

Public Art Proposal for City Hall

Heart of Treasure Coast, Port St. Lucie, Florida

Treasures of the Mangrove

Kana Tanaka

Concept:

This suspended glass sculpture transforms the Port St. Lucie City Hall lobby into an imagined underwater world—where schools of fish swim among glowing root-like structures, and fragments of history glimmer below. Inspired by the city's waterways and the mangrove ecosystems that shelter marine life, the artwork reimagines the building's vertical light fixtures as mangrove roots descending into water, framing the space as though visitors are standing beneath the canopy of a living forest.

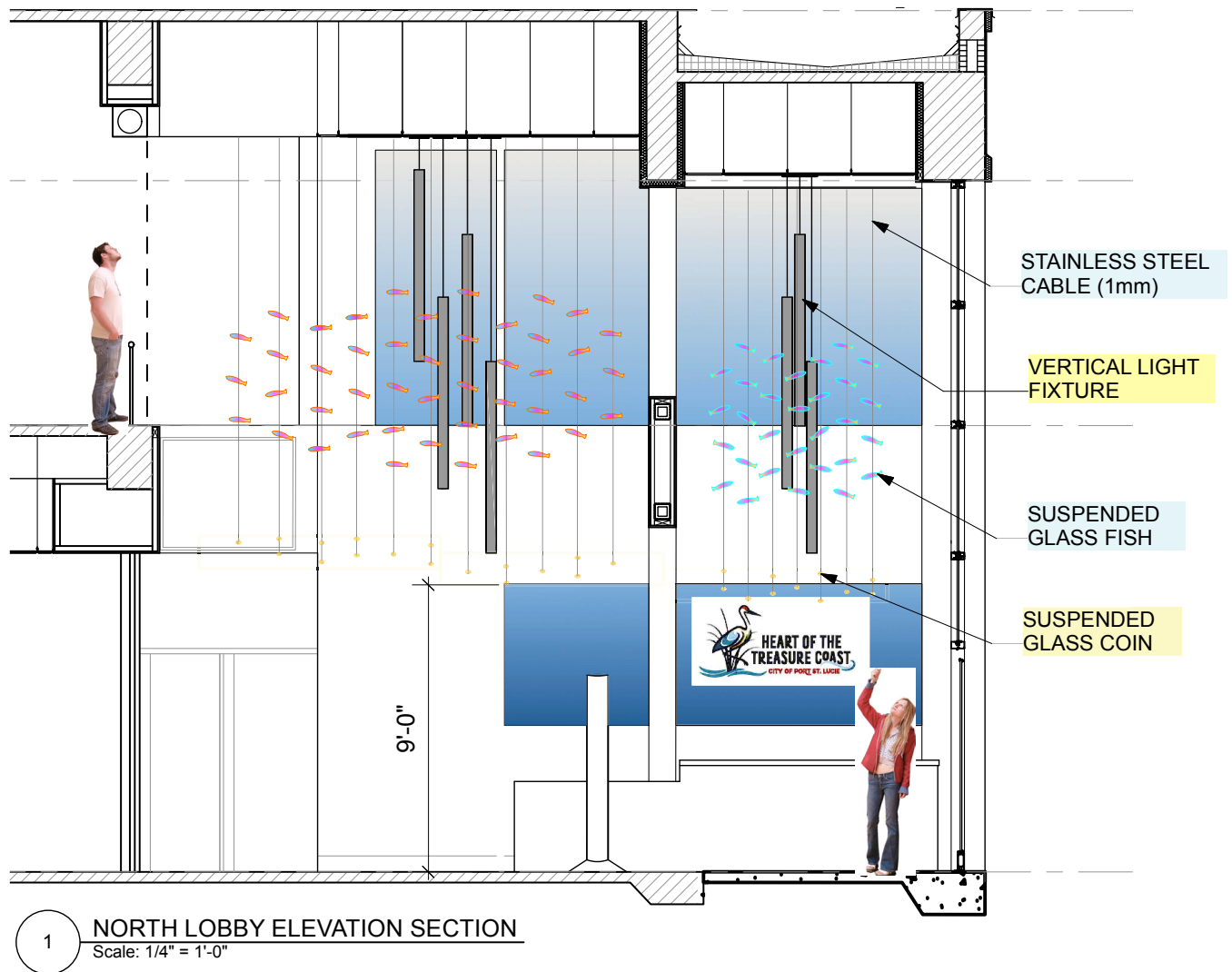


Drawing on Port St. Lucie's place along the Treasure Coast, the coins recall fragments of history while the fish highlight the biodiversity nurtured in mangrove roots. Together, they connect ecology, history, and community—mirroring City Hall's role as both protector and gathering place. Through light, glass, and the play of color, the installation offers an ever-changing encounter that celebrates heritage, ecology, and the city's living present.



