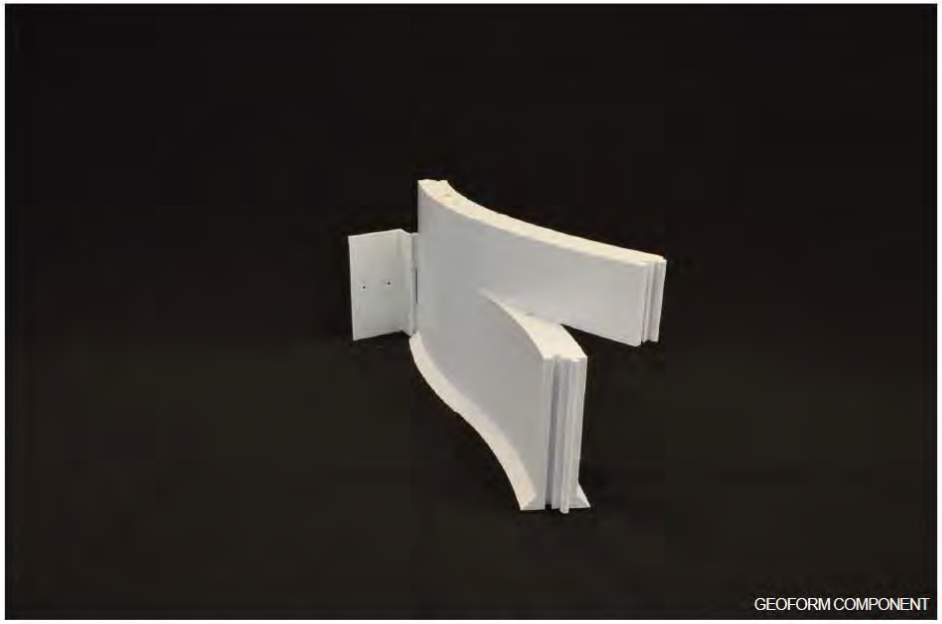
GEOFORM

INNOVATION FOR A LOW-COST TECHNOLOGY

PATENT PENDING # 006274-0100



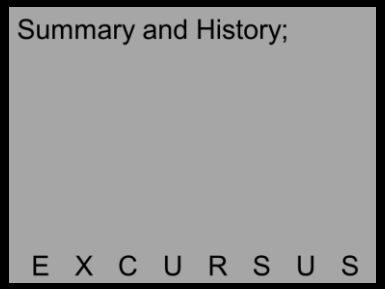
GEOFORM COMPONENT

As a low-cost, low-technology construction method, tilt-up concrete has become one of the fastest growing solutions for addressing lowered budget constraints. Recently, it has gained a foothold with architects as an innovative way of form-making for other projects.

It may appear strange to extoll the virtues of loadbearing wall construction in the 21st century after post-industrial revolution inventions such as the skeleton-frame structural systems of steel and cast-in-place concrete. However, loadbearing wall construction, particularly tilt wall, has never had more potential to respond to market challenges and capitalize on technological advancements. Recent innovations in the science of concrete composition and engineering advancements like helical fiber reinforcement have enormous implications to all aspects of the material.

Yet almost all innovations are technological. Our effort here is to advance the aesthetic potential of this ubiquitous construction system to allow it entry into new building types and make it an option for designers rather than a last resort. It is currently not possible to make reliable dimensionally stable curved edges and impossible to make meaningfully deep compound surface curves. The current method requires hand cutting of foam ballast. This in turn makes repetition difficult, shop fabrication of windows impractical and numerous other barriers. This invention solves those issues.

Lecture Keynotes



At the beginning of each deck, as brief overview or abstract along with a brief history of its origin date, first presentation or generation

Mid deck summaries of the main points for clarity & flow

Mid deck enhanced explanation of the details behind the main points for clarity and flow

E X C U R S U S

Summary and History;

This presentation is comprised mostly of slides from our actual “pitch deck” used in meeting with manufacturers and some investors on our patent pending product for creating dimensionally stable curved edges with a non single use edge form.

Our position is that tilt wall construction technology seems to benefit mostly from technological innovation bracketed by a kind of internal logic. Taking things the technology does and enhancing them. Helical anchors (*tilt wall already had anchors- these are better)*, clip anchors for sandwich foam panels (*again- there are perhaps 10 varieties of this*), form liners (*much innovation here but offering only innovation on variety*) and many chemical enhancements of additives bond breakers and so on.

No effort is put into solely aesthetic advancement. For us this gives the lie to the conundrum of the question posed by many envoys of this technology – “why don’t architects embrace tilt wall”. As to why MORE architects don’t see its potential the apparent design limitations, creative constraints and general derivative tendencies place it in the category of an engineering solution rather than an aesthetic opportunity.

E X C U R S U S

The big idea here is;

As a low-cost, low-technology construction method, tilt-up concrete has become one of the fastest growing solutions for addressing lowered budget constraints. Recently, it has gained a foothold with architects as an innovative way of form-making for other projects.

It may appear strange to extoll the virtues of loadbearing wall construction in the 21st century after post-industrial revolution inventions such as the skeleton-frame structural systems of steel and cast-in-place concrete. However, loadbearing wall construction, particularly tilt wall, has never had more potential to respond to market challenges and capitalize on technological advancements. Recent innovations in the science of concrete composition and engineering advancements like helical fiber reinforcement have enormous implications to all aspects of the material.

Yet almost all innovations are technological. Our effort here is to advance the aesthetic potential of this ubiquitous construction system to allow it entry into new building types and make it an option for designers rather than a last resort. It is currently not possible to make reliable dimensionally stable curved edges and impossible to make meaningfully deep compound surface curves. The current method requires hand cutting of foam ballast. This in turn makes repetition difficult, shop fabrication of windows impractical and numerous other barriers. This invention solves those issues.

E X C U R S U S

Explainer

The next two slides position the GEOFORM patent in our research group which is driven by our mandate of Bottom Up Innovation done by Everyday Architects.
Like us.

E X C U R S U S

Avant Garde / Starchitects – Weekend Guys

Big Firms- 20% 80%

Gensler

SOM

hok

PERKINS + WILL

Mainstream / Everyday-Drive Home Guys

WAREHOUSES AND OFFICE FACTORIES

Top down innovation-

happens in the Avant-Garde and Large format areas of architectural practice

(-Purpose of research Cool Form)

Bottom up innovation

happens in the Mainstream area of practice

(-Purpose of research Commodity)

powers
brown
archit
ecture

Excursus ™

Under our research initiative we have a particular focus on the next level thinking on tilt wall construction technology. This focus area has established expertise in Tilt Wall building types….which we commoditized, branded and applied to the ‘normal” problems and building types we most often were commissioned to undertake. It has grown into new areas such as product development, post tensioning of tilt wall panels and experimenting with new formulae for concrete and rebar alternatives

- SSB ™
- Largest building- Tilt Wall & 2016
- Tiltwallism- we wrote the book on it
- Tallest panel
- Product Development
- Six story Load bearing Building
- Value Office ™
- Blast / Progressive Collapse

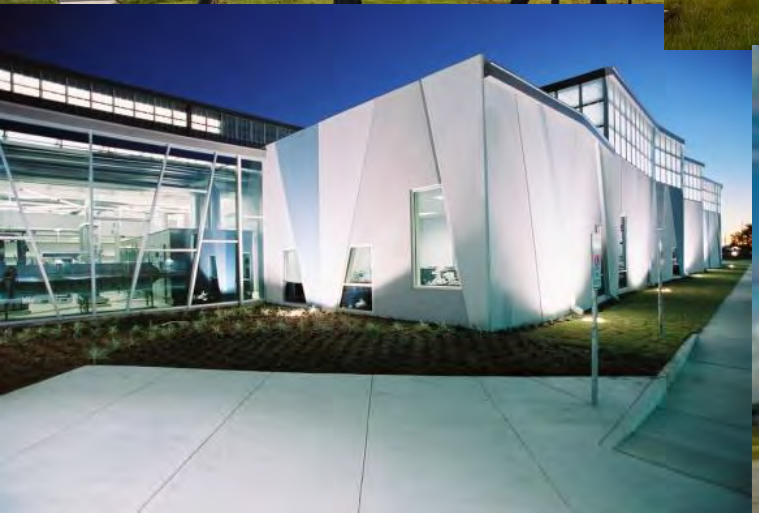
Explainer

Following are many of the areas of our focus specifically around tilt wall technology

E X C U R S U S

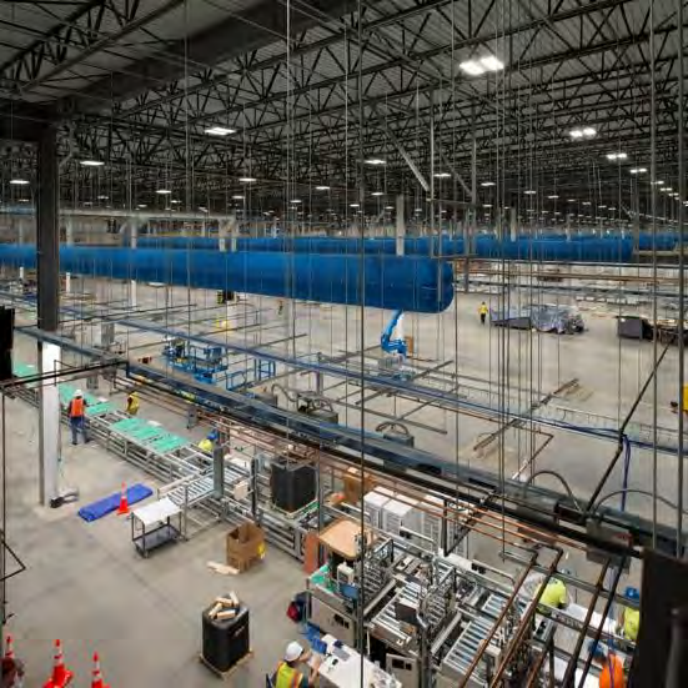
Small Smart Boxes ™

powers
brown
architecture



Worlds Largest tilt wall building

4.26 million Square feet

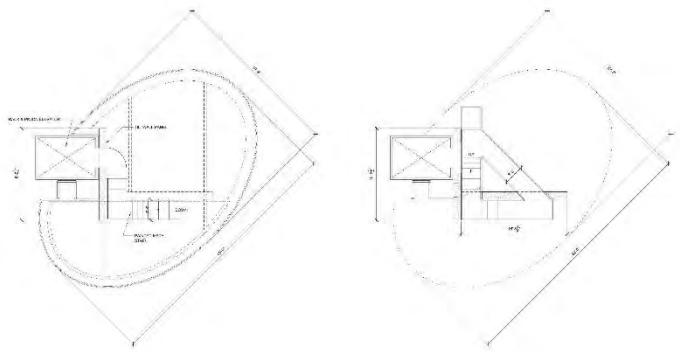


DAIKIN
TX TECHNOLOGY PARK

powers
brown
architecture

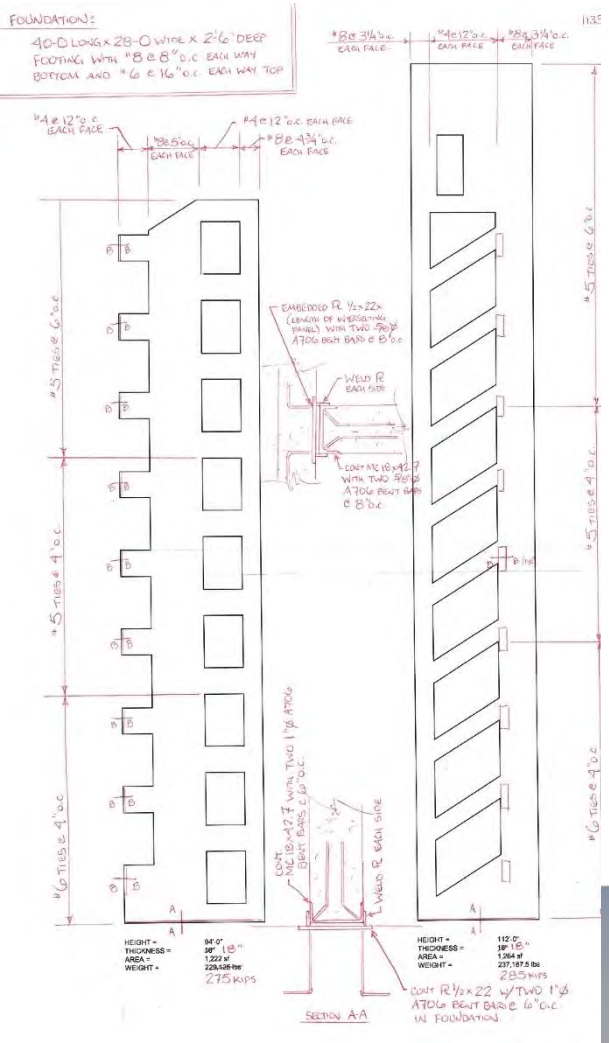
Worlds Tallest Tilt Wall Panel

113’ feet



powers brown architecture

OBSERVATION TOWER:
GENERATION PARK
OBSERVATION TOWER



Value Office ™

powers
brown
architecture

Worlds First Six story
load bearing
tilt wall building

Sierra Pines II

Worlds first DoD level 4 Blast and Blast resistant / progressive Collapse building

This research was recently published in

The Construction Specifier, August 2011

Protective Design Center (PDC)
Army's center of expertise for engineering services related to force protection and protection design

Lead developer and resources of Security Related UFC Documents

To date, the Progressive Design Council (PDC) has taken no objection to the research.

Tiltwallism-
we literally
wrote the book
on the subject….

Tiltwallism: Potential of Tilt Wall Hardcover – September 1, 2014

by Jeffrey Brown (Author)

Be the first to review this item

Look inside

Flip to back



See all 3 images

See all formats and editions

Hardcover
$41.85

8 Used from $36.57
16 New from $31.81

An introductory resource to architects and an inspiration to contractors, developers and structural consultants who have encountered Tilt Wall construction. Brown provides a full synthetic treatment of Tilt Wall construction, explaining its history, methodology, and relationship to the current architectural approaches to meaning. Inclusion of practical reference and resource sections in the book will appeal to a cross-disciplinary audience.

See the Best Books of the Month
Want to know our Editors' picks for the best books of the month? Browse Best Books of the Month, featuring our favorite new books in more than a dozen categories.

Back to the Patent Pending product development experiment…..

Explainer

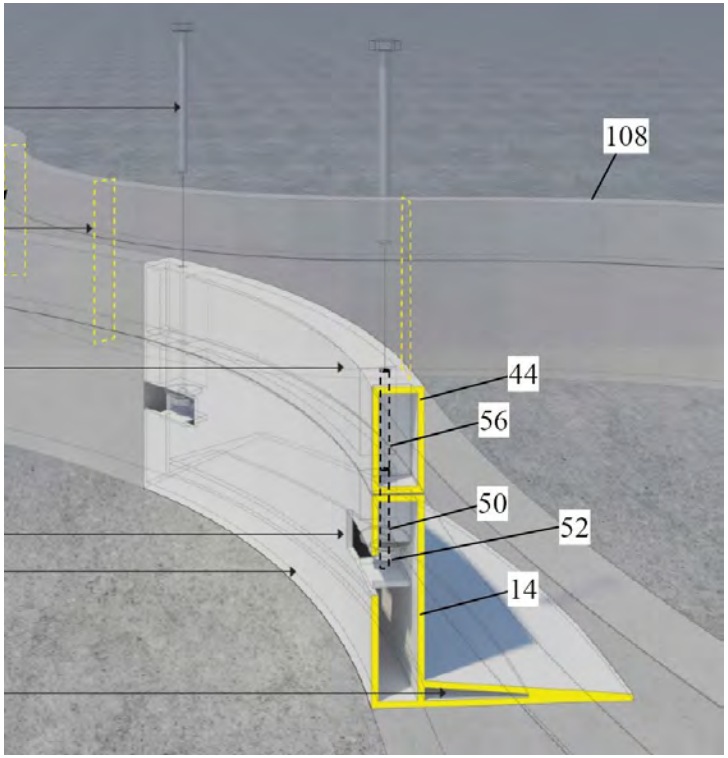
At this point we transition to talking about the patent and its origins and the experience of filing it.

Yes, it really did begin with the cliché napkin sketch. We attended a luncheon at the invitation of a team of researchers who attended a talk we gave on tilt wall in Dallas. They had a patent on a 3-d printable material and were looking to monetize it for use in tilt wall while they continued its development for the military.

They were looking for something they could provide that was missing in tilt wall and could be accommodated by their technology. I made a simple sketch at the end of the lunch. I had it formalized the very same day and sent it to them

I never heard back.

E X C U R S U S



So- no bullshit. I literally made a napkin sketch. Yep. F’ing cliché.

Explainer

As most people have not ever applied for a patent, I include these images of the process to illustrate the Kafkaesque balkanization of an idea in bureaucracy

E X C U R S U S

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	009732-0100
	Application Number	
Title of Invention	KITS SUITABLE FOR CASTING CONCRETE ELEMENTS, AND METHODS FOR CASTING CONCRETE ELEMENTS USING SUCH KITS	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Jeffrey		Brown	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Houston	State/Province	TX	Country of Residence	US

Mailing Address of Inventor:

Address 1	2100 Travis St., Suite 501		
Address 2			
City	Houston	State/Province	TX
Postal Code	77002	Country	US

Inventor 2

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	John		Cadenhead	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Houston	State/Province	TX	Country of Residence	US

Mailing Address of Inventor:

Address 1	2100 Travis St., Suite 501		
Address 2			
City	Houston	State/Province	TX
Postal Code	77002	Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	009732-0100
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Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	12099		
Email Address	patmail@porterhedges.com	Add Email	Remove Email
Email Address	jpierce@porterhedges.com	Add Email	Remove Email

Application Information:

Title of the Invention	KITS SUITABLE FOR CASTING CONCRETE ELEMENTS, AND METHODS FOR CASTING CONCRETE ELEMENTS USING SUCH KITS		
Attorney Docket Number	009732-0100	Small Entity Status Claimed	☒
Application Type	Provisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	5	Suggested Figure for Publication (if any)	1

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative Information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)

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Customer Number					
Prefix	**Given Name**	Middle Name	**Family Name**	Suffix	Remove
Registration Number					
Prefix	**Given Name**	Middle Name	**Family Name**	Suffix	Remove
Registration Number					

Additional Representative Information blocks may be generated within this form by selecting the **Add** button.

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status			Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country[1]	Filing Date (YYYY-MM-DD)	Access Code[1] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

PTO/AIA/14 (08-15)
Approved for use through 08/30/2017 OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	009732-0100
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☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

WEB ADS 1.0

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	009732-0100
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Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

PTO/AIA/14 (08-15)
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	Application Number	
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Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

○ Assignee	○ Legal Representative under 35 U.S.C. 117	○ Joint Inventor
○ Person to whom the inventor is obligated to assign.	○ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:	
If the Applicant is an Organization check here.	☒
Organization Name	Powers Brown Architecture

Mailing Address Information For Applicant:

Address 1	2100 Travis St., Suite 501		
Address 2			
City	Houston	**State/Province**	TX
Country[1]	US	Postal Code	77002
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	009732-0100
	Application Number	
Title of Invention	KITS SUITABLE FOR CASTING CONCRETE ELEMENTS, AND METHODS FOR CASTING CONCRETE ELEMENTS USING SUCH KITS	

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

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Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Jonathan M. Pierce/			Date (YYYY-MM-DD)	
First Name	Jonathan M.	Last Name	Pierce	Registration Number	42073

Additional Signature may be generated within this form by selecting the Add button.

WEB ADS 1.0

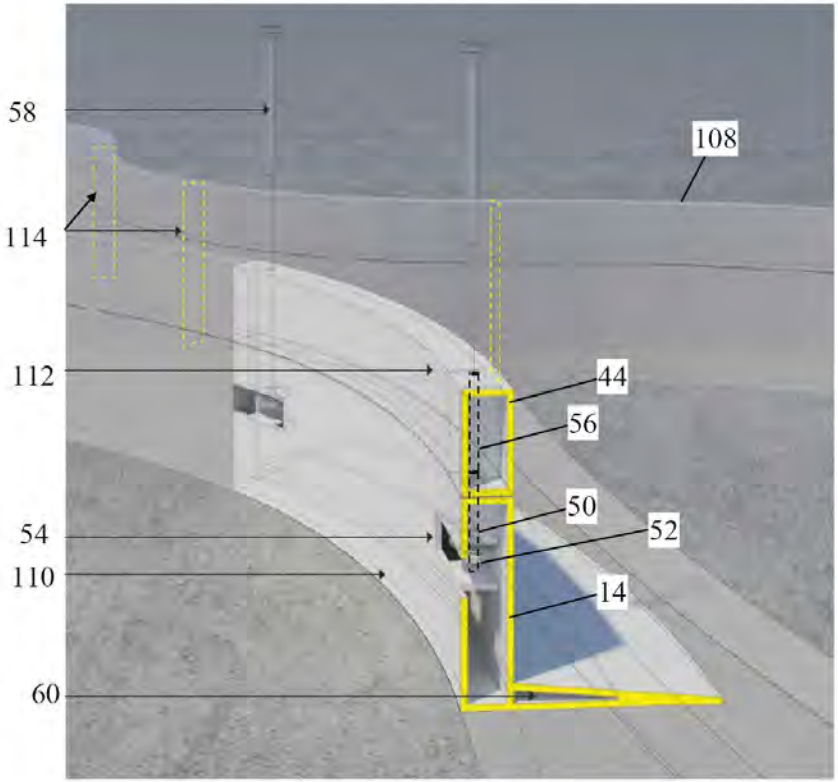
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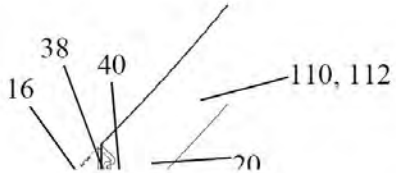
FIG. 3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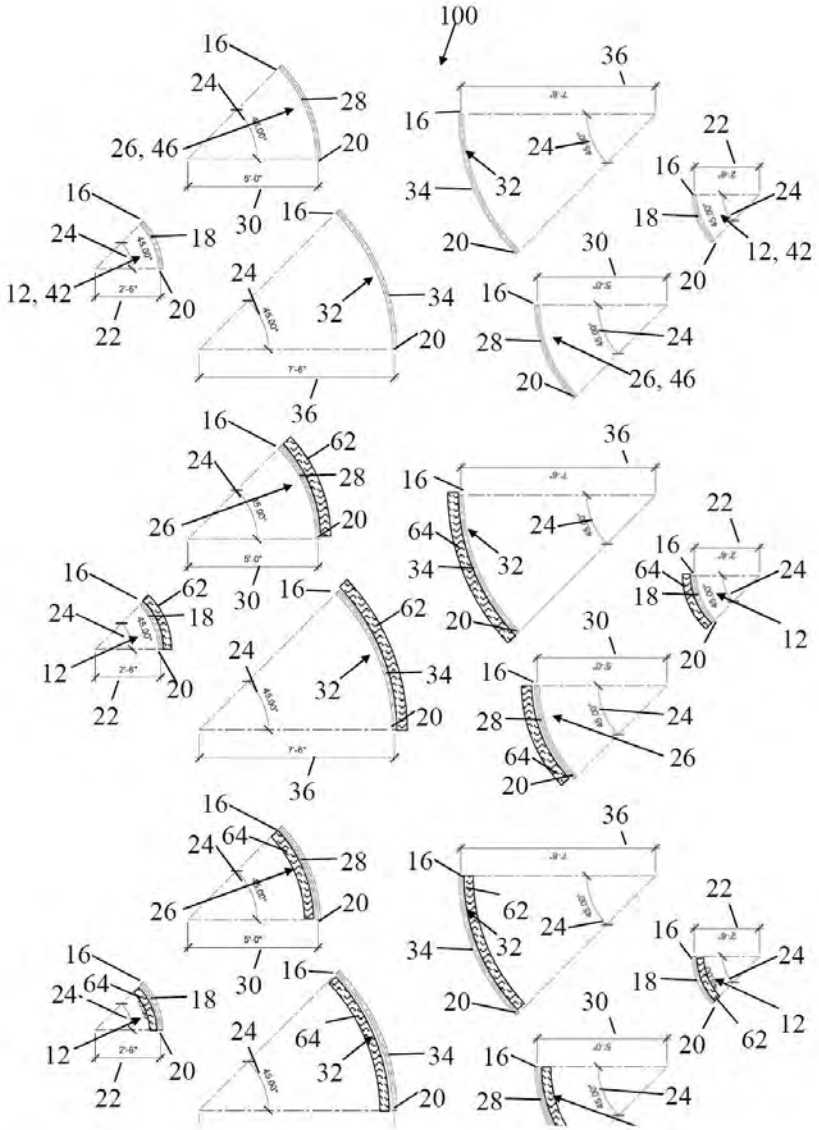
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12

Explainer

Up to this point it has been table setting- now for the pitch. We illustrate precedent, exiting market opportunities and new market development and expansion opportunities.

