

ainsley b jackson.  
portfolio '26.

resume.

education and work history.

millwork system.

digital planning and manufacturing.

projects.

a selection of past projects.

# ainsley b jackson, rse.

ainsley@woodinform.com  
604.807.6243

## work experience.

### millwork specialist.

quarterhorse solutions - surrey, bc  
2023 to present

modelling, drafting, cnc programming, manufacture and installation of custom millwork and signage.

### owner, design/production manager.

tlg millwerks ltd - port coquitlam, bc  
2017 to 2023

planned the layout and coordinated the setup of a new facility, created a robust database along with several integrated software automation systems to manage administrative tasks.

typical ongoing duties included project management, estimating and drafting using rhinoceros w/ automation via grasshopper and python scripting, purchasing, 3d site scanning using a faro m70 and scan processing with autodesk recap, nest based cnc programming using rhinocam for a roc-tech 1530 and bsolid for a biesse rover k ft.

## summary.

problem solver specializing in parametric design tools. proficient in rhinoceros, grasshopper, and rhinocam. extensive background in cnc programming, machining and custom fabrication. skilled in delivering innovative, efficient, precision-driven solutions for unique projects.

### cnc programmer/operator.

bensen manufacturing - vancouver, bc  
2014 to 2016

pod & rail cnc programming using xilog, genio and camworks for a morbidelli universal and a morbidelli planet equipped with c-axis aggregates and edge banding capabilities. beam saw programming for a selco eb70.

### designer, drafts person.

3 dimensional services - burnaby, bc  
2013 to 2014

design of museum displays and interactive exhibits using autocad and rhinoceros.

### production manager.

apollo sign & millwork - burnaby, bc  
2010 to 2013

created production systems to manufacture commercial millwork with a focus on retail stores and kiosks. reduced production times by 50%. aided in estimating, created shop drawings in autocad, cut lists in excel and cnc programs in biesseworks for a biesse rover a.

## education.

industrial woodworking techniques  
hamilton, on - 1997 to 1998

dupont corian fabrication workshop  
richmond, bc - 2011

awmac certification exam  
burnaby, bc - 2011

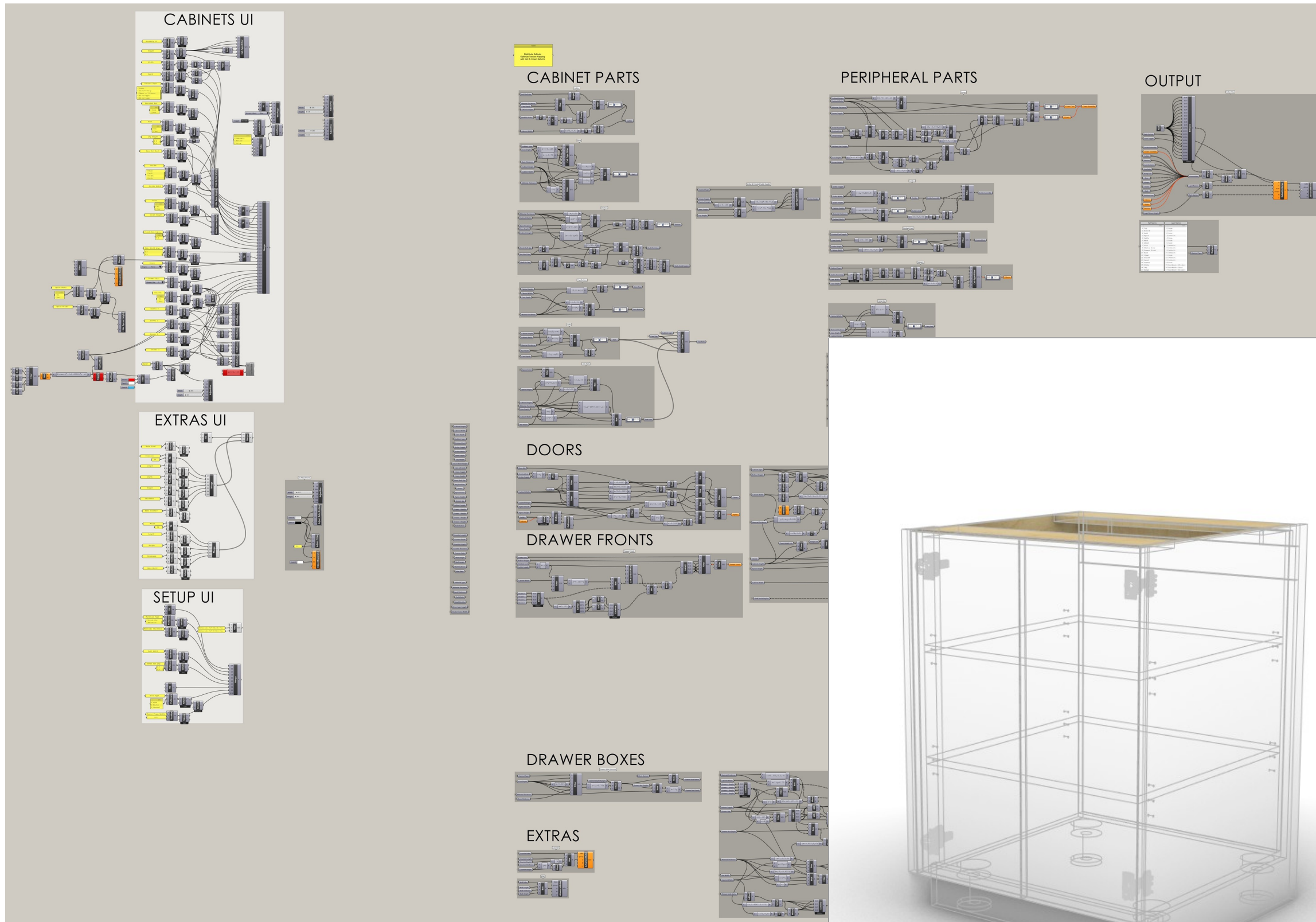
camworks + solidworks for camworks  
richmond, bc - 2014

joinery red seal exam  
burnaby, bc - 2018

robotic fabrication workshop  
ubc - 2022

## software.

rhinoceros	solidworks
grasshopper	camworks
rhinocam	bsolid
pycharm	biesseworks
visual studio	xilog
autocad	genio



create.

builds a full model of cabinet assemblies via ui. this definition includes automated part naming, layer placement and block insertion for hardware items.