Artwork Location:

The suspended glass sculpture will be installed in the north and south lobbies of Port St. Lucie City Hall. Each lobby rises through two stories, with vertical light fixtures that visually anchor the space. These architectural features are reinterpreted in the artwork as luminous “roots,” around which schools of glass fish and glimmering coins are suspended.



The installation is designed to be experienced from multiple vantage points. From the ground floor, visitors will look upward into the suspended forms, as though standing beneath water. From the mezzanine level, which overlooks the lobby, viewers will encounter the fish at eye level and see the coins suspended below, creating a more intimate experience.

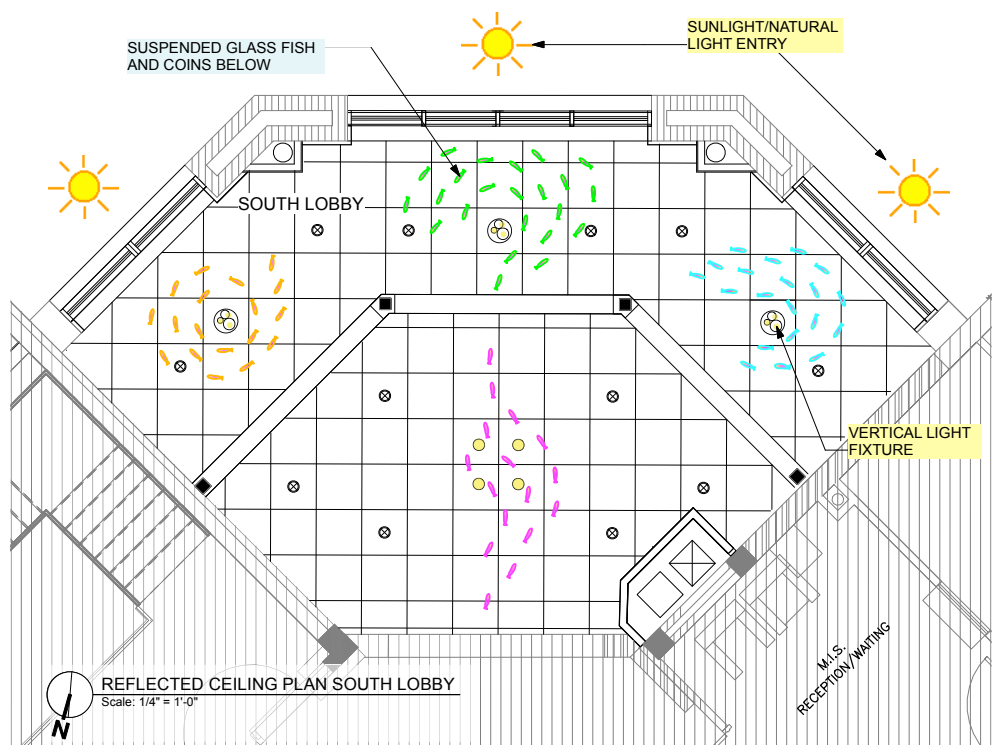
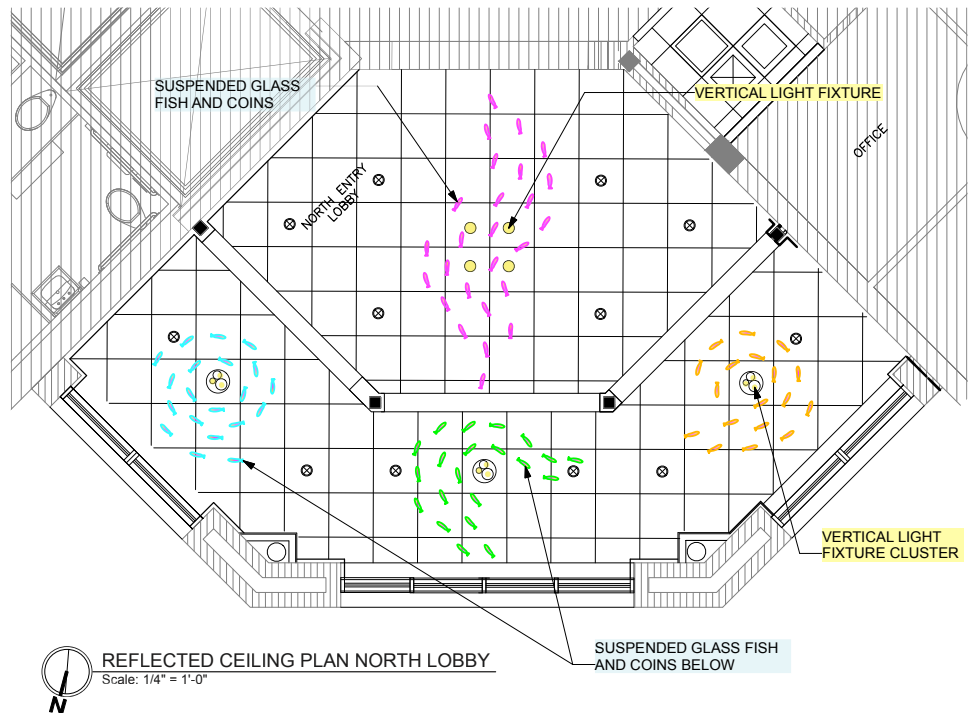
Suspension Units / Connection Points:

The reflected ceiling plan shows the planned connection points for the suspended glass elements across the both lobbies. The installation is organized around **four clusters of ceiling light fixtures** in each lobby: three clusters near the windows, each with three vertical light bars, and a fourth, more widely spaced cluster in the main open area. Fish are arranged to be suspended around each light fixture cluster.

Each cable unit supports 3–5 glass fish and 1–2 glass coins. While the drawings illustrate a total of **162** connection points across the two lobbies, the final installation will feature approximately **650–700 glass fish** and up to **300 coins** throughout the space.

Distribution Across Lobbies:

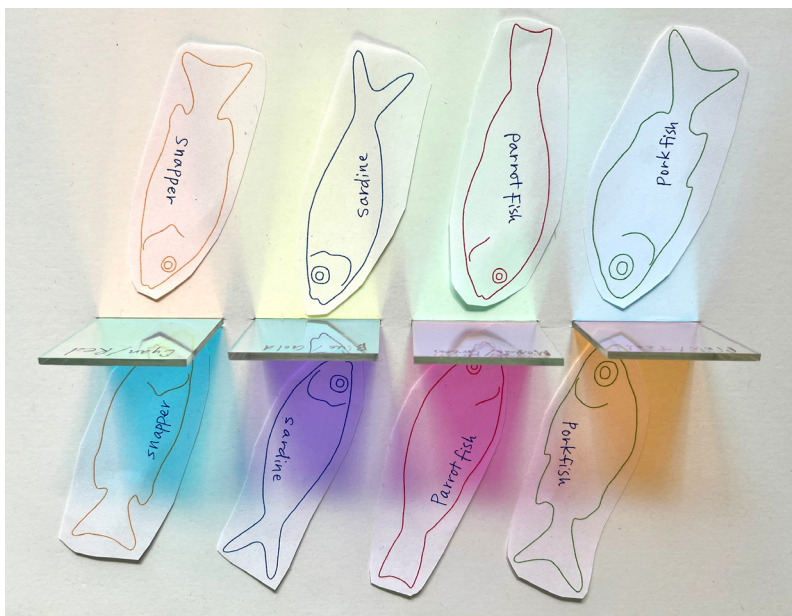
The **North Lobby**, as the main entrance, is treated as the primary focus and contains a higher number of glass fish. The **South Lobby** continues the installation, with more fish positioned near the south-facing windows to take advantage of direct sunlight.