E X C U R S U S

CURVED PANEL EDGES
GEOMETRIC APERTURES WITHIN PANELS
INFINITE COMPLEXITY
SIMPLE TO INSTALL
RE-USABLE

GEOFORM - A a way to make consistent, accurate, dimensionally stable, repeatable ***CURVED FORMWORK SYSTEM 'ON SITE.'***

01 CASE

WHY CURVED

LIBRARY FOR THE BLIND - STANLEY TIGERMAN

BENACERRAF HOUSE - MICHAEL GRAVES

WALL HOUSE - JOHN HEJDUK

PRECEDENTS (HISTORICAL)

LIKE PRECAST

- *SHOP-FABRICATED FEEL*
- *NO TRANSPORTING PANELS*

PRECEDENTS (CONTEMPORARY)

A FEW CAPTURED MARKETS WHICH TILT WALL IS FULLY INTEGRATED IN BUT COULD ***EXPAND*** WITH CURVED FORMWORK….

CHAPEL OF ST. IGNATIUS
STEVEN HOLL ARCHITECTS

(AVANT-GARDE & TRADITIONAL)

SAINT MARK'S COPTIC CHURCH

CAPTURED MARKET - SPIRITUAL

UGN SANTA FE IV

CAPTURED MARKET - INDUSTRIAL

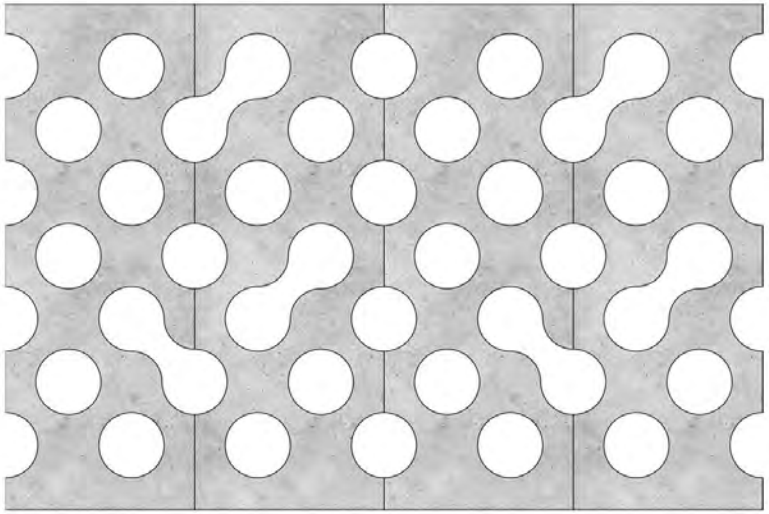
CAPTURED MARKET - OFFICE & RETAIL

CAL STATE SAN MARCOS

CAPTURED MARKET - EDUCATION

NUMEROUS ***NEW*** MARKETS WHERE CURVED FORMWORK COULD GIVE TILTWALL AN ENTRY POSITION….

MARKET OPPORTUNITY - RESIDENTIAL



MARKET OPPORTUNITY - RESIDENTIAL

The Architect's Newspaper

February/March 2019 | www.archpaper.com | @archpaper | $3.95

Moving a Swedish Town 10
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Drowning in Design

The Maldives gets the first underwater hotel. See page 12.

Yes We Span

World's longest bridge opens.

China's new Hong Kong-Zhuhai-Macao Bridge is a structural anomaly. Stretching across and underneath the Pearl River estuary, it crosses over four artificial islands and 147-foot-deep waters. At 34 miles long, it's not only the world's longest oversea bridge, but the most extensive fixed link ever built on Earth.

The $18.7 billion project, dubbed the HZMB, was first envisioned by Hong Kong businessman Gordon Wu, chairman of Asian infrastructure firm Hopewell Holdings, back in 1983. Wu was inspired by Virginia's 23-mile-long Chesapeake Bay-Bridge Tunnel, a project spanning five decades that remains one of the longest constructions ever built in the United States. In 2009, Wu's initial dream for the HZMB came true when the Chinese government announced it as part of a $300 billion infrastructure plan to connect the nine mainland cities of the densely populated Pearl River Delta. The plan, now well underway, consisted of 150 projects meant to spur economic development and trade in the nation's largely administrative region.

After years of logistical planning, construction on the HZMB began in December 2011 and was split into three sections. The Main Bridge, the most complex part of the project, features a 14-mile-long viaduct and a 4-mile underwater tunnel. In order to achieve staying power under the sea, the six-lane elevated highway required the construction of multiple prefabricated steel box girders, as well as steel-concrete composite continue reading on page 11

2019 Emerging Voices

The Architectural League of New York delivers another solid class of up-and-coming talent. Say hello to CCA Centro de Colaboración Arquitectónica, UUfie, MODU, Colloqate Design, FreelandBuck, Davies Toews, SCHAUM/SHIEH, and Waechter Architecture.

See page 18.

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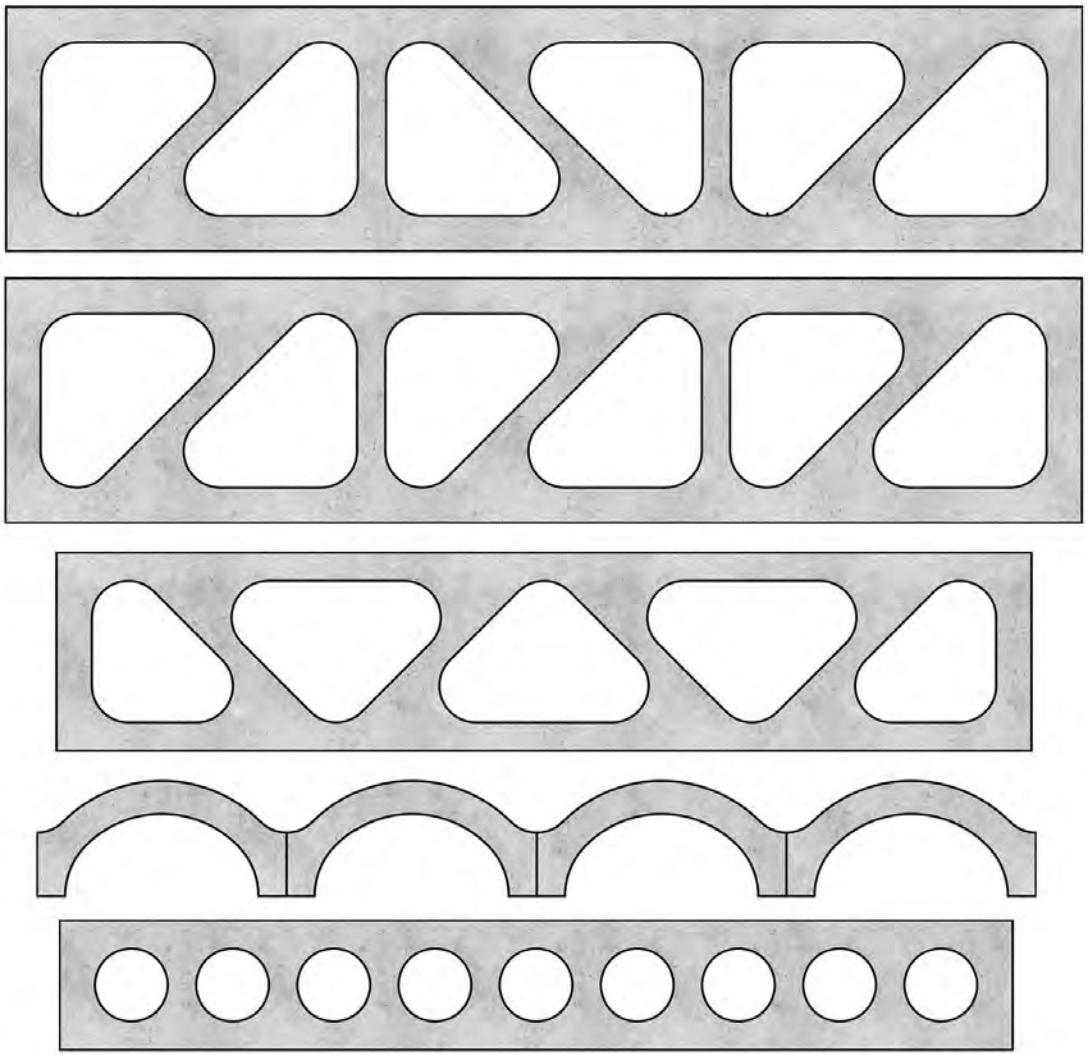
Kitchen & Bath

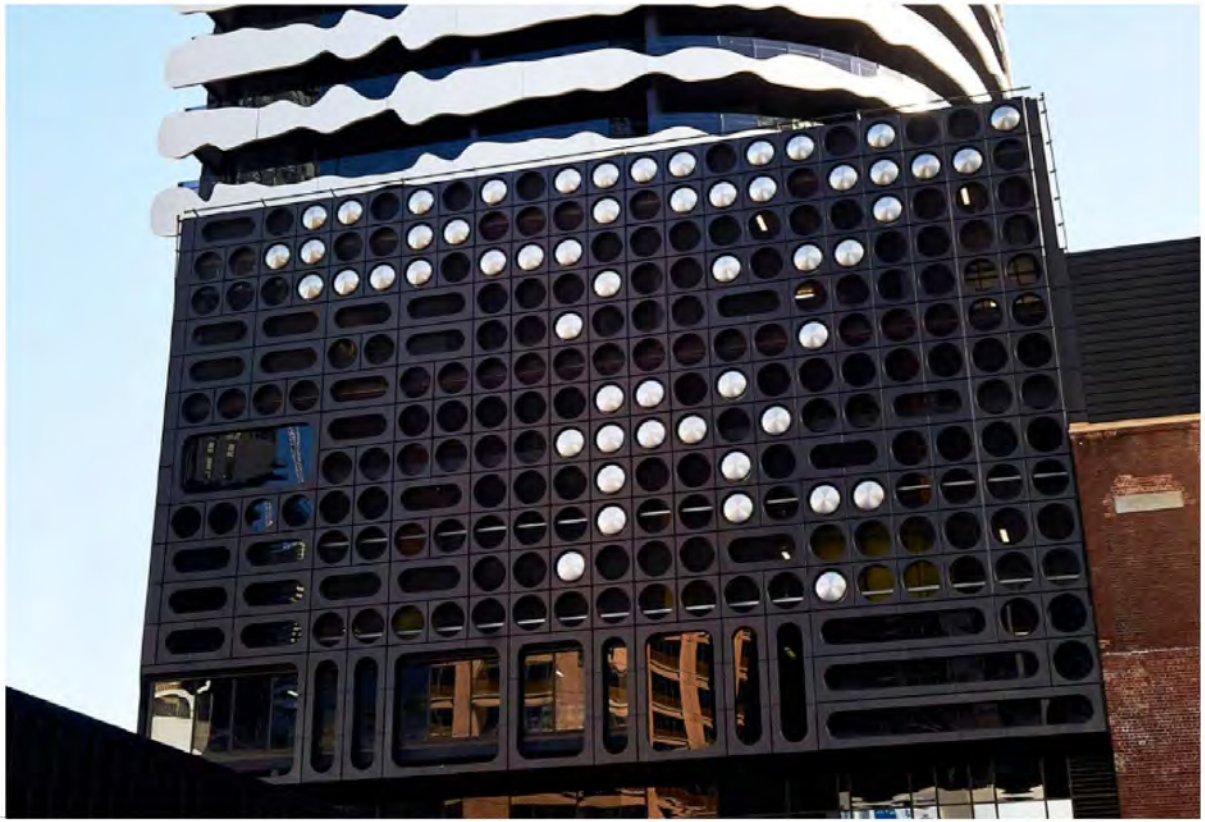
See page 29.

MARKET OPPORTUNITY - INFRASTRUCTURE



MARKET OPPORTUNITY - INFRASTRUCTURE

MARKET OPPORTUNITY - LANDSCAPE ARCHITECTURE



BARAK PORTHOLE FACADE
ASHTON RAGGATT MCDOUGALL

MARKET OPPORTUNITY - PARKING

SOUTHERN UTAH MUSEUM OF ART
BROOKS + SCARPA, BLALOCK & PARTNERS DESIGN STUDIO

MARKET OPPORTUNITY - CULTURAL

Explainer

The following is brief technical description of the GEOFORM system

E X C U R S U S

The system requires the fabrication of a limited number of forms that can be combined and either sold to subcontractors or rented out.

Very much the same way braces are, as equipment.

It is simple, easily maintainable and if ever needed easily extend-able as a product line.

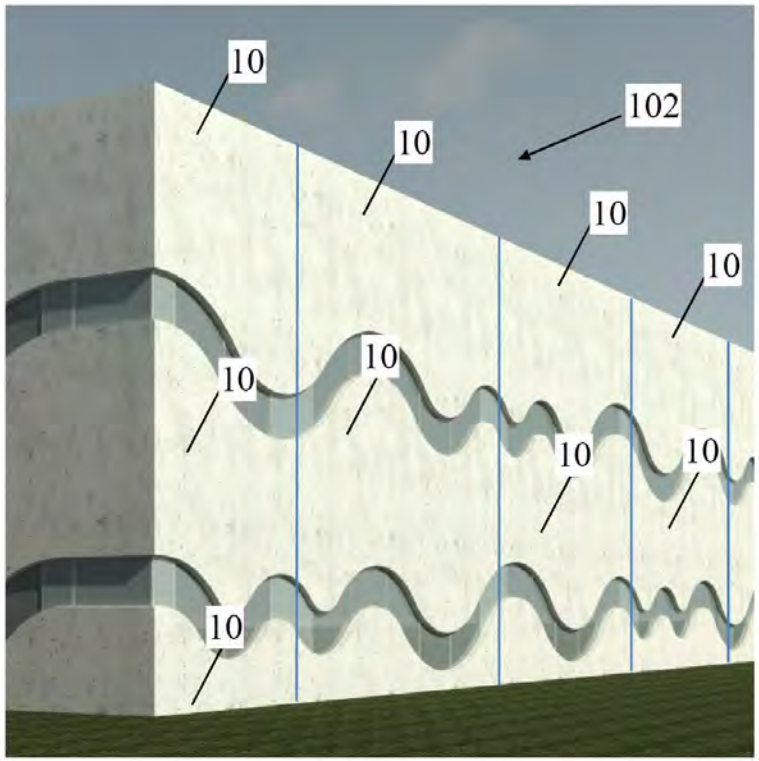


FIG. 1A

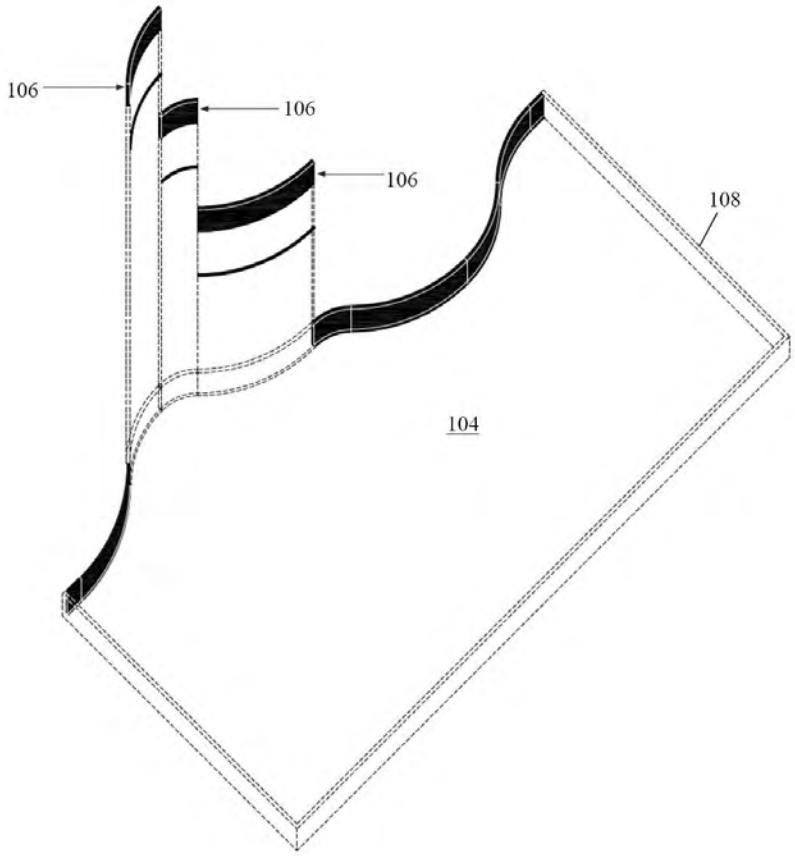


FIG. 2

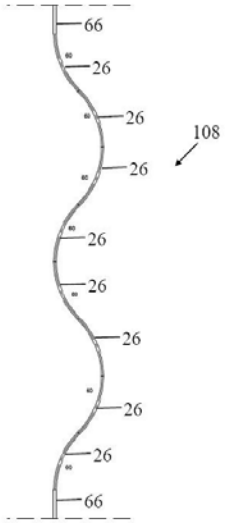


FIG. 6A

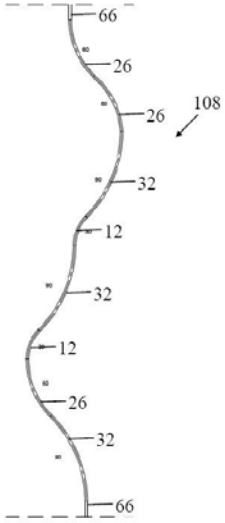


FIG. 6B

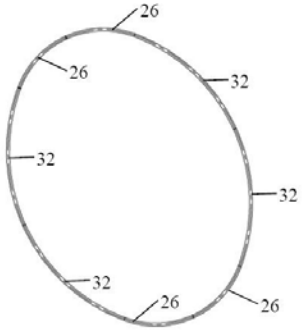


FIG. 6C

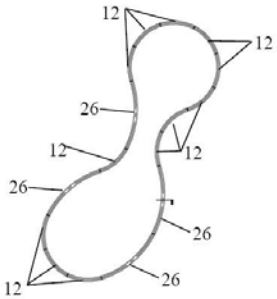
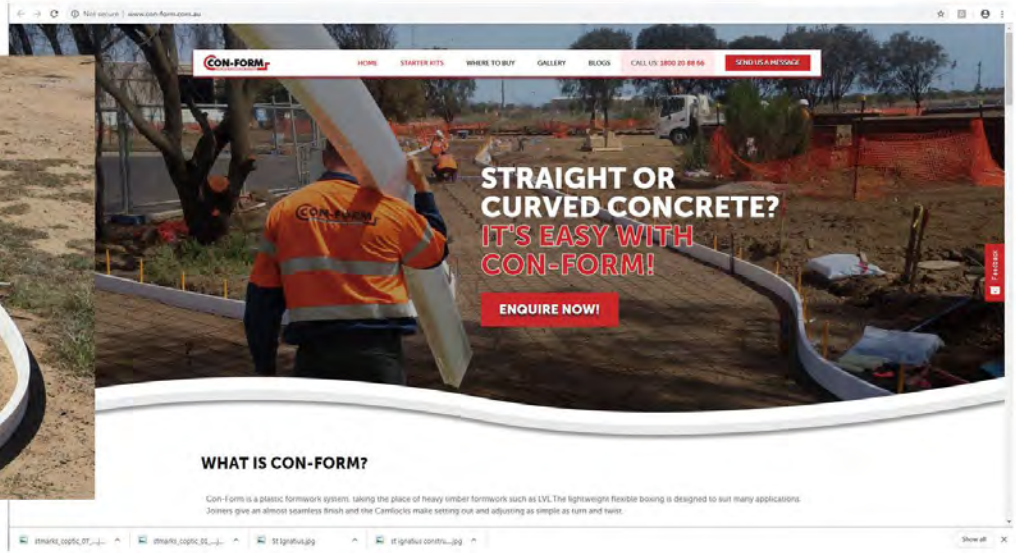
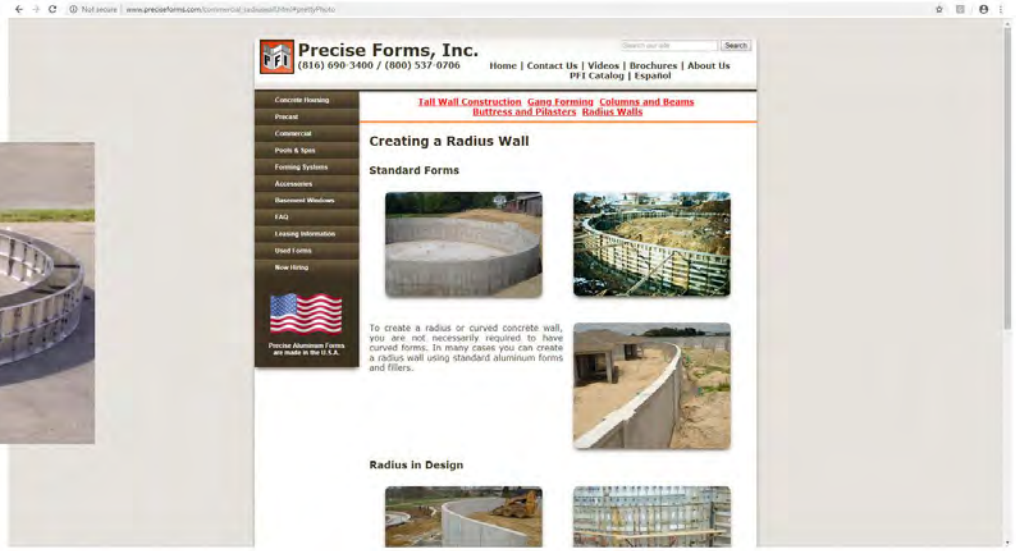


FIG. 6D

There are some competitors of a kind …..which all have quality related shortcomings but also have the benefit of creating a nascent market ripe for a mature product.