**MILLWERKS CREATE**

Cabinets Extras Setup

**Dimensions**

Height 30.75

Width 24

Depth 24.875

**Options**

Cabinet Type Lower

Finished End Right

Scribe Left

Scribe Width 1

Base Yes

Leg Height 4

Face Set Back 3

Crown No

Fixed Shelf Qty. 0

Adj. Shelf Qty. 2

**Fronts**

Doors Double

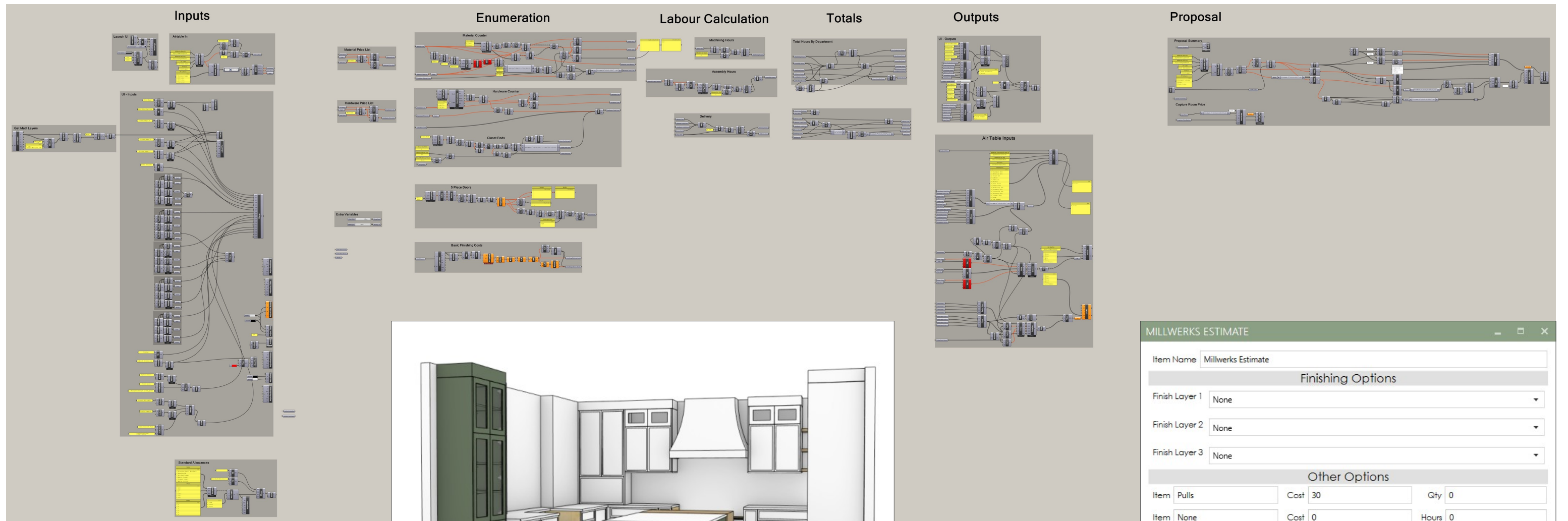
Apron Panel No

Drawer Qty. 0

Rollout No

**Bake!**

millwork system.



estimate.

integrates the create model with an airtable database. it queries the latest material and hardware costs from the purchasing table, calculates material usage and counts hardware. finishes are specified by layer and additional custom items can be added manually as needed. output data is displayed in the ui for review and can be posted to the estimate table via ui button. additionally, in conjunction with a rhino template, it creates a pdf file with the required information in place for a proposal.

millwork system.

**Kitchen** \$59,678.62

**Finishes:**

- Exterior: Paint - Colour TBD
- Exterior: Paint - Colour TBD
- Exterior: Veneer - Rift White Oak Stain To Match Sample w/ 5\* Clear Lacquer
- Interior: 5/8" Plywood w/ Birch Face and Matching Birch Veneer Edge Banding

**Specialty Hardware:**

- 63x Pull - Spec TBD
- 3x Appliance Pull - Spec TBD
- 2x Spice Pullout
- 1x Appliance Garage Door Slides

**Notes:**

- Excluded From Quote:
- Profile Crown Moulding
- Metal For Range Hood
- Butcher Block Counter
- Dog Hydration Interior Finishes

**MILLWERKS**  
seamless form & function

Private Residence  
North Vancouver  
Last Revised: Sep.12.22

**MILLWERKS ESTIMATE**

Item Name: Millwerks Estimate

**Finishing Options**

Finish Layer 1:

Finish Layer 2:

Finish Layer 3:

**Other Options**

Item	Pulls	Cost	30	Qty	0
Item	None	Cost	0	Hours	0
Item	None	Cost	0	Hours	0
Item	None	Cost	0	Hours	0
Item	None	Cost	0	Hours	0

**Pricing**

TIME ESTIMATES	HOURS	COST TOTALS	\$
Pre-production:	3	Hardware:	0
Machining:	1	Material:	0.00
Assembly:	7	Doors:	0
Finishing:	0	Labour:	1840
Delivery:	1	Total:	1840
Installation:	11	Markup:	920
<b>Total:</b>	<b>23</b>	<b>Sale Price:</b>	<b>2760.00</b>

Refresh Definition

**Standard Allowances**

ITEM	PRICE	HOURS
Floating Shelf Brackets	200	2
Aventos HK	150	0
Notched Drawer	0	1
Magic Corner	1250	1
Drawer Insert	150	1
Waste Rollout	600	1

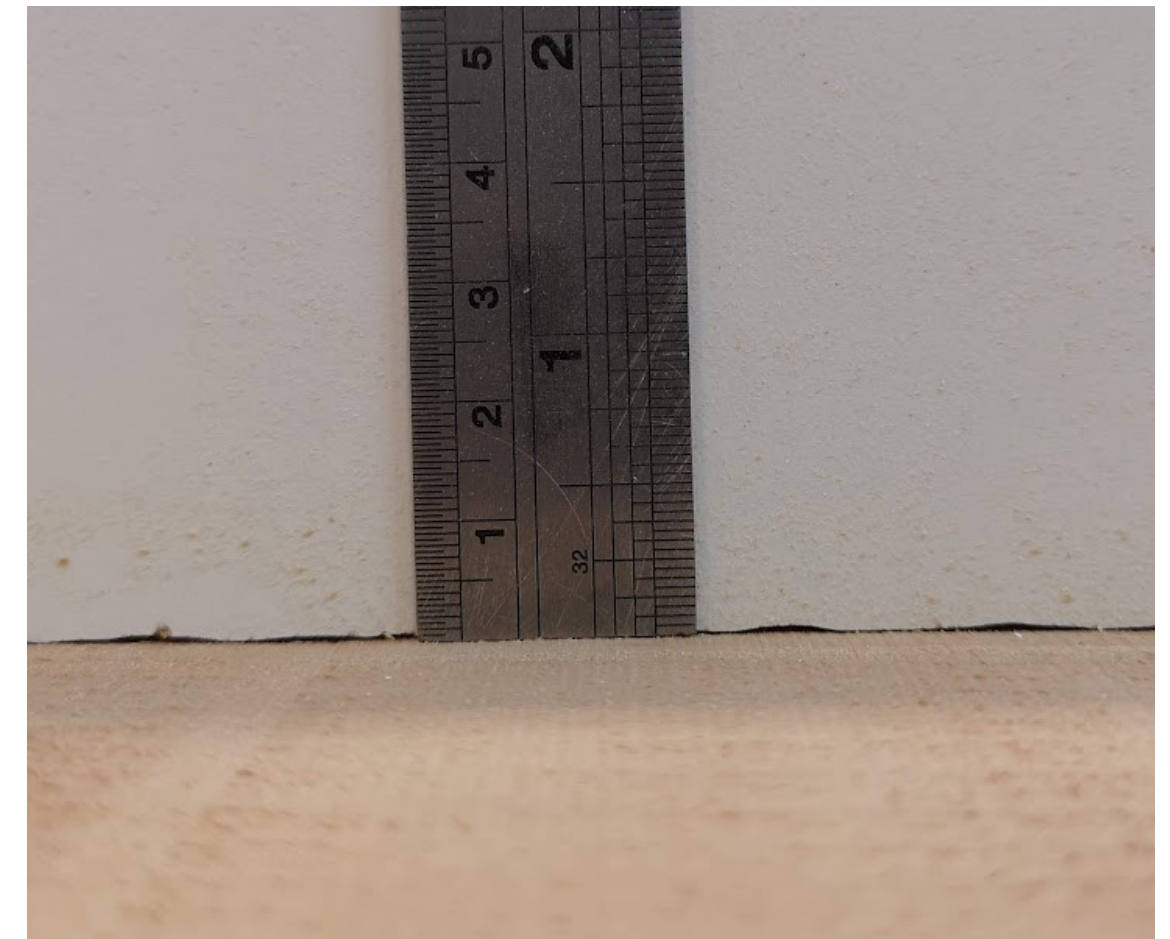
```
1 @echo off
2 setlocal
3
4 rem Set the paths and options
5 set "recapFolder=C:\Program Files\Autodesk\Autode
6 set "sourceFolder=%CD%"
7 For %%A in ("%sourceFolder%") do (
8     Set saveName=%%~nxA.rcp
9 )
10 set "opt1=--importWithLicense"
11 set "opt2=--maxRangeClipping=15"
12
13 setlocal EnableDelayedExpansion
14 set "folders="
15 for /d %%i in (*) do (
16     set "folders=!folders! %%~fi"
17 )
18 set "folders=%folders:~1%"
19
20 rem Generate the command line string
21 set cmdline=cmd /k ""%recapFolder%" %opt1% "%sour
22
23 %cmdline%
24
```