Material and Process:

The suspended fish and coins are crafted from custom-made dichroic glass. The fish come in four distinct colors, representing juvenile species commonly found in mangrove roots along Florida's Treasure Coast: Parrotfish, Porkfish, Snapper, and Sardine.

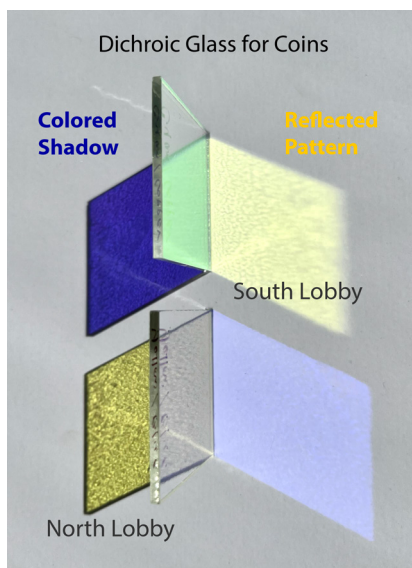
Each fish shape is digitally outlined and cut using a waterjet technique. At the artist's studio, the pieces are then sanded, drilled, and engraved before being kiln-fired at 1300°F on a sand-pressed mold. This slumping process develops the scale-like textures and gentle, fish-like curves, giving each glass form a naturalistic vitality.



Dichroic glass samples (4 colors) showing reflected and transmitted color



Test firing on sand mold



The suspended glass coins remain flat, in dichroic Yellow/Blue for the North Lobby and Blue/Gold for the South Lobby. Some coins may be engraved with patterns, adding texture to the golden-yellow reflections cast onto the walls and ceiling.

Mock-Up: Light Fixtures

To study the interaction between architectural lighting and the suspended glass fish, I contacted the lighting company directly and obtained a fixture based on the architect's specification. Incorporating the actual fixture into my studio mock-up was essential, as it allowed me to evaluate both the light quality and its effect on the suspended glass fish against the white and blue backdrop.

