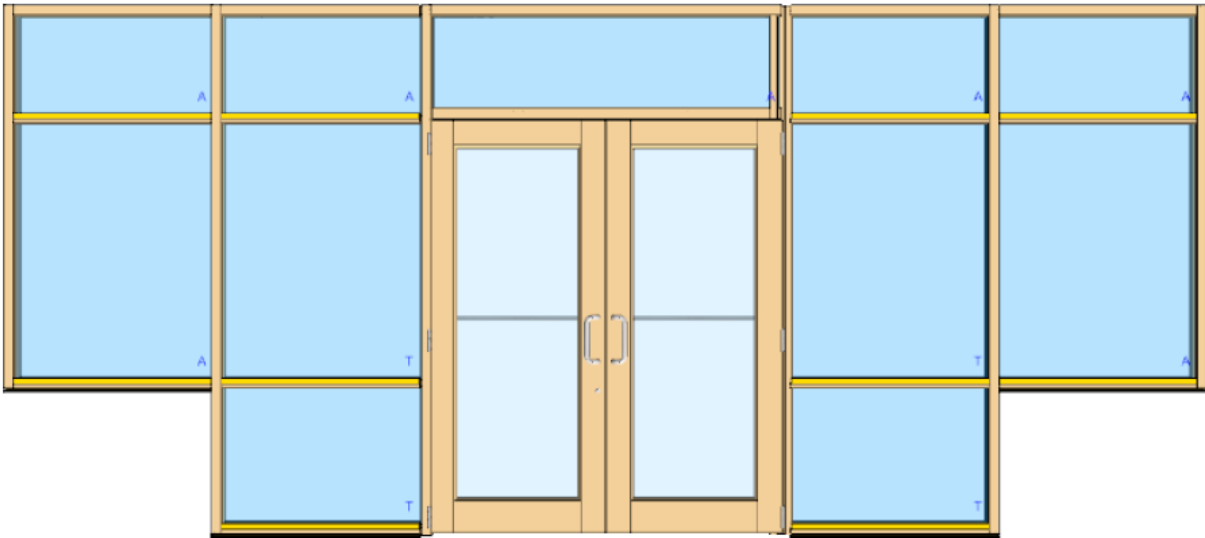


Quick Start Guide with Workbook

DeMichele Group



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Contacting the DeMichele Group

Business Hours:

Monday through Friday

7:00am to 5:00pm AST

Phone Numbers:

Questions, Suggestions, Software Installation
or Training Information:

480-985-4926

Fax:

480-985-3000

Email Us:

General Information: info@demichelegroup.com

Chris Draper: chris@demichelegroup.com

Mike English: me@demichelegroup.com

John Blasko: jblasko@demichelegroup.com

Website:

General: www.demichelegroup.com

PartnerPak Studio: <http://www.demichelegroup.com/ppakstudiodownload>

UPS Deliveries:

DeMichele Group
6432 E McDowell Rd
Mesa, AZ 85215

Getting Started

Getting Started with PartnerPak Studio

Starting PartnerPak Studio®

To start **PartnerPak Studio®**, double click on the **PartnerPak** Shortcut that was placed on the desktop during installation

OR

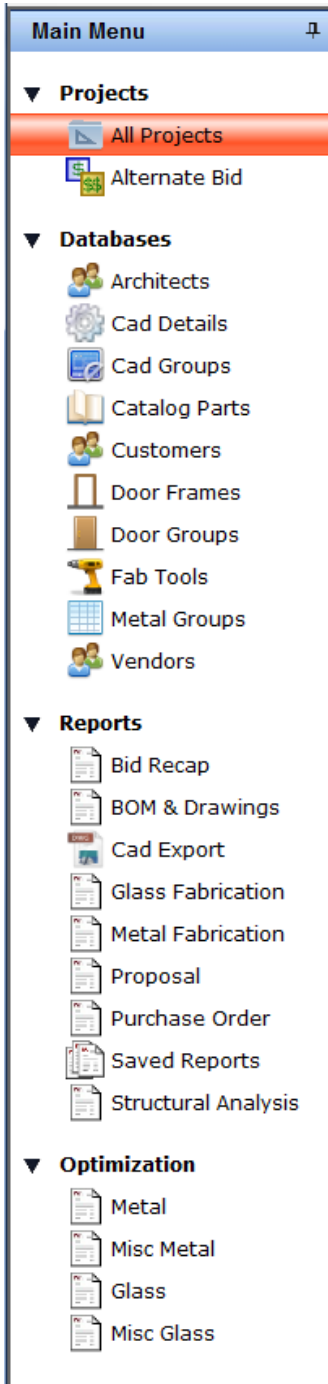
Go to **Start | Programs | DeMichele Group | PartnerPak Studio** and left click on the **PartnerPak Studio icon** to start the program.



Navigating PartnerPak Studio

The **Main Menu** has several options to choose from:

Main Menu



Projects

All Projects: Displays current projects and allows you to select, edit general info, copy, rename, delete, import and save existing projects or create new projects.

Alternate Bid: Allows a change to a previous bid recap without re-entering elevations.

Databases

Architects: Displays a list of Architects to select from for specific projects.

CAD Details: Displays all catalog parts and keywords for finding CAD details.

CAD Groups: Displays a list of metal systems and keywords to find with CAD Details to bring into an elevation or export to CAD.

Catalog Parts: Displays current catalog parts to select, edit general info, copy, rename, delete, import and save existing parts or create new parts.

Customers: Displays current customers and allows you to select, edit general info, copy, rename, delete, import and save existing customer information or create new customers.

Door Frames: Displays a list of door frames to bring into an elevation and keywords.

Door Groups: Displays current preconfigured doors and allows you to select, edit general info, copy, rename, delete, import and save existing door groups or create new preconfigured doors.

Fab Tools: Displays a list of drill bits used in fabrication process with the Rhino Fab Machining Centers.

Metal Groups: Displays current preconfigured metal systems and allows you to select, edit general info, copy, rename, delete, import and save existing metal systems or create new custom systems.

Vendors: Displays current vendors and allows you to select, edit general info, copy, rename, delete, import and save existing vendors or create new vendors. Once a vendor is created, they can be specified in Catalog Parts to associate what product the vendor sells.

Reports

Bid Recap: Allows for project pricing and bidding information to be performed.

BOM & Drawings: Used to generate printer drawings, parts lists, and BOM for a project.

CAD Export: Used to export elevations and details to a CAD interface such as AutoCAD or FastCAD.

Glass Fabrication: Used to generate a set of reports on how to cut glass for sheet glass projects.

Metal Fabrication: Used to generate fabrication reports and CNC export data.

Proposal: Generates a proposal from a stored recap.

Purchase Order: Generates purchase orders and glazing bid requests for a stored recap.

Saved Reports: Gives access to saved recaps, proposals and purchase orders.

Structural Analysis: Generates wind load and dead load analysis reports on any project that has structural data.

Optimization

Metal: Allows for optimization of projects, or misc. materials to be performed generating cutting instructions and other reports necessary for the fabrication of metal.

Misc Metal: Allows for optimization of misc. cut lists to be performed, generating cutting instructions, drop lists, stock length usage, labels and more.

Glass: Allows for optimization of glass within a project to determine how many sheets of glass are needed and how to optimize the cutting

Misc Glass: Allows for optimization of a miscellaneous glass cut list.

Main Dropdown Menus

File

New (CTRL + N): Creates a new project.

Open (CTRL + O): Opens an existing file.

Save (CTRL + S): Saves a project.

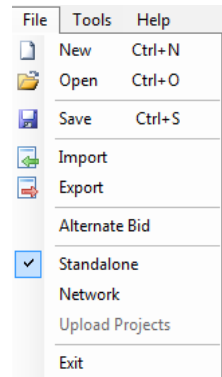
Import: Generates a .dat file which can be shared with others to continue working on a project.

Export: Imports a .dat file to continue working on a project from another user.

Alternate Bid: Allows a change to a previous bid recap without re-entering elevations.

Standalone: Selected if PartnerPak Studio is being used on a standalone workstation.

Network: Selected if PartnerPak Studio is being used in a network environment with data files stored on server.



Tools

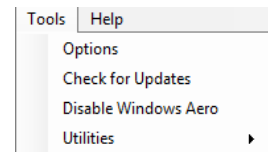
Options: Used to access User defined settings such as labor rates, CMP discounts and other default settings used in PartnerPak Studio.

Check for Updates: If selected, PartnerPak will automatically check to see if an update is available on the DeMichele Group's web site.

Disable Windows Aero: This option is selected to improve the performance of PartnerPak Studio by turning off some of Windows background functions.

Utilities

3D Mesh Tool: Used to import dxf file into a CAD detail.



Help

Studio Support – TeamViewer: Utility used by DeMichele Group to help diagnose and repair customer issues.

PartnerPak Downloads: Access to the latest update and info on-line.

PartnerPak Website:

<http://www.demichelegroup.com/index.php/estimating/partnerpak-studio>

Kawneer Website: Access to Kawneer’s web site for information.

<http://www.kawneer.com>

Kawneer Price Book: Opens current Kawneer price catalog from local drive. To view most current, go to KawneerDirect Resource Center.

<http://www.kawneerdirect.com>

Short Cut Keys

F2 – Displays Catalog Part Details for selected part number (product code).

F3 – Displays Price Book information for selected part number (product code).

F6 – Displays Windload/Deadload chart for select part number (product code).

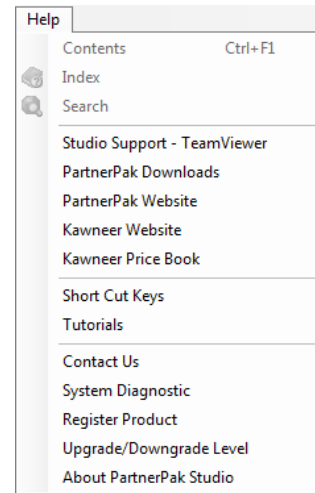
ALT + Left Mouse Click – Selects a stick in the graphics editor and all sticks to the right.

ALT + Shift + Left Mouse Click – Selects a panel in the graphics editor and all panels to the right.

CTRL + Shift + Left Mouse Click – Selects a panel in the graphics editor and all panels above.

Tutorials: Video step by step directions on the use of different areas of the program.

Contact Us: Quick access to DeMichele Group and Kawneer contact information.

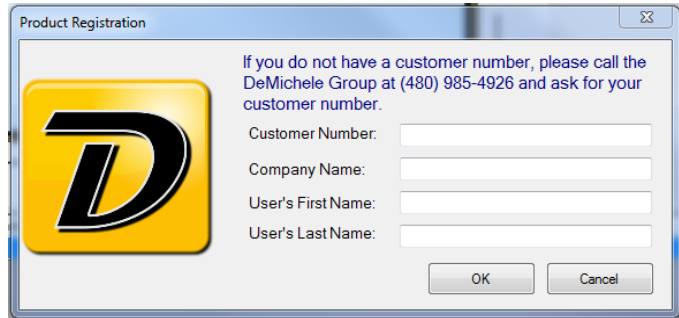


System Diagnostic: Provides a diagnostic of system components to determine if PartnerPak Studio meets performance requirements.

Register Product: Complete to register product and prevent error timeout warnings. Contact the DeMichele Group for your customer number.

Upgrade/Downgrade Level: Used to confirm upgrade/downgrade of PartnerPak Studio subscription.

About PartnerPak Studio: Displays PartnerPak Studio version number.



Project Information Bar:



New: Create a new project.

Open: Open highlighted project.

Save: Save highlighted project.

Copy: Create copy of a select project.

Delete: Delete highlighted project.

Create Alternate Bid: Create an alternate bid of an existing bid recap without reentering elevations.

Exercise 1: Entering System Parameters

Objective(s):	<ul style="list-style-type: none"> Review system parameters in the PartnerPak Studio Tools – Options menu.
----------------------	---

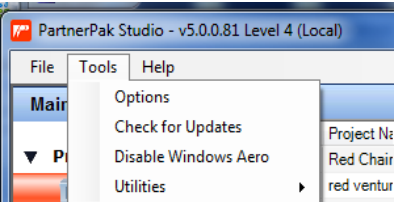
In this section, we will look at these settings that when configured to the way you do business, greatly increase the accuracy of the quoting.

- | | |
|-----------------------|--------------------|
| General Parameters | Contacts Merge |
| CAD Parameters | Glass Opt Defaults |
| Structural Parameters | Glass Stock Size |
| CMP Matrix | Labor Defaults |
| Glass Tempering Rules | Labor Rates |
| Frame Set Defaults | List Manager |
| Backup & Restore | Proposal Defaults |
| Company Info | Rack Schedule |
| Company Logo | |

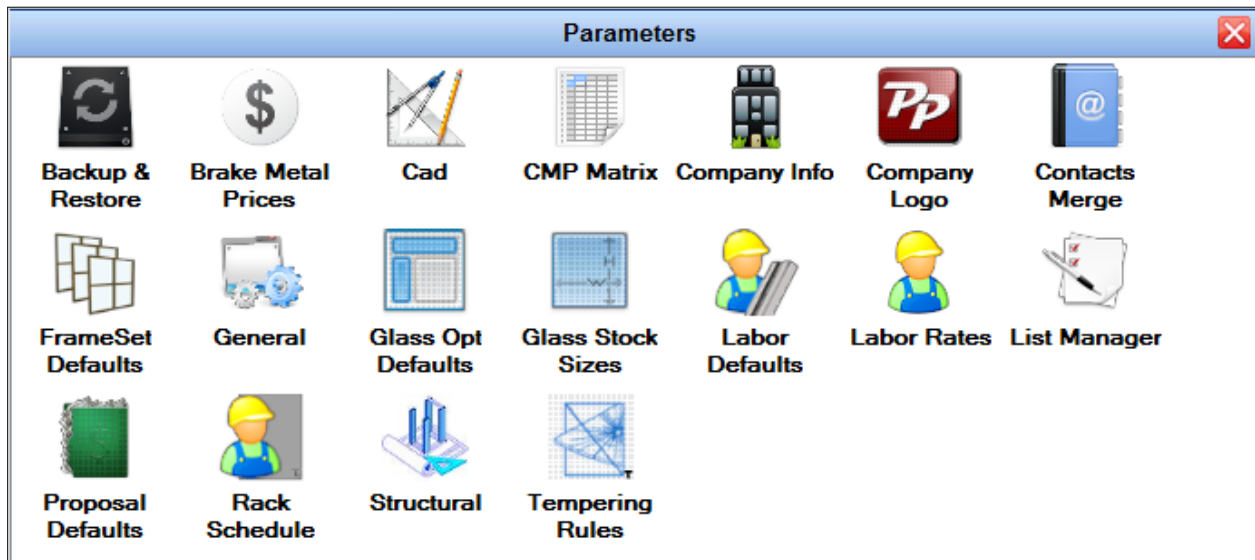
Setting Parameters

Program Parameters: The Tools/Options menu gives access to parameters for PartnerPak Studio® Software.