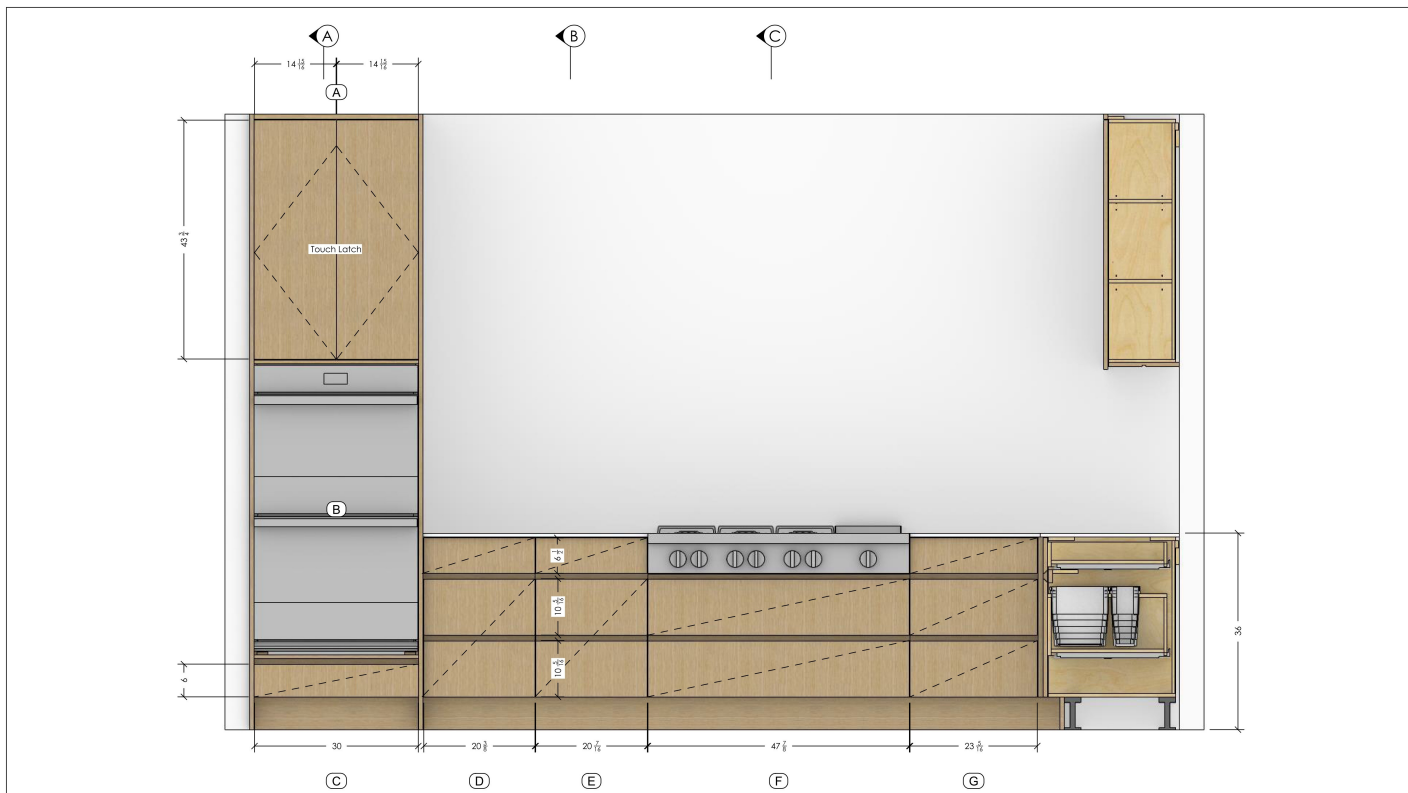


scan.

using raw faro scan data the recap import process is automated via decap script. next the formatted point cloud is brought into rhino for model review and adjustment. where required, a grasshopper definition creates scribe profiles with sub-millimeter precision.

millwork system.





ELEVATION A - 1:16

**MILLWERKS**  
seamless form & function

3110-575 Seabome Ave.  
Port Coquitlam, BC

Kitchen  
ID 21065.01

Drawn By A. Jackson

First Draft: Dec.07.21  
Last Revised: Mar.29.22

**3/12**



PERSPECTIVE VIEW

**MILLWERKS**  
seamless form & function

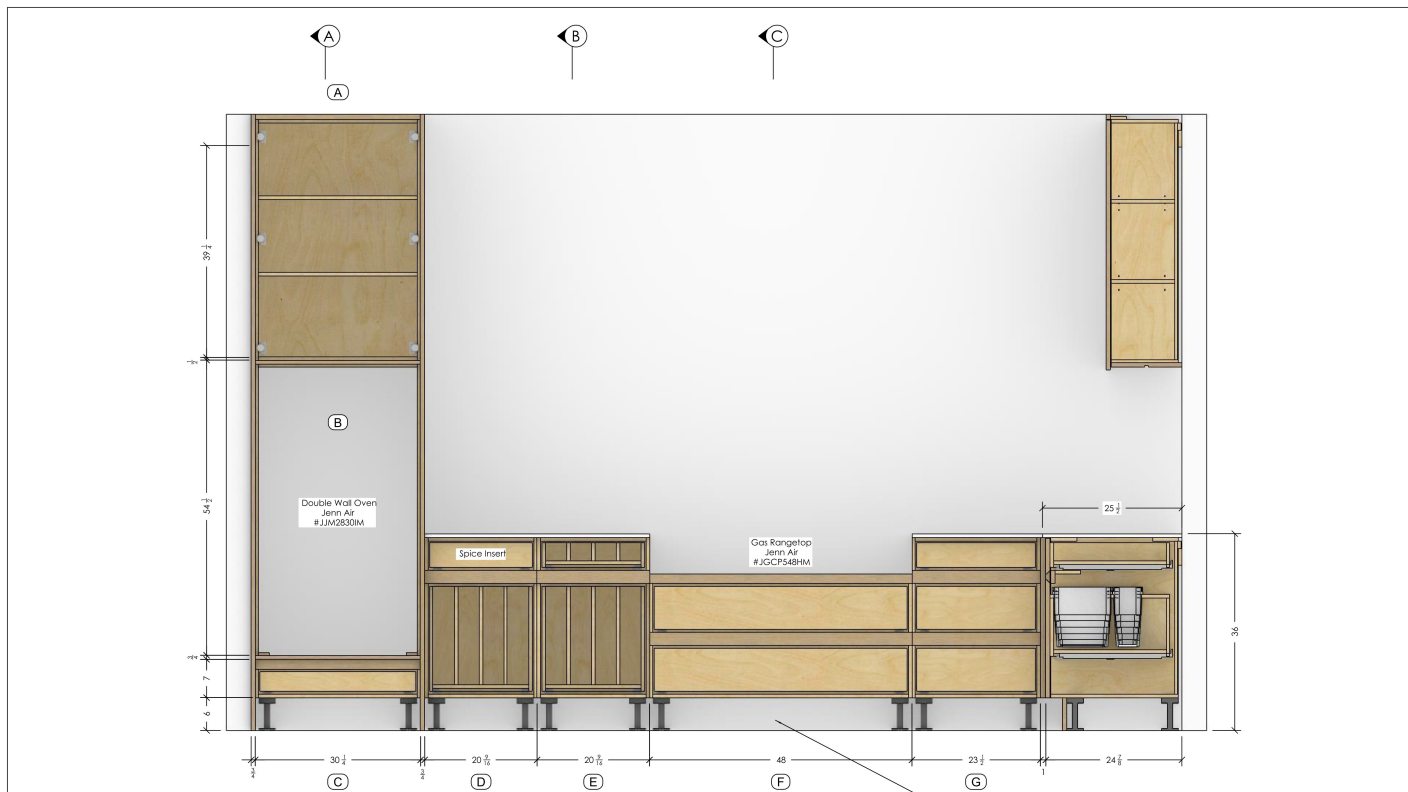
3110-575 Seabome Ave.  
Port Coquitlam, BC