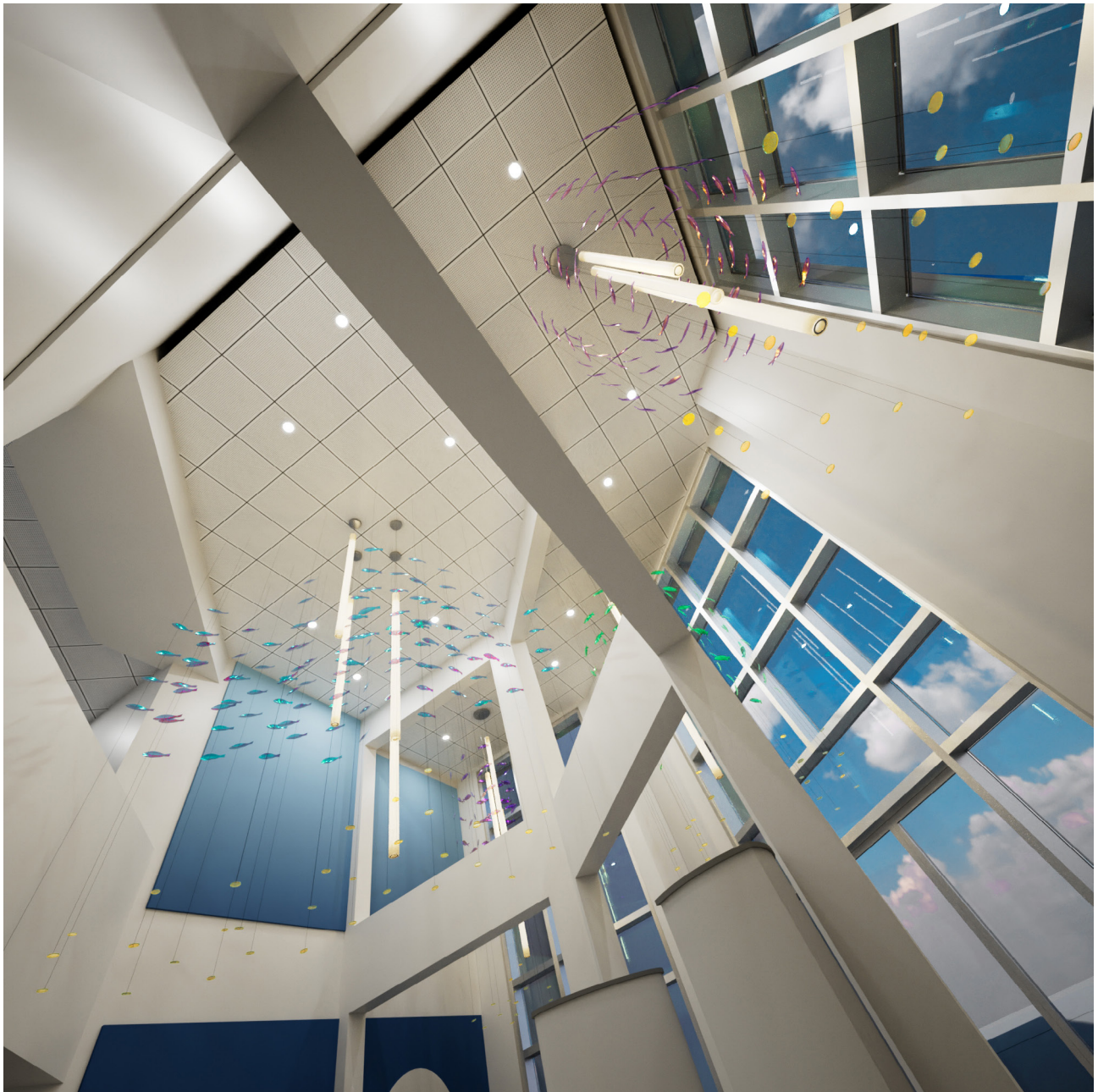


The mock-up revealed the unique color effects of the dichroic glass: while the suspended fish usually display shimmering reflected colors, in areas where the light fixture bar is directly behind them, the reflection disappears, allowing the transmitted color to become visible.

Renderings:



NORTH LOBBY 1 – view from ground level



NORTH LOBBY 2 – view from ground level



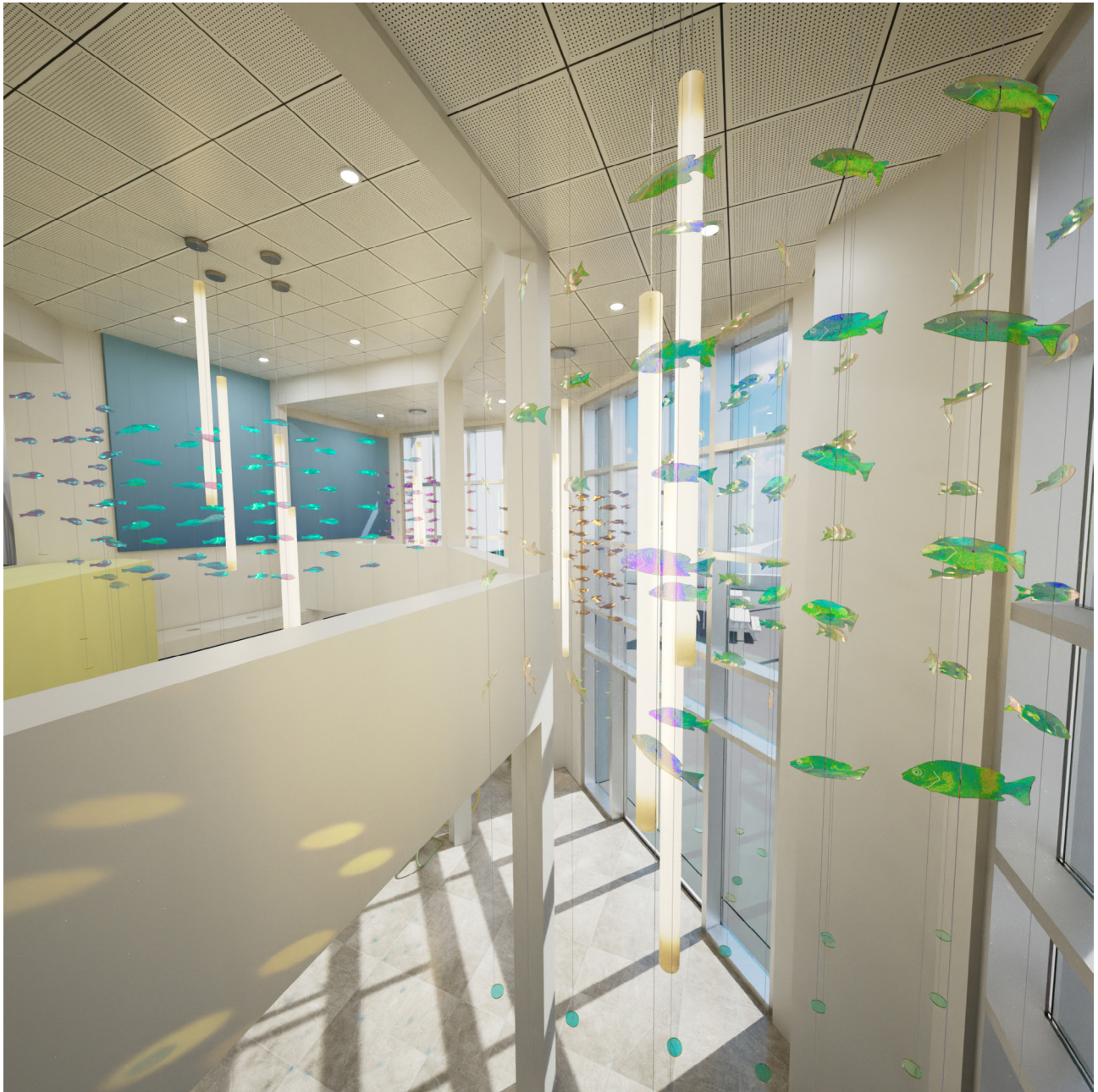
NORTH LOBBY 3 – view from 2nd floor mezzanine