COMPETITOR PRODUCTS

A strong marketing campaign to architects and engineers - in their professional publications, at their conferences and presented in product literature could simultaneously introduce tiltwall and its design potential to an emerging and influential market.

Explainer

This next slide elides the marketing context for the product. Top down innovators inspire the clients of the everyday architect to ask for the things they see in magazines at cheaper costs and easier implementation. A top down to bottom up cycle of opportunity…..if you look at it the right way.

And

The Starchitects have recently seen downward pressure on their astronomical budgets. Thus why not upwardly innovate tilt wall to attract their attention.

Seems like a great way to expand the market for the technology.

So tilt wall has to have ways of making more innovative form

E X C U R S U S

powers brown architecture

20,836 Architecture Firms in USA according to 2012 economic Census
Ideas, influence, inspiration and trend flow diagram

Starchitects - $$$$$

>5% of all firms 2% of all projects Narrow building type bandwidth

Frank Gehry Tadao Ando Norman Foster Santiago Calatrava Renzo Piano Rem Koolhaas MVRDV BIG
Bjarke Ingles Herzog De Mueron Diller Scofidio

Branded Band- $$$

20% of Total Firms Employ 80% of all architects Execute 60%of all Projects Mid Range building type bandwidth

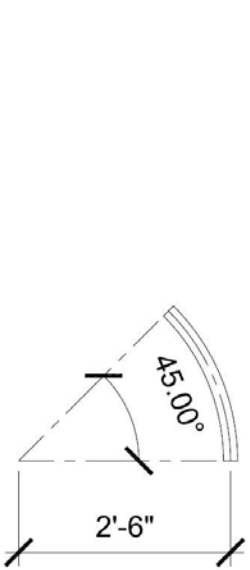
HOK AECOM SOM KPF Perkins Will DLR BYP HDR NBBJ IBI Group Woods Bagot Gensler
Jacobs HKS Perkins Eastman Stantec Smith Group LMN ZGF WDG Cooper Carey O'Brien

Everyday' s- $+

75% of Total Firms (15,626) Execute 35-40% of all projects Bandwidth with high percentage Tilt Wall overlay

02 SYSTEM

FORM-MAKING
POSSIBILITIES



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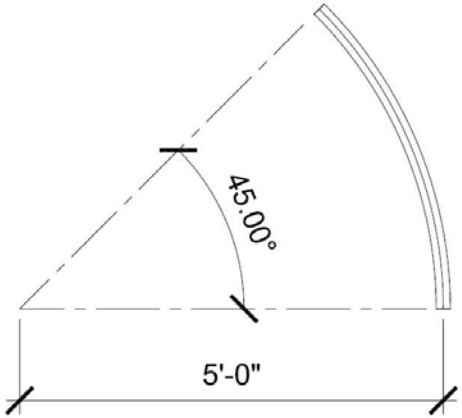

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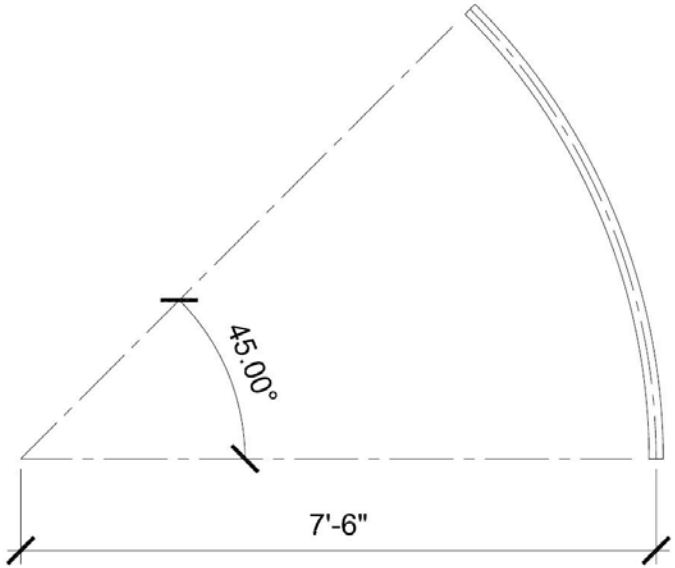
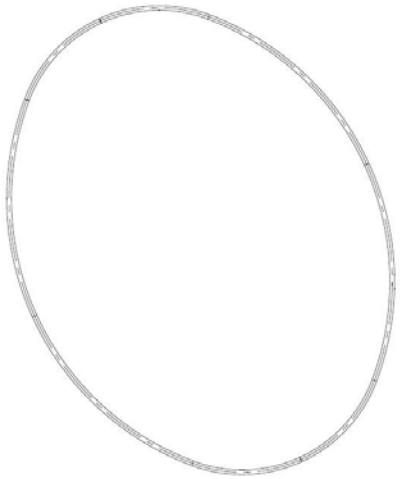
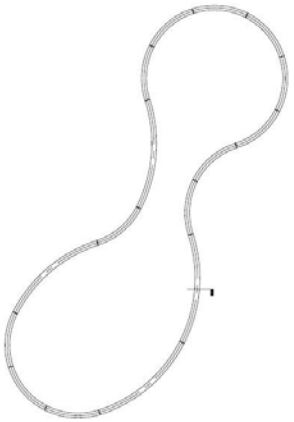
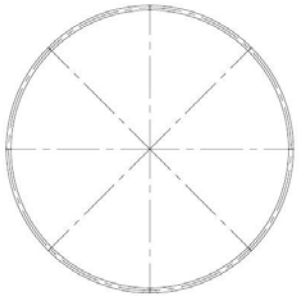


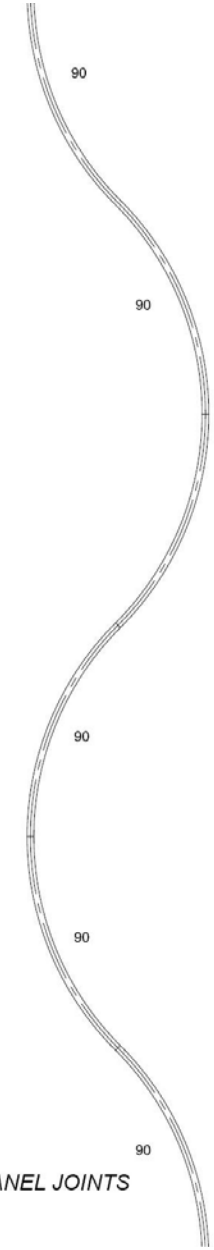
90

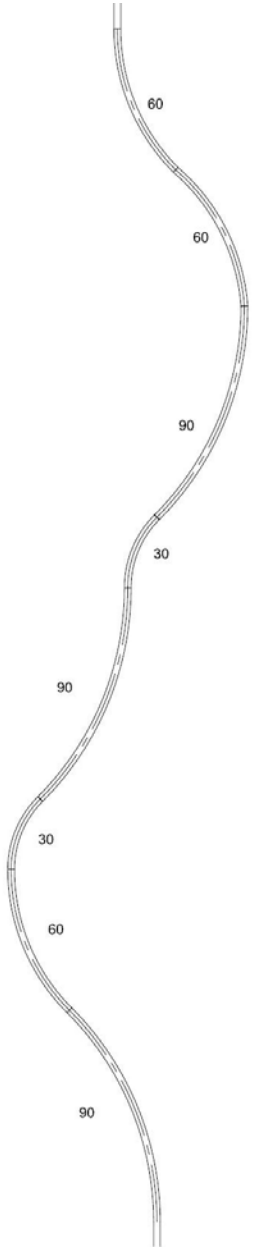
THREE SHAPES *SYSTEMATICALLY DETERMINE THE LEVEL OF OPTIONALITY ACHIEVABLE WITH TILTWALL DESIGN*



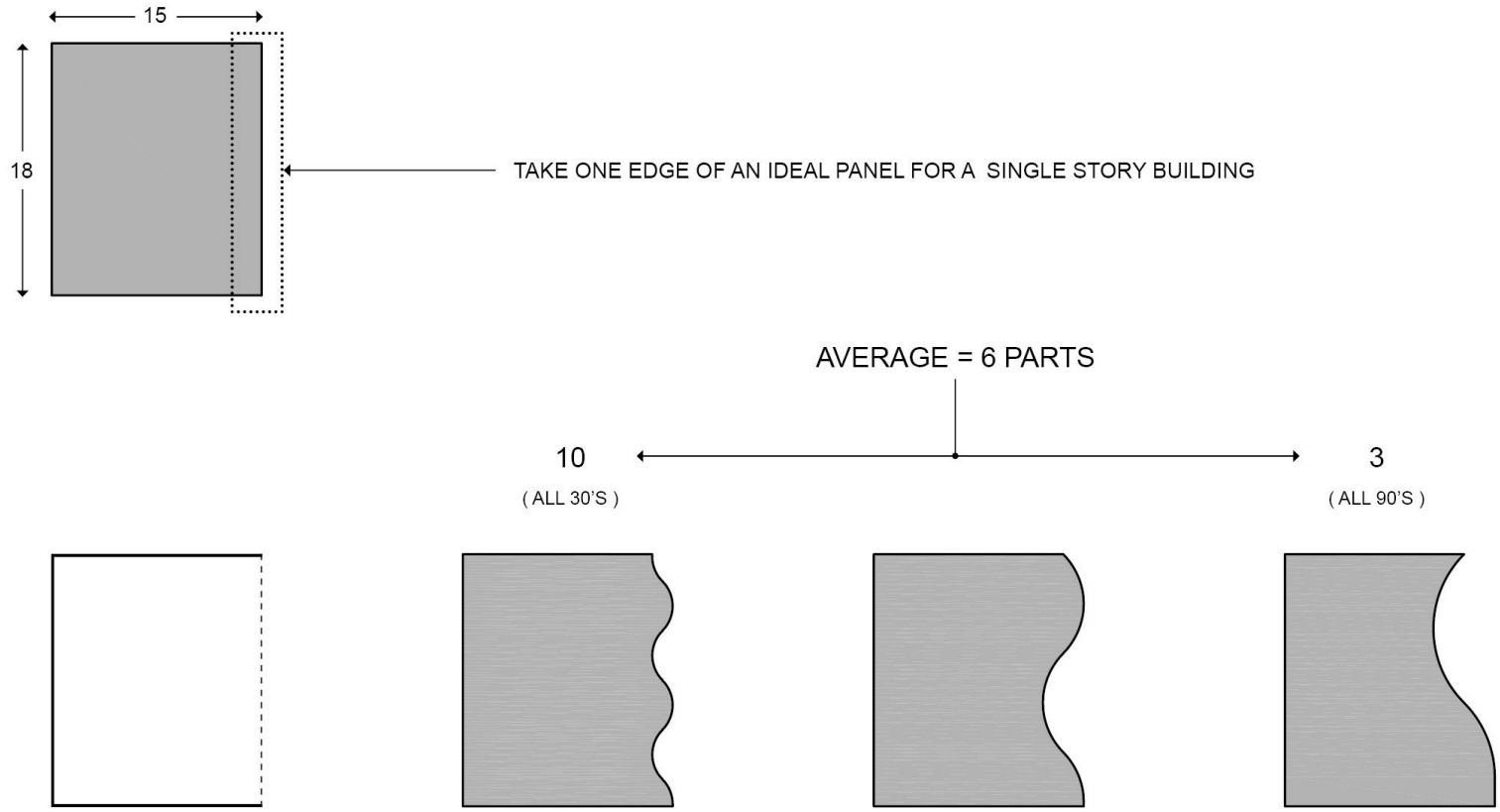




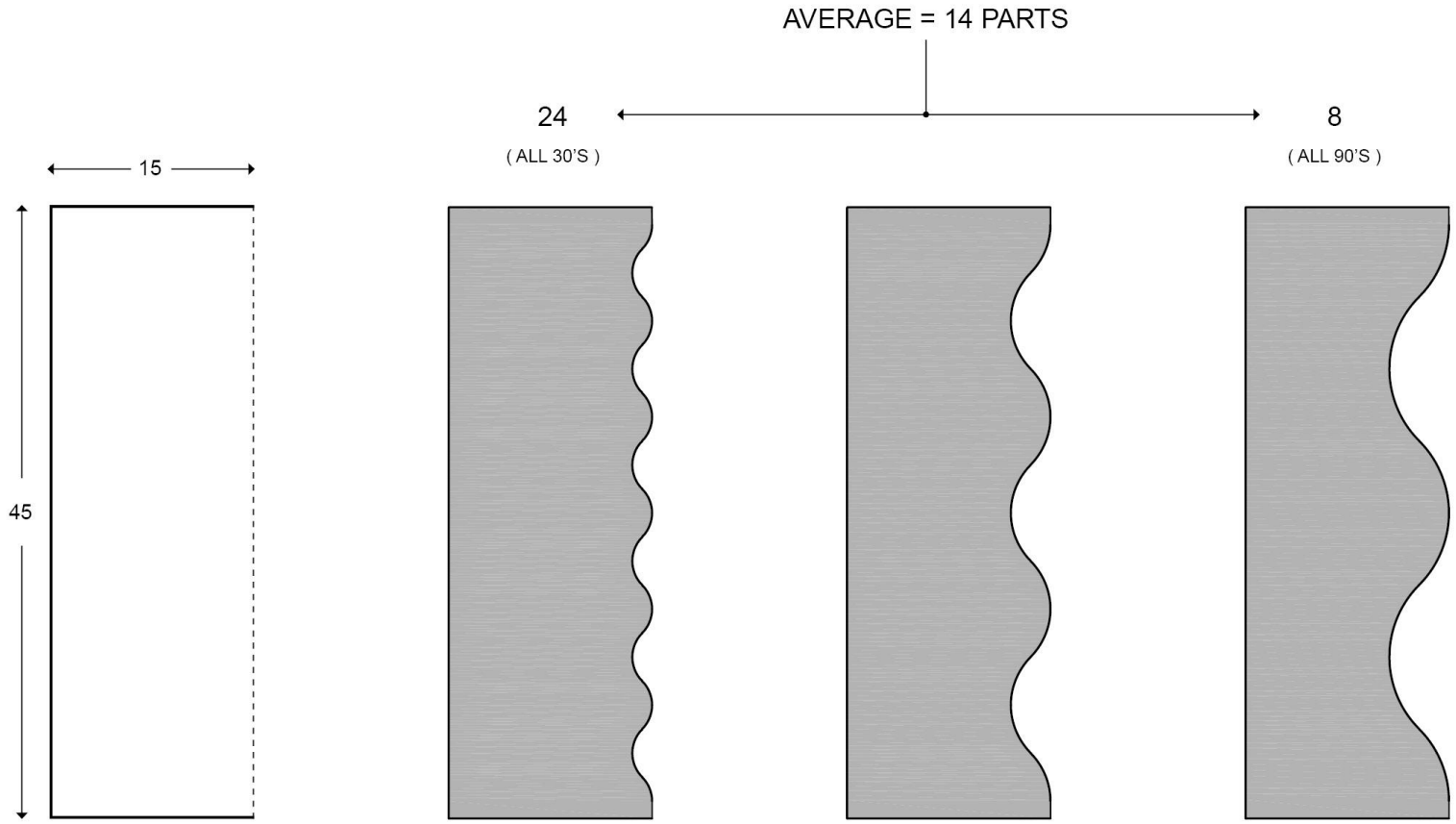




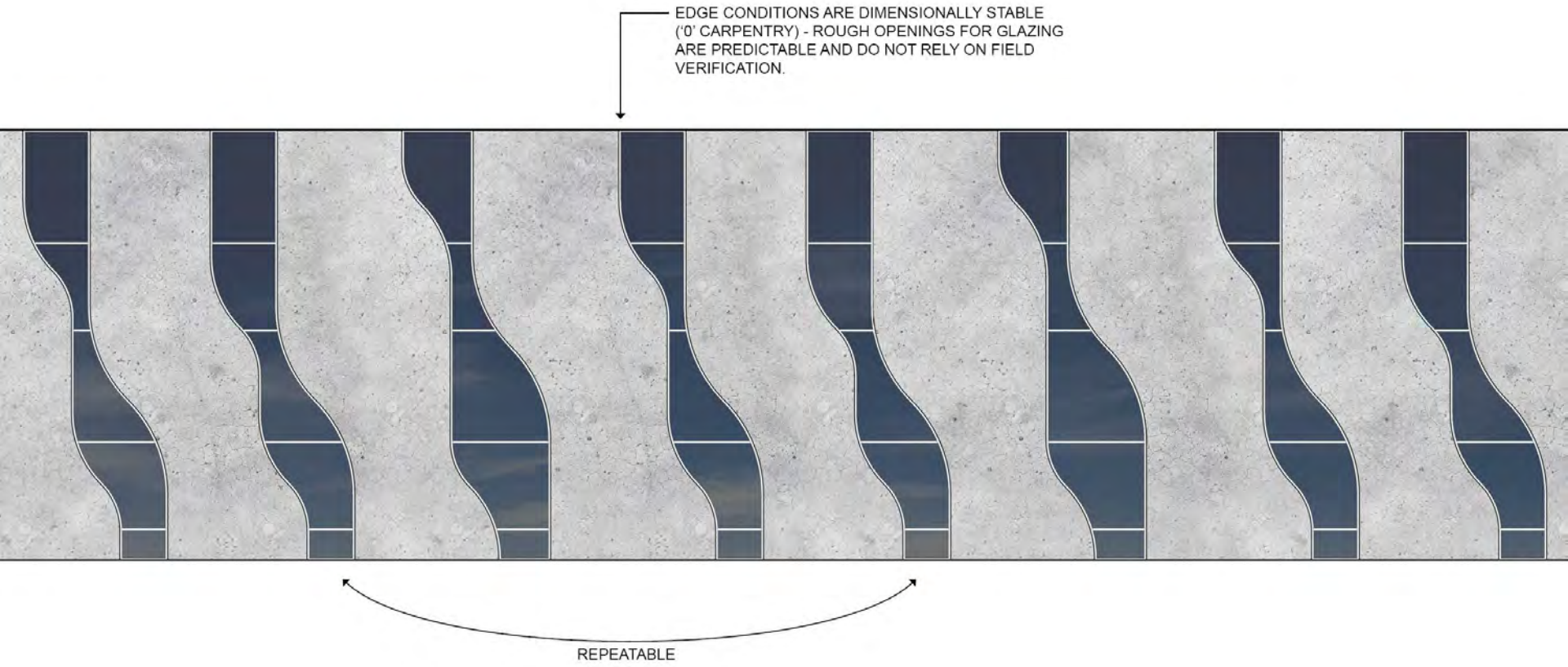
THEY CAN BE ASSEMBLED *AS CLOSED SHAPES AND PANEL JOINTS*