Kitchen  
ID 21065.01

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**1/12**



ELEVATION A - 1:16 (FRONTS REMOVED)

**MILLWERKS**  
seamless form & function

3110-575 Seabome Ave.  
Port Coquitlam, BC

Kitchen  
ID 21065.01

Drawn By A. Jackson

First Draft: Dec.07.21  
Last Revised: Mar.29.22

**4/12**



SECTION A - 1:16

SECTION B - 1:16

SECTION C - 1:16

SECTION D - 1:16

**MILLWERKS**  
seamless form & function

3110-575 Seabome Ave.  
Port Coquitlam, BC

Kitchen  
ID 21065.01

Drawn By A. Jackson

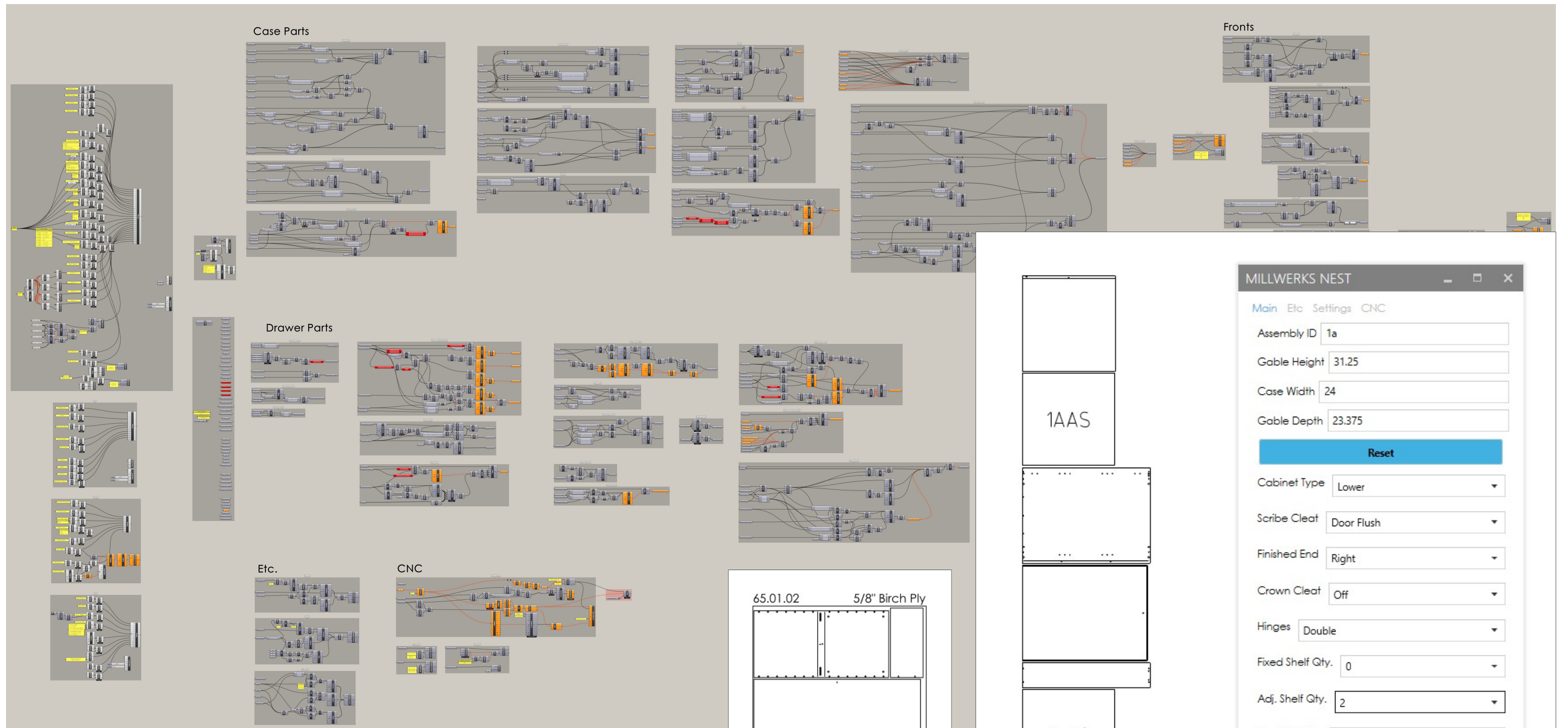
First Draft: Dec.07.21  
Last Revised: Mar.29.22

**7/12**

millwork system.

draft.

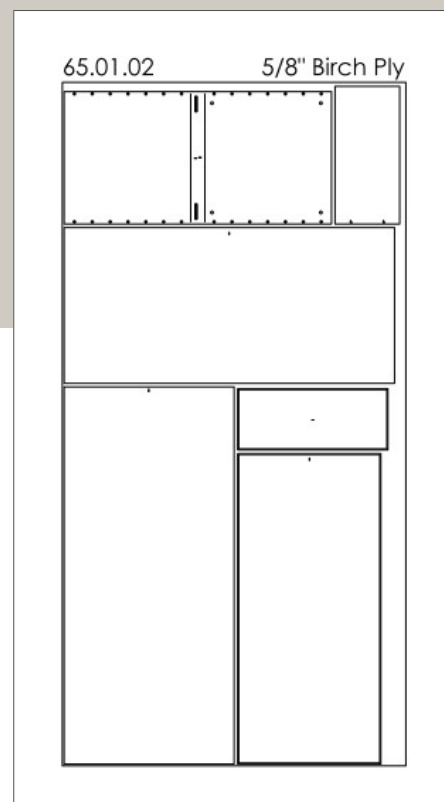
shop drawings created using  
standard rhino tools.



nest.

2d cnc geometries with set z heights are generated via ui. output is assigned to appropriate layers and grouped by part to feed into the rhinocam nest module.

millwork system.



1AAS

1AAS

1AAS

1AAS

MILLWERKS NEST

Main Etc Settings CNC

Assembly ID

Gable Height

Case Width

Gable Depth

Reset

Cabinet Type

Scribe Cleat

Finished End

Crown Cleat

Hinges

Fixed Shelf Qty.

