSTONIAN
200 N CONGRESS AVE

- Site Area: 0.65 acres

- Impervious Cover: 100%

- **FG Score: 0.31**

Landscape elements

- Planted trees

- Extensive and intensive green roof

- Shrubs

- Ornamental grasses

- Ground cover

- Cistern

- Alternative water irrigation of the landscape

**Thank you.
QUESTIONS?**