Executive Summary

Problem

Shorefront Legacy Center is burdened by the heavy, difficult to set up, fragile display systems that they currently use to showcase black history around Chicago's North Shore. They asked our team to design and create a lightweight, collapsible, and modular display system to display both 2-Dimensional pieces and 3-Dimensional objects.

Purpose and Requirements

The purpose of our team's design, the **FlatTen**, is to provide a less difficult and cumbersome system for Shorefront Legacy Center, while also remaining aesthetically pleasing and impactful in its messaging. The design should be easy to transport, inexpensive, and easy to handle.

Methodology

Throughout the design process, we interviewed with the client multiple times to check in if our design was meeting their needs and expectations. In addition to this, we also researched many art displays and trade show displays to draw inspiration from current designs and where we can improve them.

Design

Our design involves a collapsible system utilizing a frame built from telescoping poles. To hang media and display other objects, the frame will utilize tension cables and fasteners to hold things in place.

Components	Benefits
7' 3-component Aluminum Telescoping Poles	● Allows for the system to collapse ● Lightweight
39" Rectangular Aluminum poles	● Provides a stable base and top to the frame
⅛" Pulley Cable Rope	● Allows for the connection of displays ● Can support platforms for 3D objects
Rope Display Clips	● Connects to 2D media

Recommendations for Future Development

1. Adjustable Cable Positions: Introduce more options for where tension cables can be attached, allowing for more adjustable widths regarding posters and other media.
2. Increased Customizability Involving Frame: Telescoping poles in the frame could contain more pieces to allow for increased customizability allowing the system to fit in various spaces.

FlatTen

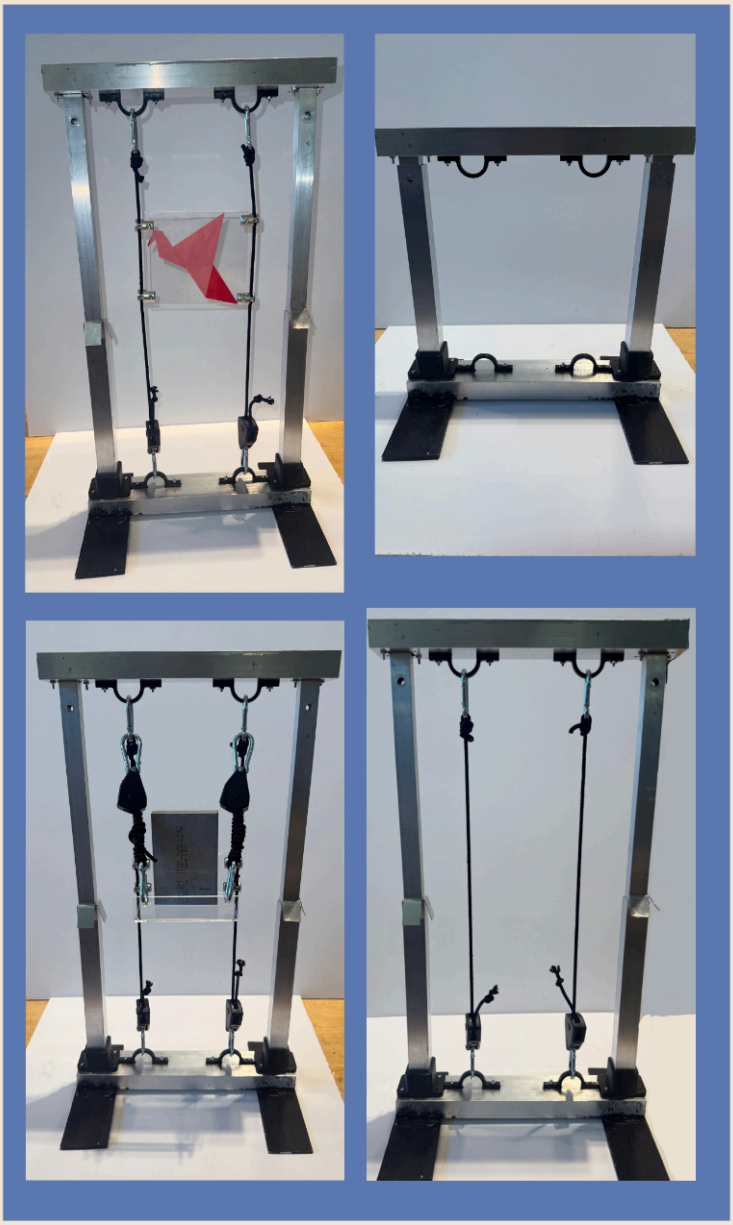
A Perfectly Collapsible Tension Cable Display System

Problem:

Create an ultralightweight display system that can easily display both 2D and 3D artifacts at exhibit outreach events.

Design:

A telescoping display made of lightweight aluminum poles with tension cables functioning as structural support and display mounting.



Features:

Highly Adjustable: Fully Adjustable telescoping poles

Structurally Sound: Autolocking pulleys create tension at any height

Multipurpose display: Cable clamps work with custom-made acrylic poster holders and shelves

Easily Collapsible and Packable: Elegantly breaks down into one carry case

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