Adj. Shelf Qty.

Shelf Pin Qty.

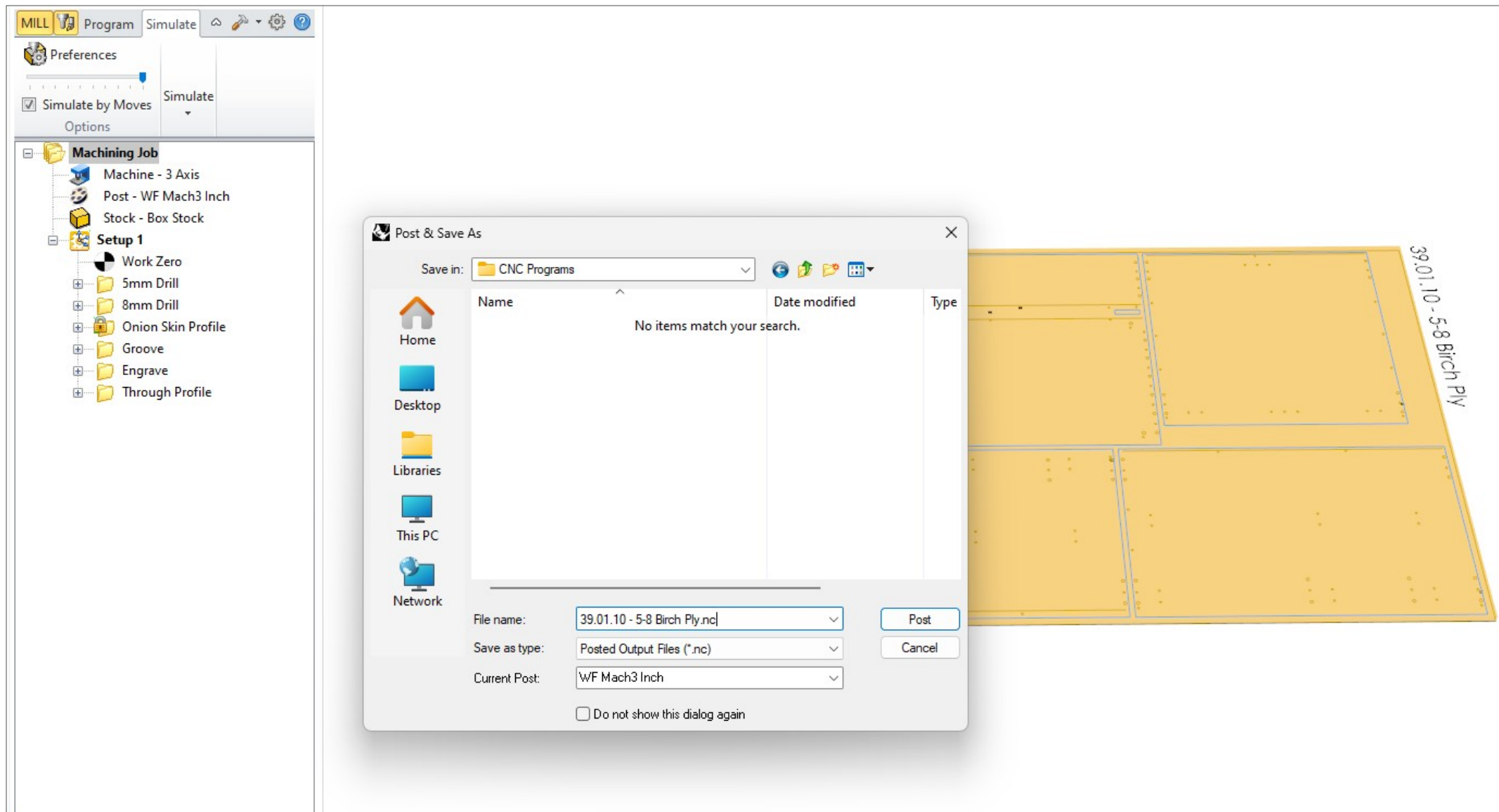
Drawer Qty.

Slide Length

Rollout (H=Drawer-2)

Bake Cabinets!

Bake Fronts!



```

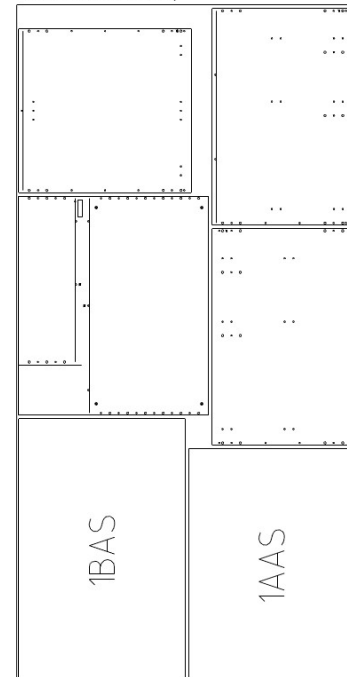
1 ;-----Toolpath in CNC Template
2 NumpadEnter::
3 SetTitleMatchMode, RegEx
4 send ^c
5 sleep 250
6 send ^c
7 if WinExist("CNC Template.3dm*")
8 {
9     WinActivate
10 }
11 else
12 {
13     return
14 }
15 BlockInput, 1
16 send NC{enter}
17 Sleep 1000
18 SendEvent {Click 960, 310}
19 send {Delete}
20 SendEvent {Click 1340, 180 down}{click 1200, 500 up}
21 sleep 200
22 if WinExist("CNC Template.3dm*")
23     WinActivate
24 SendEvent {Click 1160, 480}
25 SendEvent {Click 1340, 200 down}{click 1200, 500 up}
26 SendEvent {Click 960, 310}
27 send {Click Down Right}
28 sleep 500
29 send {Down}
30 send {Enter}
31 send {Click Up Right}
32 sleep 3500
33 loop 30
34 {
35     if WinExist("RhinoCAM 2021 For Rhino6.0")
36         WinActivate
37         send, {esc}
38     }
39     sleep 750
40     send {Click Down Right}
41     loop 8
42     {
43         send {Down}
44     }
45     send {Enter}
46     send {Click Up Right}
47     sleep 500
48     send {Click Down Right}
49     loop 2
50     {
51         send {Down}
52     }
53     send {Enter}
54     send {Click Up Right}
55     sleep 1000
56     SendEvent {Click 245, 100}
57     SendEvent {Click 245, 370}
58     sleep 500
59     SendEvent {Click 247, 370}
60     send {Shift Down}{Left}{Left}{Shift Up}
61     send ^c
62     num1 := clipboard
63     num2 := num1 + 1
64     num3 := Format("{:02}", num2)
65     send %num3%
66     BlockInput, 0
67     Return

```

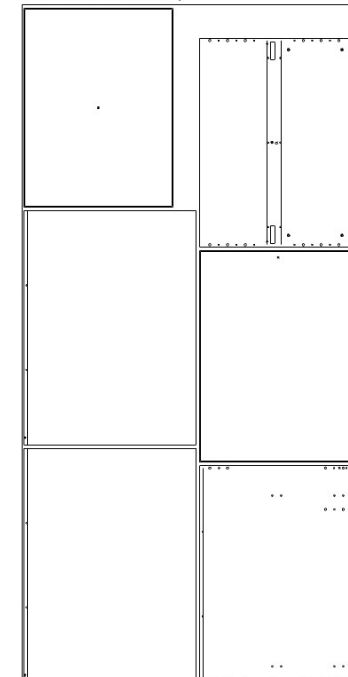
## toolpath.

cnc programming is automated with a combination of rhinocam knowledge base and autohotkey script. a single keystroke sends a selected sheet through the entire tool path creation process to the 'post & save as' dialogue with a pre-populated filename.

