

Skyline Geology: A Self-Guided Walking Tour of Downtown Houston's Buildings (2018)

JONES LOOP – 1.5 MILE (~1 HOUR)



BAYOU PLACE – 510 TEXAS

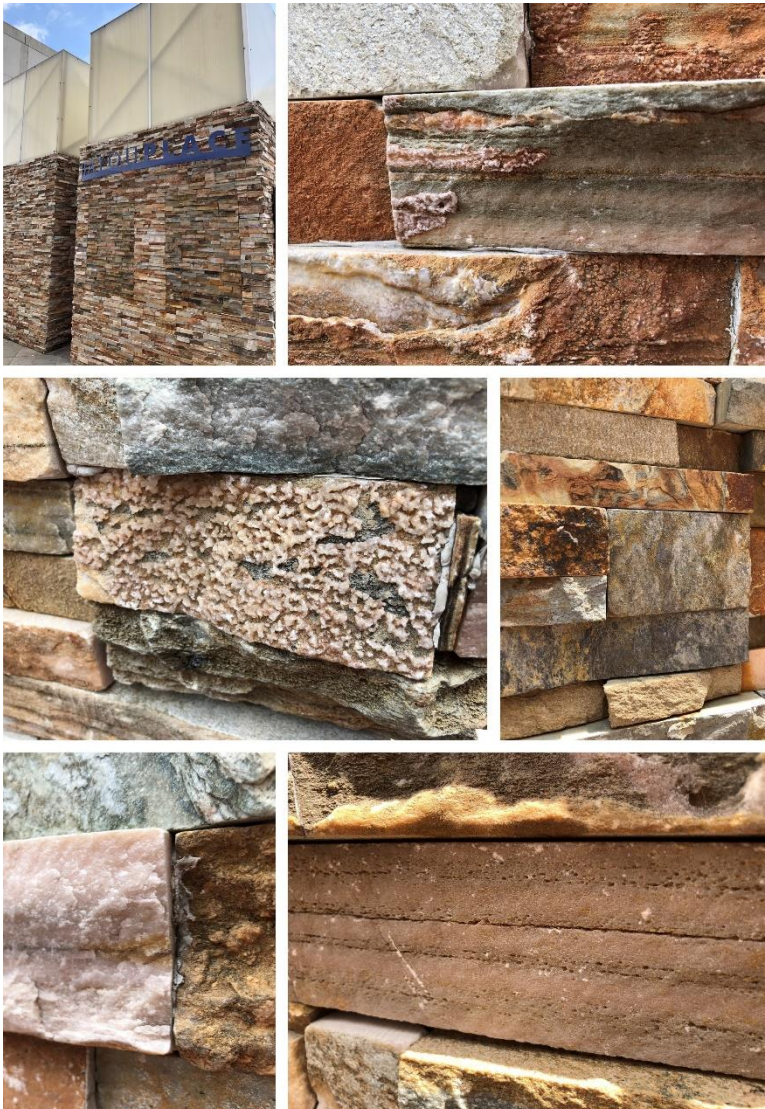


Building Accent 1

Mixed landscaping stones

- Sandstone (fluvial or marine sedimentary)
- Quartzite and/or marble (low grade metamorphic)
- Slate (low grade metamorphic)

Observed: The quartzite and/or marble appears to have dolomite growth on some of the edges (pink anhydrous carbonate mineral). The slate has typical weathering features showing iron oxidation.





Building Accent 2

Unknown dark stone, could be concrete, could be well sorted conglomerate in alternating rough and sliced bricks



717 TEXAS



2



Building/Pavement

Granite (cream and tan, mafic igneous)
 Maybe St. Cecilia granite from Brazil, also known as Giallo Napoleone, quarried in Espirito Santo
 If Giallo, then age is late Neoproterozoic to Cambrian (635-485my)
 Porphyritic texture, alkaline granite containing garnets
 Alkaline granite: Rich in potassium feldspar
 Observed: Moth light and dark varieties of St. Cecilia present. Most of building is light/white St. Cecilia, finer grained dark granite as accent, could even be Caledonia Granite (trade name) from Canada or Brazil.





Building

Observed: Garnets, likely spessartine, a manganese aluminum variety

Pavement

Light and dark granites, unpolished

Light granite is a visual match to building. Dark granite could be Caledonia Granite (trade name) from Canada or Brazil.

Fun Fact

Sharing the same block is the Lancaster Hotel that recently underwent a 10 month renovation post Hurricane Harvey. It is an example of Regency style and in 1984, the hotel received Recorded Texas Historic Landmark status. In 2010, it was accepted into the prestigious Historic Hotels of America representing the Jazz Age.