To enter Set Parameters Menu, select Options from the Tools menu:



Set Parameters Main Screen



PartnerPak Studio Program Parameters Window

From the Parameters Window (above), the following program parameters can be adjusted:

General Parameters: Set Saw Cut Width, Dimension Tolerance, Tax and Markup percentages, min drop length, min glass size and optimization defaults.

Parameters Details	
GENERAL	
SAW CUT WIDTH	0.1875
FRAMING TOLERANCE (1/32 OR 1/16)	1/32
PERCENT TAX ON FRAMING/MATERIALS	5
PERCENT MARKUP ON FRAMING/MATERIAL	15
PERCENT TAX ON DOOR/DOOR FRAMING	0
PERCENT MARKUP ON DOOR/DOOR FRAMING	0
PERCENT TAX ON GLAZING	0
PERCENT MARKUP ON GLAZING	0
PERCENT TAX ON SHOP LABOR	0
PERCENT MARKUP ON SHOP LABOR	0
PERCENT TAX ON FIELD LABOR	0
PERCENT MARKUP ON FIELD LABOR	0
PERCENT TAX ON SPECIAL CHARGES	0
PERCENT MARKUP ON SPECIAL CHARGES	0
PERCENT TAX ON MATERIAL MARKUP	0
PERCENT TAX ON LABOR MARKUP	0
MIN. LENGTH OF USABLE DROP	12
ADD TO STOCK LENGTH FOR OPTIMIZATION	1
TRIM DIMENSION FOR S/L OPTIMIZATION	0
MIN. GLASS SIZE (SQ. FT.)	3
ROUND TO ROLL OR BOX QUANTITY	<input type="checkbox"/>
DISPLAY ALL NUMBERS IN DECIMALS	<input type="checkbox"/>
COMBINE PATTERNS IN OPTIMIZATION	<input type="checkbox"/>
METAL OPT DOWNLOAD FOR TPS	<input type="checkbox"/>
MERGE FILE FOR OTHER MANUFACTURERS	<input type="checkbox"/>
METRIC OUTPUT	<input type="checkbox"/>
EXTRUSION MIN LENGTH	0
EXTRUSION MAX LENGTH	0.0
OPTIMIZER STEP SIZE	0.0
ADD FOR RADIUS BENDING	0.0
VERTICAL FAB LOCATIONS	<input type="checkbox"/>
VALIDATE FOR KAWNEERDIRECT EXPORT	<input checked="" type="checkbox"/>
GLAZING TOLERANCE (1/16 OR 1/8)	1/16
DON'T CUT A1 AND A4 TRANSOM FRAMES	<input checked="" type="checkbox"/>
SMART-FAB LOCATION	<input type="button" value="v"/>
ADD FOR ANGLED CUTS	0.0

CAD Parameters: (Level 4 needed) Set scales, drawing size and plot area defaults.

Parameters Details	
▼ CAD	
Elevation Scale Inch	1/2
Elevation Scale to Inches	12
SPECIFY SIZE OF DRAWING AREA (INCHES)	
Drawing Area Width	34
Drawing Area Height	22
Section Drawing Scale	1/2
Draw Boundry Around Plot	<input checked="" type="checkbox"/>
PartnerPak Format	<input checked="" type="checkbox"/>
Draw Bubbles on Elevations	<input checked="" type="checkbox"/>
Draw Labels on Bubble Cuts	<input checked="" type="checkbox"/>
Remove Glass Labels	<input type="checkbox"/>
Layout Options	Sections on seperate sheets
Dimension Options	Standard Dimensions
Dimension Format	Feet and Inches
Cad File Type	DWG
Auto Launch Program	<input checked="" type="checkbox"/>
Cad Directory Location	null

Structural Parameters: (Level 2 needed) Set defaults for wind speed and max deflections for windload and deadload analysis. NOTE: Some metal systems do not support structural analysis.


Parameters Details	
▼ STRUCTURAL	
DESIGN LOAD (PSF)	25
WIND LOAD ANALYSIS	SINGLE SPAN
DEAD LOAD ANALYSIS	1/4 POINT
MAXIMUM WIND LOAD DEFLECTION	0.75
WIND LOAD DEFLECTION RATIO	175
MAXIMUM DEAD LOAD DEFLECTION	0.125
DEAD LOAD DEFLECTION RATIO	360
DEFAULT SPLICE PC	SPLICE SLEEVE
DEFAULT SPLICE GAP	0.5
DEFAULT ANCHOR PC	WINDLOAD CLIP
TURN ON STRUCTURAL ANALYSIS:	<input checked="" type="checkbox"/>

CMP Matrix: Set individual discounts based on Kawneer Price Book sections.

CMP MATRIX	
A1	0
A2	0
A3	0
A4	0
A5	0
A7	0
A8	0
A18	0
A9	0
C1	0
C1A	0
C2	0
C2-6	0
C2UT	0
C2T	0
C3	0
C4	0
C5	0
C6	0
C7	0
C8	0
C9	0
C20	0
C11	0
C12	0
C13	0
D1	0
D2	0
D3	0
D4	0
D5	0
D6	0
D7	0
D8	0
D9	0
E1	0
E2	0
F1	0

Enter Multiplier

Glass Tempering Rules: Set default variables for tempering glass panels around doors and openings.

Parameters Details	
	
TEMPERING RULES	
DISTANCE FROM FINISH FLOOR (INCHES):	18
AREA ABOVE FLOOR (SQFT):	9
DISTANCE FROM DOOR (INCHES):	24

Labor Defaults: There are five default labor types which can be set.

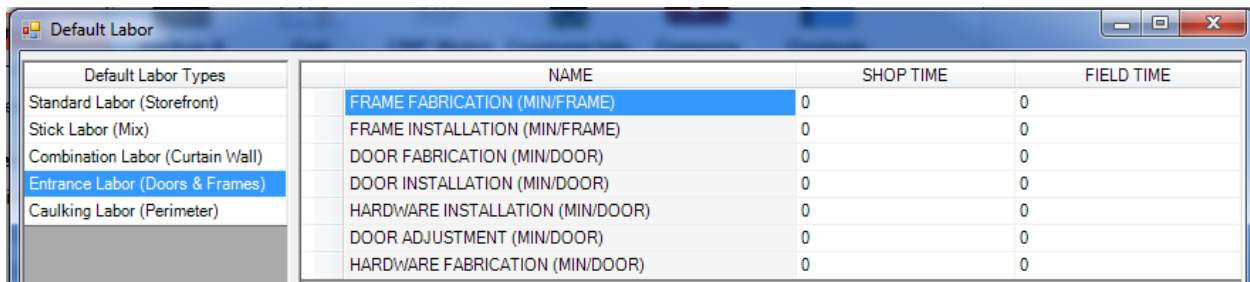
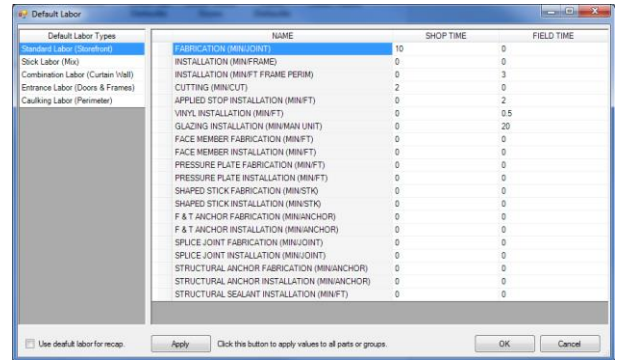
- **Standard Labor (Storefront)**
- **Stick Labor (Mixed)**
- **Combination Labor (Curtain Wall)**
- **Entrance Labor (Doors & Frames)**
- **Caulking Labor (Perimeter)**

Default Standard Labor (Storefront): Sets the default labor to be applied to all metal systems that are set to a standard labor type. In order to use this default, the labor times defined in each metal system must be set to 0.

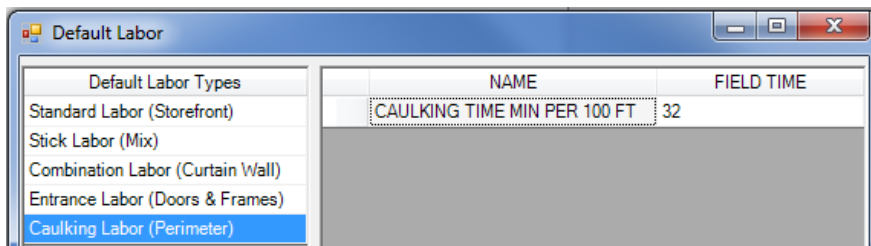
Default Stick Labor (Mix): Sets the default labor to be applied to all metal systems that are set to a stick labor type. In order to use this default, the labor times defined in each metal system must be set to 0.

Default Combination Labor (Curtain Wall): Set the default labor to be applied to all metal systems that are set to a combination labor type. In order to use this default, the labor times defined in each metal system must be set to 0.

Default Entrance Labor (Door & Frames): Set the default labor to be applied to all doors and frames. In order to use this default, the labor times defined in each metal system must be set to 0.



Caulking Labor (Perimeter): Set the default labor to be applied to caulking time (minutes per 100 feet). In order to use this default, the labor times defined in each metal system must be set to 0.



Frame Set Defaults: Set defaults for each project frame set that is opened with every new project. Allows for use of a specific type of metal, infill, finish, sealant and RO to start which can still be changed on a per project basis.

▼ FRAMESET DEFAULTS	
METAL GROUP:	M1620 6" SB 1" W/F&T
BACK MEMBER FINISH:	#22 DARK IVY : FLUROPON
FACE MEMBER FINISH:	#22 DARK IVY : FLUROPON
1/4" TEMPERED GLAZING	1/4 CLEAR TE
1/4" ANNEALED GLAZING	1/4 CLEAR AN
1/4" SPANDREL GLAZING	1/4 BRONZE SP
PANEL GLAZING:	1/4 PANEL
OTHER GLAZING:	1/4 CLEAR MIRROR
1" TEMPERED GLAZING	1 CLEAR INS TE
1" ANNEALED GLAZING	1 CLEAR INS AN
1" SPANDREL GLAZING	1 SPAN/INSUL
1" PANEL	1 PANEL 15 WO
OUTSIDE CAULKING:	SILICONE
INSIDE CAULKING:	SILICONE
OUTSIDE BACKER ROD:	1/4" BACKER ROD
INSIDE BACKER ROD:	1/4" BACKER ROD
LEFT SHIM:	0
RIGHT SHIM:	0
TOP SHIM:	0
BOTTOM SHIM:	0

Glass Opt Defaults: Set defaults to be used on glass optimization function of program.

Parameters Details	
▼ GLASS OPT DEFAULTS	
GENERATE Z-CUT [Y/N]	<input checked="" type="checkbox"/>
HORIZONTAL TRIM	0
VERTICAL TRIM	0
INTERIOR TRIM	0
MIN DROP SIZE	12

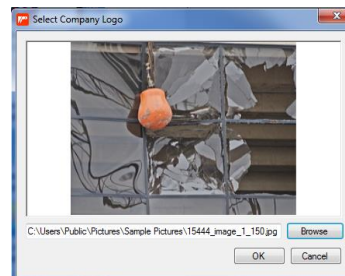
Glass Stock Sizes: Set default glass stock sizes to be used on glass optimization function of program.

Parameters Details	
▼ GLASS STOCK SIZES	
WIDTH	120
HEIGHT	96

Company Information: Set Company Name, Address, City, State, Zip Code and KawneerDirect Customer User Name.

▼ COMPANY INFO	
COMPANY NAME:	Red Mountain Research Labs
ADDRESS:	6432 E. McDowell Road
CITY:	Mesa
STATE:	AZ
ZIP CODE:	85215
PHONE NUMBER:	(480) 985-4926
FAX NUMBER:	(480) 985-3000
USER NAME:	Guest

Recommended: Logo max 100px tall.



Company Logo: Set company logo for top of reports.

Proposal Defaults: Set default information, conditions, and exclusions available in proposals.

Note: These can be selected from the list of options or customized.

The screenshot shows a software interface with two main sections. The top section is titled 'Exclusions' and has tabs for 'General', 'Inclusions', 'Exclusions', 'Qualifications', and 'Adds/Deducts'. Under 'Exclusions Type', 'Standard' is selected. The 'Exclusions List' contains several items with checked boxes: 'All door hardware and preps nc', 'All freight', 'All fabrication on any stock len', 'All Insurance, bonding or permi', 'All glass and glazing unless oth', 'All engineering calculations', 'All fabrication on any stock len', 'All door hardware and preps nc', 'All CAD shop drawings', and 'All glass, panels, screens, and'. Below this is a 'Text Editor' field.