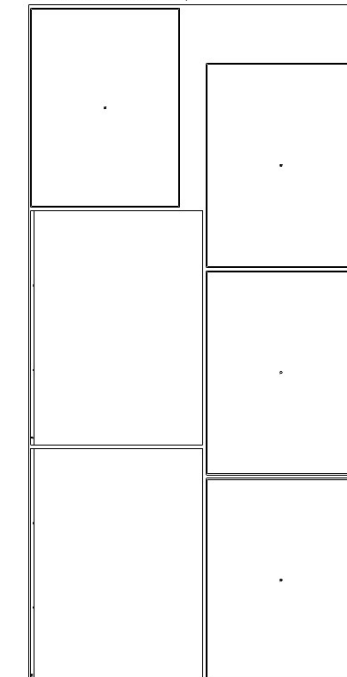
39.01.10 - 5-8 Birch Ply



39.01.11 - 5-8 Birch Ply



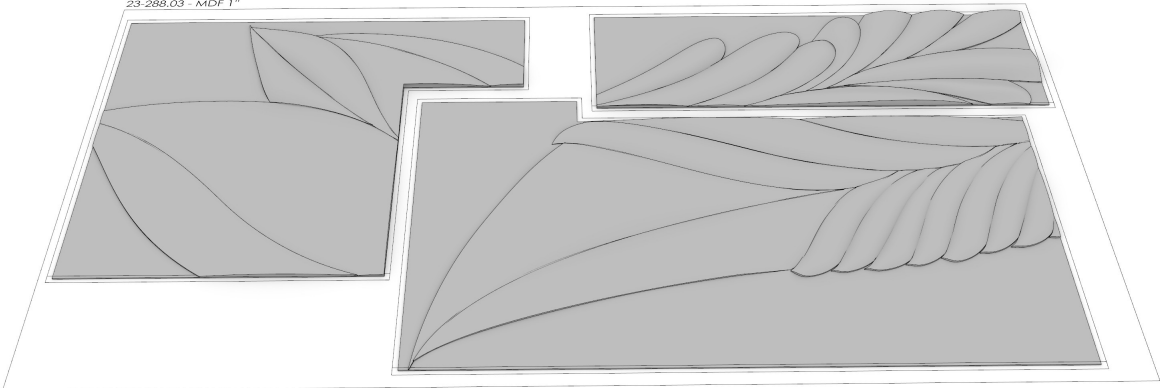
39.01.12 - 5-8 Birch Ply

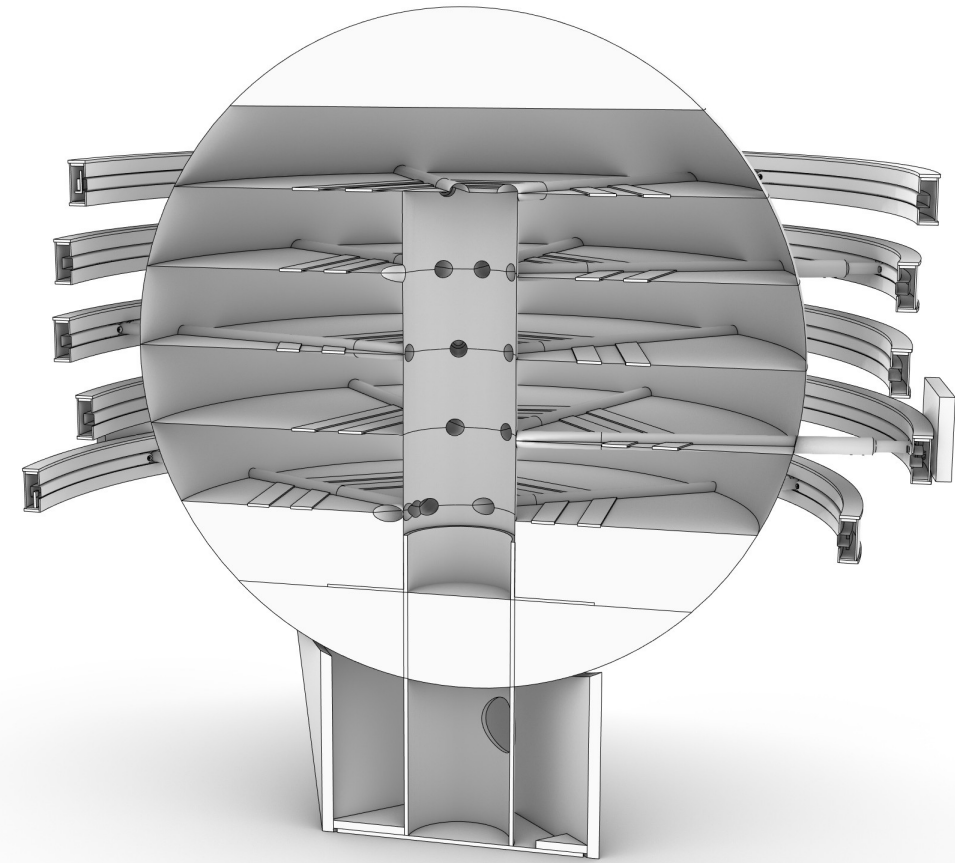
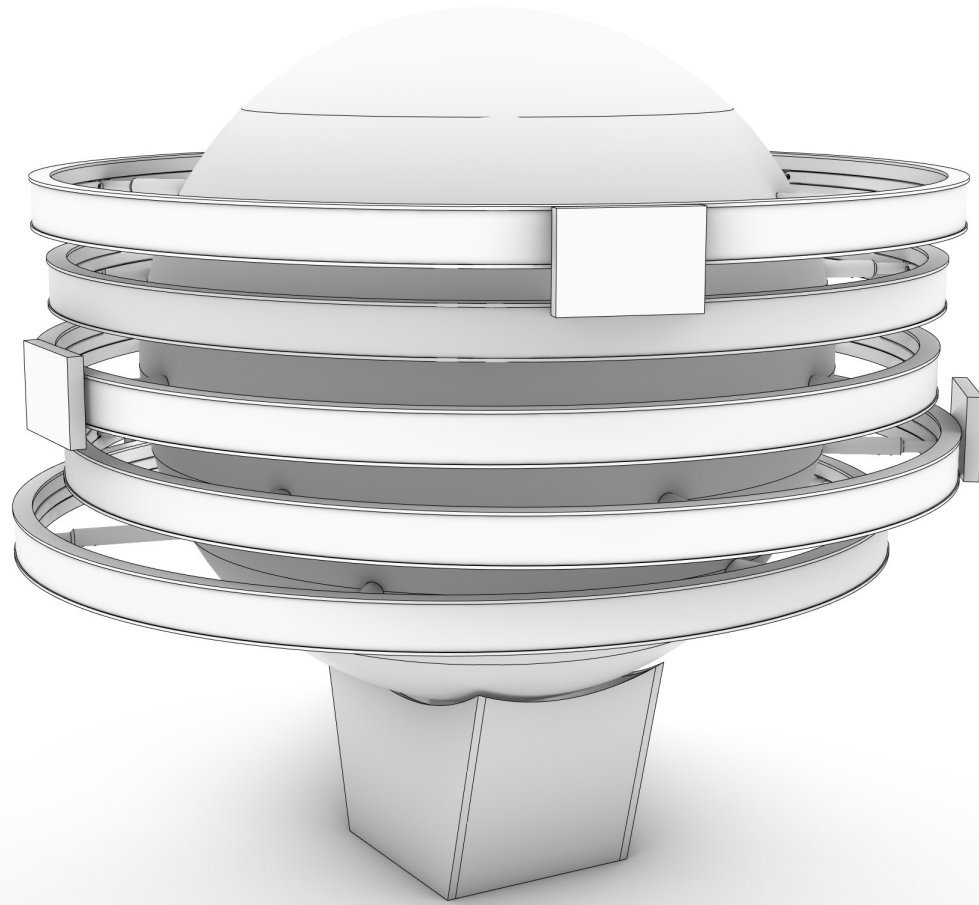


## millwork system.

bassano presentation center.