A LIMIT OF 6 PIECES USED ON A SINGLE STORY PANEL YIELDS ***729 POSSIBLE EDGE CONDITIONS***

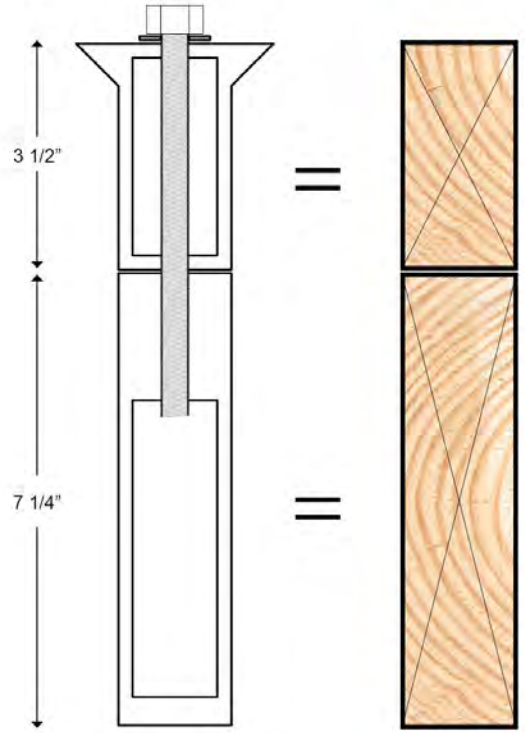


A LIMIT OF 14 PIECES USED ON A 3-STORY PANEL YIELDS ***4,782,969 POSSIBLE EDGE CONDITIONS.***

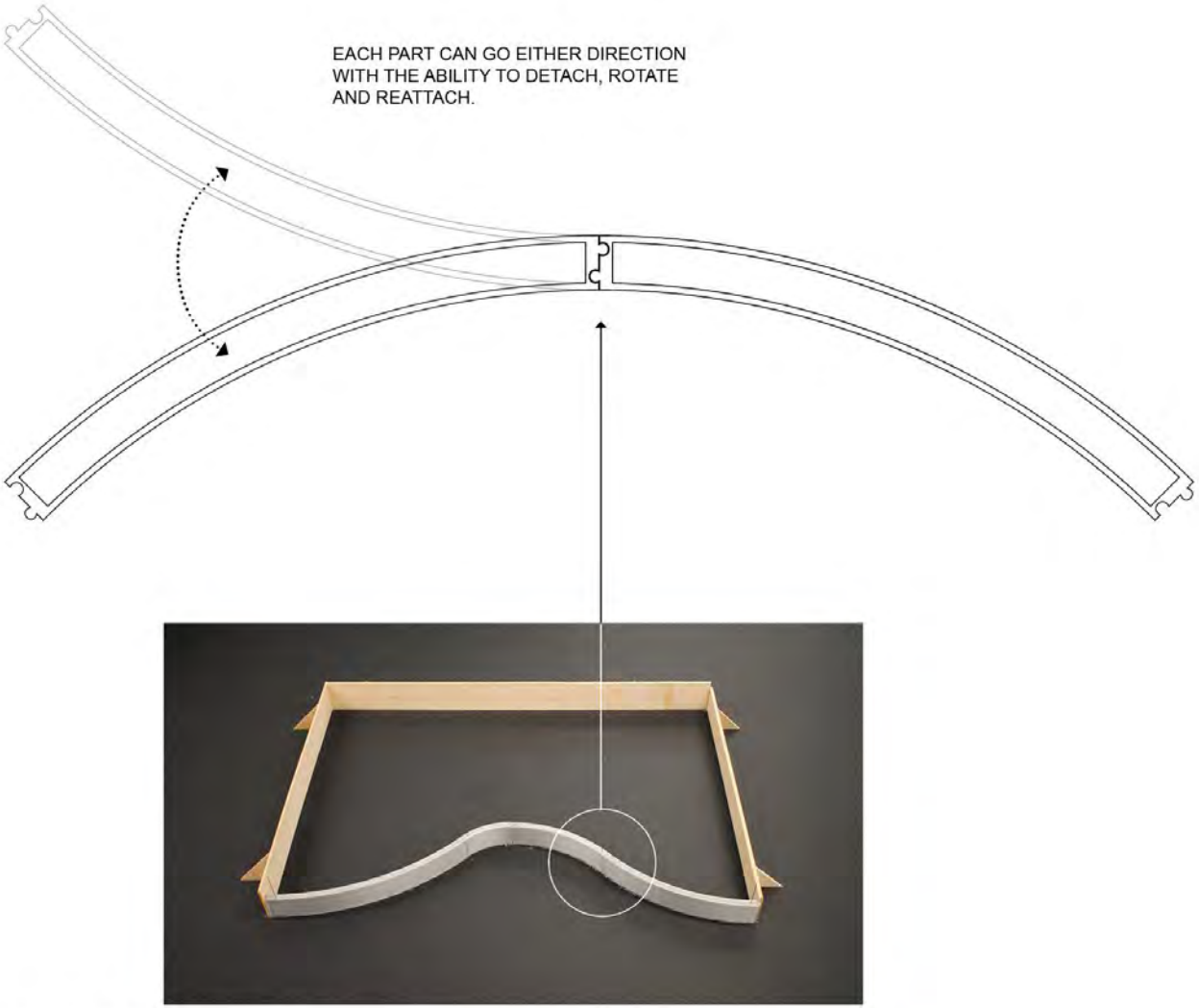


LIMITED CARPENTRY ALLOWS FOR EASY INTEGRATION OF GLAZING

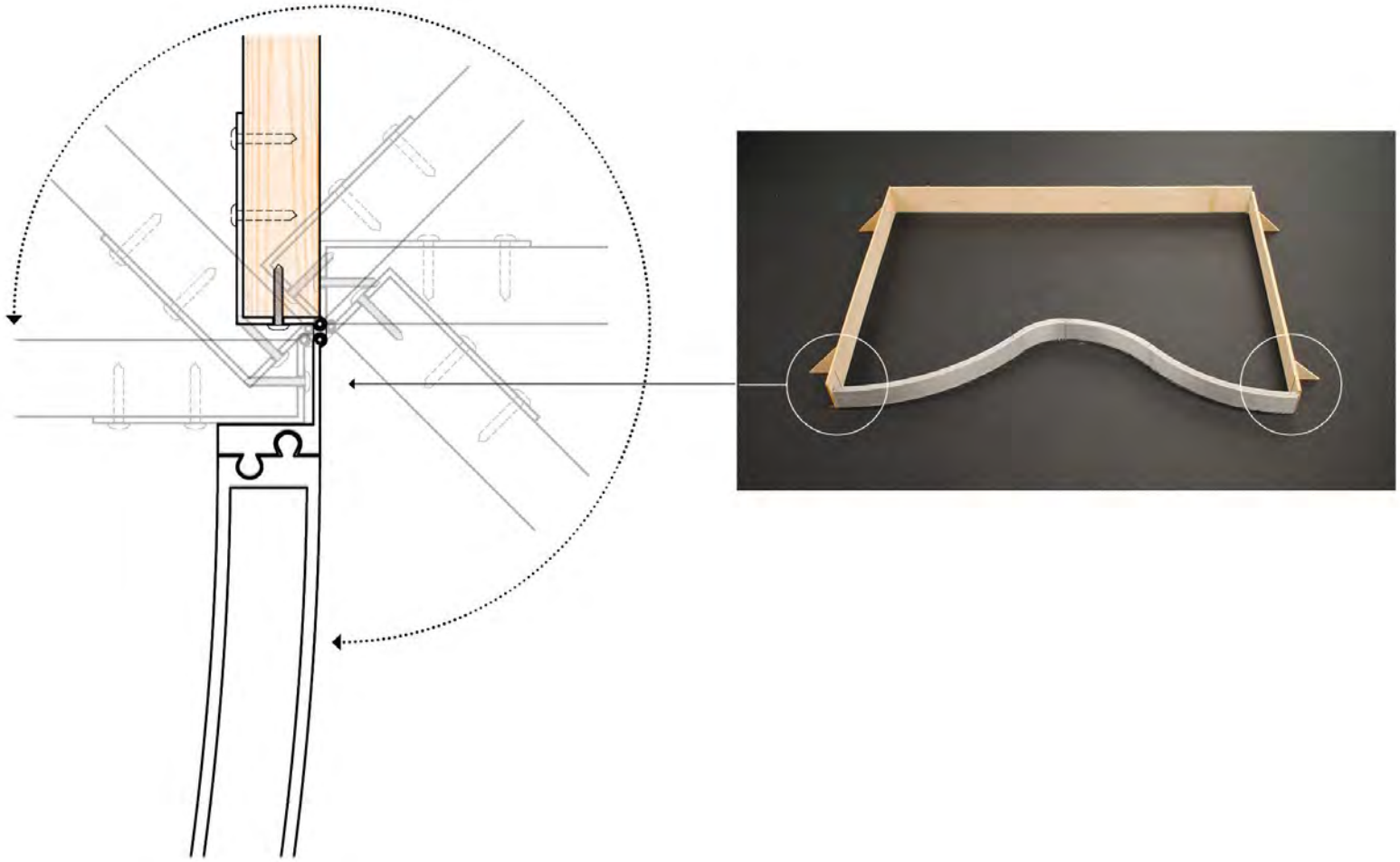
DETAILS



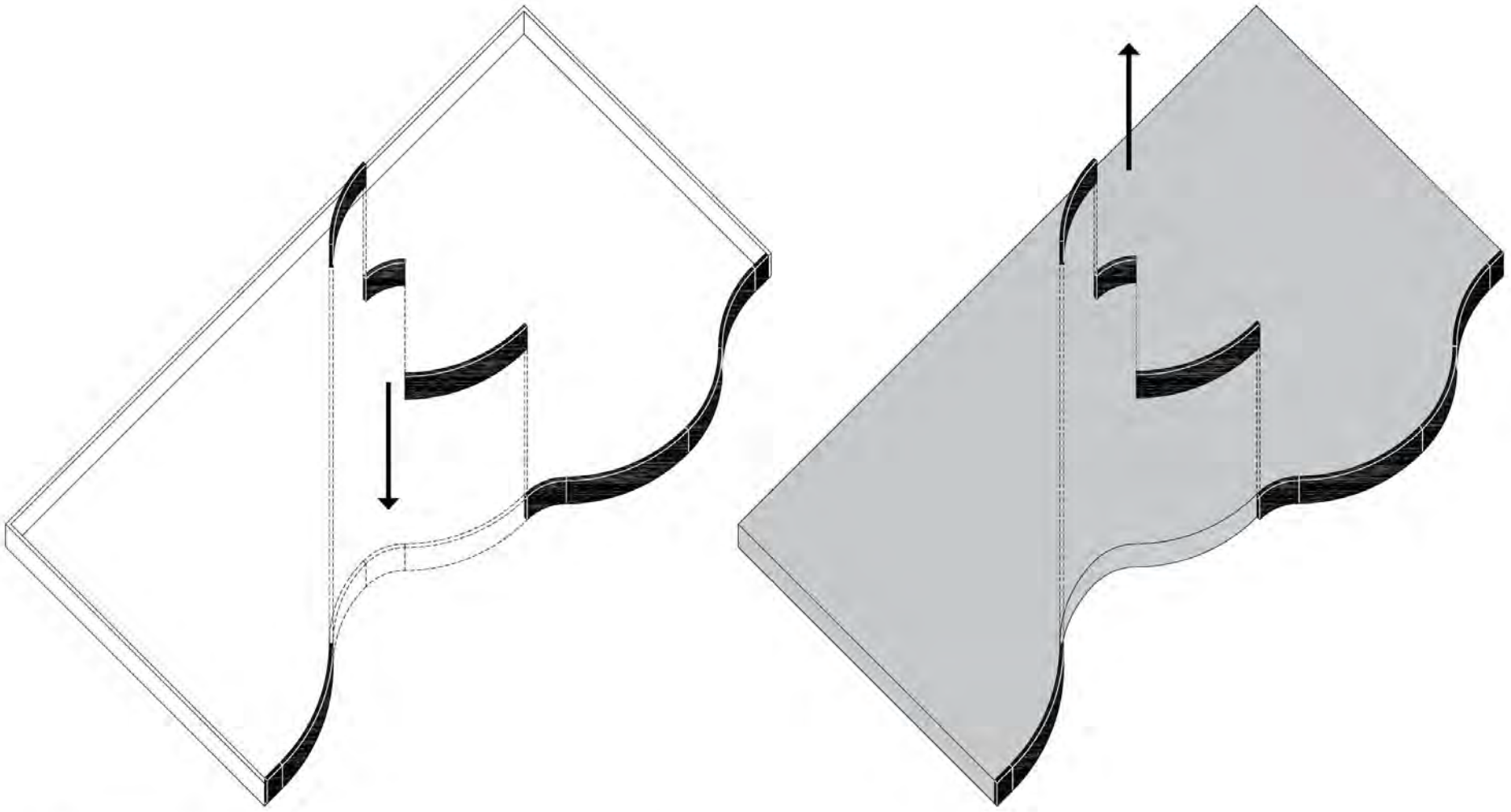
DETAILS / CONNECTIONS



STANDARD CONNECTION

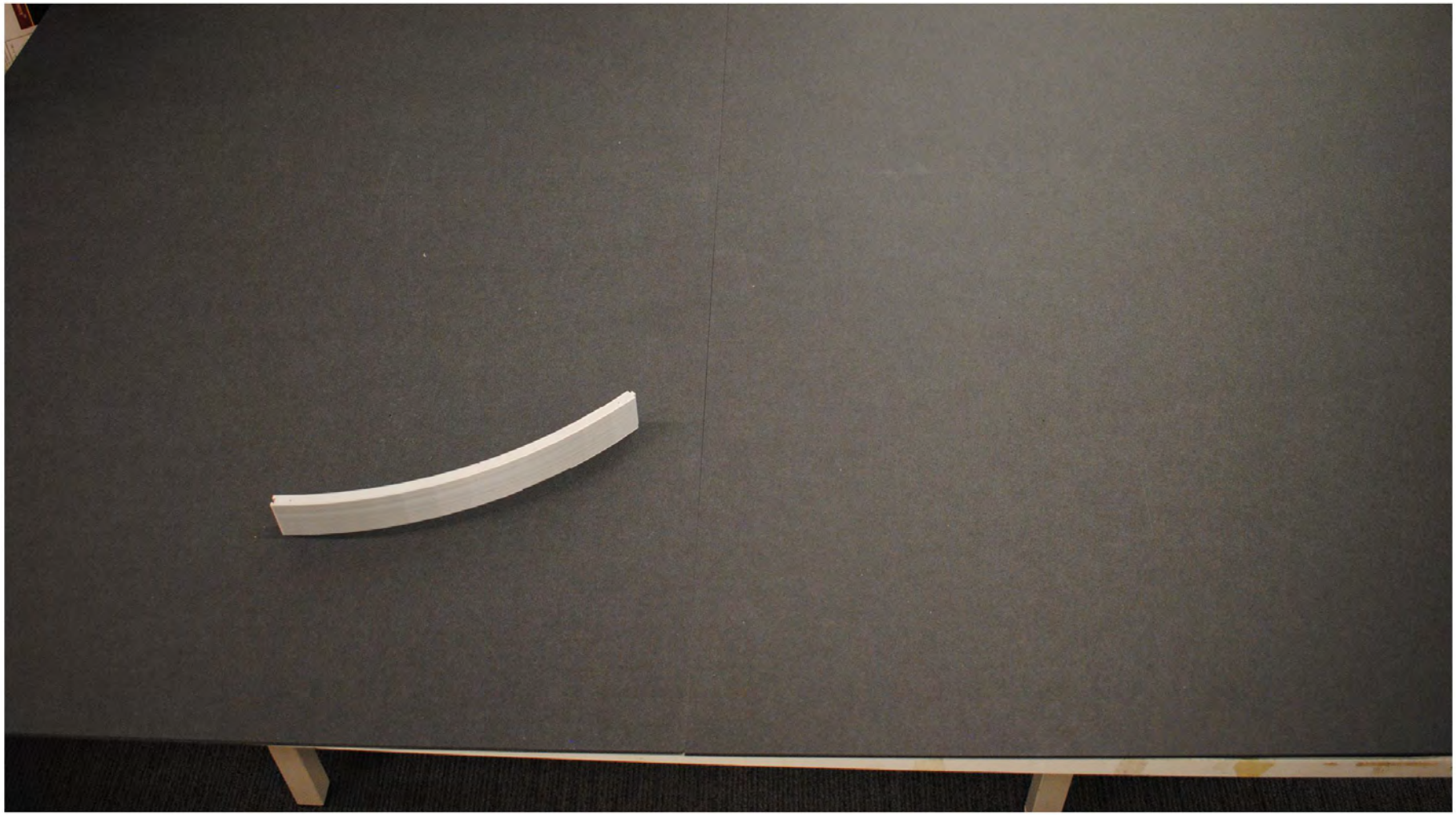


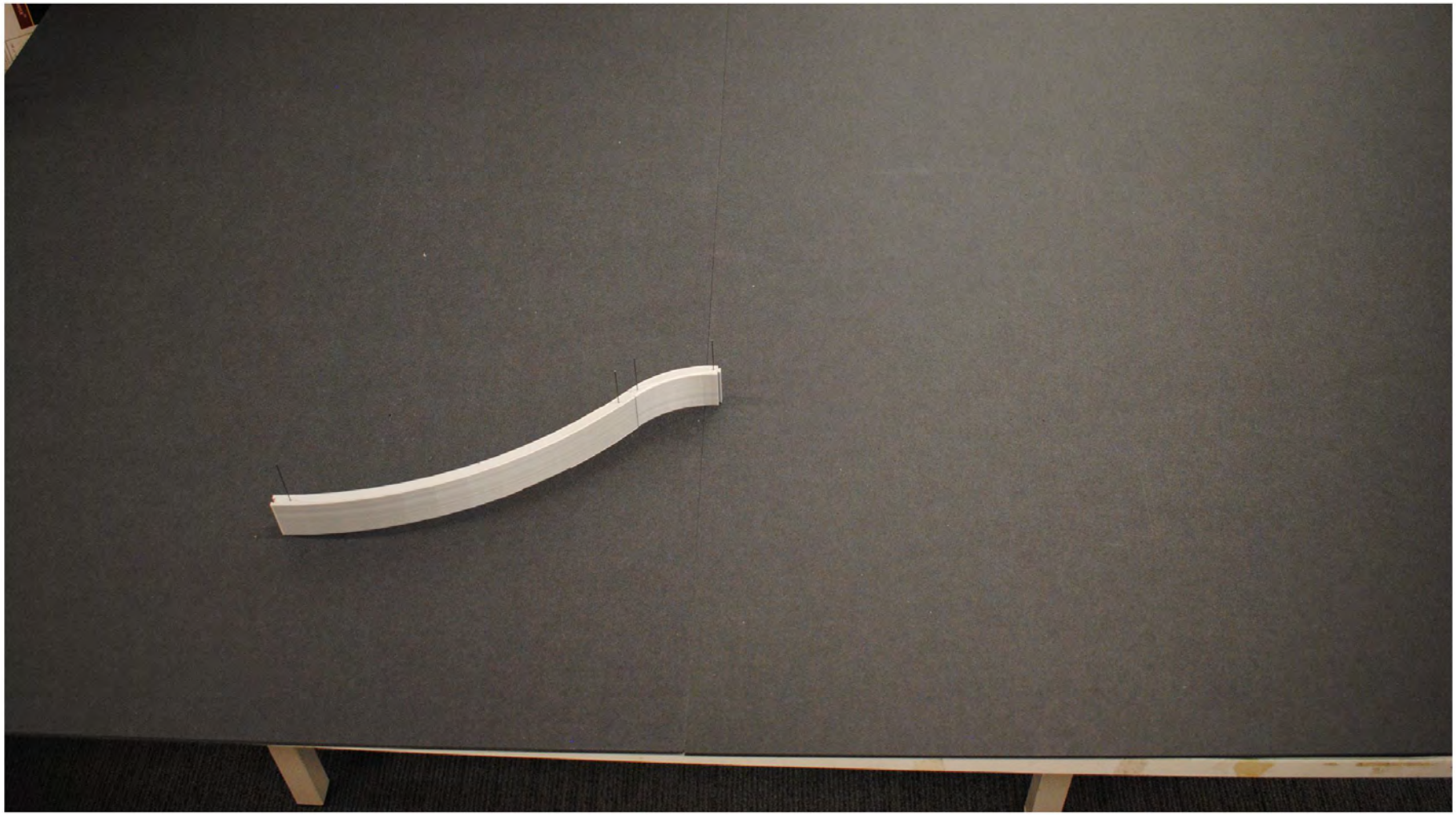
INTEGRATED COMPATIBILITY WITH LUMBER

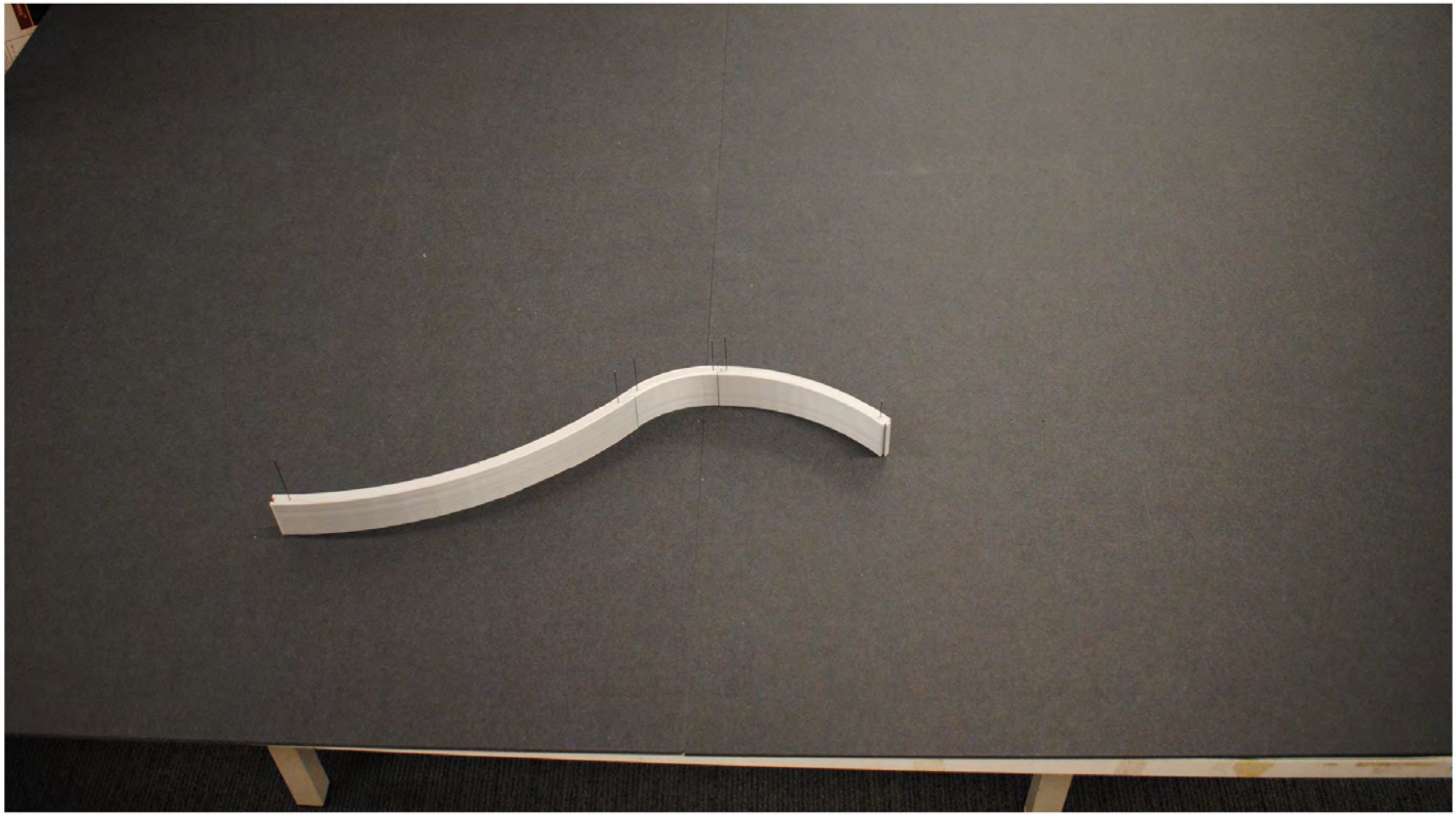


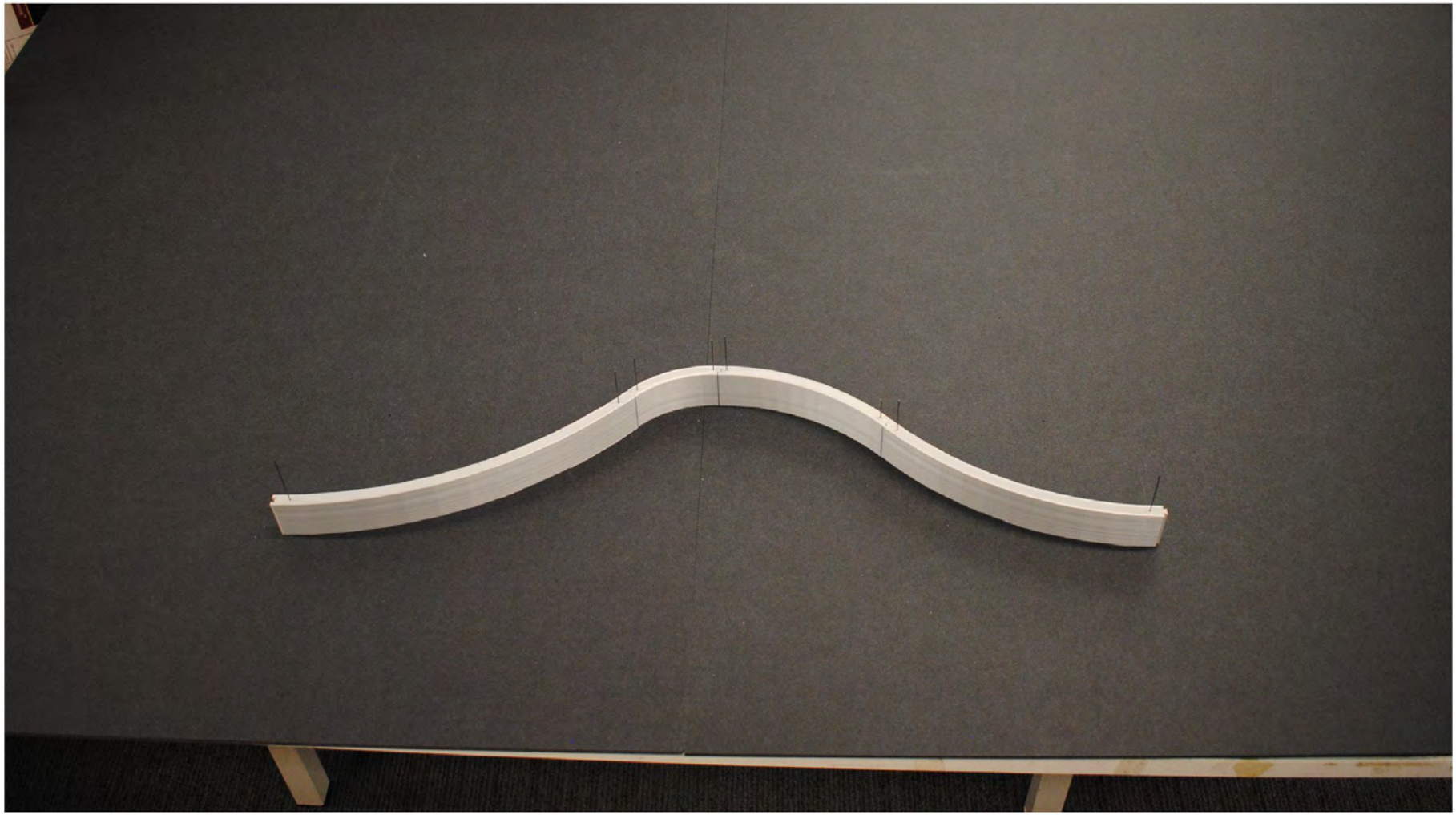
CONNECTION *ALLOWS FOR VERTICAL SETTING AND REMOVAL OF PARTS*