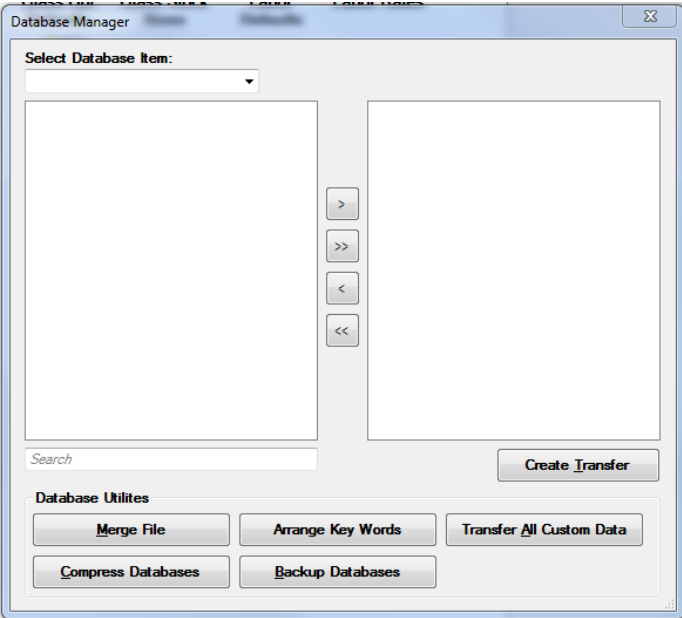
The bottom section is titled 'Proposal Options' and has tabs for 'General', 'Inclusions', 'Exclusions', 'Qualifications', 'Adds/Deducts', 'Terms', 'Disclaimers', and 'Special Notes'. It contains a form with the following fields:

- Company Name: Red Mountain Research Labs
- Address 1: 6432 E. McDowell Road
- Address 2: (empty)
- City: Mesa
- State: AZ
- Zip Code: 85215
- Phone: (480) 985-4926
- Fax: (480) 985-3000
- Prepared By: Guest
- Title or Department: (empty)
- Architect: (empty)
- Salutation: (empty)
- Tax Percentage: 5
- Bond Percentage: 6.5
- Taxable:

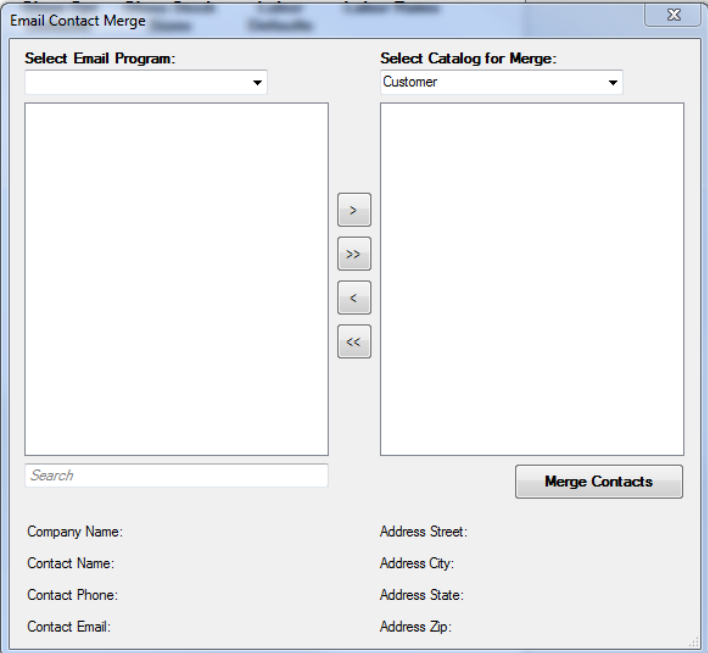
Structural Parameters: (Level 2 needed) Set default wind load and dead load parameters and enable structural analysis.

▼ STRUCTURAL	
DESIGN LOAD (PSF)	25
WIND LOAD ANALYSIS	SINGLE SPAN ▼
DEAD LOAD ANALYSIS	1/4 POINT ▼
MAXIMUM WIND LOAD DEFLECTION	0.75
WIND LOAD DEFLECTION RATIO	175
MAXIMUM DEAD LOAD DEFLECTION	0.125
DEAD LOAD DEFLECTION RATIO	360
DEFAULT SPLICE PC	SPLICE SLEEVE ▼
DEFAULT SPLICE GAP	0.5
DEFAULT ANCHOR PC	WINDLOAD CLIP ▼
TURN ON STRUCTURAL ANALYSIS:	<input checked="" type="checkbox"/>

Backup & Restore: Backups and restore database files. Also used to create transfer files to share database info with others in a standalone environment.



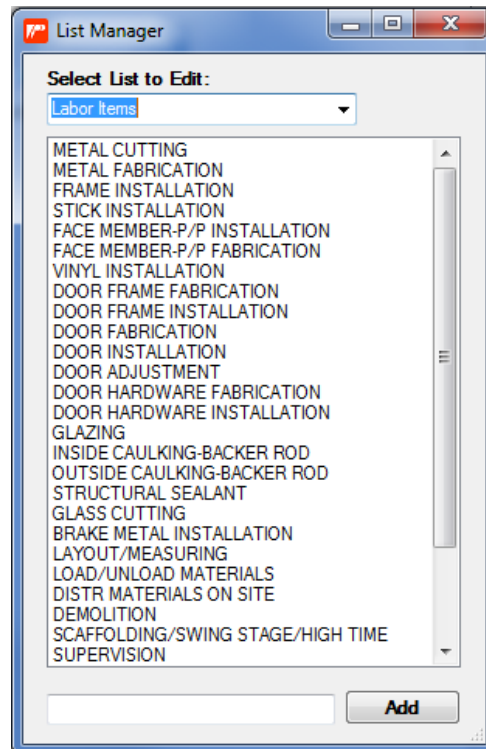
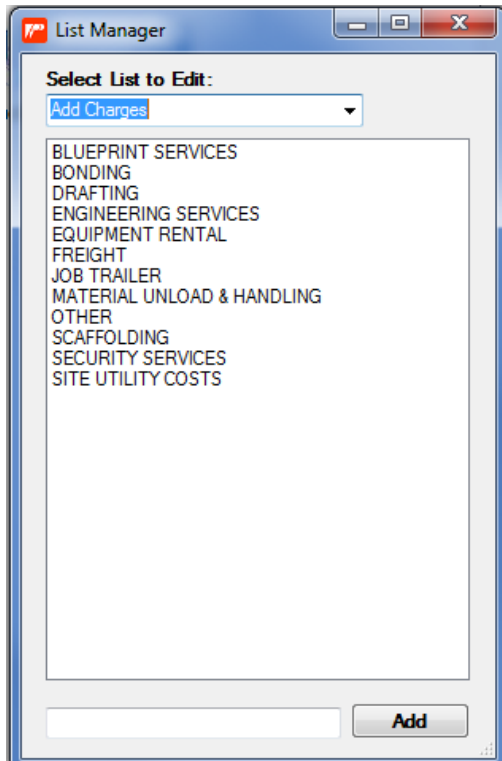
Contacts Merge: Import Contacts from Outlook to add new Vendors, Customers, and Architects.



Labor Rates: Allows for creation of labor rates (shop and field) based on different zones, which might be used for distances from shop or other circumstances.

NAME	ZONE 1 SHOP \$/HR	ZONE 1 FIELD \$/HR	ZONE 2 SHOP \$/HR	ZONE 2 FIELD \$/HR	ZONE 3 SHOP \$/HR	ZONE 3 FIELD \$/HR	ZONE 4 SHOP \$/HR	ZONE 4 FIELD \$/HR
METAL CUTTING	15	15	0	0	0	0	0	0
METAL FABRICATION	15	15	0	0	0	0	0	0
FRAME INSTALLATION	15	15	0	0	0	0	0	0
STICK INSTALLATION	15	15	0	0	0	0	0	0
FACE MEMBER-P/P FABRICATION	15	15	0	0	0	0	0	0
FACE MEMBER-P/P INSTALLATION	15	15	0	0	0	0	0	0
VINYL INSTALLATION	15	15	0	0	0	0	0	0
DOOR FRAME FABRICATION	15	15	0	0	0	0	0	0
DOOR FRAME INSTALLATION	15	15	0	0	0	0	0	0
DOOR FABRICATION	15	15	0	0	0	0	0	0
DOOR INSTALLATION	15	15	0	0	0	0	0	0
DOOR ADJUSTMENT	15	15	0	0	0	0	0	0
DOOR HARDWARE FABRICATION	15	15	0	0	0	0	0	0
DOOR HARDWARE INSTALLATION	15	15	0	0	0	0	0	0
GLAZING	15	15	0	0	0	0	0	0
INSIDE CAULKING-BACKER ROD	15	15	0	0	0	0	0	0
OUTSIDE CAULKING-BACKER ROD	15	15	0	0	0	0	0	0
STRUCTURAL SEALANT	15	15	0	0	0	0	0	0
GLASS CUTTING	15	15	0	0	0	0	0	0
BRAKE METAL INSTALLATION	15	15	0	0	0	0	0	0
LAYOUT/MEASURING	15	15	0	0	0	0	0	0
LOAD/UNLOAD MATERIALS	15	15	0	0	0	0	0	0
DISTR MATERIALS ON SITE	15	15	0	0	0	0	0	0
DEMOLITION	15	15	0	0	0	0	0	0
SCAFFOLDING/SWING STAGE/HIGH TIME	15	15	0	0	0	0	0	0
SUPERVISION	15	15	0	0	0	0	0	0
TRAVEL TIME	15	15	0	0	0	0	0	0
PUNCH LIST	15	15	0	0	0	0	0	0
CALL BACKS	15	15	0	0	0	0	0	0
MONTHLY MEETINGS	15	15	0	0	0	0	0	0
CLEAN UP	15	15	0	0	0	0	0	0
MISC.	15	15	0	0	0	0	0	0

List Manager: Create items to include in lists used in estimation of additional items, such as special charges or labor.



Rack Schedule: Used to define number of men required to set a piece of glass. Can be used to help determine labor costs.

Rack Schedules	UI	MEN	WEIGHT
Rack Schedule 1	100	1	
Rack Schedule 2	170	2	
Rack Schedule 3	200	3	
Rack Schedule 4	230	4	
	260	5	
	280	6	
	300	7	
	320	8	
	340	9	
	360	10	
	*		

These parameters are guidelines for the program to work in and can all be adjusted as you work throughout the program.

Brake Metal Prices: Used to enter pricing for brake metal operations, including pricing for brakes, hems, and shears. Used when adding parts.

BRAKE METAL PRICES	
PRICE PER BRAKE:	3
PRICE PER HEM:	7
PRICE PER SHEAR:	2.5

Exercise 2: Enter Company Information

Objective(s):	<ul style="list-style-type: none">• Enter Company Information in the Tools – Options menu.
----------------------	--

Enter your company information into the fields provided.

Entering Company Information

Company Information: This is your specific information about your company. This data is used for reports and other purposes throughout PartnerPak Studio.

To open the Company Info Menu select:

Tools → Options → Company Info

Company Information Menu

Parameters Details	
COMPANY INFO	
COMPANY NAME:	Red Mountain Research Labs
ADDRESS:	6432 E. McDowell Road
CITY	Mesa
STATE	AZ
ZIP CODE	85215
PHONE NUMBER:	(480) 985-4926
FAX NUMBER:	(480) 985-3000
USER NAME:	Guest

Company Information screen contains information about your company including:

- Company Name:**
- Address:**
- Phone Number:**
- Fax Number:**
- User Name: (for KawneerDirect)**

Enter pertinent information into the fields and left click on the **SAVE** icon to store data.

Exercise 3: Entering a Customer

Objective(s):	<ul style="list-style-type: none"> Enter Customer information in the Customer Database.
----------------------	--

Customer Name: Hansen Construction
Customer #: 1100100
Address: 140 E. Center Street
 Mesa, AZ 85301
Phone #: 480-555-1212
Fax #: 480-555-1214
Credit: 10,000.00

Entering Customers

Adding a Customer: Adds a customer to the database with contact information. This info is used for bid recaps and purchase orders.

To open the Customer screen select:

Main Menu Toolbar → Customers

Customer Screen

Customer Details	
CUSTOMER	
NAME	Name of customer or business
CUSTOMER NUMBER:	Kawneer customer number
DESCRIPTION:	Customer description
ADDRESS1:	Customer Address1
ADDRESS2:	Customer Address2
CITY:	Customer City
STATE:	Customer State
ZIP:	Customer Zip
PHONE:	Customer Phone Number
FAX:	Customer Fax Number
EMAIL:	Customer Email
CONTACT:	Customer Point of Contact
LOCATION:	Geographical Location
KEY WORDS:	EAST\COD\
CREDIT LIMIT:	100000
TOTAL CREDITS:	12500
SALES TO DATE:	125000
TAX EXEMPT NO.:	124414
LAST ACTIVITY:	11/15/2014

- Name:** Name of customer or business.
- Customer number:** Number assigned to customer.
- Address:** Customer Address.
- Phone / Fax:** Customer Phone Number and Fax Number.
- Email:** Customer email address.
- Contact:** Point of contact for customer.
- Location:** Geographical location of customer.

Key Words: Key words assigned to the customer. Additional keywords can be added using the green plus sign at the bottom of the window.

Credit Limit: Customer established credit limit.

Total Credits: Customer current credit amount.