PARKING LOT AT MILAM/TEXAS



Parking Lot Half-Wall

Granite or Quartz Monzonite (intermediate igneous)

Color matched: Coldspring Academy Black (trade) From Clovis, California (assumed)

Mesozoic, possibly Jurassic (201-145my)

Observed: less than 20% quartz grains, equal amounts of biotite, hornblende, orthoclase and plagioclase feldspar (generally)

CHASE TOWER – 600 TRAVIS



Building

Granite (grey, mafic igneous)

Barre Gray Granite from Vermont/Quebec, Canada

Devonian (419-359my)

Medium grained, even textured, biotite granite containing quartz and orthoclase feldspar. Very weather resistant.

Fun Facts

The granite was shipped to Italy, cut, and shipped back. There's enough granite on the tower to fill 11 football fields. At the entrance of the building is a multi-colored sculpture entitled "Personage with Birds", which was designed by painter and sculptor Joan Miró.





Pavement

Pink Laurentian granite from Canada
PreCambrian (>541 my)
Veined (bottom left)

Fountain

Granite (mafic igneous)
Maybe Barre Gray Granite, looks very similar

Pavers/Pavement

Granite (mafic igneous)
Pink mineral is potassium feldspar
Veined, some composition/texture zoning
(bottom right)



JONES HALL – 615 LOUISIANA



5



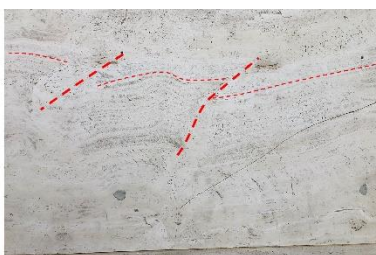
Building

Tufa (Travertine, continental sedimentary)
Travertino Romano (trade) from Tivoli near Rome
in Italy

Also known as Romano Classico or Travertine
Classico

Tufa/Travertine: formed by algae/calcium
carbonate in hot springs, phytoherms (freshwater
reefs) and thrombolite-stromatolites; not to be
confused with tuff/tufo (igneous)

Observed: stromatolite patterns/precipitation
growth dominant feature (thin dashed lines, left),
some vugs partially to fully filled with more
transparent cement, some soft fault/like
displacement before lithification (thick dashed
lines, left)





Fun Facts

It occupies an entire city block and features a white Italian marble exterior with eight story tall columns. It won the 1967 American Institute of Architects' Honor Award.

Accent

Granite (mafic igneous)



6

PENNZOIL PLACE – 700 MILAM



Building Accents

Granite (pink, mafic igneous)

Sardinian Pink (Rosa Beta) from Alta Gallura area (Tempio, Calangianus, Aggius and Luras) in Sardinia

Upper Paleozoic (Carboniferous and Permian, 359-252my)

Observed: Potassium feldspar (pink), plagioclase feldspar (white), quartz (grey), hornblende (black), and biotite (black).

Fun Facts

The building itself consists of two 495 ft trapezoidal towers placed ten feet apart and sheathed in dark bronze and aluminum. It was named "Building of the Decade" in 1975 by the New York Times architecture critic Ada Louise Huxtable. The base of the Statue of Liberty is also Sardinian Pink Granite from La Maddalena, Sardinia.



BANK OF AMERICA CENTER – 700 LOUISIANA



7



Building/Pavement/Accents

Granite (pink-red, mafic igneous)

Balmoral red granite from Vehmaa-Taivassalo area in Finland (or Sweden)

Precambrian (>541my)

Medium grained, uniform, granite containing brick-red potassium feldspar, dark smoky quartz, plagioclase feldspar, biotite, and hornblende

One rock with 4 finishes

- Building base and rolled moldings polished high gloss finish
- Building honed finished
- Insets hammered finished
- Pavement flame finished