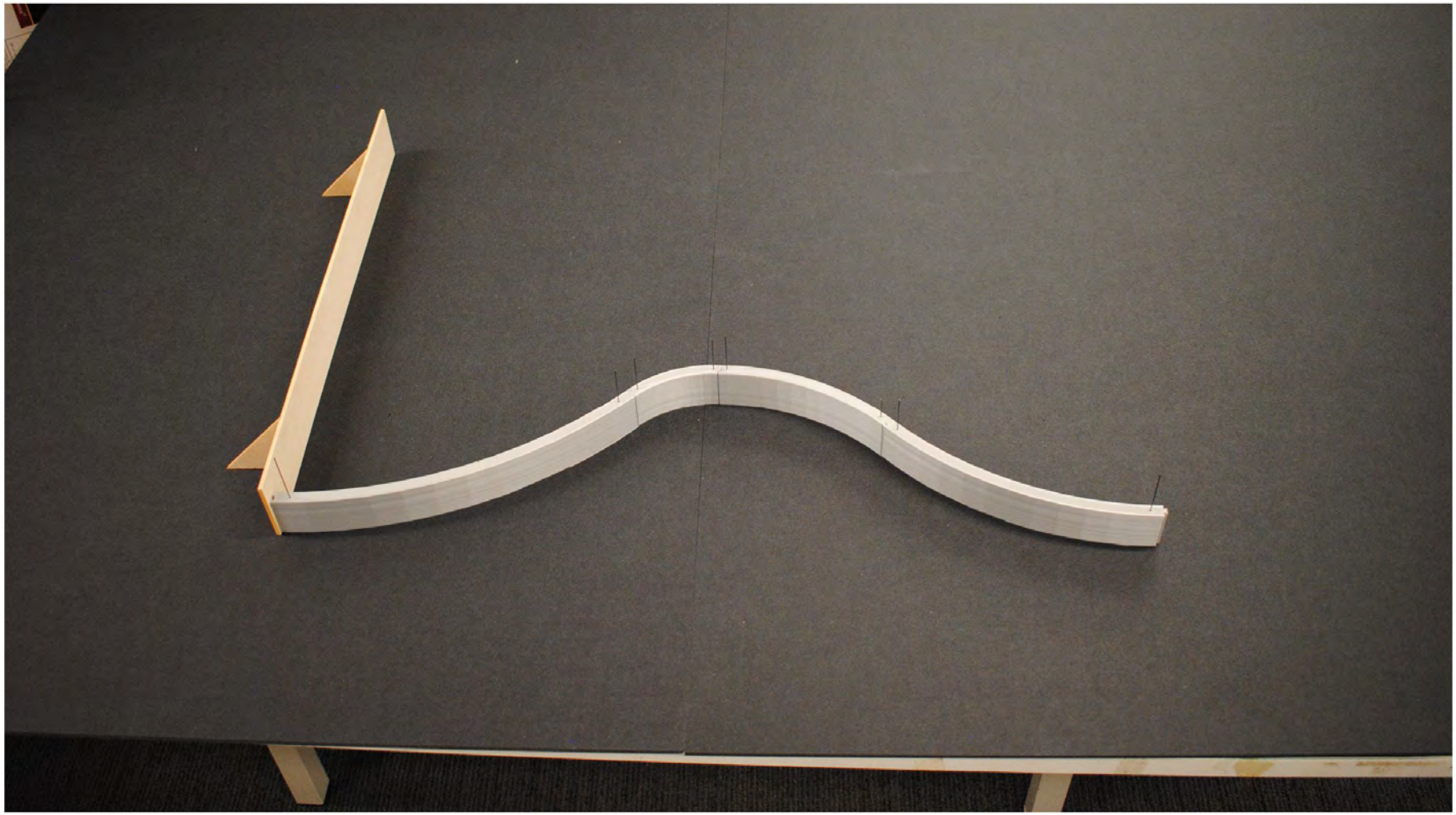
03 - APPLICATION

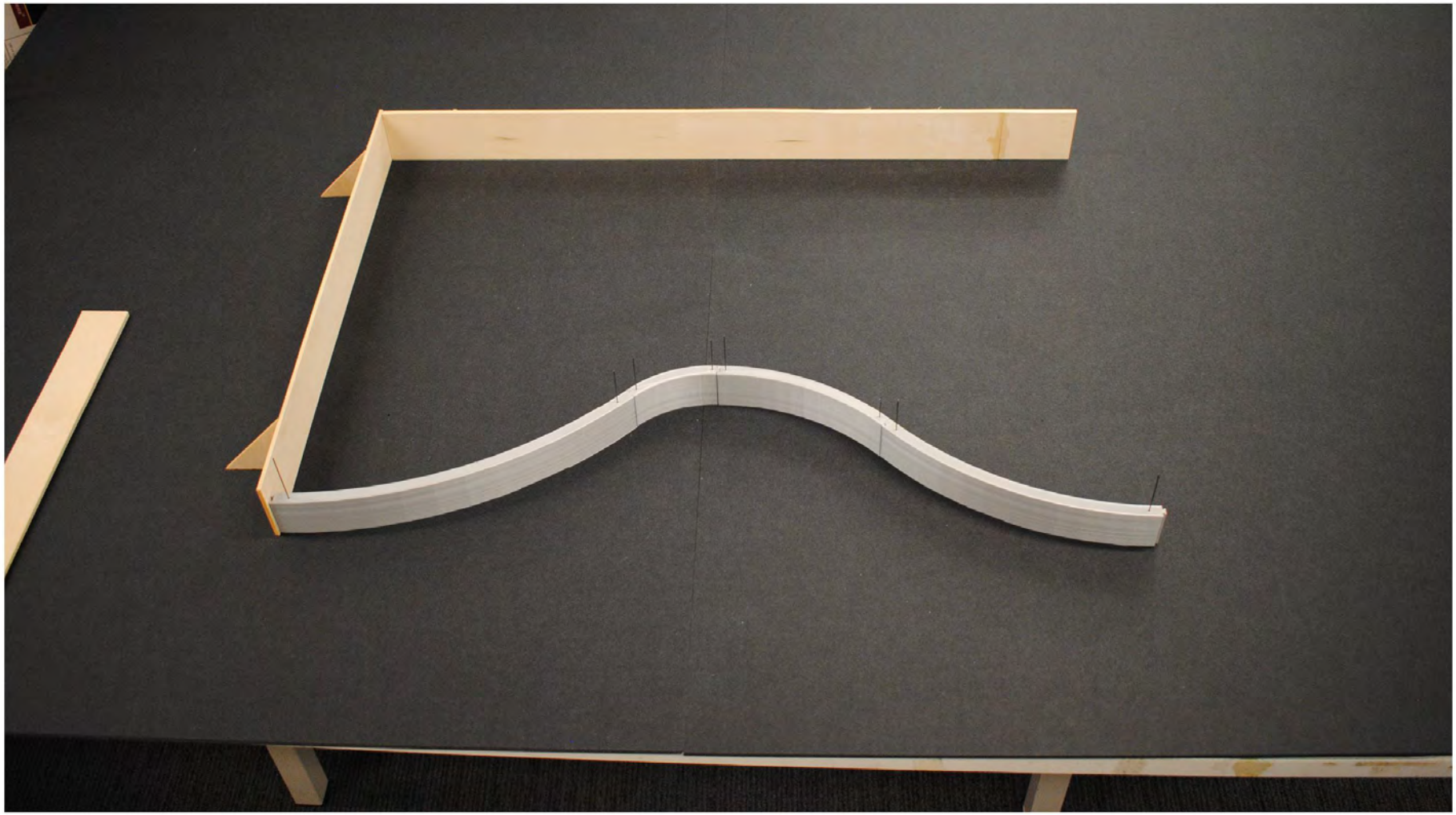


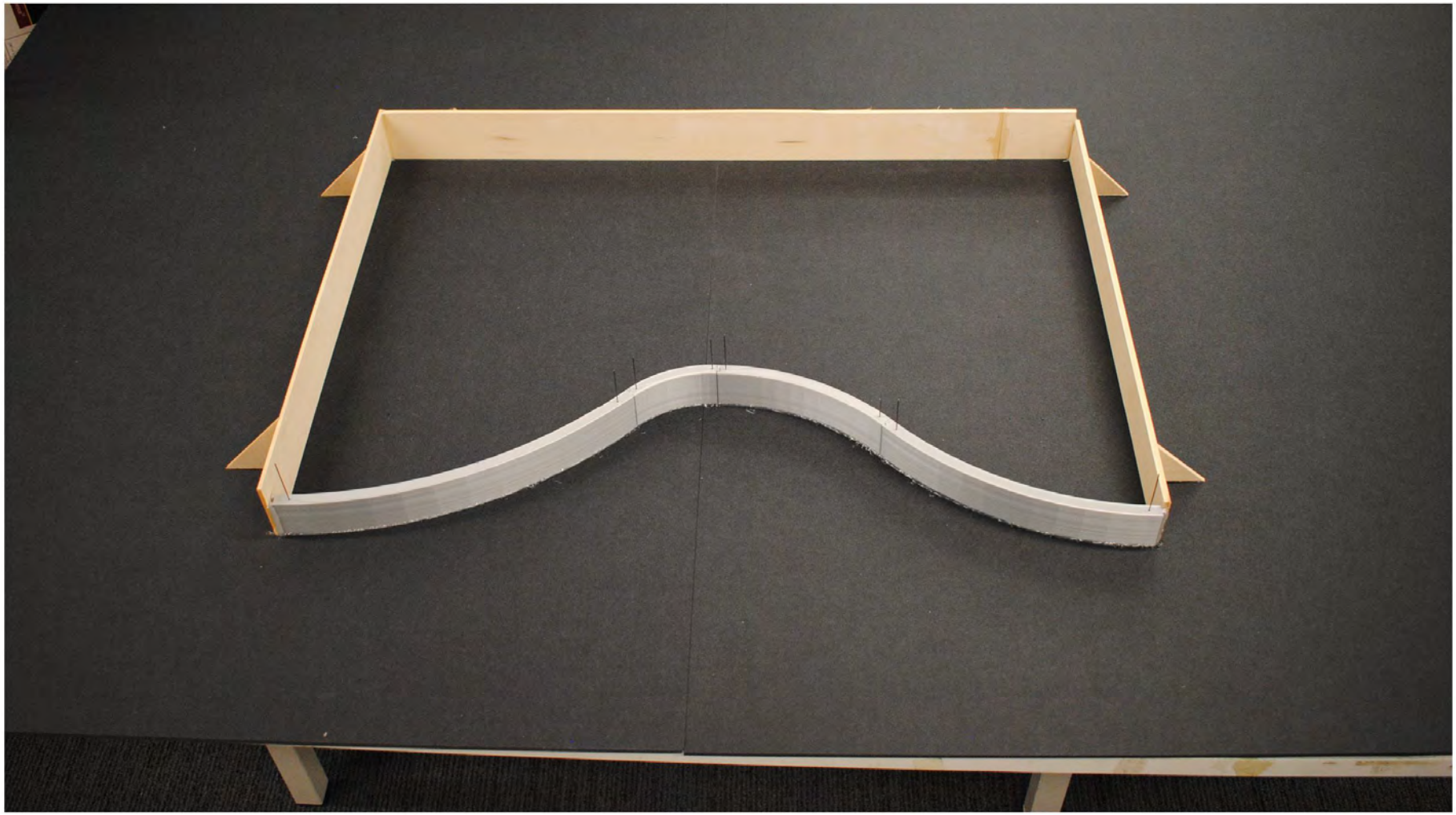


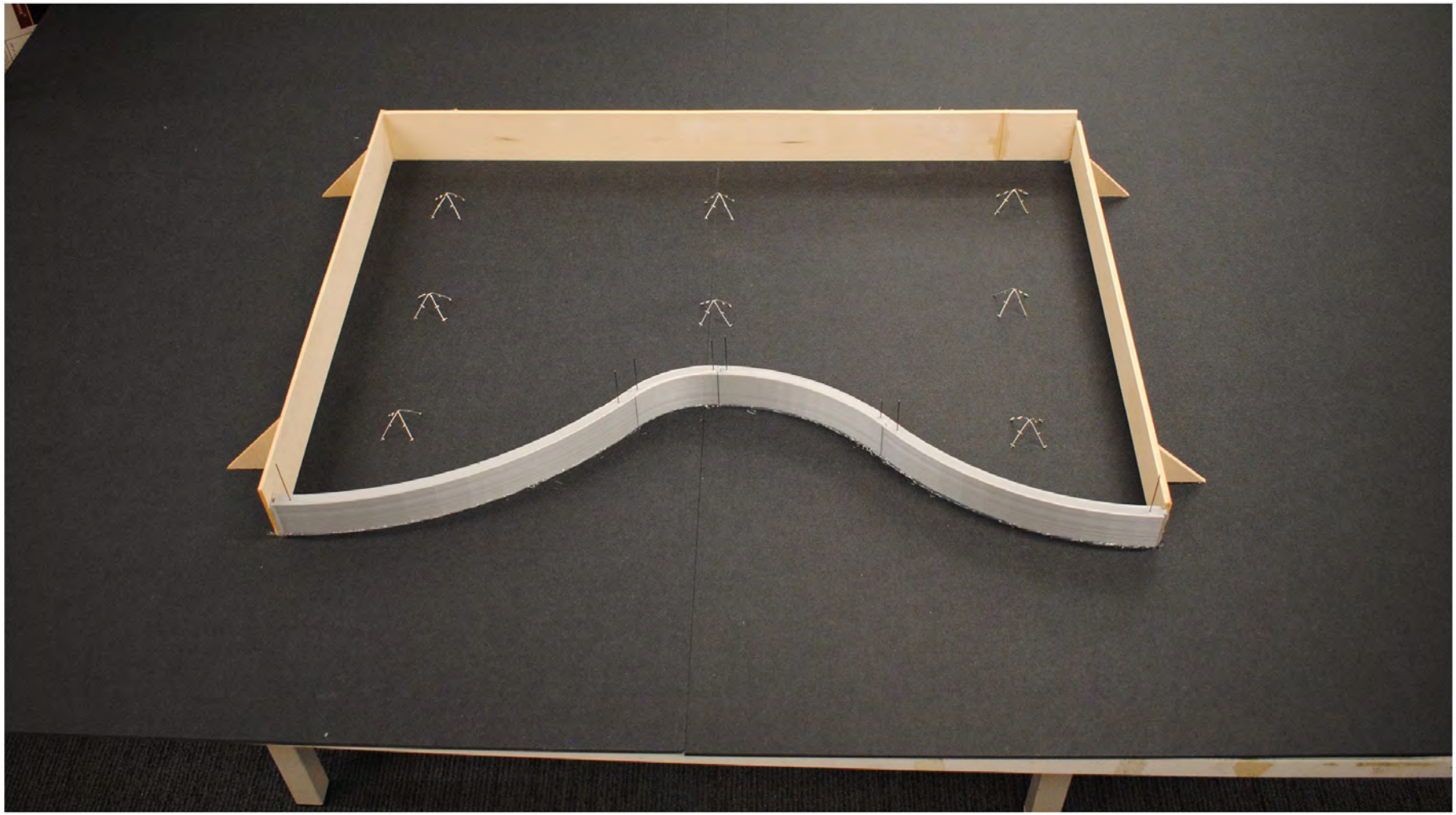


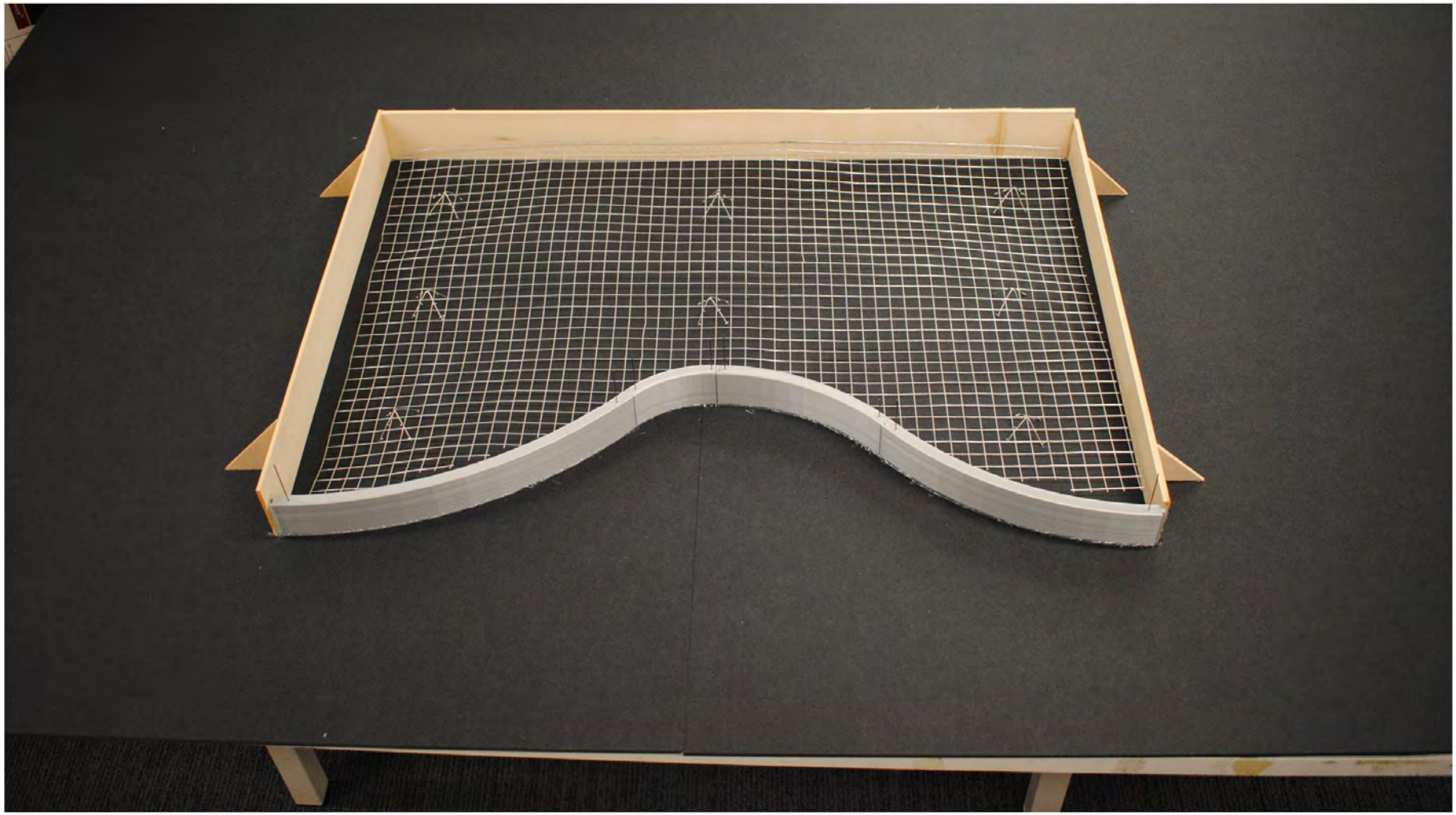


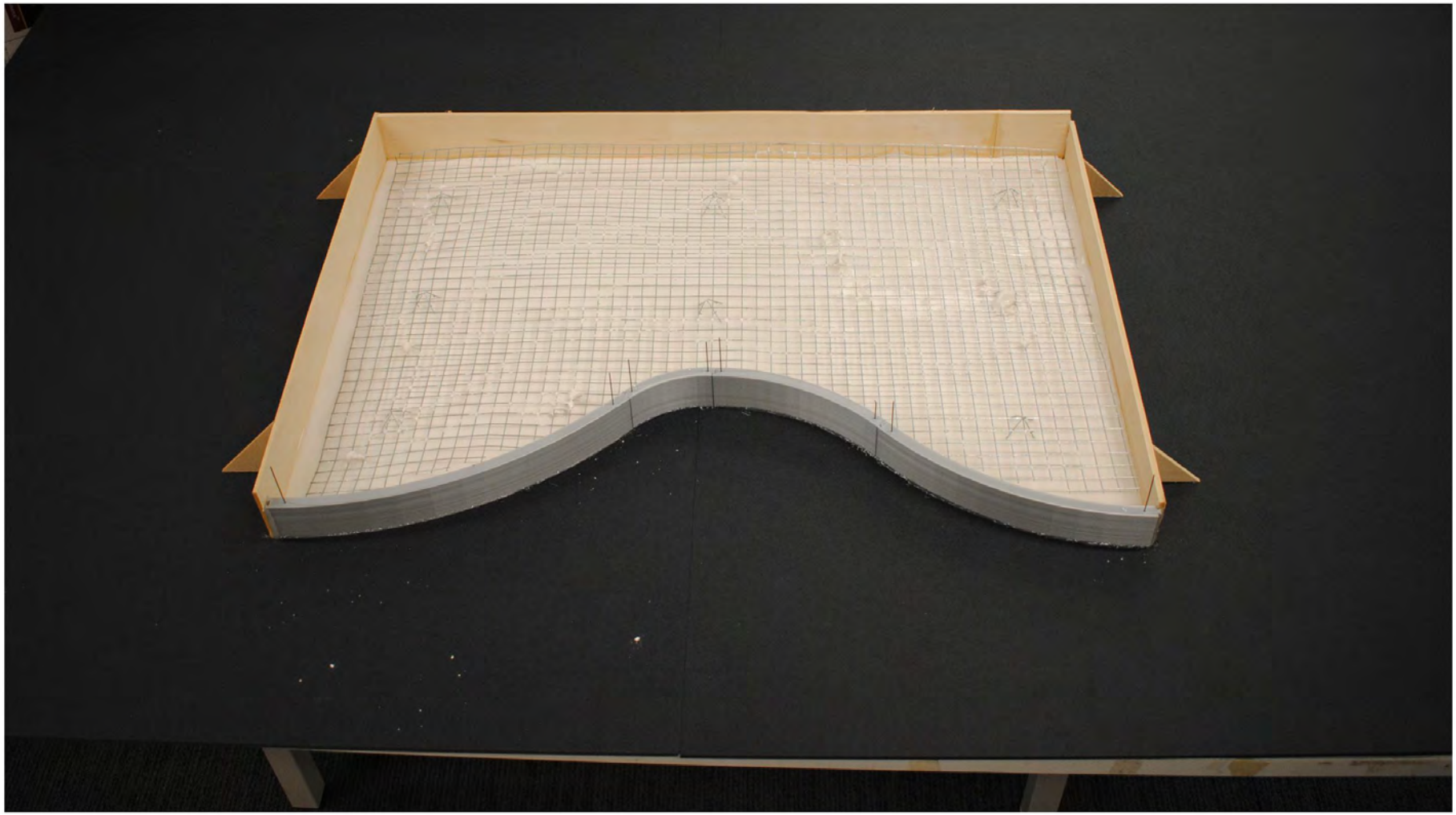


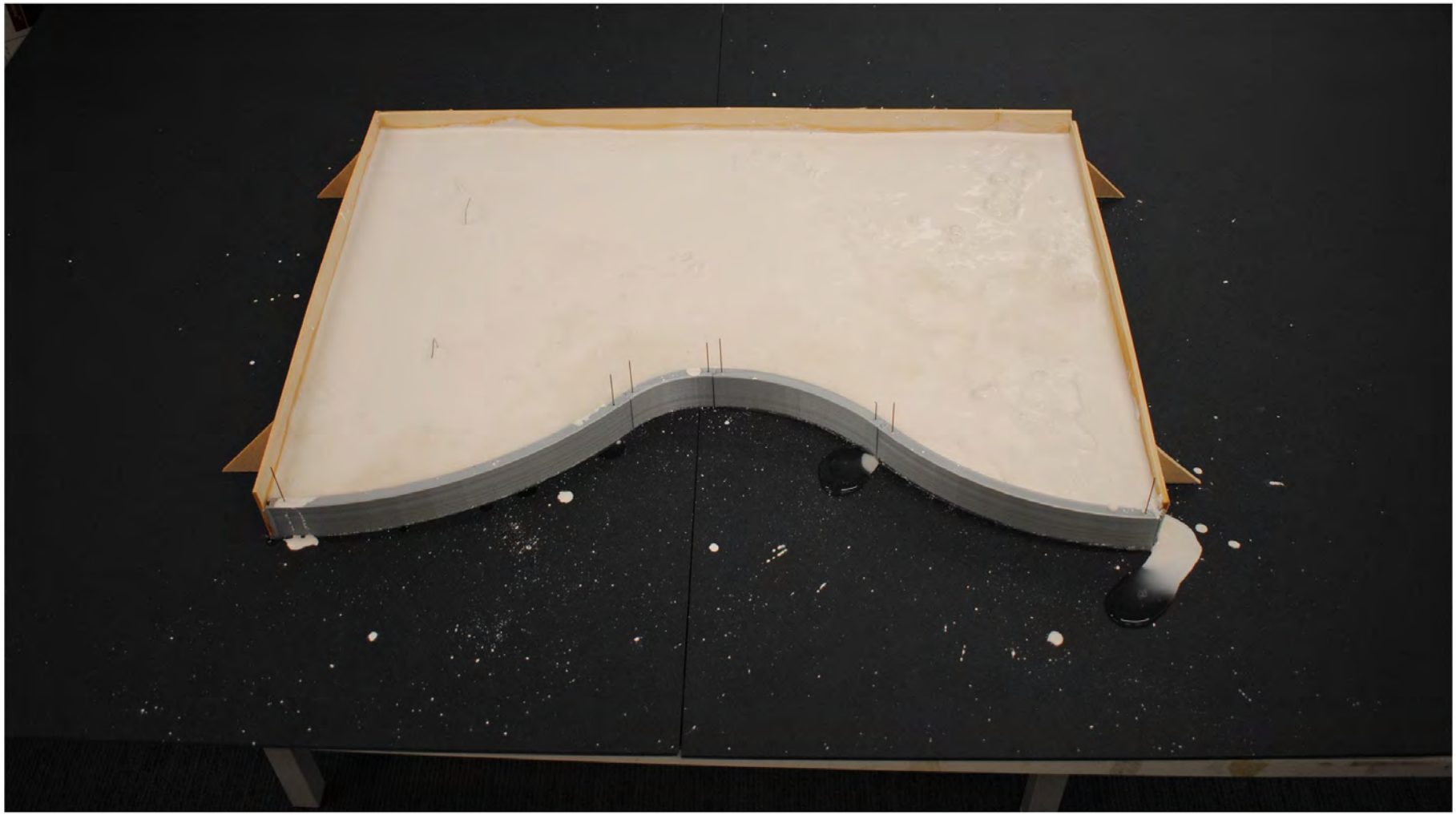


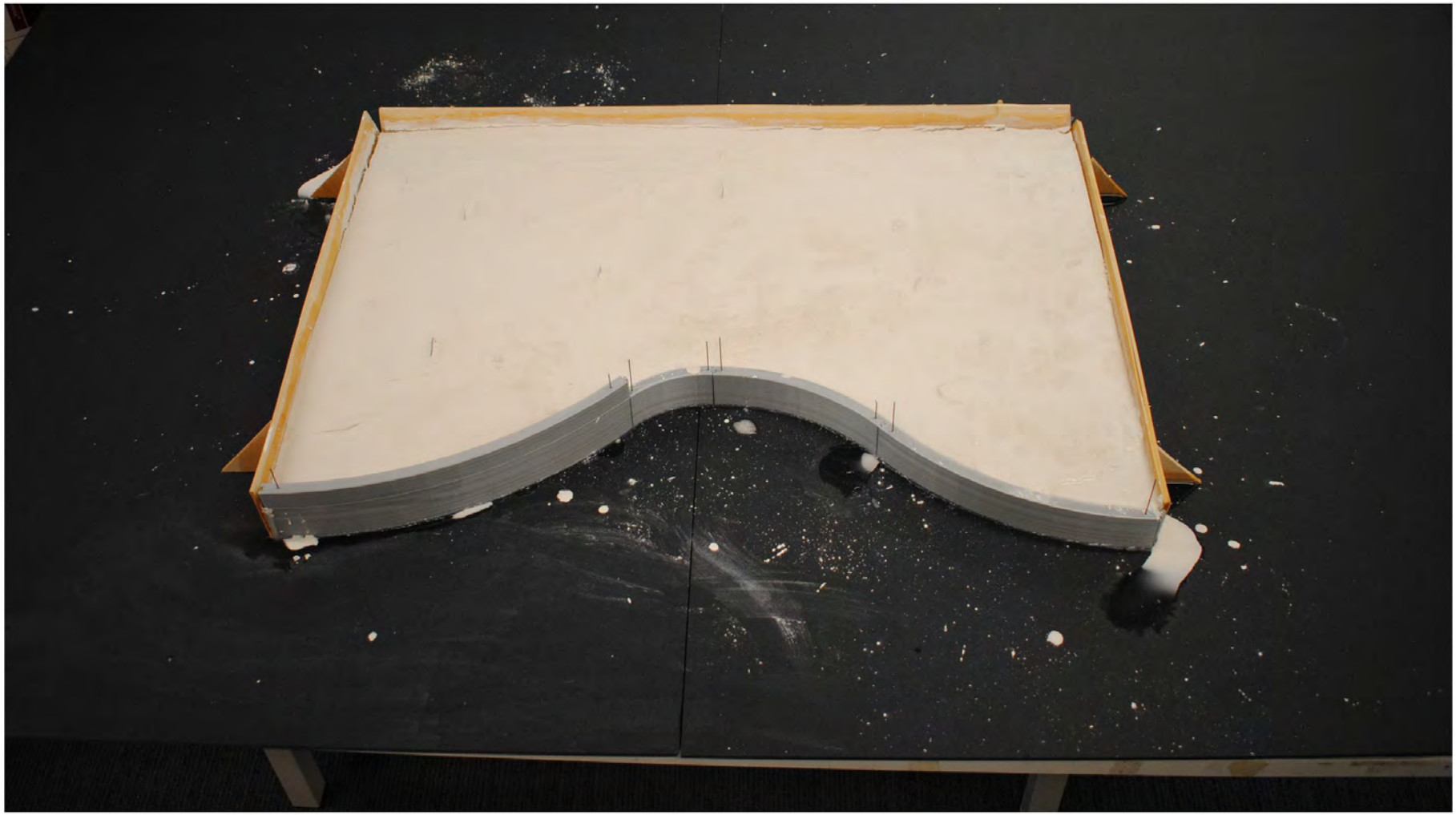


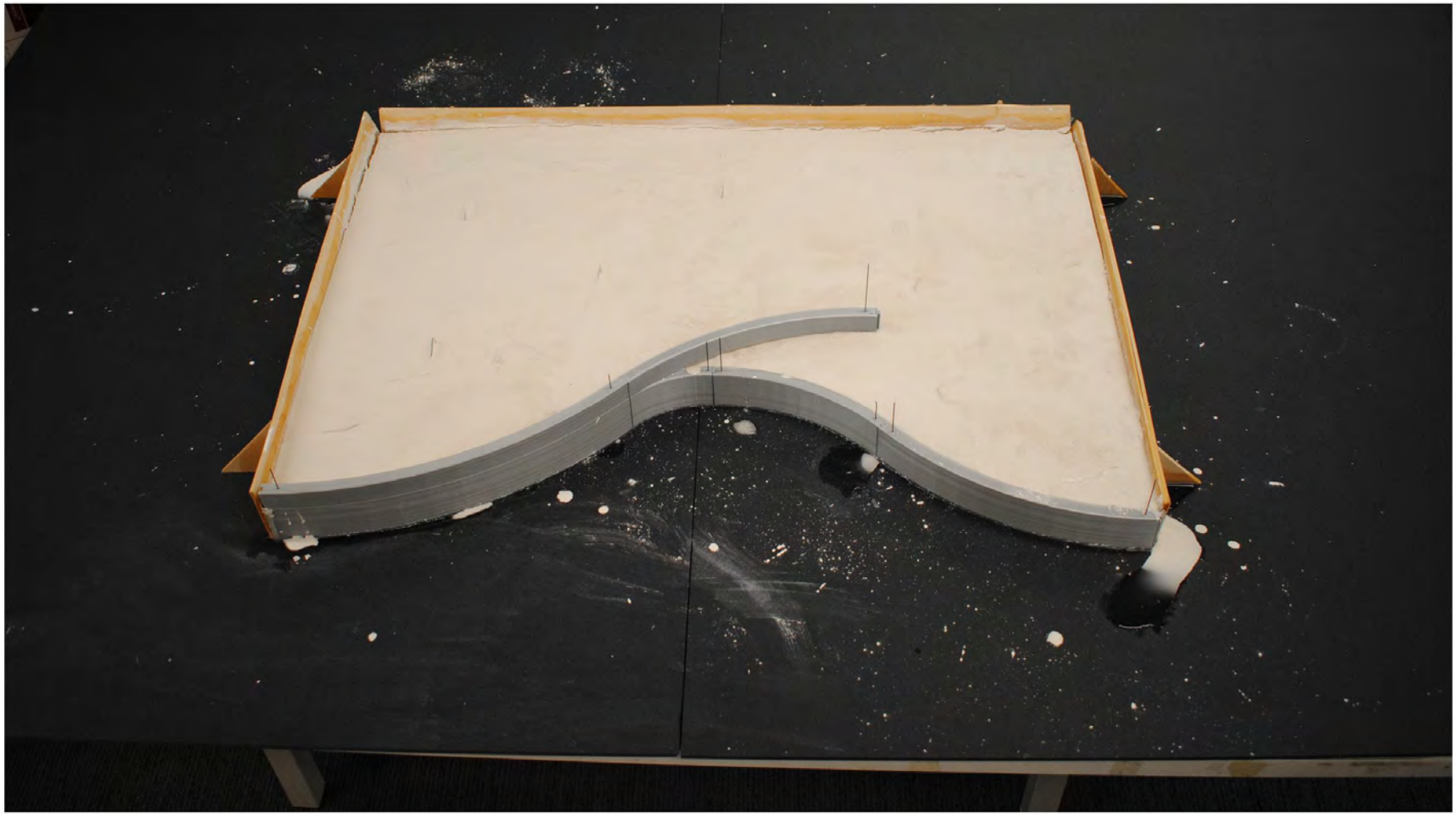


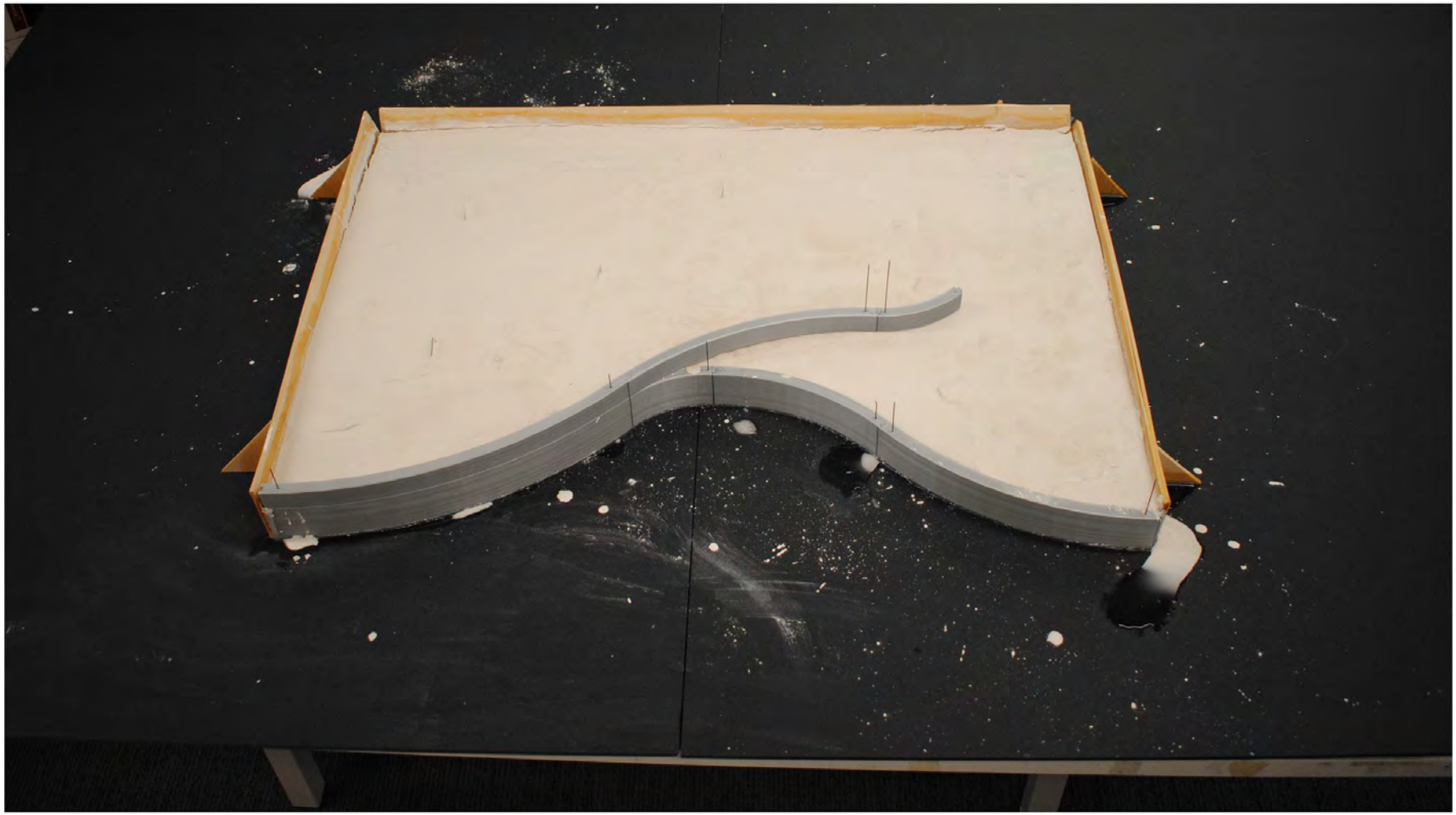


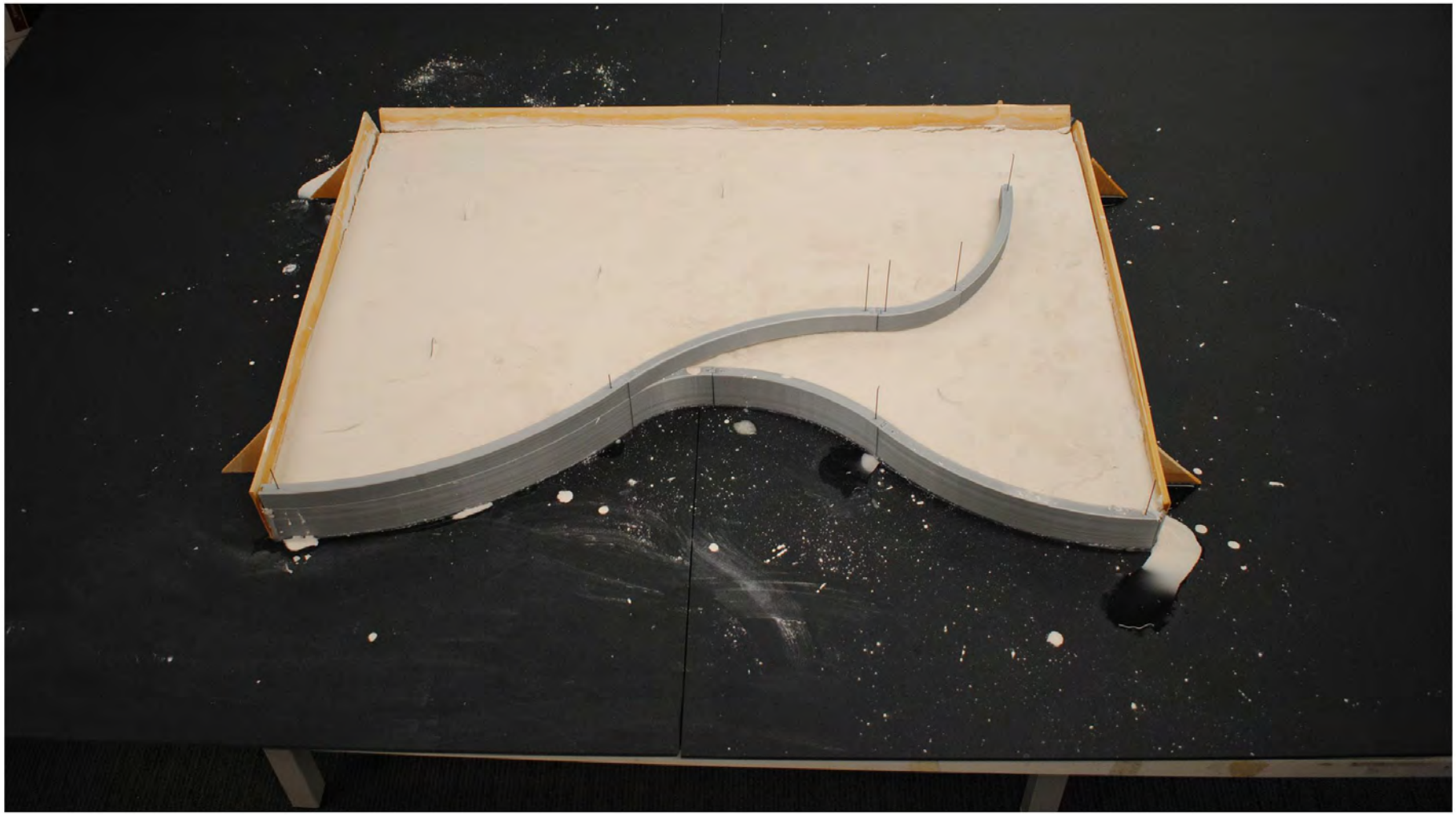


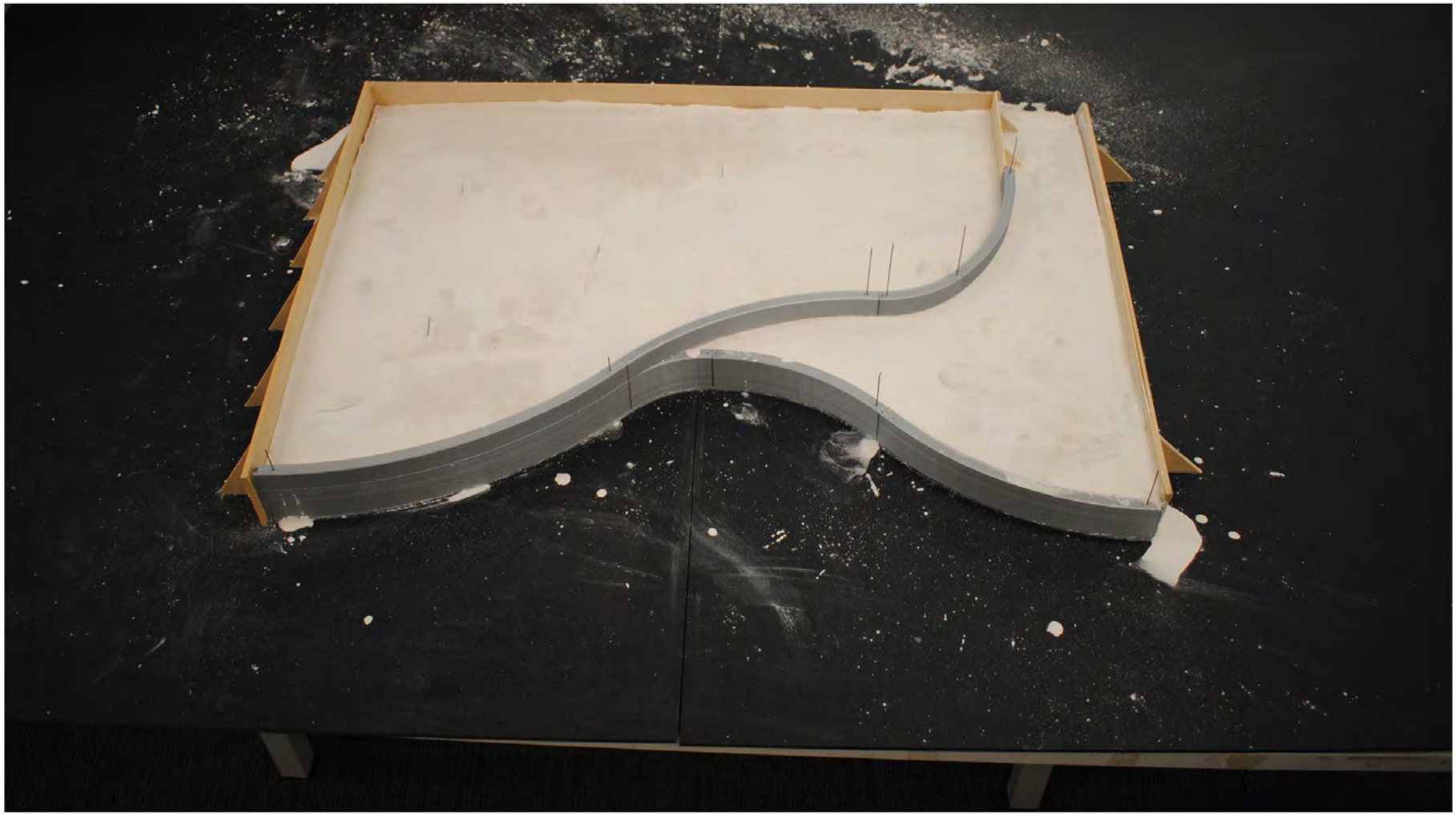


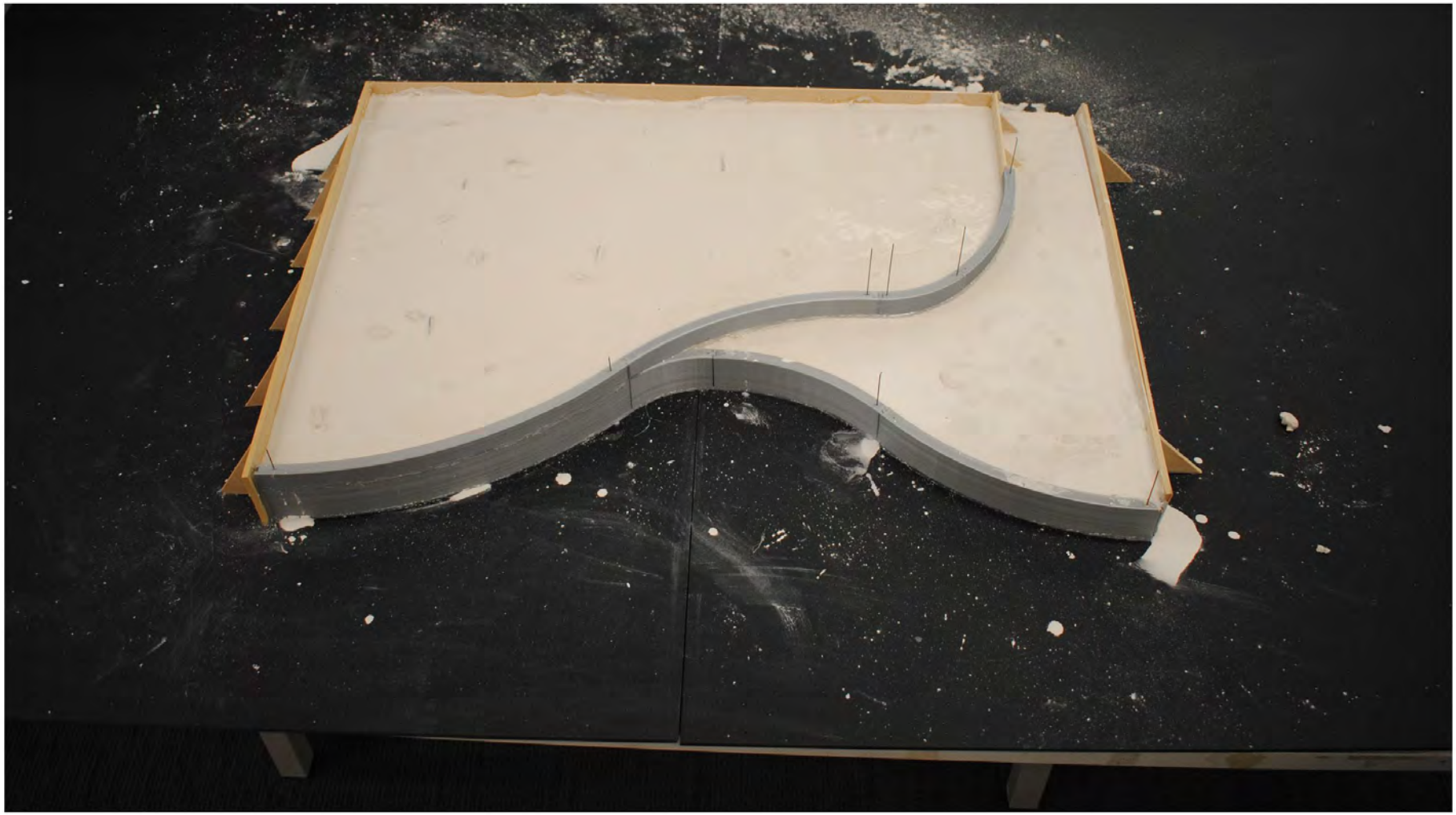


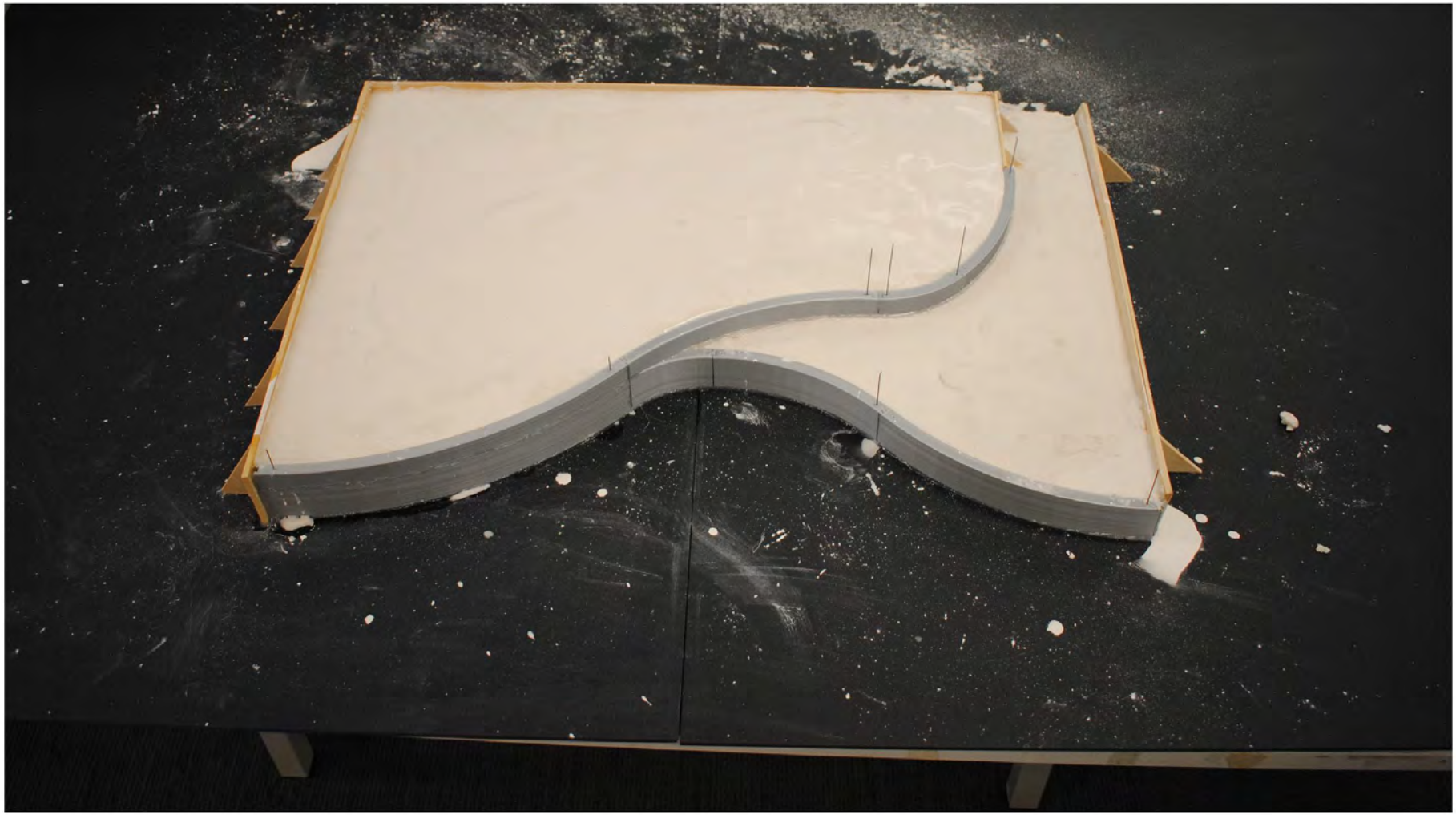


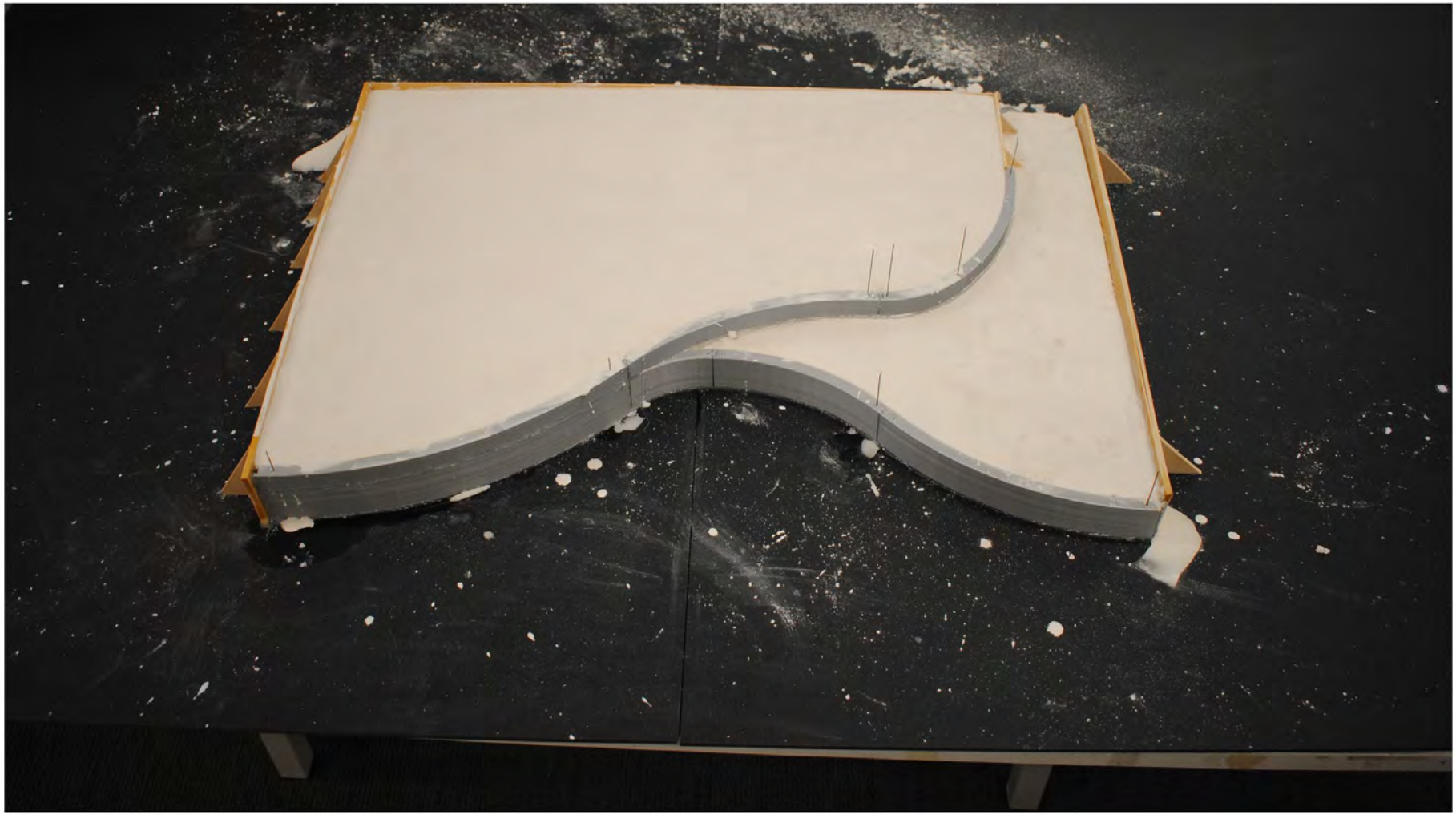


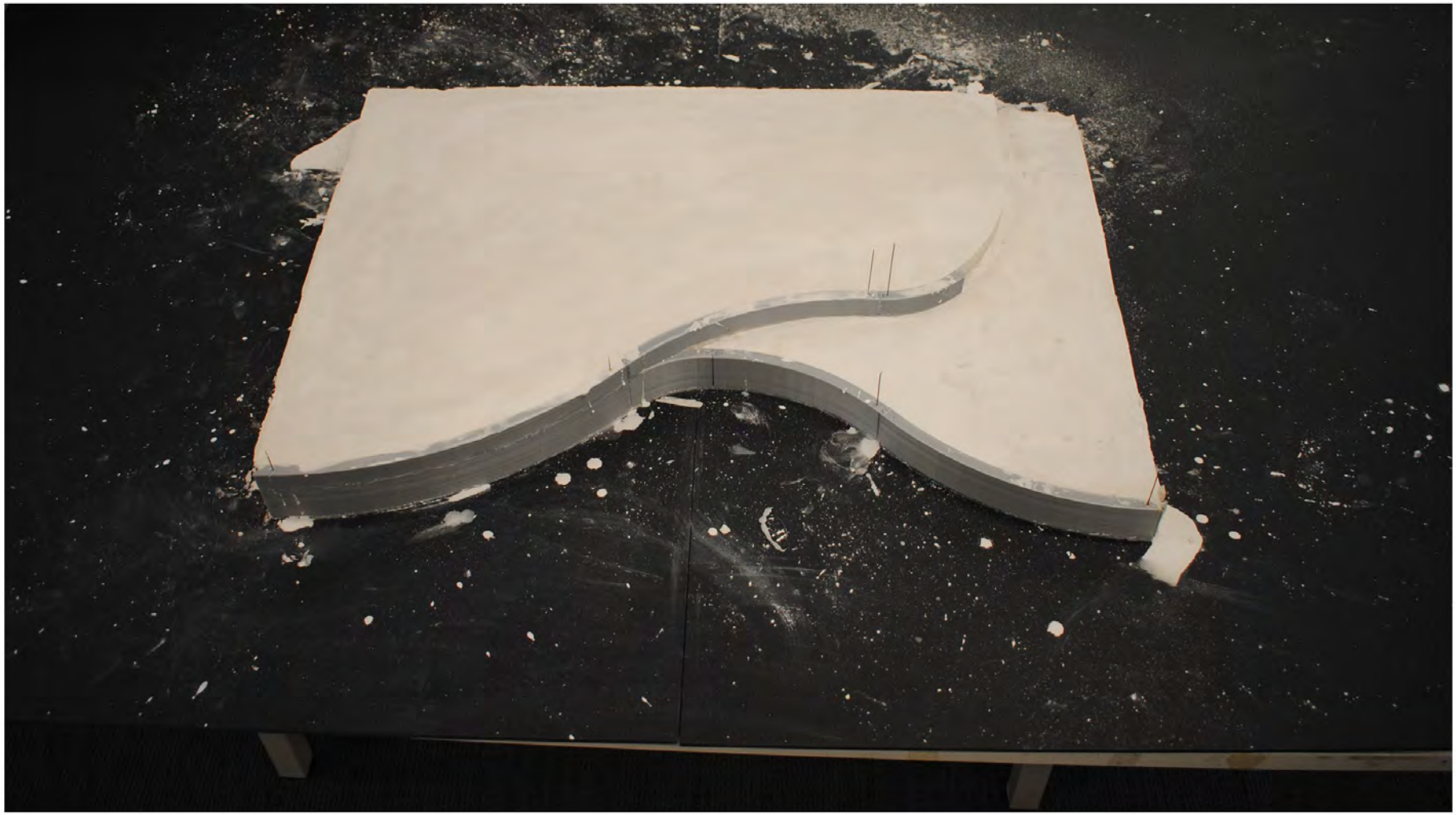


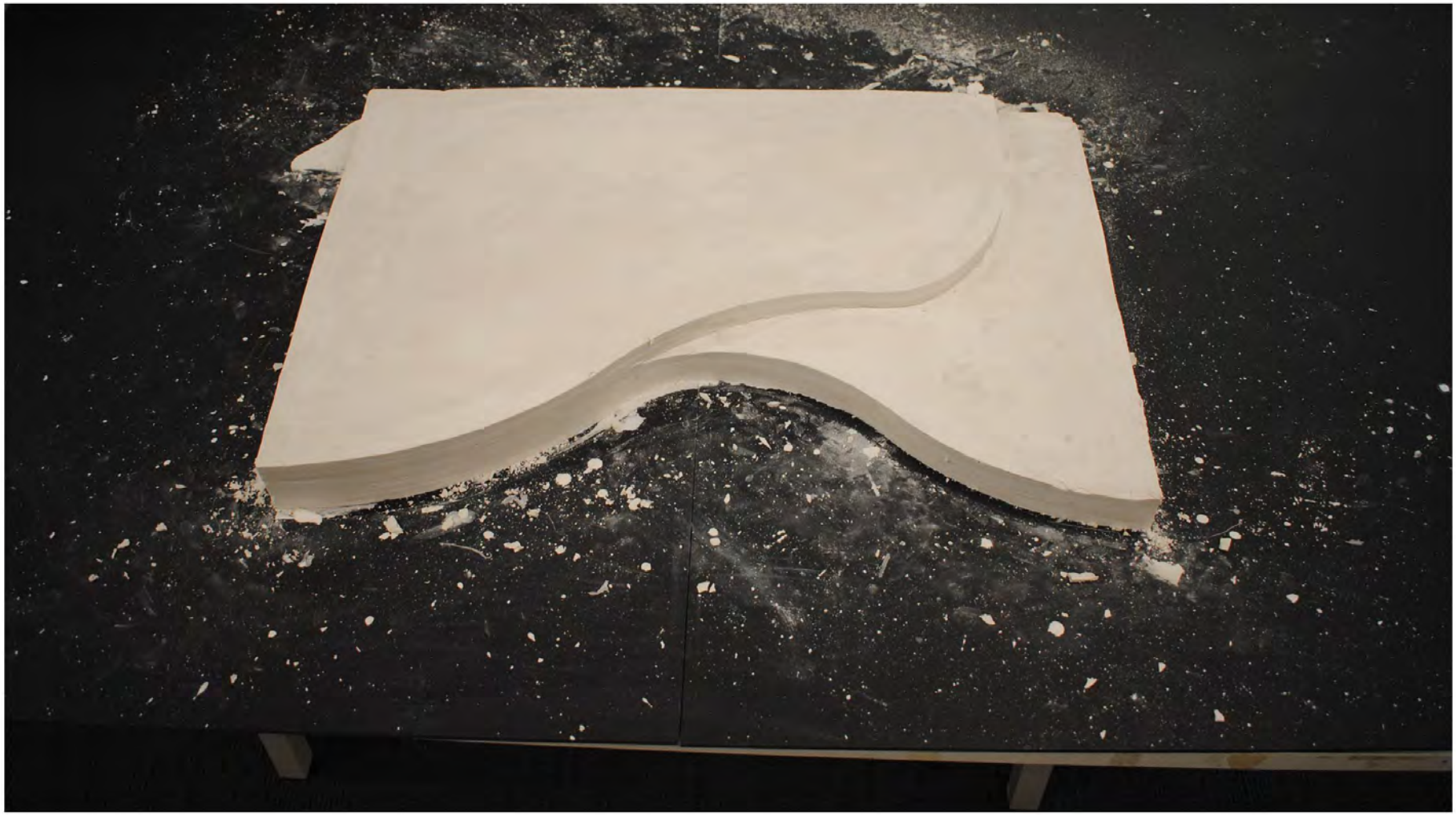


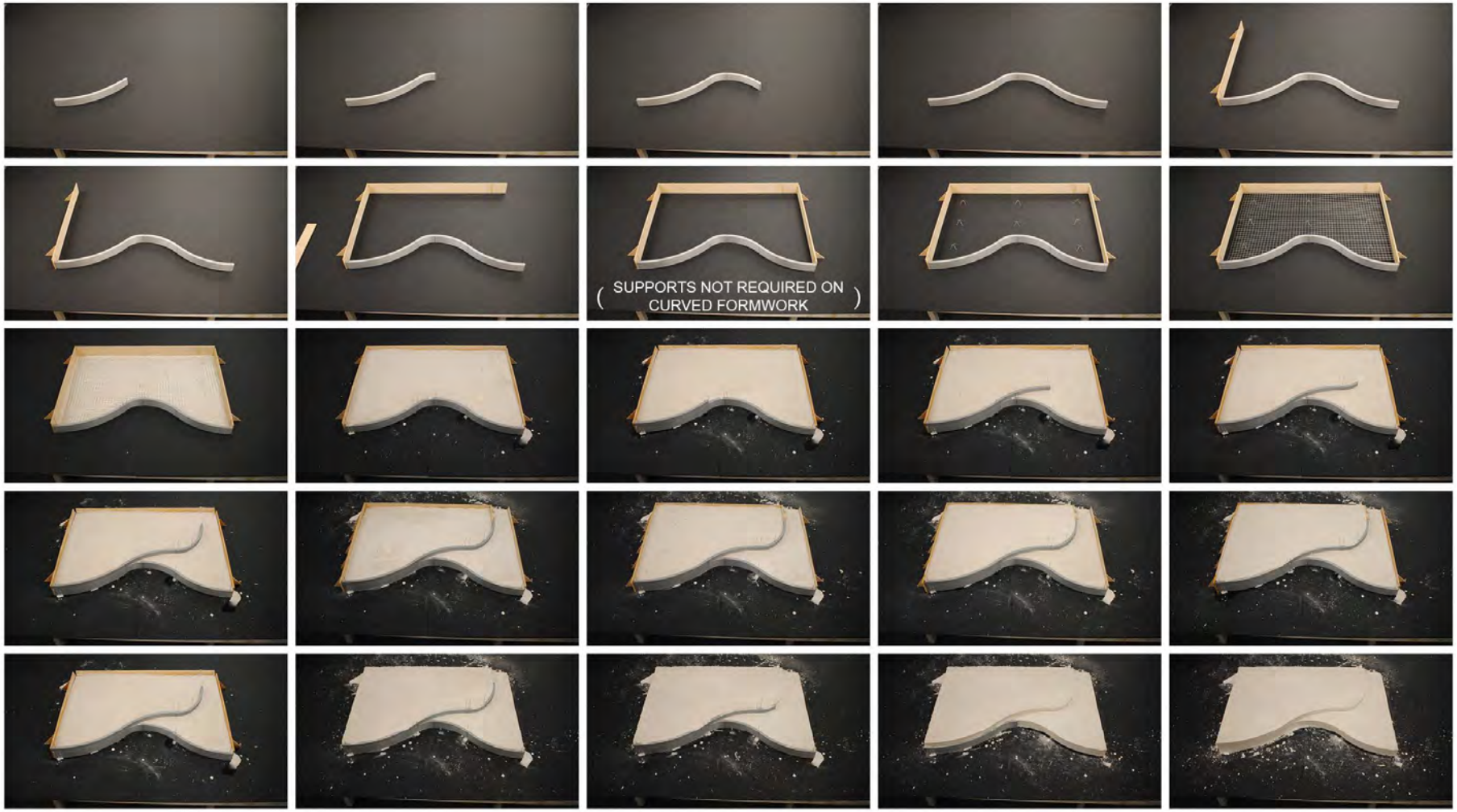




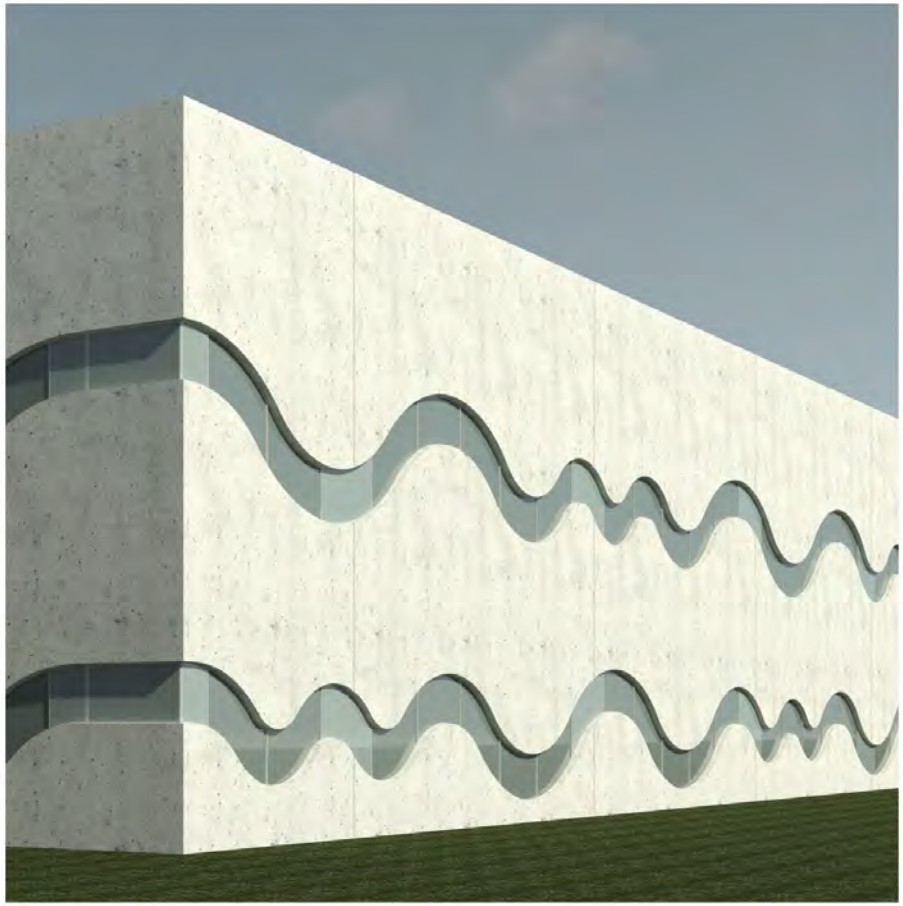




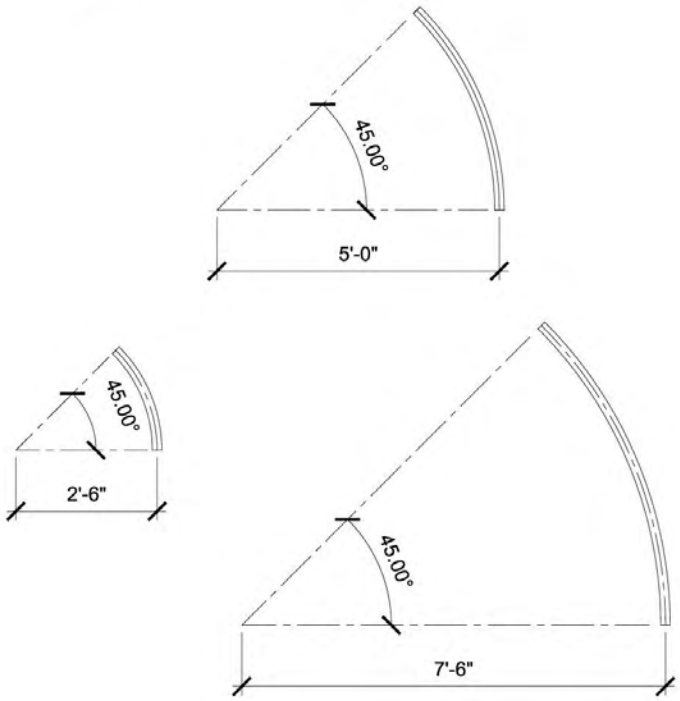


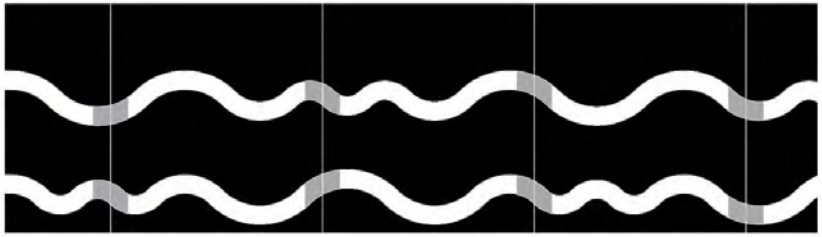


TOP-CAST PANEL INSTALLATION MOCK-UP *(1-1/2" = 1'-0" SCALE)*

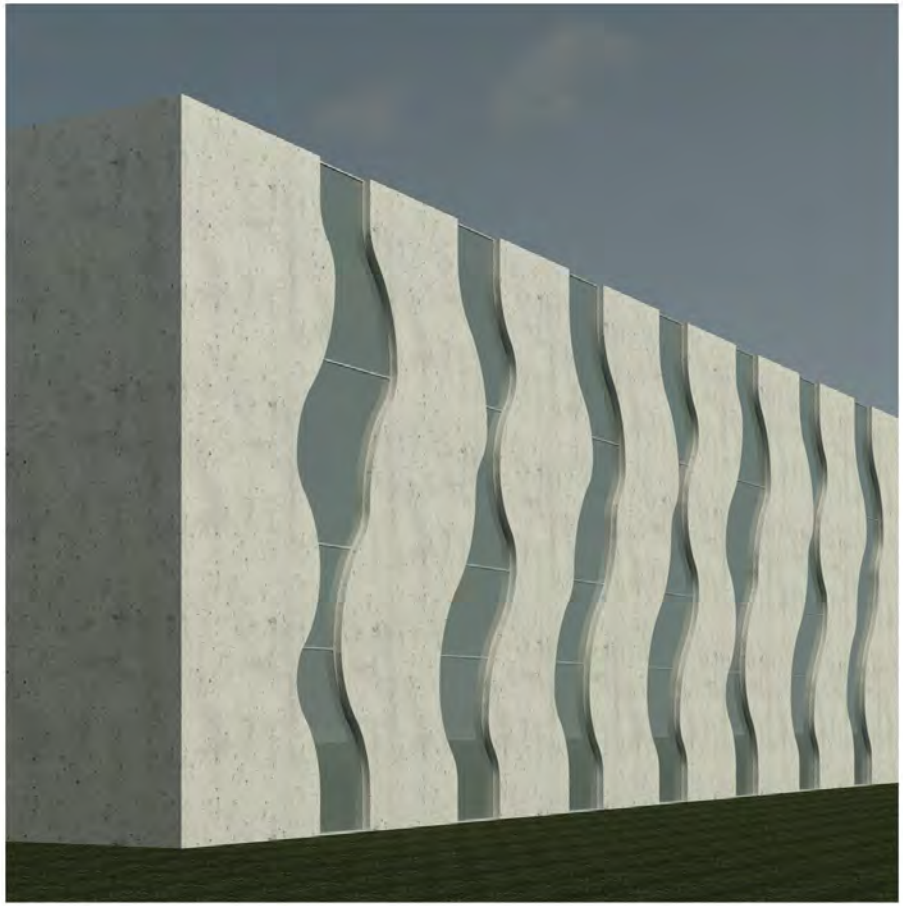


PIECES USED . . .

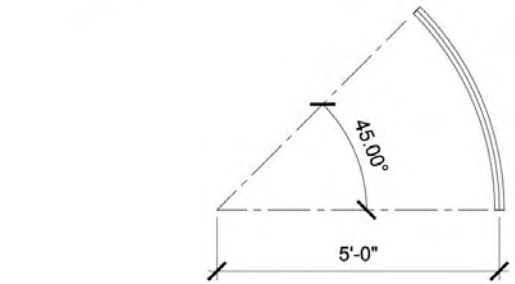


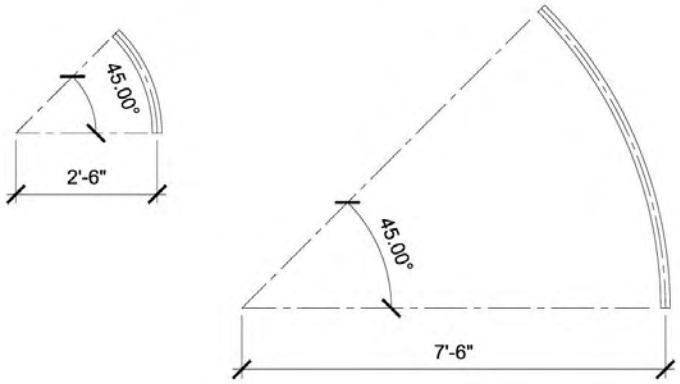


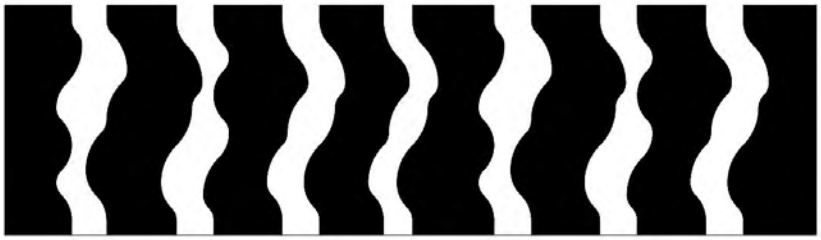
WALL COMPOSITION 01.....



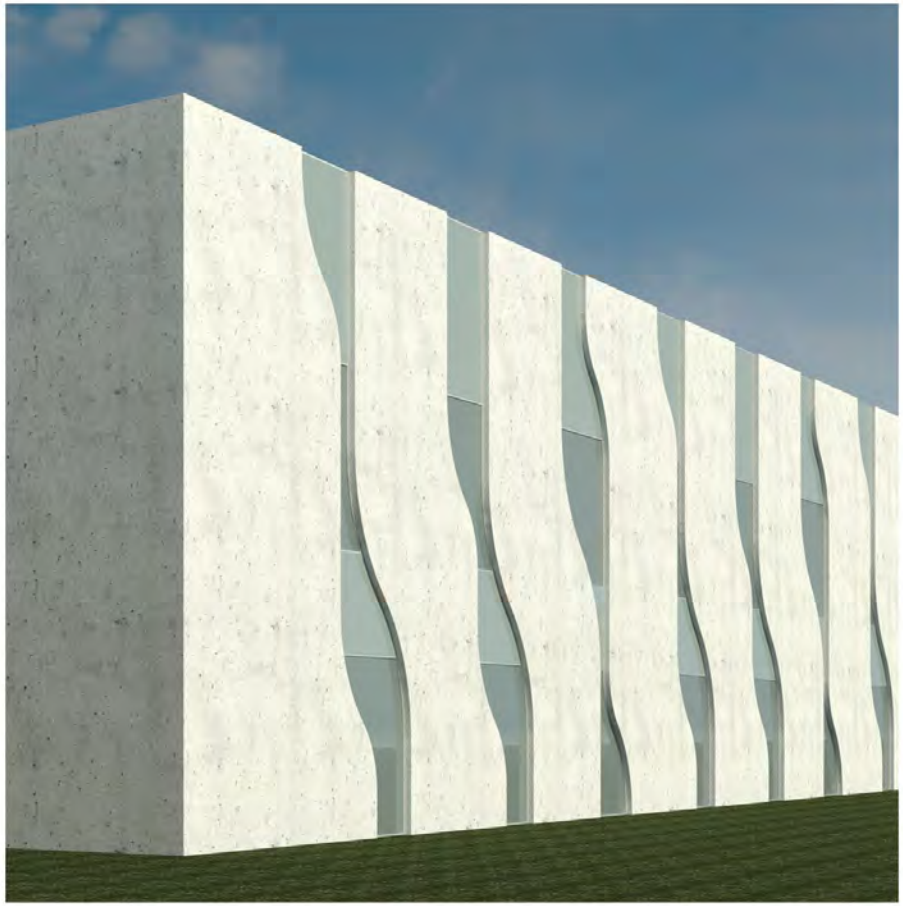
PIECES USED . . .







WALL COMPOSITION 02.....



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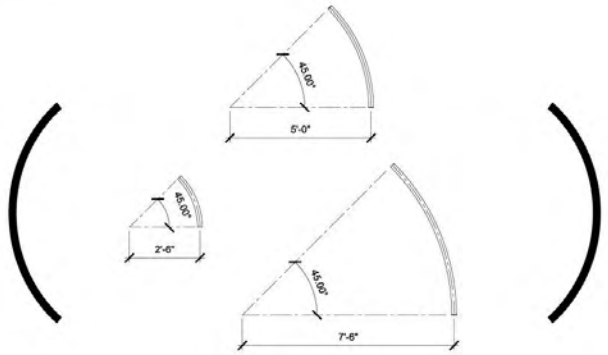
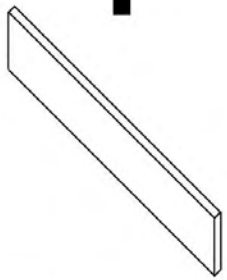
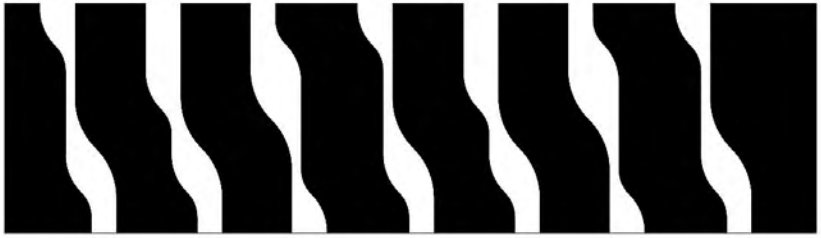
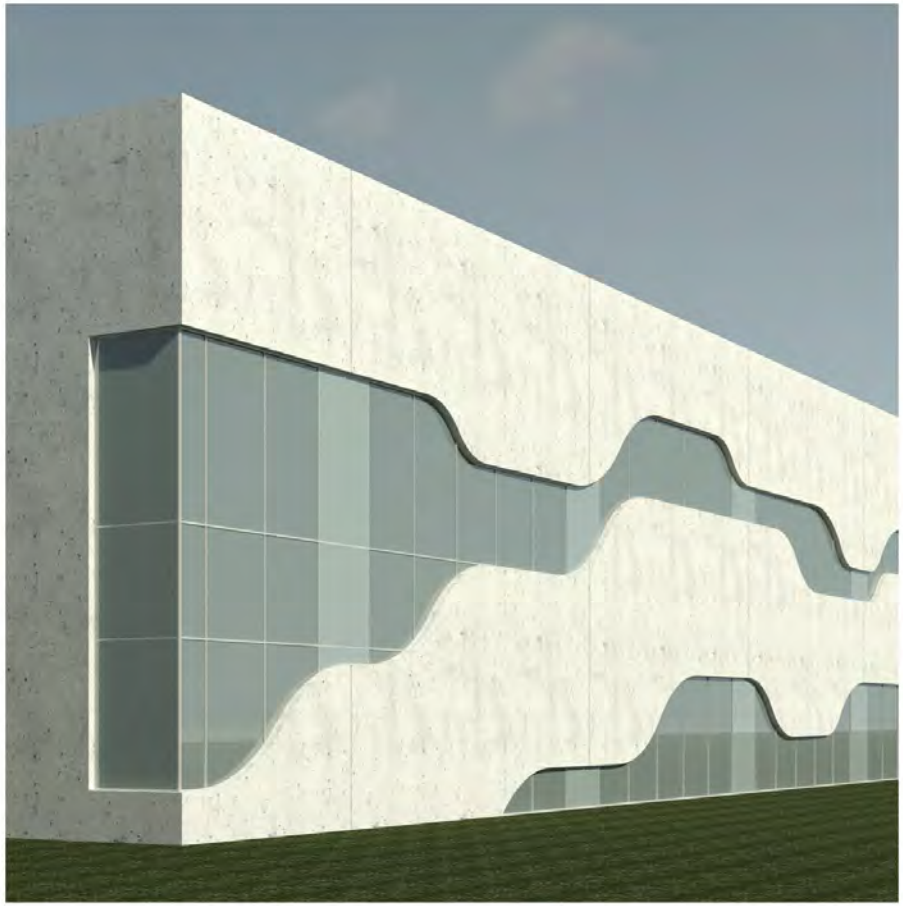






WALL COMPOSITION 03.....



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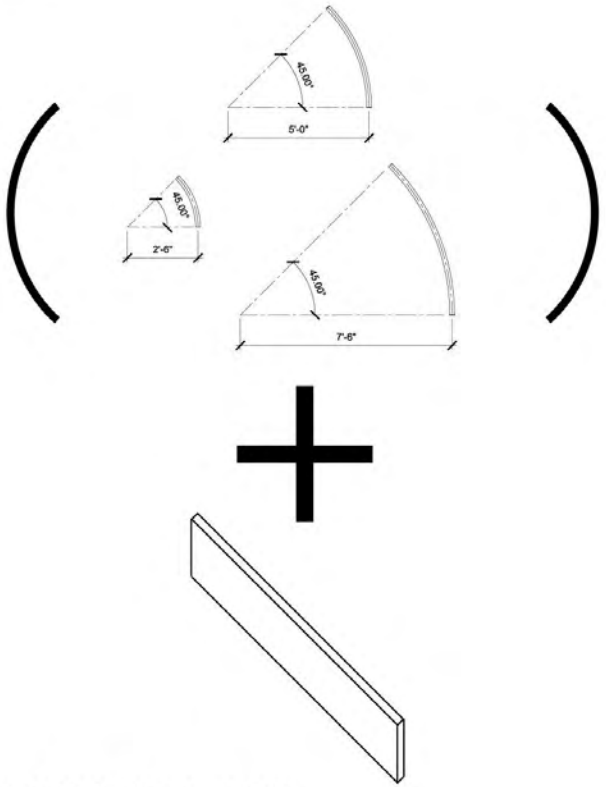
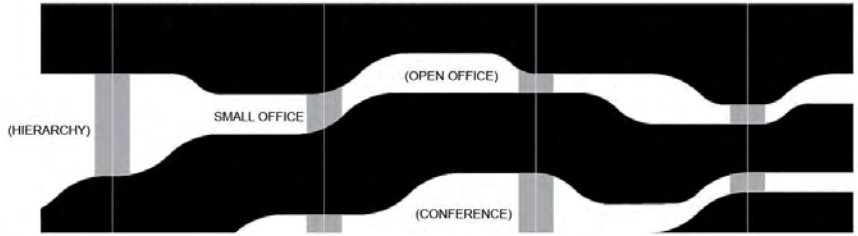
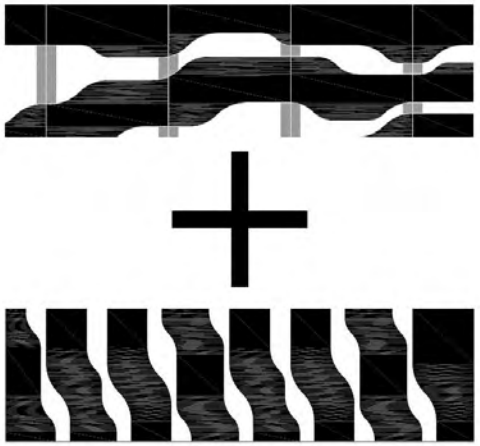


PROGRAMMED VARIATIONS IN FACADE:



WALL COMPOSITION 04.....



*CASE STUDY **01***

Explainer

We sked the audience in Denver if they would buy it as it were. It was all hands up.

But.

E X C U R S U S

So- Show of hands-

Who’s in?

Not this industry so far…..

Explainer

We are exhibiting the actual internal score sheet from a manufacturer.

Note the evaluation has no category for aesthetics…..

E X C U R S U S

PCAT	Tilt			
Product Name:	Geo Form			
Resource and Timing		Low	Medium	High
Design Difficulty:	Low	Doesn't require substantial design or testing time or resources; no new technologies. Proven performance.	Moderate design time and testing or requires outsourcing; uses new methods or technologies. High probability of design success.	Uses new design techniques, materials or methods. Requires substantial design and testing time and resources and performance.
Production Difficulty:	Medium	Resell item or uses existing tooling, materials and processes. Proven success with similar products. Can be an import	Requires new or modified tooling or equipment but utilizes existing processes. High probability of manufacturing success.	Requires new equipment and tooling; not a proven process. Outside current core competencies.
Initial Investment:	High	Tooling investment of less than $100,000. (CapEx required over $10,000)	Tooling investment of between $100,000 to $500,000; requires CapEx	Tooling cost over $500,000; requires CAPEX.
Urgency	Low	No code or customer requirements. Our idea driving development towards a specific timeframe	Customer has shown an interest in the future or there are potential code and paten changes ahead	Potential opportunity with an existing customer, patent or code change imminent
Market		Low	Medium	High