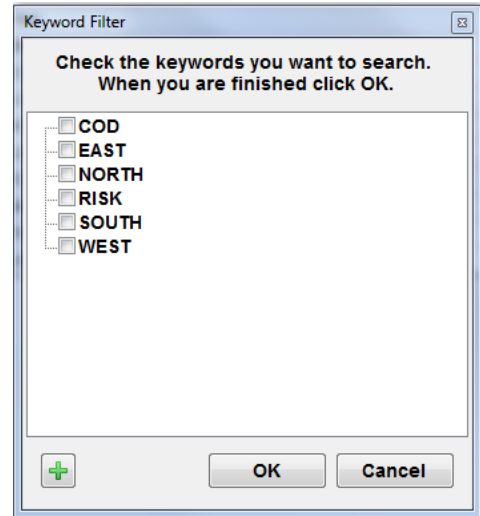
Sales to date: Total customer has purchased in the past.

Tax Exempt No.: Tax Exempt ID number

Last Activity: Date last transaction occurred.

To create a new customer, select the **New** menu icon, enter customer name, and fill out pertinent details for the customer.

To save customer information, select the **Save** menu icon.



Exercise 4: Entering a Vendor

Objective(s):	<ul style="list-style-type: none"> • Enter Vendor information in the Vendor Database.
----------------------	--

Vendor Name: Glazing Connection, Inc.
Vendor #: 12345
Address: 14 E. Center Lane
 Mesa, AZ 85301
Phone #: 480-555-1211
Fax #: 480-555-1210
Sales Rep: Jerry Sloan

Entering Vendors

Adding a Vendor: Allows adding vendors to database with their contact information. This information is used for bid recaps and purchase orders.

To open the Vendor screen select:
 Main Menu Toolbar → Vendors

Vendor Screen

Vendor Details	
▼ VENDOR	
NAME	Vendor Name
VENDOR NUMBER:	Number assigned to customer
NAME:	Vendor Name
ADDRESS1:	Vendor Address1
ADDRESS2:	Vendor Address2
CITY:	Vendor City
STATE:	Vendor State
ZIP:	Vendor Zip
PHONE:	Vendor Phone Number
FAX:	Vendor Fax Number
EMAIL:	Vendor Email Address
SALES REP:	Vendor Sales Rep Name
LOCATION:	Geographical Location
KEY WORDS:	GLASSI
CREDIT LIMIT:	125000
TOTAL CREDITS:	50000
SALES TO DATE:	150000
TAX EXEMPT NO.:	12565
LAST ACTIVITY:	11/17/2014
CUSTOMER NO.:	Your Customer Number for Vendor

Vendor number: Number assigned to the vendor.

Name: Name of vendor.

Customer number: Assigned customer number.

Address: Vendor Address.

Phone / Fax: Vendor Phone Number/Fax Number.

Email: Vendor Email address.

Sales Rep: Point of contact for the vendor.

Location: Geographical location of vendor.

Key Words: Keywords assigned to vendor for quick reference. Additional key words can be added using the green plus sign at bottom of window.

Credit Limit: Established credit limit with the vendor.

Total Credits: Amount currently on credit.

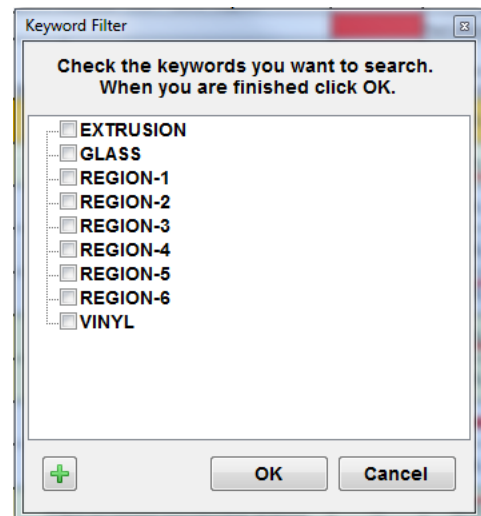
Sales to date: Material purchased from the vendor year-to-date.

Tax Exempt: Tax Exempt ID number

Last Activity: When the last transaction took place.

To create a new vendor, select the **New** menu icon, name the vendor, and complete pertinent details for the vendor.

Select **Save** menu icon to save the information.



Project Manager Menus and Icons

The Project Manager shows the elevations contained in the frames and allows additional frames and framesets to be added as well as editing existing elevations.

Frame Items: Main project review screen containing a visual representation of the elevation and all the frames/elevations contained.

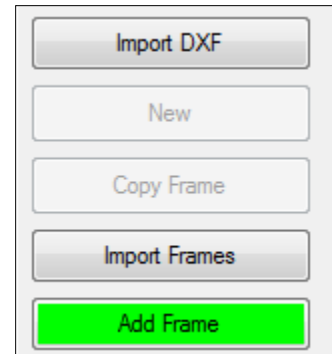
Import DXF: Import a DXF file with prepared elevations into PartnerPak Studio.

New: Create a new frame in this project.

Copy Frame: Copy the Selected Frame.

Import Frames: Allows frames from other projects to be imported into a project.

Add/Edit Frame: Adds a new frame to the project or edits the selected frame.



Frame Information	
▼ Metal Group Options	
Catalog	KAWNEER
Metal Group	M451T CG/SS/OG STOPS DOWN
Back Color	#17 CLEAR : PERMANODIC
Face Color	#17 CLEAR : PERMANODIC
▼ Glazing Options	
Annealed	1 CLEAR INS AN
Tempered	1 CLEAR INS TE
Spandrel	1 SPAN/INSUL
Panel	1 PANEL 15 WO
Other	1/4 CLEAR MIRROR
▼ Frame Parameters	
Frame Set Name	Exterior
Frame Name	F32
Frame Shape	Rectangle
Include RO Dim	<input type="checkbox"/>
Panels	5
Rows	2
Number Thus	2
Width	144
Height	100
▼ Sealant Options	
Outside Caulking	SILICONE
Outside Backer Rod	1/4" BACKER ROD
Outside Beads	1
Outside Qty	1
Inside Caulking	SILICONE
Inside Backer Rod	1/4" BACKER ROD
Inside Beads	1
Inside Qty	1
Choose a catalog	

Frame Information: Details of the Elevation, such as name, frameset, frame size, metal system, color, panels, rows, quantity, and sealants.

New: Create a new frame.

Open: Open highlighted frame.

Save: Save highlighted frame.

Delete: Delete highlighted frame.

Frame Information:

Frame Information	
<div style="display: flex; justify-content: space-between;"> 📄 🗑️ ✖ 🔍 </div>	
▼ Metal Group Options	
Catalog	KAWNEER
Metal Group	M451T CG/SS/IOG STOPS DOWN
Back Color	#17 CLEAR : PERMANODIC
▼ Glazing Options	
Annealed	1 CLEAR INS AN
Tempered	1 CLEAR INS TE
Spandrel	1 SPAN/INSUL
Panel	1 PANEL 15 WO
Other	1/4 CLEAR MIDPOD
▼ Frame Parameters	
Frame Set Name	Frame Set 1
Frame Name	Frame 15
Frame Shape	Rectangle
Include RO Dim	<input checked="" type="checkbox"/>
Top Shim	0
Bottom Shim	0
Left Shim	0
Right Shim	0
Panels	5
▼ Sealant Options	
Outside Caulking	SILICONE
Outside Backer Rod	1/4" BACKER ROD
Outside Beads	1
Outside Qty	1
Inside Caulking	SILICONE
Inside Backer Rod	1/4" BACKER ROD
Inside Beads	1
Inside Qty	1

Metal Group Options: Contains Vendor, Metal System used for elevation and finish (interior/exterior).

Glazing Options: Contains glazing being applied to frame using PartnerPak Studio's glazing parameters.

Frame Parameters: Contains name, frameset, shape, size, Rough Opening options, shims, width, height, panels, rows and quantity of this frame layout.

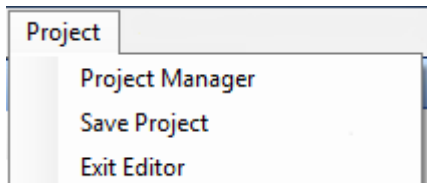
Sealant Options: Sealant, backer rod, sealant amounts for inside and outside glazing.

Graphic Editor Menus and Icons

The Graphic Editor displays elevations, allows for custom modifications to elevations and displays a detailed 3D view.

Dropdown Menu Bar: Main dropdowns that contain all commands available in PartnerPak Studio software.

Project Menu

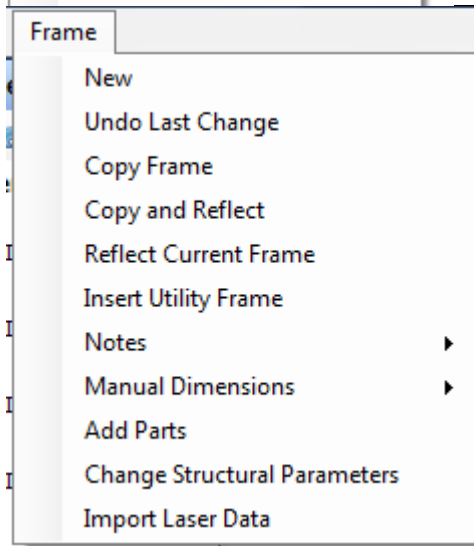


Project Manager: Opens the project manager.

Save Project: Saves the complete project.

Exit Editor: Exits the graphics editor.

Frame Menu



New: Creates a new frame.

Undo Last Change: Allows stepping back and erasing steps.

Copy Frame: Allows for selected frame to be copied. Requires new name.

Copy and Reflect: Allows for selected frame to be copied and makes a mirror reflection of current frame. Requires new name.

Reflect Current Frame: Makes a mirror reflection of current frame.

Insert Utility Frame: Inserts a pre-built interior frame into a panel.

Notes: Adds notes to a specific location in the frame. See below.

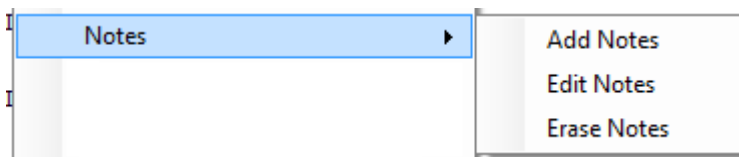
Manual Dimensions: Allows viewing dimensions of selected areas. See below.

Add Parts: Add additional parts to an elevation.

Change Structural Parameters: Change structural defaults for current frame. . (Level 2 Required)

Import Laser Data: Import dxf file.

Notes



Add Notes: Inserts a note into elevation.

Edit Notes: Make changes to notes added to an elevation.

Erase Notes: Remove notes from a

specific elevation.

Manual Dimensions

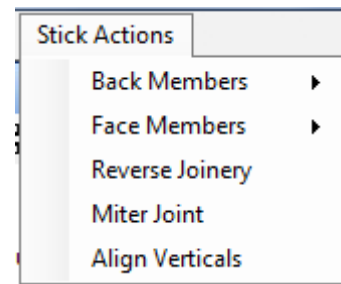


Add Manual Dimensions:
Add manual dimensions to an elevation displayed

elevation printer drawings and CAD exports.

Erase Manual Dimensions: Removes manual dimensions on an elevation.

Stick Actions: (Some Features - Level 2 Required)



Back Members: Adjusts features of the back members. See Sub Menu.

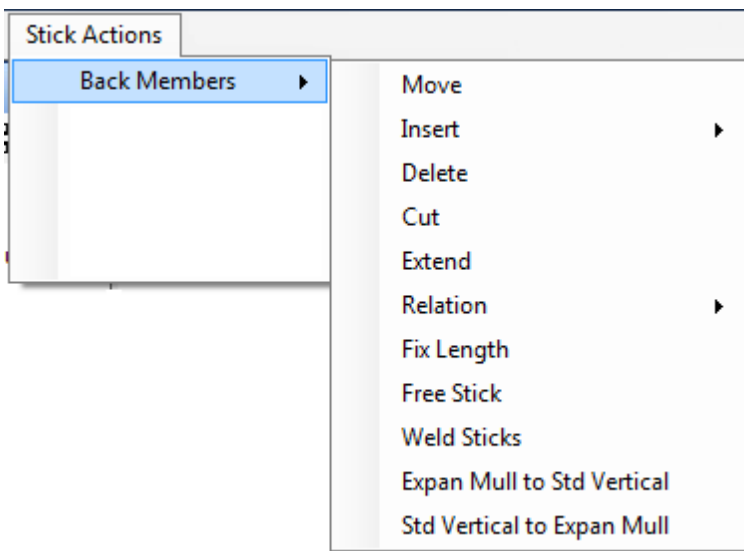
Face Members: Adjusts features of the face members. See Sub Menu

Reverse Join: Reverses the joinery of selected sticks. (Level 2 Required)

Miter Joint: Sets a 45 degree angle for the joints selected. (Level 2 Required)

Align Vertical Sticks: Aligns the selected sticks vertically.

Back Members: (Some Features - Level 2 Required)



Move: Moves a stick to a specified location.

Insert: Insert components. See Sub Menu below.

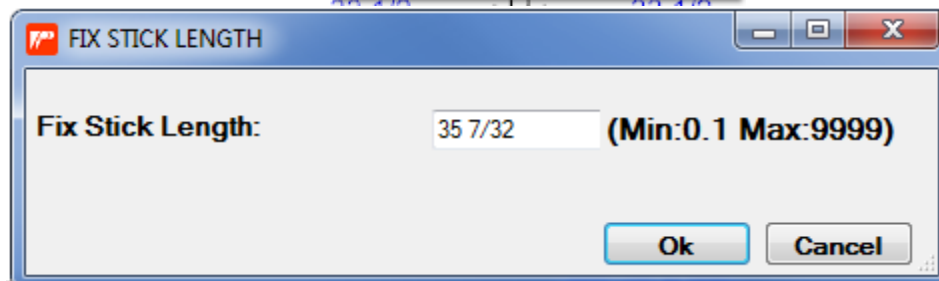
Delete: Deletes a stick from frame.