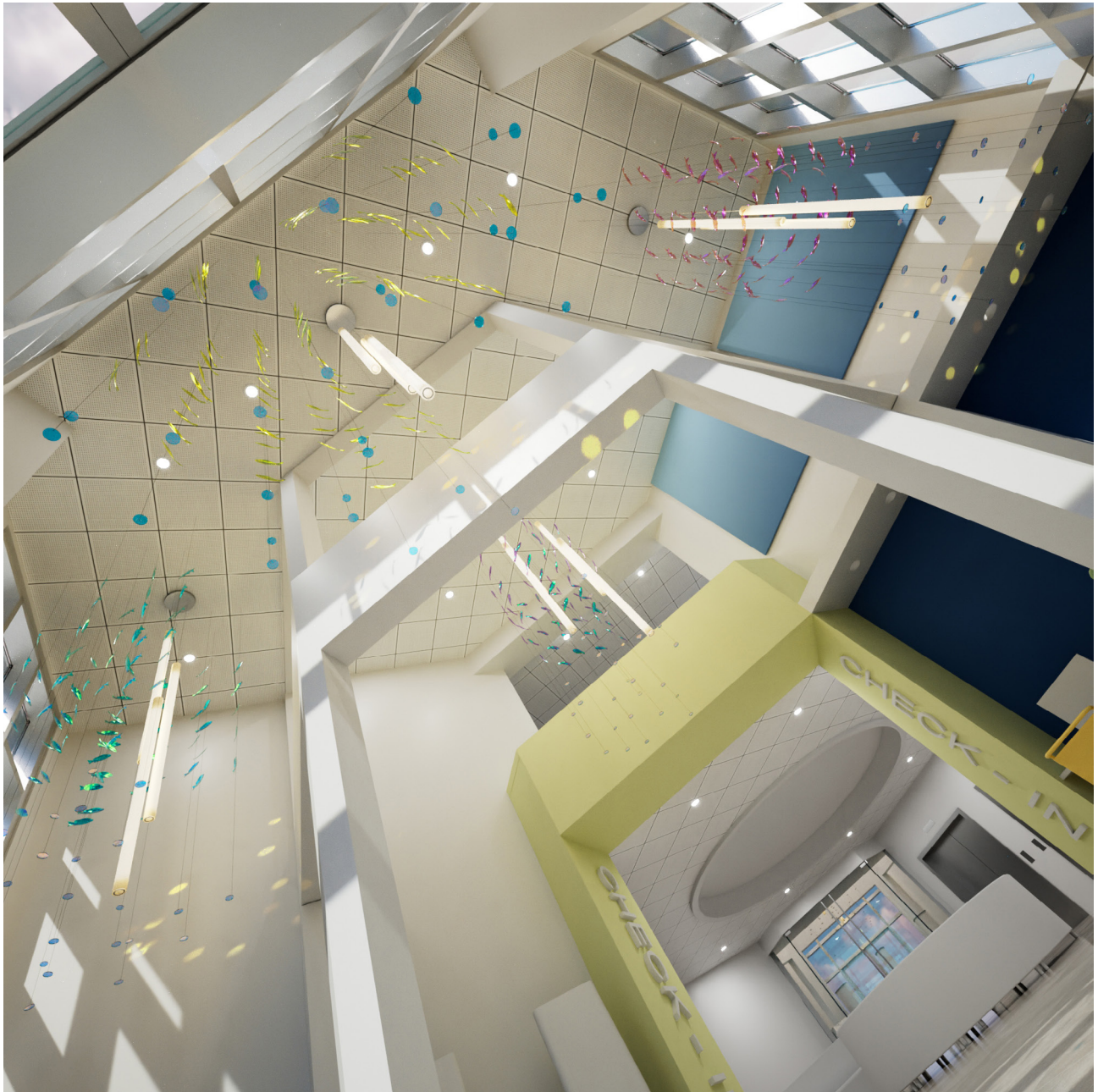
NORTH LOBBY 4 – view from 2nd floor height, shown as an imagined drone perspective



SOUTH LOBBY 1 – view from 2nd floor mezzanine



SOUTH LOBBY 2 – view from 2nd floor height, shown as an imagined drone perspective



SOUTH LOBBY 3 – ground-level view capturing circular reflections of direct sunlight dancing on the walls and underside of the gate.

List of Maintenance Issues and Concerns

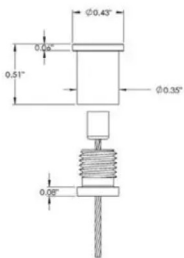
- **Spider webs:** Based on experience, spider webs can sometimes form in upper areas, occasionally bridging between suspension cables. Their presence depends on the interior environment and climate; periodic removal with a long duster may be required.
- **General cleaning:** Just as interior windows require occasional cleaning, the suspended glass elements may also collect light dust. Occasional dusting will help maintain appearance, and a more thorough cleaning every 5–10 years can restore the full clarity and luster of the glass coins and fish.