Solves a real problem:	Low	Aim is to supply the product cheaper than an existing product in the market	Product provides a better alternative than current method	New solution is safer, saves time and is a cheaper/better solution than current method or product
Patentability	High	Not likely to patent	Potential patent difficulties	Likely to patent
Market Share and Potential Customers:	Low	We sell few or no products in this category and are unfamiliar with the potencial customers. Market share is less than 20%	We sell some products in this category or type of product but Have limited relationship and knowledge within this market segment have 20 - 40 % market share	We are a market leader in this category or type of product. Within current customer base and we are their primary supplier of our type or products. More than 40% share
Competitive Landscape:	Low	Multiple competitors within product category	We would be in the top 5 or suppliers of this product category compared to our competitors	We would be in the top 1 or 2 or suppliers of this product category compared to our competitors
Revenue and Margin		Low	Medium	High
Margin:	40% Plus	We expect our net margin to be less than 30%.	We expect our net margin to be between 30% and 40%.	We expect our net margin to be 40% or higher.
Volume by year 3:	Under $250k	We expect our annual revenue in year 3 to be less than $250k	We expect our annual volume in year 3 to be more than $250k but less than $1m.	We expect our annual volume in year 3 to be more than $1m.
TOTAL SCORE:	37			

100 is highest score

75 or >	Immediate Focus
50 to 75	Midrange Focus
50 and Below	Don't Pursue

Explainer

A post evaluation communication from us to them excerpted from an e-mail exchange.

E X C U R S U S