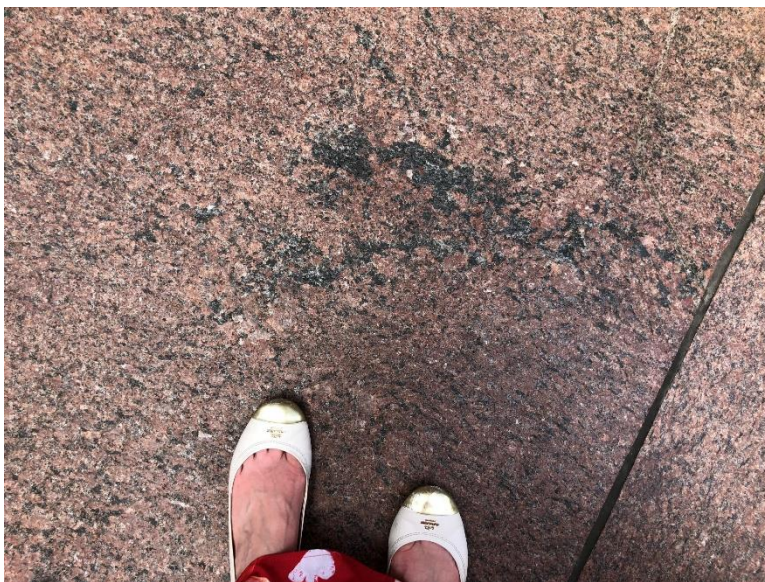
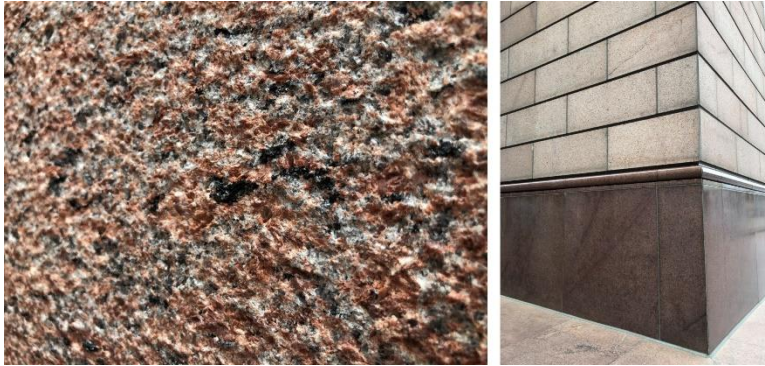
Building

The 4 types of granite finishes on this building

- Building Base: High gloss polished finish enhances a stone's natural pattern and colors
- Building: Honed finish has a smooth surface, buffed or matte appearance but not polished
- Insets: Bush hammered finish artificially creates textured surface
- Pavement: Flame finish is heated retaining the rough texture of the stone but resistant to moisture and shoes in Downtown Houston

Fun Facts

Gables inspired by canal houses of The Netherlands. It represents one of the first significant examples of postmodern architecture construction in Downtown Houston.



BOB CASEY FEDERAL COURTHOUSE – 515 RUSK

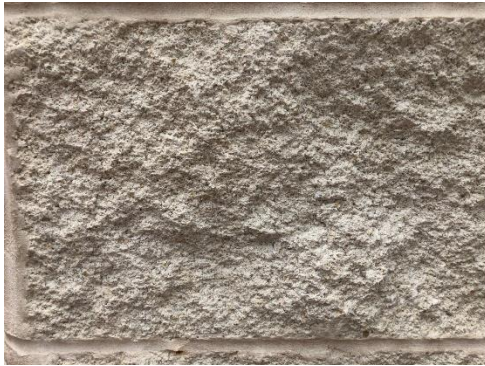


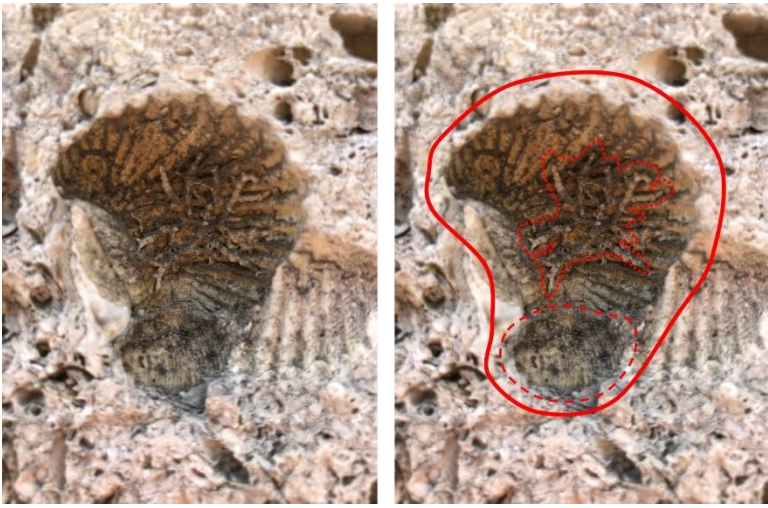
Building

Fossiliferous Limestone (marine sedimentary)
Cordova Shell from Austin (quarry/trade)
Whitestone Lentil (geo)
Walnut Formation
Middle Cretaceous (105my)
Fossils Observed: Trigonina, Turitella, Crinoid,
Rudist, Bryozoan
Bricks appear to be artificial but match
fossiliferous panels in color

Fun Facts

Also found at City Hall in Downtown Houston
and in the National Museum of Natural History in
Washington D.C.