Cut: Cuts a stick. (Level 2 Required)

Extend: Extends a stick above or below frame. (Level 2 Required)

Relation: Sets a relation of sticks. See Sub Menu below.

Fix Length: Allows an adjustment on length of a stick.



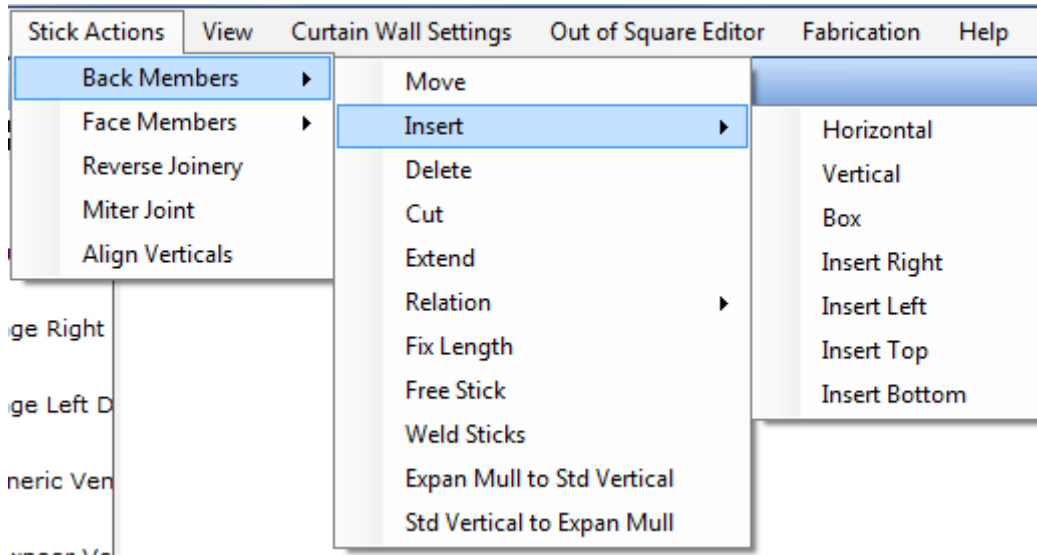
Free Stick: Releases stick from locked position to a split position in the frame.

Weld Stick: Welds two sticks into one continuous stick. **(Level 2 Required)**

Expan Mull to Std Vertical: Converts a selected vertical from an expansion mullion to a standard mullion.

Std Vertical to Expan Mull: Converts a selected vertical from a standard mullion to an expansion mullion.

Insert:



Horizontal: Inserts a horizontal into the selected opening(s).

Vertical: Inserts a vertical into the selected opening(s).

Box: Inserts a box into the selected opening(s).

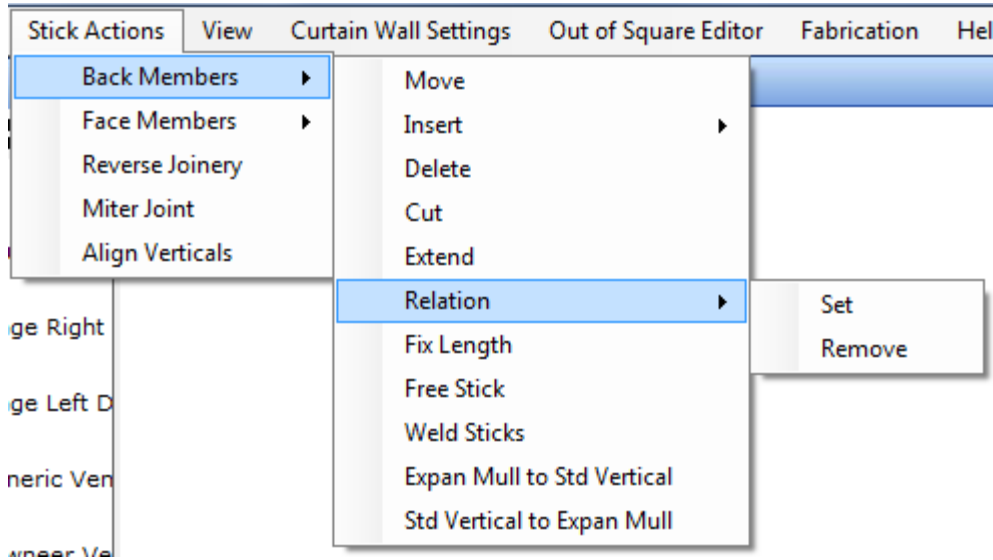
Insert Right: Inserts a stick in the opening(s) at the right side.

Insert Left: Inserts a stick in the opening(s) at the left side.

Insert Top: Inserts a stick in the opening(s) at the top.

Insert Bottom: Inserts a stick in the opening(s) at the bottom.

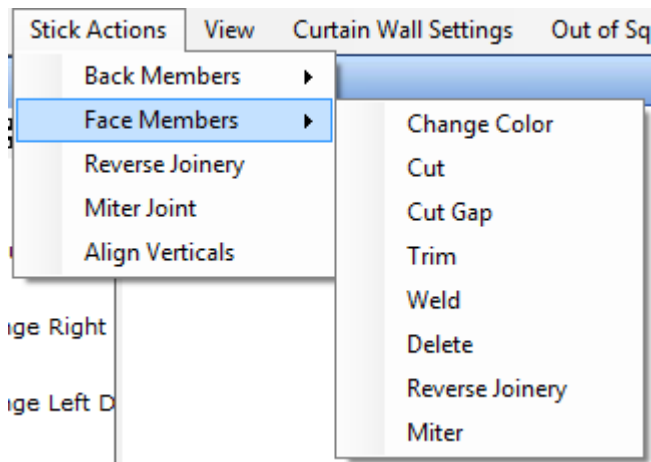
Relation: (Some Features - Level 2 Required)



Set: Sets a relation to the selected sticks.

Remove: Removes a relation from the selected sticks.

Face Members: (Some Features - Level 2 Required)



Change Color: Changes face member color

Cut: Cuts a stick. (Level 2 Required)

Cut Gap: Sets the gap associated with a cut of a face member. (Level 2 Required)

Trim: Trims size of face member.

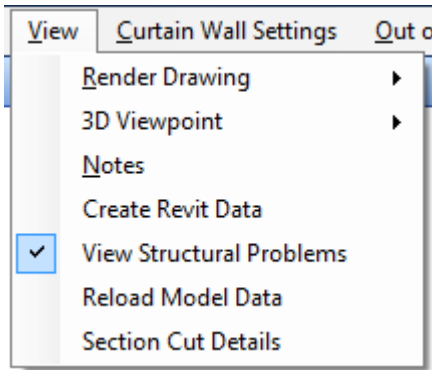
Weld Stick: Welds two sticks into one continuous stick. (Level 2 Required)

Delete: Deletes a stick from the frame.

Reverse Joinery: Reverse face member joinery. (Level 2 Required)

Miter: Miters face member corner. (Level 2 Required)

View: (Some Features - Level 2 Required)



Render Drawing: Gives 3D options to render elevation on screen.

3D Viewpoint: Allows for different views of 3D image .

Notes: Turns on or off the displaying of notes.

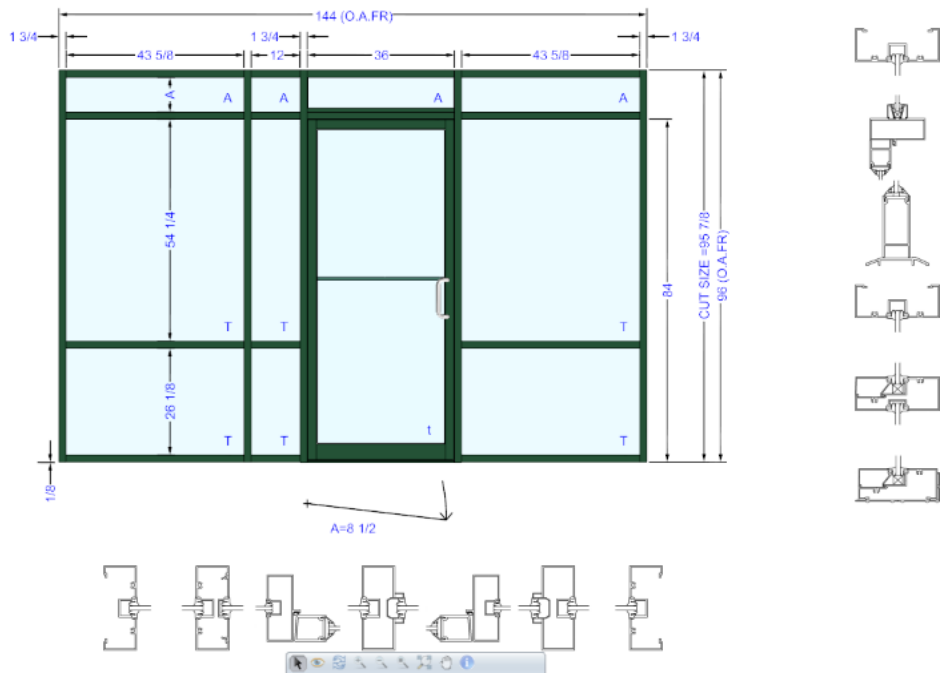
Create Revit Data: Generates a file that can be imported into REVIT* elevations.

* REVIT is an AutoDesk product and does not come with PartnerPak Studio and is not affiliated with the DeMichele Group.

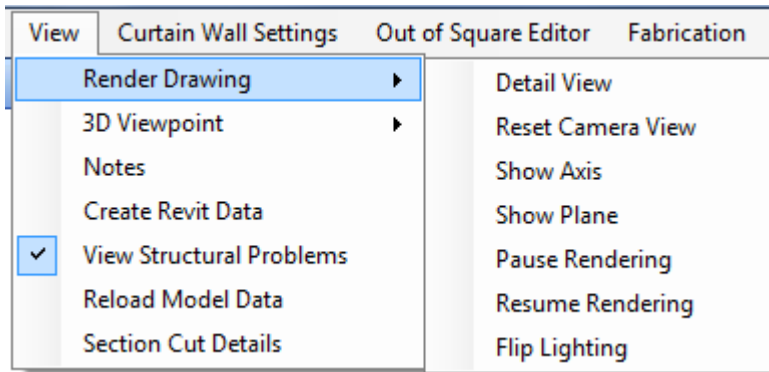
View Structural Problems: Turns on and off viewing of structural problems. (Level 2 Required)

Reload Model Data: Reloads and updates view of elevation.

Section Cut Details: Displays section cuts on project screen.



Render Drawing:



Detail View: Allows you to see the die details.

Reset Camera View: Centers Camera on the elevation.

Show Axis: Draws 3D axis lines.

Show Plane: Draws and shades the floor axis to reveal depth.

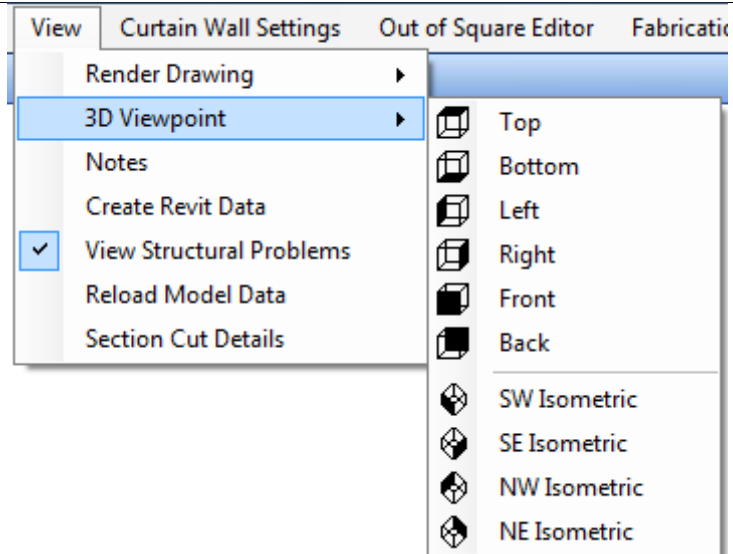
Pause Rendering: Pauses Rendering of Elevation.

Resume Rendering: Continues to

render the 3D view of an elevation.

Flip Lighting: Shows the model with the lighting from behind the elevation.

3D Viewpoint:



Top: 3D view from above.

Bottom: 3D view from below.

Left: 3D view from left.

Right: 3D view from right.

Front: 3D view from front.

Back: 3D view from behind.

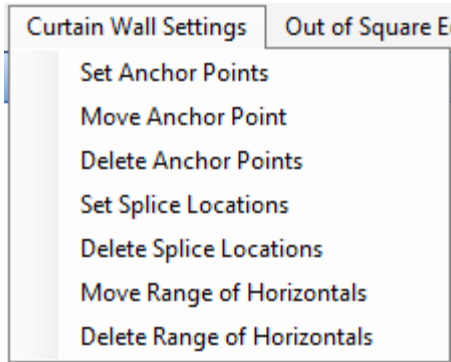
SW Isometric: Isometric view from SouthWest.

SE Isometric: Isometric view from SouthEast.

NW Isometric: Isometric view from NorthWest.