Preliminary Installation Plan and Required Equipment

- **Suspension hardware:** The sculpture will be suspended using 1 mm (or 3/64”) stainless steel cable. Each cable, supporting up to 5 glass fish and coin components, is estimated to weigh less than 13 oz.
- **Ceiling connections:** Ideally, ceiling connectors can be installed directly on the acoustic ceiling tiles. If the tiles are not sufficient to bear the weight, alternative hardware compatible with the grid T-bar system will be used (see attached images).
- **Connection point mapping:** Installation will begin with precise mapping of connection points by creating a grid system on the floor on site. A laser pointer will then be used to align and mark the ceiling connection points.
- **Installation access:** Depending on site conditions, installation will be performed using aerial lift equipment or scaffolding with platforms.
- **Floor protection:** If lift equipment is required, protective measures will be taken to safeguard the flooring during installation.
- **Timeline:** On-site installation is expected to take approximately 5–10 days, depending on final site conditions and access.



CC-M8



Description

Additional information

Drawings

Return Policy

Description

- Two-part flat ceiling cable coupler.
- Non-adjustable.
- Use w/ #6 screw
- For use with 1/32” – 1/16” 7×7 or 7×19 aircraft cable only.



HX-T-CLIP-KEY-W

Insert a cable with a ball terminal directly into this Key Clip and twist it on to standard acoustical ceiling T-bar to create ceiling attachments for lightweight signage and promotional material. Leave it where it is and change the signage, or move it elsewhere on the grid if your presentation changes.

Description

Drawings

Return Policy

Description

- Adjustable non-supported key clip for 15/16” T-bar.
- Use with 3/64” – 1/16” 7×7 or 7×19 aircraft cable

September 28, 2025

ARTIST: K A N A T A N A K A

PROJECT: **Port St. Lucie | City Hall**
Entrance Lobby Suspended Sculpture***Treasures of the Mangrove***Available Budget: **\$150,000**

	Item	Notes	# Units	Cost/Unit	Ext. Cost [\$]
1	Artist fee	Design, coordination and overhead	20%		\$30,000
2	Designer fee	CG and shop drawing			\$5,000
3	Dichroic glass	Coatings by Sandburg including shipping	72	\$150	\$10,800
4	Waterjet cutting	Waterjet Design Oregon, and shipping			\$10,000
5	Glass coldworking	Sanding, drilling and etching			\$8,000
6	Glass tools	Dremel bits and sanding belts			\$1,000
7	Glass slumping	Kiln rental at Jackman Glassworks	10	\$400	\$4,000
8	Glass slumping	Mold set up labor & transportation	10	\$300	\$3,000
9	Metal parts	Griplock Systems: Connectors and cable			\$4,000
10	Metal parts	DUBRO: Stop collars with set screw			\$200
11	Studio rental	Space rental	6	\$550	\$3,300
12	Studio mockup	Studio assembly set up			\$1,000
13	Studio artist labor	Studio mockup, assembly and packing	200	\$75	\$15,000
14	Studio assistant	Assembly and packing	120	\$50	\$6,000
15	Packing	Boxes, foams, bubble wrap and crates			\$3,500
16	Shipping	allowance			\$5,000
17	Site ceiling prep	allowance			\$1,000
18	Installation set up	Scaffolding, Lift rental and space set up			\$10,000
19	Installation labor	Local contractor	5	\$800	\$4,000
20	Travel expenses	Installation visit			\$6,000
21	Liability insurance	partial			\$2,000
22	Engineering	allowance			\$2,000
23	Contingency	allowance	10%		\$15,000
			TOTAL		\$149,800

TIMELINE

September 28, 2025

ARTIST: KANA TANAKA

PROJECT: **Port St. Lucie | City Hall**
Entrance Lobby Suspended Sculpture

Treasures of the Mangrove

	Task	Description	Time frame [wk]	Combined weeks
1	Final research on materials and process	Sample making and studio mockup	3	4
2	Additional design development	Construction details and engineering	3	
3	Glass fabrication 1	Dichroic glass by CBS	6	16
4	Glass fabrication 2	Waterjet cutting and shipping	6	
5	Glass fabrication 3	Drilling, etching and kiln firing	6	
6	Studio assembly	Assembly and packing	4	
7	Shipping to site	California to Florida	2	2
8	Site layout and installation	Scaffolding and installation	2	2
TOTAL Weeks			32	24

**some tasks will overlap, so reducing the total time maybe required.*