Building
Trigonias with Bryozoan

HOBBY CENTER FOR THE PERFORMING ARTS – 800 BAGBY



Pavement Accent
Granite (pink-brown, mafic igneous)
Could be Baltic Brown (trade) or similar

Sign Accent
Unknown, could be Black Pearl Granite (trade)
from India



BEFORE YOU GO

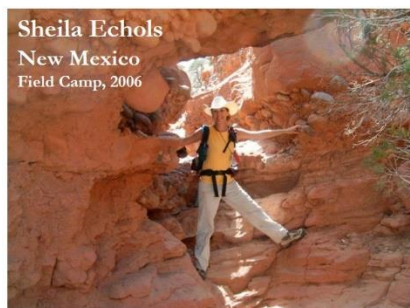
- **Safety**
 - Look up, not at your phone, when navigating downtown
 - Please be mindful of the traffic lights, pedestrian signals, bike lanes, and buses
 - Buses make frequent stops and can sometimes hop curbs
 - Some curbs, pavements, and streets may be uneven
- **Etiquette**
 - Please review the walking guide prior to arriving downtown to maximize time spent on the tour
 - Please be mindful of downtown employees and keep slower pedestrian traffic to the right so they can go about their business
 - Try to walk in pairs if walking around downtown as a group
 - If approached by a homeless person, try to be firm but respectful

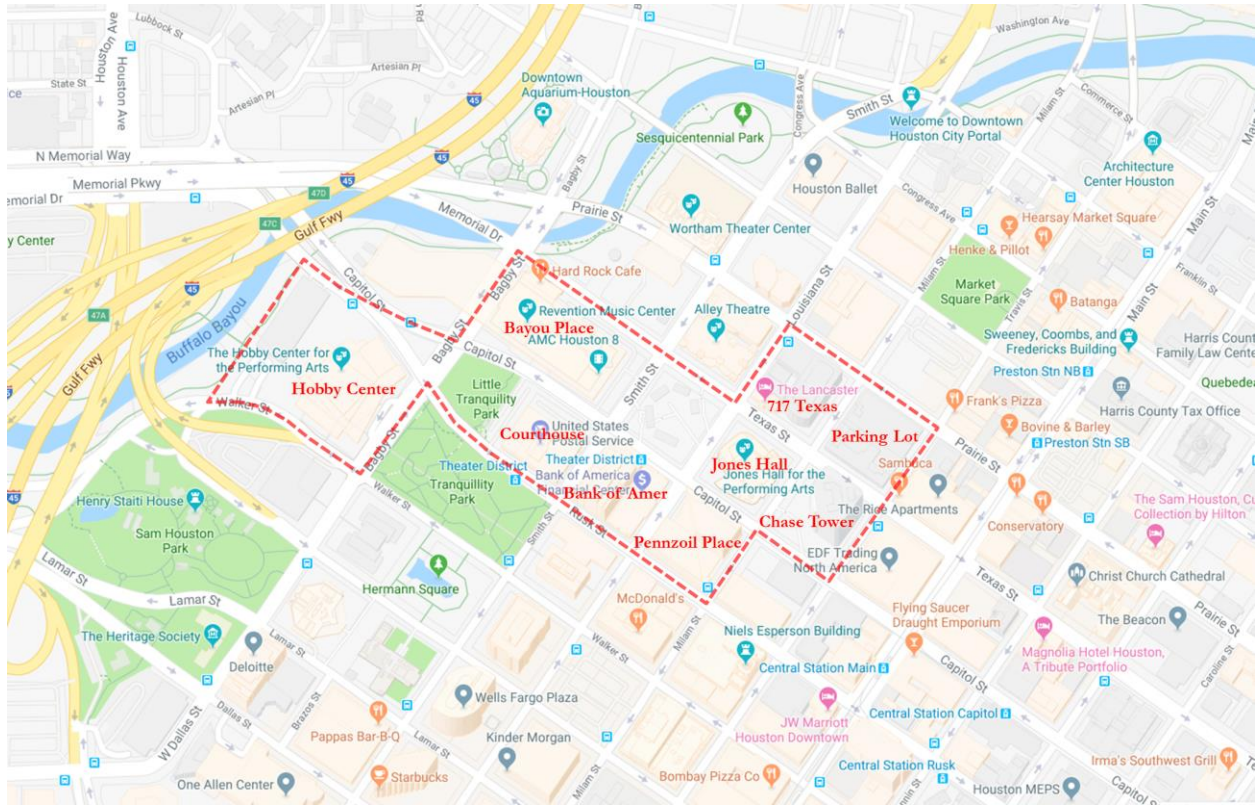
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