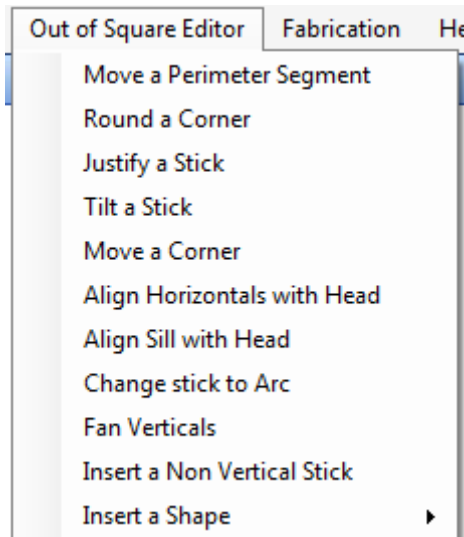
NE Isometric: Isometric view from NorthEast.

Curtain Wall Settings: (Level Required)



- Set Anchor Points:** Sets anchor points at a specific height.
- Move Anchor Points:** Move current anchor points to
- Delete Anchor Points:** Removes selected anchor points
- Set Splice Location:** Sets splice location to a specified height.
- Delete Splice Locations:** Removes current splices.
- Move Range of Horizontals:** Moves a range of curtain wall horizontals to new location based on selected stick.
- Delete Range of Horizontals:** Deletes a range of horizontals based on selected stick.

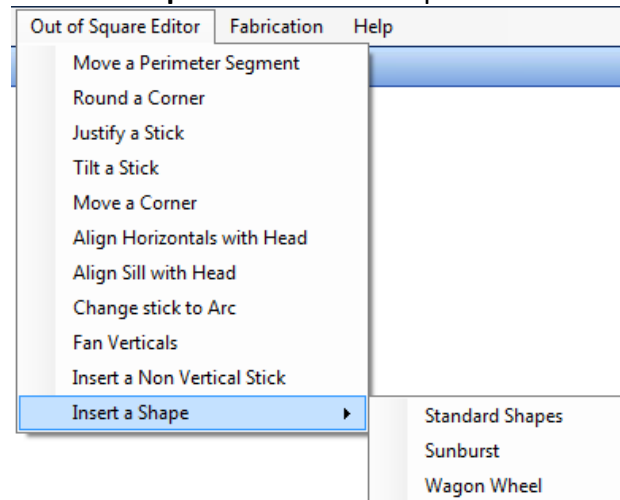
Out of Square Editor: (Level 3 Required)



- Move a Perimeter Segment:** Move a perimeter segment to a different position.
- Round a Corner:** Round a corner based on radius.
- Justify a Stick:** Justify a stick to the left, right, top or bottom.
- Tilt a Stick:** Slope a stick to any angle.
- Move a Corner:** Move a corner to a different position.
- Align Horizontals with Head:** Aligns intermediate horizontals with the head.
- Align Sill with Head:** Aligns sill with head.
- Change Stick to ARC:** Change selected stick to an arc. Convex or concave shape.
- Fan Verticals:** Fans verticals to match the radius of the head.

Insert a Non Vertical Stick: Insert a stick at any angle.

Insert a Shape: All available shapes that can be added into an opening.



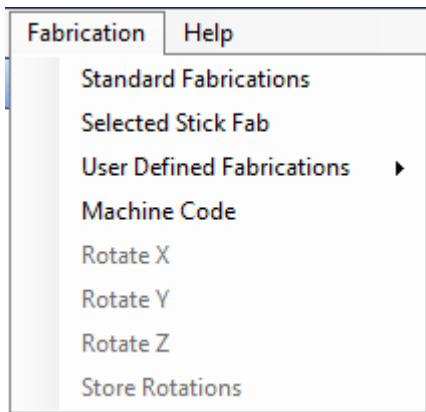
Standard Shapes:

Sunburst: Creates sunburst pattern in selected panel/row.

Wagon Wheel: Creates wagon wheel pattern in selected panel/row.

Fabrication: (Level 4 Required)

Display fabrication information on selected part.



Standard Fabrications: Display Standard Fabrications on Elevation. Most fabrications are at the joints so they will only show up if you hide members using the Stick Levels tab on bottom right side of editor.

Selected Stick Fab: Displays the fabrication locations of the selected stick.

User Defined Fabrications: Opens the menu to allow for additional added fabrications to be placed on the elevation.

Machine Code: Requires NCX viewer to view machine code for fabrication data.

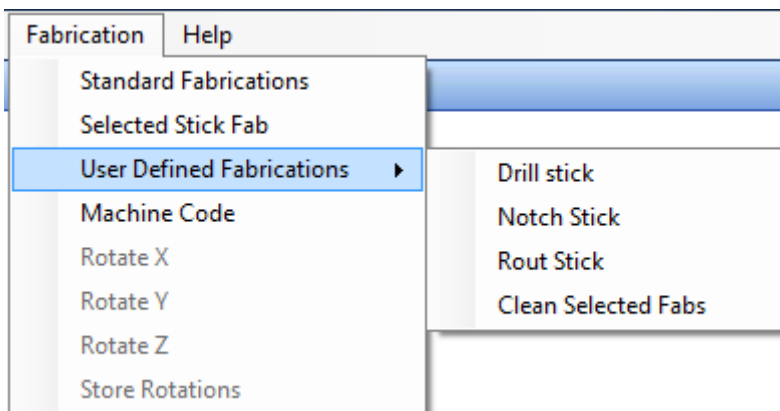
Rotate X: Change orientation of a selected stick on the X axis

Rotate Y: Change orientation of a selected stick on the Y axis

Rotate Z: Change orientation of a selected stick on the Z axis

Store Rotations: Save Rotation info to file

User Defined Fabrications: (Level 4 Required)



Drill Stick: Add a fabrication drill point to an existing stick.

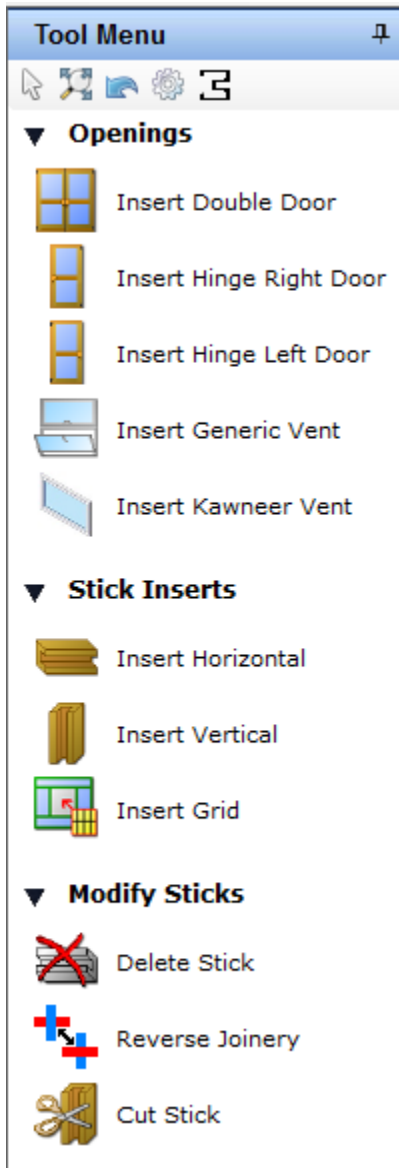
Notch Stick: Add a notch fabrication to an existing stick.


Rout Stick: Add a rout fabrication to an existing stick.


Clean Selected Fabs: Erase added fabrications from selected stick.

Tool Menu:


Contains the action commands such as insert door, vent, stick or grid and modify functions such as delete stick and Reverse Joinery.




Select Objects Tool:  The Select tool allows you to select specific objects in the editor.

Reset Zoom & Zoom Extents:  The Zoom Extents tool resets the view to flat front view.

Undo Tool:  Allows stepping back and erasing steps.

Details View:  The View Details switches from solid parts to actual die detail in the editor. This will allow the user to see the die details throughout the elevation and to explode the joinery details.

Show/Hide Section Cut Details:  Displays section cuts on project screen.

▼ Openings

Insert Double Door: Allows insertion of a double door into a panel in row 1.

Insert Hinge Right Door: Allows insertion of a hinged right door into a panel in row 1.

Insert Hinge Left Door: Allows insertion of a hinged left door into a panel in row 1.

Insert Generic Vent: Insert a vent into any panel.

Insert Kawneer Vent: Insert a vent into any panel. Vent parameters options window allows configuration of Kawneer Project Out, LH Out Swing Casement, and RH Out Swing Casement. Generates order form.

▼ Stick Inserts

Insert Horizontal: Inserts horizontal into selected panel(s).

Insert Vertical: Inserts vertical into selected panel(s).

Insert Grid: Inserts multiple horizontals and verticals into

selected panel(s).

▼ Modify Sticks

Delete Stick: Removes selected stick(s) from a frame.

Reverse Joinery: Changes stick which penetrates at a specific joinery. . (Level 2 Required)

Cut Stick: Cuts a vertical or horizontal at either a specific coordinate or at a specific joint. . (Level 2 Required)

Frame Information (Tab)

Contains frame data and stick properties. As sticks and panels are selected edits such as Daylight Opening, Move Centerline, Move Horizontal position and more are available.

Frame Information	
▼ Frame Parameters	
Frame Set Name	Frame Set 1
Frame Name	Frame 1
Include RO Dim	<input type="checkbox"/>
Panels	4
Rows	2
Number Thus	1
Width	144
Height	96
▼ Metal Group Options	
Catalog	KAWNEER
Metal Group	M1620 6" SB 1" W/F&T
Back Color	#22 DARK IVY : FLUROPON
Face Color	#22 DARK IVY : FLUROPON
▼ Stick Properties	
Components	
RIGHT JAMB FACE MEMBER PRESSURE PLATE RIGHT JAMB ADAPTER RIGHT JAMB INSIDE STOP RIGHT JAMB RIGHT JAMB OUTSIDE STOP RIGHT JAMB	
Components Details	
Product Code	178001
Color	#22 DARK IVY : FLUROPON
Length	96
Final Adjustment	0
Apply	
▼ Stick Location	
Center Line Location	143
Enter The Center Line of the Stick Min:0 Max:144	
Frame Infor...	Stick Levels BOM General Info Labor

New Frame: Adds another frame to current project without having to go back to project manager.

Save Frame: Saves projects and current changes to frames.

Copy Frame: Creates copy of currently selected frame in the editor. Requires new name.

Capture Image of Current View: Screen capture of current frame. File saved as png.

Reset Panels and Rows: Resets frame to original parameters.

▼ **Frame Parameters**

Allows changes to current dimensions of frame without deleting/recreating frame.

Adjustments can be made to number of panels and rows configured in current frame

Note: This resets the frame.

▼ **Metal Group Options**

Select metal group and finishes for back and front members.

▼ Stick Properties

Make adjustments to properties of selected sticks.

Daylight Opening (DLO): Adjust physical DLO of the selected panel(s).

▼ Daylight Opening	
Glazing	1 CLEAR INS TE
Panel Id	6
Row Id	1
Glass Width	22 9/16
Glass Height	45 1/4
DLO Width	21 3/32
DLO Height	44 1/4
Apply Manual Glass Size	<input type="checkbox"/>

Horizontal Location: Adjusts physical height of horizontal stick(s) selected using either Bottom, Top or Center of Horizontal.

▼ Stick Location	
Horizontal Location	46 3/4

Center Line Location: Adjusts centerline location of vertical stick(s) selected.

▼ Stick Location	
Center Line Location	119 5/32

Stick Level

- Back Members
- Arc Sticks
- Vertical Sticks
- Slope Sticks
- Horizontal Sticks
- Face Members
- Pressure Plates
- Inside Stops
- Outside Stops
- Adapters
- Stiffeners
- Receptors
- Glass
- Vinyl
- Dimension Frame
- User Fabs

Select All

Select None

Apply Changes

Frame Infor... **Stick Levels** | BOM | General Info | Labor

TABS

Stick Level (Tab)

Show/hide detail components in the editor. Add or remove, horizontals, verticals from view to see glazing etc.

Click on Apply Changes to accept selection.

BOM (Tab)

Materials List			
Qty.	Product		
2	162001	96	LEFT JAMB
4	162001	96	RIGHT JAMB
2	162006	21.03125	FACE FEMALE HORIZC
2	162006	21.03125	FACE HEAD
2	162006	21.03125	FACE SILL
2	162006	23.5	FACE FEMALE HORIZC
2	162006	23.5	FACE HEAD
2	162006	23.5	FACE SILL
2	162006	23.53125	FACE FEMALE HORIZC
2	162006	23.53125	FACE HEAD
2	162006	23.53125	FACE SILL
1	162006	96	FACE LEFT JAMB
1	162006	96	FACE RIGHT JAMB
5	162025	96	INT VERTICAL
2	162203	21.03125	HEAD
2	162203	21.03125	SILL
4	162203	21.0625	HEAD
4	162203	21.0625	SILL
2	162310	21.03125	HEAD
2	162310	21.03125	INT HORIZONTAL
2	162310	21.03125	SILL
4	162310	21.0625	HEAD
4	162310	21.0625	INT HORIZONTAL
4	162310	21.0625	SILL
1	162310	96	LEFT JAMB
1	162310	96	RIGHT JAMB
2	162335	20.34375	FACE FEMALE HORIZC
2	162335	20.34375	FACE HEAD
2	162335	20.34375	FACE SILL
2	162335	22.8125	FACE FEMALE HORIZC

Bill of Materials displayed for project, including:

- Metal
- Hardware
- Glass
- Doors/Door Frames
- Vinyl & Sealants

NOTE: If the BOM, GENERAL INFO or LABOR TABS are solid grey or blank on your system, then you have your system fonts boosted above 100%. Reset font percentage to 100% to restore these screens.