3d modeling, programming, machining and installation. (2d source file shown supplied by design firm)





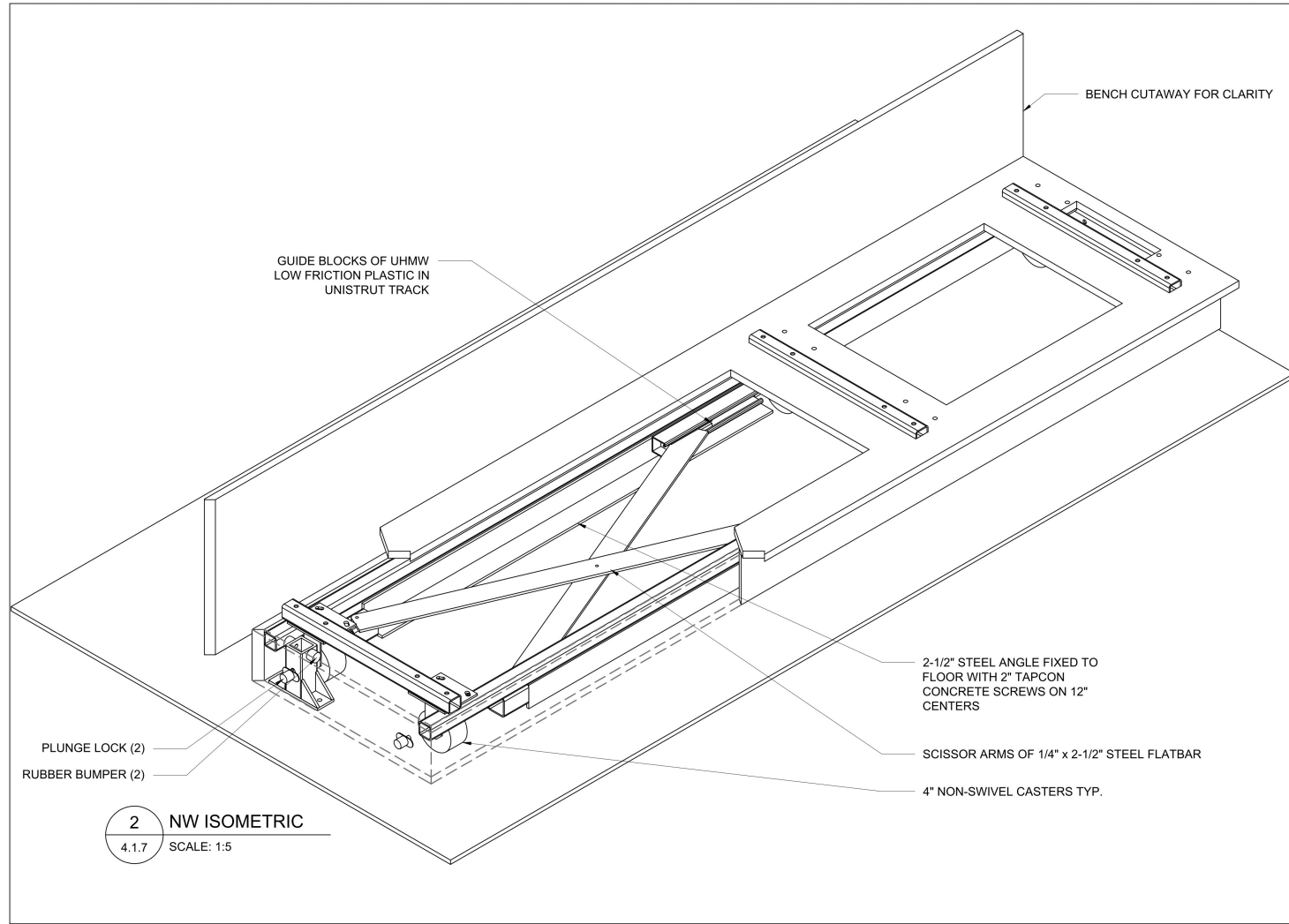
richmond olympic experience.

modelling, structure and interactive  
mechanism design.

projects.



PLOTTED ON: Tuesday, July 14, 2015 3:00:49 PM BY: VSW  
FILE NAME: C:\VSW\150001\_3DS\PMV\Output\drawings\14103\_4.1 - PMV Bench Layout R6.dwg



**3DS**  
3DS THREE DIMENSIONAL SERVICES INC.  
2000 Westside Ave. Suite 100, Seattle, WA 98148  
Tel: 206.208.1000 Fax: 206.208.1001 www.threedimensional.com  
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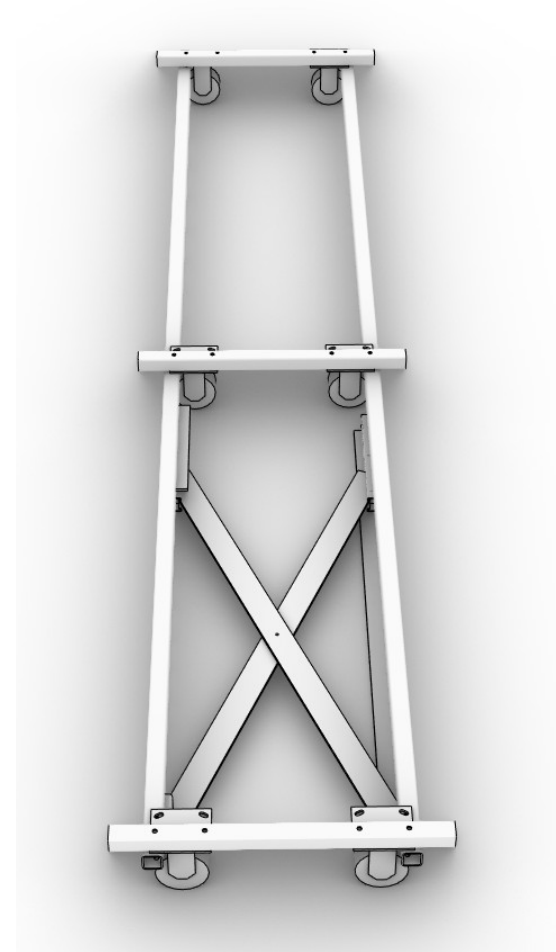
REVISIONS:  
#FA 7/14/2015 - COORDINATION

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PROJECT: **PORT METRO VANCOUVER DISCOVERY CENTER**  
EXHIBIT AREA: **BENCH GUIDE**  
SHEET TITLE: **BENCH GUIDE DETAIL**