We appreciate you taking the time to consider it so thoroughly. Helpful to understand how you all think about things.

One exploratory / constructive comment.

One wonders if you are being too short sighted in considering your market exclusive of architects. All of the evaluation forms and evaluative rubric are weighted heavily if not exclusively around a sub / contractor oriented consideration. Which at one level makes sense. That is your existing client base .

At another level however- that of growing market share and expanding your client base- it excludes every single aspect of how you would ever reach beyond that base. Of course my bias here is that you will reach a limit in your current market. I would argue there is an adjacent- directly logical reason for a group like yours to consider, that of architects, while I also accept that may not make our product idea any more viable. Just my thoughts. Thoughts driven by years of working on why architects don’t use tilt wall I suppose.

Explainer

The conclusion is really a challenge to the industry to take a lesson from their own limitations.

At least of their goal is to attract more architects to the technology…..

E X C U R S U S

Said otherwise.
The current market benefits by my invention of a commodity - say value office. But has no investment in it. I use existing MARKET products in my invention.

Yet the market cannot invest in my invention of an idea. Because it would have to invest in MY product and thus encounter

Risk.

Risk.

Which is double sided. Tit Wall technology currently is at risk of NEVER appealing to the larger bandwidth market potential which would moves its place in the industry vertically.

so

Do I abandon the market for elsewhere

Or

Does the market accommodate change….