General Info (Tab)

General Info	
Total Frame Perimeter	4073.96875
Total Frame Area	885
Total Glazing Perimeter	12751.9697265625
Total Joints	256
Total Cuts	504
Total Doors	0
Total Openings	96

Project General Information including:

- Frame Perimeter
- Frame Area
- Glazing Perimeter
- Joints
- Cuts
- Doors
- Openings

Labor (Tab)

Labor Times		
Labor Type:	Standard	
Labor Item	Standard	
FABRICATION	Stick	
	Combination	
INSTALLATION (MIN/FRAME)	0	45
INSTALLATION (MIN/FT FRAME PERIM)	0	30
CUTTING (MIN/CUT)	2	0
APPLIED STOP INSTALLATION (MIN/FT)	0	3
VINYL INSTALLATION (MIN/FT)	0	2
GLAZING INSTALLATION (MIN/MAN UNIT)	0	20
FACE MEMBER FABRICATION (MIN/FT)	10	0
FACE MEMBER INSTALLATION (MIN/FT)	0	20
PRESSURE PLATE FABRICATION (MIN/FT)	10	0
PRESSURE PLATE INSTALLATION (MIN/FT)	0	20
SHAPED STICK FABRICATION (MIN/STK)	20	0
SHAPED STICK INSTALLATION (MIN/STK)	0	25
F & T ANCHOR FABRICATION (MIN/ANCHO	10	0
F & T ANCHOR INSTALLATION (MIN/ANCHC	0	30
SPLICE JOINT FABRICATION (MIN/JOINT)	20	0
SPLICE JOINT INSTALLATION (MIN/JOINT)	0	20
STRUCTURAL ANCHOR FABRICATION (MIN	30	0
STRUCTURAL ANCHOR INSTALLATION (MI	0	20
STRUCTURAL SEALANT INSTALLATION (MI	0	20

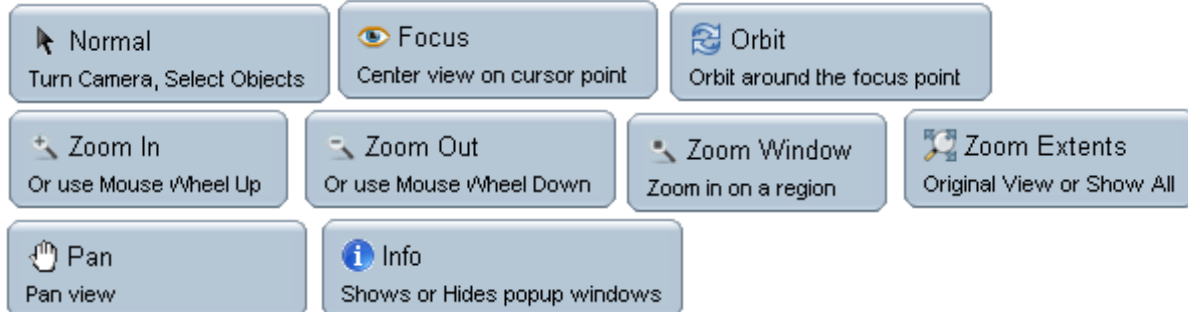
Frame Information | Stick Levels | BOM | General Info | **Labor**

Displays labor set at individual frame level.

Editor Toolbar



Controls view of the graphics editor.



Short Keys for PartnerPak Studio

F2 key – When product code is highlighted, catalog part information is displayed.

F3 key - When a part number is selected, price book entry for that item is displayed.

F6 key - When you have the primary part selected to show the windload charts.

Right Click on any Icon in the Graphics Editor will bring up the instructions on how to use the icon.

Alt + Left Click on a stick in the Graphics Editor will select that stick and all sticks to the right.

Alt + Shift + Left Click on a panel in the graphics editor will select that panel and all to the right.

Shift + Ctrl + Left Click on a panel in the graphics editor will select that panel and all panels above it.


/xxx followed by the ENTER key in any dropdown box will search for that part, product, or name. I.e. /450 will search for 450 in the list.

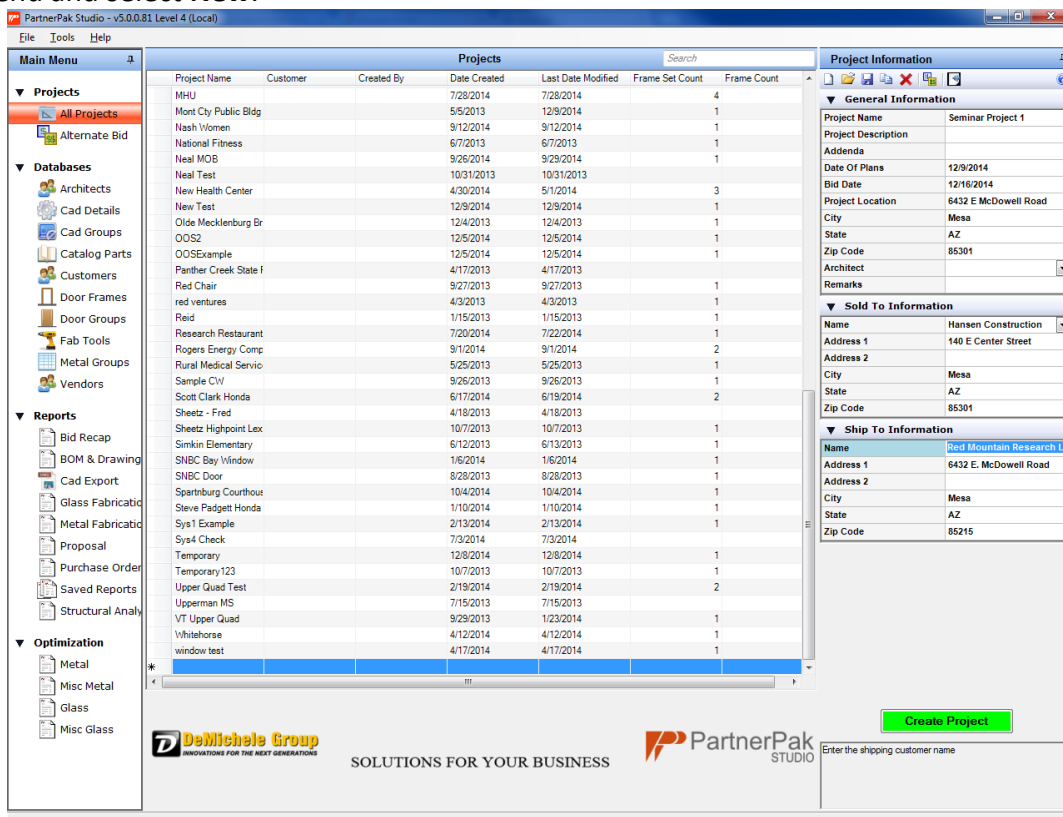
Project 1 TF 451

Exercise 6: Creating a new project

Objective(s):	<ul style="list-style-type: none"> • ALL FRAMES IN PROJECT 1 TF 451 can be built using Level 1 of software since they only use features available in all levels. • Create a new project in the Project Manager.
----------------------	---

Project Name: Seminar Project 1
Customer: Hansen Construction
Project Location: 6432 E. McDowell Road
 Mesa, AZ 85301
Date of Plans: (Today's Date)
Addendums: 1, 2, 5
Bid Date: (one week from today)
Remarks: None

To create a new project, select the **NEW** icon  and enter the Job Name. Alternately, click on **File** menu and select **New**.



Click the **Create Project** button once you have filled out all pertinent information.

Creating a Frameset

Exercise 7: Creating a Frameset

Objective(s):	<ul style="list-style-type: none">• Create a new frameset in the Project Manager.
----------------------	---

In this exercise, the frameset is a set of frames with the same metal, glazing and sealant properties. This is not a requirement. Each frame under a frameset can have unique properties.

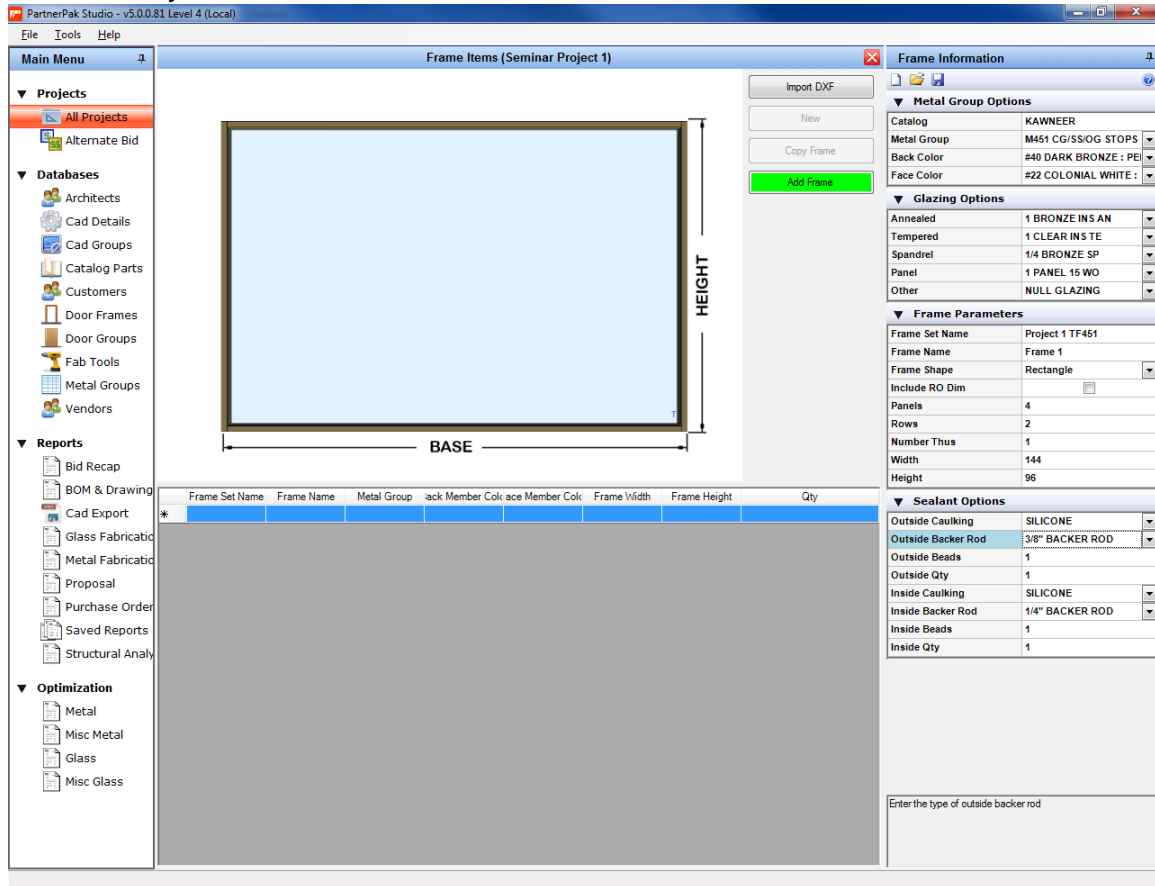
Frameset Name:	Project 1 TF451
Metal Options:	
Metal Group:	M451 CG/SS/OG STOPS UP
Back Color:	#40 DARK BRONZE: PERMANODIC
Glazing Options:	
Annealed:	1 BRONZE INS AN
Tempered:	1 BRONZE INS TE
Spandrel:	1/4 BRONZE SP
Other:	NULL GLAZING
Sealants:	
Caulking:	Silicone
Backer Rod:	3/8" Backer Rod

Definition:

Frameset: *A grouping of frames with a common feature set of components, or timeframe. Grouping frames allows for quick selection and division of project frames.*

NOTE: If you group framesets by metal systems, it is easier to use ALT BID to change the metal system for all frames in that frameset at one time, instead of having to do each frame individually.

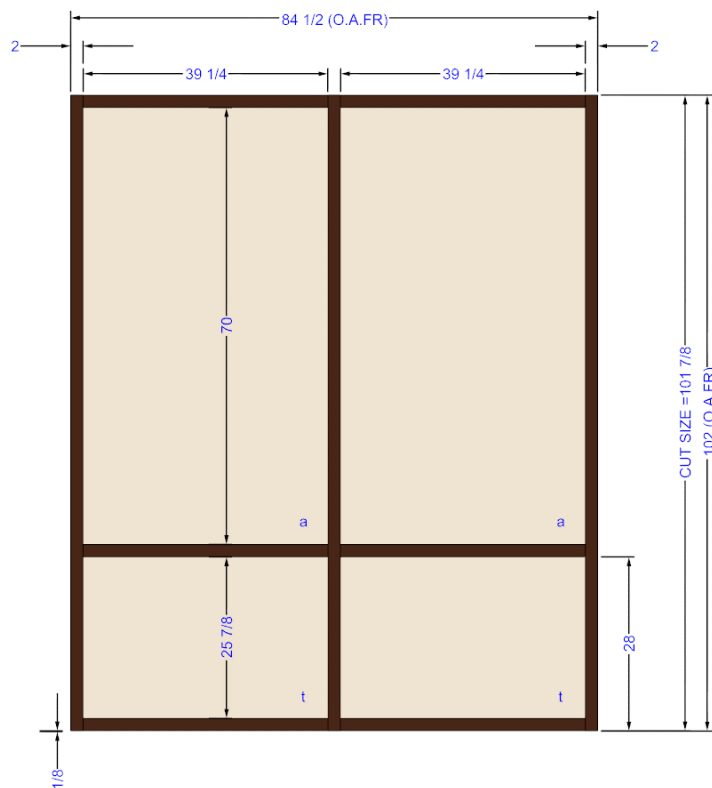
Set Project information under the Frame Information bar on the Right of the screen. Set metal system, finish, glazing frame parameters and sealant parameters. An example of a frameset name is "Project 1 TF451".