3DS JOB NUMBER: 14103  
SCALE: AS NOTED  
DRAWN BY: AJJ  
CHECKED BY: -  
DATE: July 14, 2015  
SHEET NUMBER: 2

**ID 4.1**  
**4.1.7**



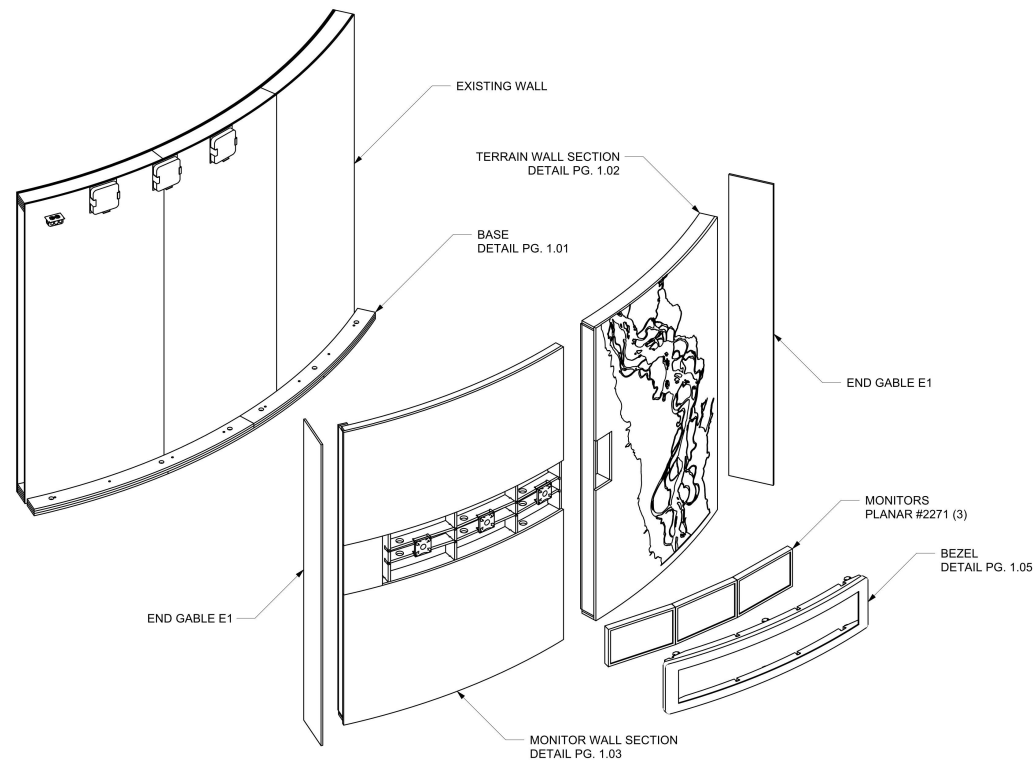
port metro vancouver discovery center.

modeling, drafting, interactive element integration, structure and mechanism design. this exhibit transforms from touch tables to benches for town hall presentations.



PLOTTED ON: February 26, 2016  
 FILE NAME: C:\Users\jv\OneDrive\Drawings\3DS\3DS\Complete 2.1 RIVER WALL 25 FEB LAYOUT REV 2.3.dwg

1 EXPLODED VIEW  
 1.00 SCALE = 1:24



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 3DS / THREE DIMENSIONAL SERVICES INC.  
 3000 Highway 104, Burnaby, BC, Canada V5A 4R9  
 TEL: 604.291.1111 FAX: 604.291.1112  
 WWW: 3DS-DESIGN.COM

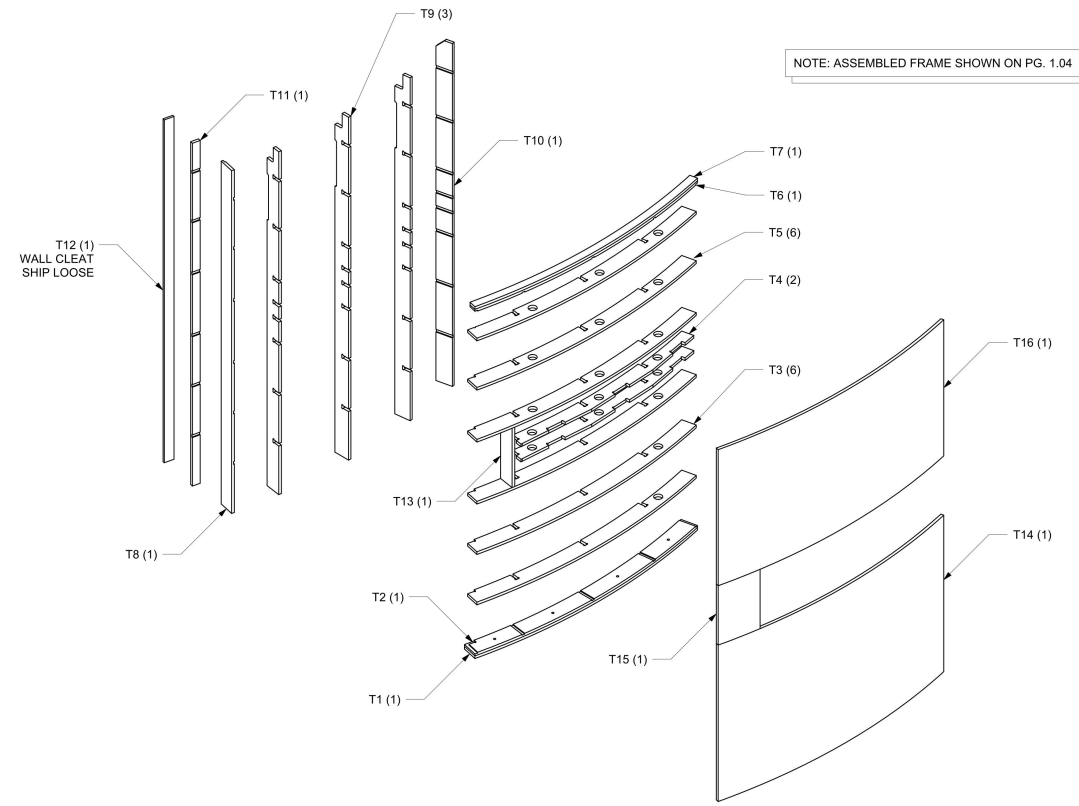
EXHIBIT DESIGNER:

DATE (YYMMDD)	ISSUE	REV.
20160226	1	1

PROJECT: BC HYDRO II  
 EXHIBIT ELEMENT # 1: RIVER WALL ASSEMBLY  
 SHEET NUMBER: 2.9.1  
 3DS JOB NUMBER: 16017  
 SCALE: AS NOTED  
 DRAWN BY: AJ  
 CHECKED BY:  
 DATE: February 26, 2016  
 SHEET NUMBER: ID 2.9.1 1.00

PLOTTED ON: February 26, 2016  
 FILE NAME: C:\Users\jv\OneDrive\Drawings\3DS\3DS\Complete 2.1 RIVER WALL 25 FEB LAYOUT REV 2.3.dwg

1 ASSEMBLY  
 1.03 SCALE = 1:20



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EXHIBIT DESIGNER:

DATE (YYMMDD)	ISSUE	REV.
20160226	1	1

PROJECT: BC HYDRO II  
 EXHIBIT ELEMENT # 1: RIVER WALL ASSEMBLY  
 SHEET NUMBER: 2.9.1  
 3DS JOB NUMBER: 16017  
 SCALE: AS NOTED  
 DRAWN BY: AJ  
 CHECKED BY:  
 DATE: February 26, 2016  
 SHEET NUMBER: ID 2.9.1 1.03

bc hydro.

modeling, drafting, structure design and interactive element integration.

projects.

