National Air and Space Museum
Major Systems / Exterior Envelope Revitalization Project

CLADDING EVALUATION UPDATE

Basis of Design: 3” Thick Tennessee Pink Marble
(formal name is Holston Limestone)

Pros:
• Matches existing exterior cladding in kind (warm color tone and fine linear veining pattern modulates scale of monolithic façade) and intended to match NGA West Building
• Matches existing interior wall cladding that will remain
• High density limestone meets durability requirements with thickness at 3” and properly detailed wall section
• Stone has 100+ year longevity

Cons:
• Additional production time over alternative stones

National Museum of American History (1964)
Holston Limestone (“Tennessee pink marble”)

National Gallery of Art
West Building (1937-1941); East Building (1978)
Holston Limestone (“Tennessee pink marble”)

National Air and Space Museum (1976)
Holston Limestone (“Tennessee pink marble”)

June 8, 2017 (Revised)
National Air and Space Museum
Major Systems / Exterior Envelope Revitalization Project

CLADDING EVALUATION UPDATE

ST CLAIR LIMESTONE

Pros:
- Fine, linear veining pattern comparable to TN Pink
- High density, durable limestone (100+ year stone longevity)
- Production time feasible

Cons:
- Light gray color tone does not match existing pink tone

Other limestone considered (Silver Shadow) found to be too soft for use at building base

ECHO LAKE GRANITE

Pros:
- Pink tone (when dry) comparable to TN Pink
- High density, durable granite (100+ year stone longevity)
- Production time feasible

Cons:
- Fine, linear veining pattern not present (very busy swirling texture that is less compatible with interior Tennessee Pink)
- Darkens considerably when wet

ULTRA HIGH PERFORMANCE CONCRETE (UHPC)

Pros:
- Color and tone customizable
- High density and durable
- Production time feasible
- Can incorporate recycled aggregate salvaged from existing cladding

Cons:
- Manufactured material relatively new – longevity promising but as yet unproven
- Man-made appearance may not be compatible with monumental, iconic buildings on the National Mall

Other man-made materials considered: Engineered (sintered) stone; metals such as titanium. Longevity of these newer materials as yet unproven.

June 8, 2017 (Revised)
National Air and Space Museum
Major Systems / Exterior Envelope Revitalization Project

CLADDING EVALUATION UPDATE

Colonial Rose Granite

Pros:
- Pink tone comparable to TN Pink
- High density, durable granite (100+ year stone longevity)
- Bands of color accents could be arranged in a horizontal orientation
- Production time feasible
- Resistant to blue green algae and pollutants

Cons:
- Fine, linear veining pattern not present

Colonial Rose Granite Mock-up - NASM
National Air and Space Museum
Major Systems / Exterior Envelope Revitalization Project

CLADDING EVALUATION UPDATE

Colonial Rose Granite – Precedent Images

National Gallery of Art East Building Roof Terrace, Washington, DC. Completed in 2016. Colonial Rose Granite is the stone on the right and bottom of the image, with TN Pink visible at left.


National Air and Space Museum
Major Systems / Exterior Envelope Revitalization Project

CLADDING EVALUATION UPDATE

June 8, 2017 (Revised)
National Air and Space Museum
Major Systems / Exterior Envelope Revitalization Project

CLADDING EVALUATION UPDATE

Existing TN Marble East Elevation

TN Marble Mockup North & East Elevations

TN Marble Mockup South & West Elevations

TENNESSEE MARBLE COLOR RANGE KEY


June 8, 2017 (Revised)
National Air and Space Museum
Major Systems / Exterior Envelope Revitalization Project

CLADDING EVALUATION UPDATE

St Clair Mockup
South & East Elevations

Echo Lake Mockup
South & West Elevations

UHPC Mockup
South & West Elevations

June 8, 2017 (Revised)