Exercise 8: Project 1 TF451 Frame 1

Objective(s):	<ul style="list-style-type: none"> • Create new frame in the Project Manager. • Change location of framing member in Graphics Editor.
---------------	---

Frame Name:	Frame 1
Panels:	2
Rows:	2
Number Thus:	3
Width:	7' 1/2"
Height:	8' 6"

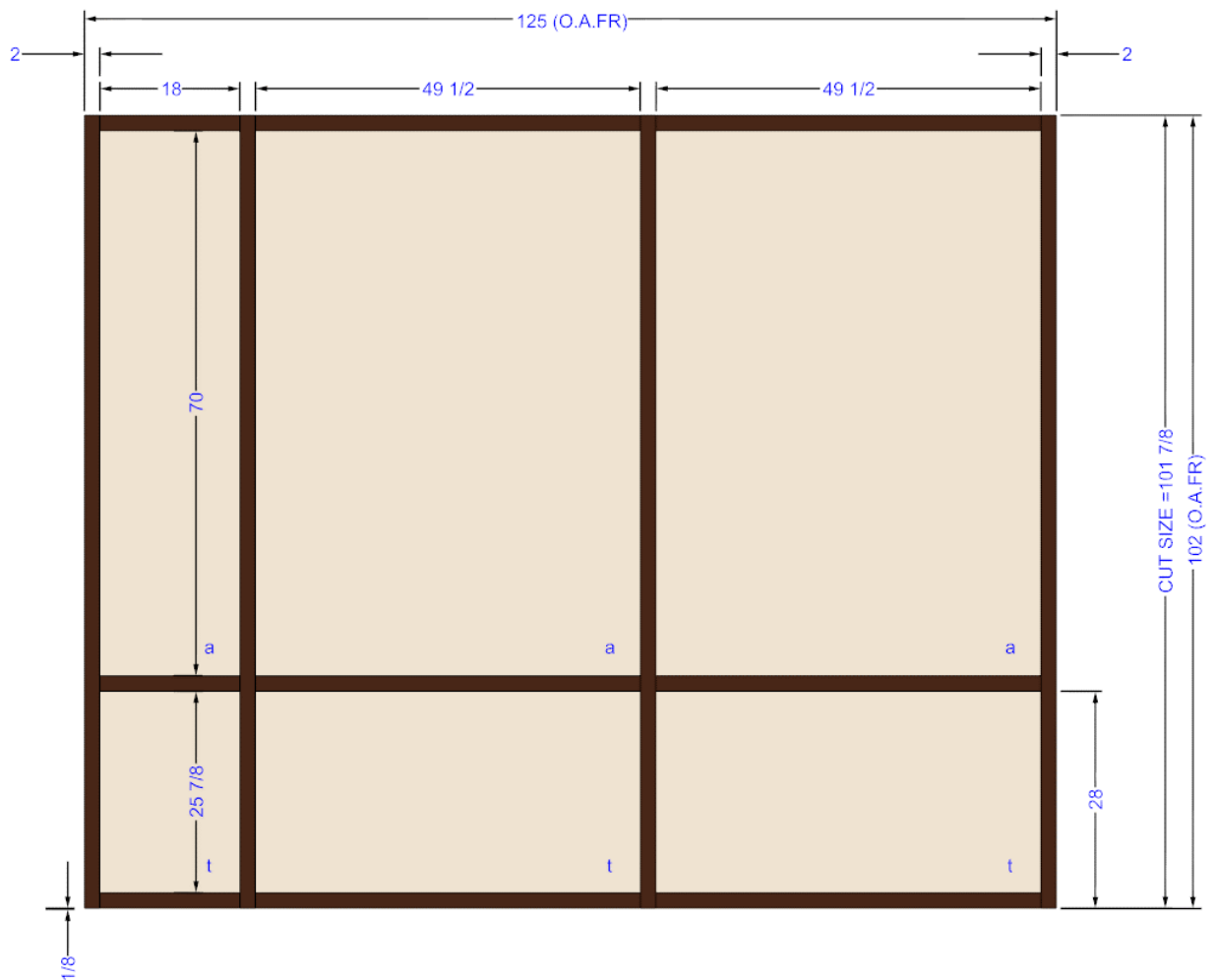


- Once all the characteristics of the frameset have been selected, enter basic information about the frame.
When information about the frame has been completed, click on the **Add Frame** button. This will bring up the graphics editor where the frame can be configured.
- Select interior horizontals *between* Row 1 & 2 and set the Bottom of Horizontal to a Height of 28". Use Position Horizontal field on right Frame Information bar.
- Left Click **SAVE** icon  in the right Frame Information bar.
- Left Click on **NEW FRAME** icon .

Exercise 9: Project 1 TF451 Frame 2

Objective(s):	<ul style="list-style-type: none"> • Create new frame in Project Manager. • Modify location of framing member in Graphics Editor. • Modify dimension of daylight opening in Graphics Editor. • Add parts to frame with menu.
---------------	--

Frame Name: Frame 2
Panels: 3
Rows: 2
Number Thus: 1
Width: 10' 5"
Height: 8' 6"



1. Select interior horizontals *between* Row 1 & 2 Panels 1, 2 & 3 and set the bottom of horizontals to a Height of 28". Position Horizontal option is on right Frame Information bar.

NOTE: To select all horizontals, press and hold ALT key and click on left most horizontal.

2. Select Panel 1 Row 1 and set the DLO to a Width of 18". *Located in Frame Information bar.*

3. Left Click the **SAVE** icon.

4. Select **FRAME** drop down menu then **ADD PARTS**.

Add a 125" wide by 5" girth #40 Dark Bronze brake metal with 2 hems, 1 shear and 1 break to the break metal tab. Use the .040 thick product.

5. Left Click on **NEW FRAME** icon .

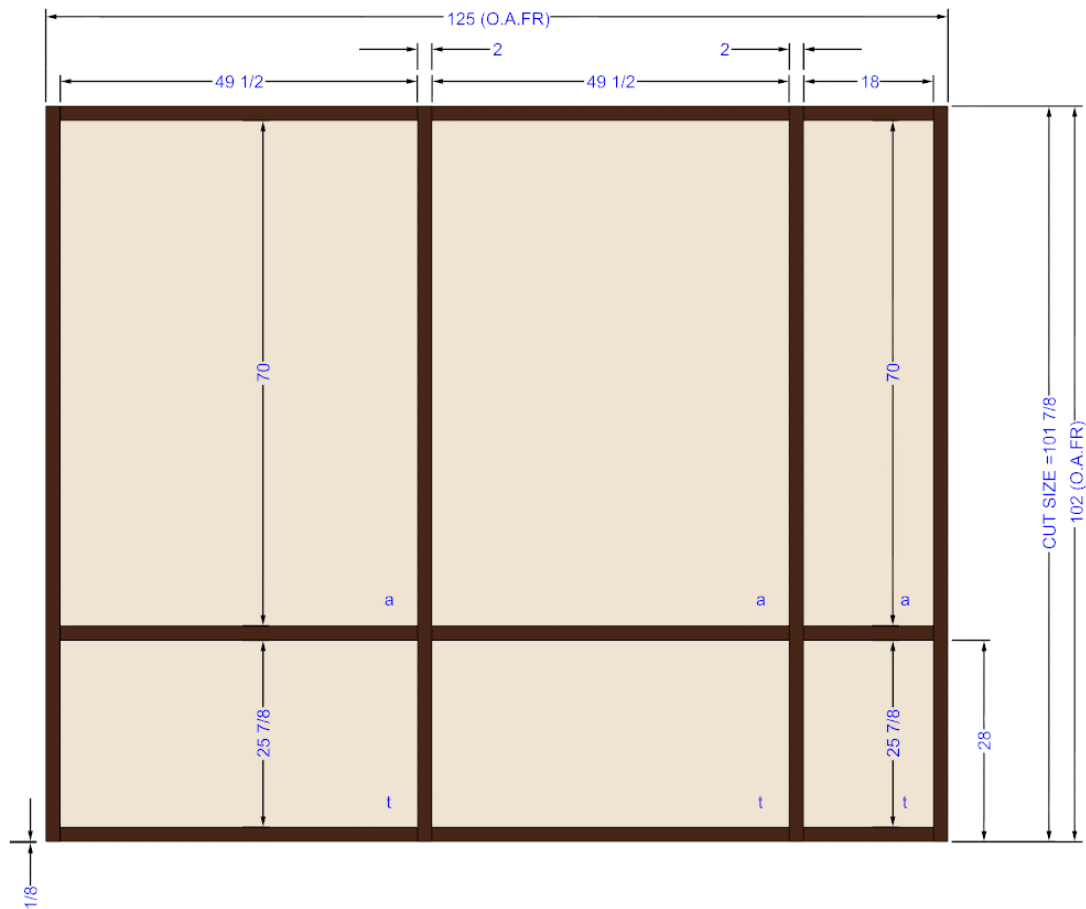
RULE OF THUMB: BUILDING FRAMES


1. Start with the right metal system. – the program does calculations as it gets to the editor, so changing the metal system at the editor may require you to reset panels and rows to get the change reflected. Ie. Head channel and sill receptor must be in the metal system prior to creating the frame.
2. If you use RO. Do not set a bottom rough opening if there are doors in the frame. Raise the sills up the additional height to compensate for bottom rough opening settings.
3. Start with enough horizontals. If you have doors with transoms, you must have at least 2 rows to start. You can delete extra horizontals in the editor, but you cannot insert a door under an inserted horizontal because the program sees that opening as a split panel.
4. Remove excess horizontals from openings before inserting doors.
5. Insert Doors before setting DLO's (Daylight Openings). Doors do not round up or down, they have to have the door and frame size that fits and the other openings will split the remainder.
6. Change properties of any stick before setting DLO or horizontal positioning since the size of the mullion can change the opening size.
7. Set DLO's or Position Horizontals and Set Centerlines for openings.
8. Set Infill's to the appropriate types.
9. Cripple Door Headers if required.
10. Set Bulkhead and \ or Soffit Conditions. Raising sills can prevent DLO's from working properly. Set the other openings first and leave the raising sills or lowering head members to almost the last step.
11. CURTAIN WALL - Set Splice Locations and Anchor Points Last. Remove splice and anchor points if you have to edit or move horizontals and then re-add them last.

Exercise 10: Project 1 TF451 Frame 3

Objective(s):	<ul style="list-style-type: none"> Use Frame menu to copy a frame and reflect the frame.
---------------	---

Frame Name:	Frame 3
Panels:	3
Rows:	2
Number Thus:	1
Width:	10' 5"
Height:	8' 6"



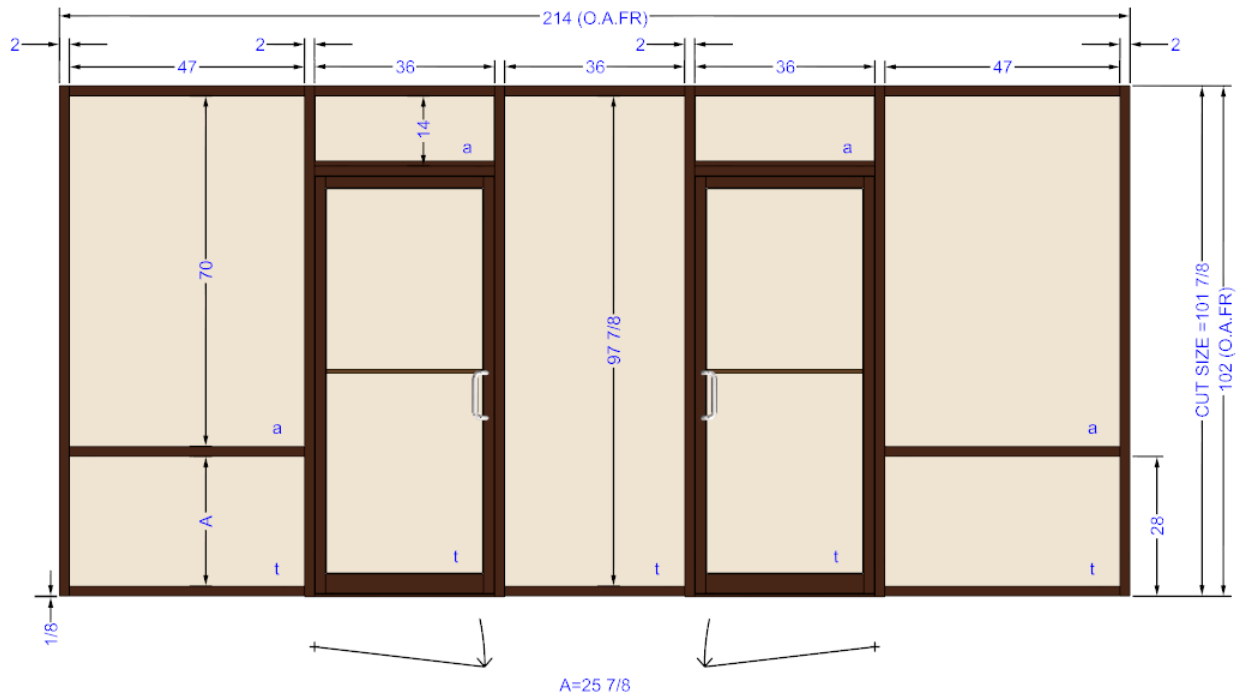
1. Save Frame 2 then from the Frame drop down menu, select **COPY FRAME** and **REFLECT CURRENT FRAME**.
2. Name it *Frame 3* and press **OK**.
3. Answer **Yes** to the question about copying the added parts.
4. Left Click the **SAVE** icon.
6. Left Click on **NEW FRAME** icon .

Note: The next frames deal with doors. It is important to remember to insert the doors before any joints are reversed, and any door modifications should be done during the first insertion of the door.

Exercise 11: Project 1 TF451 Frame 4

Objective(s):	<ul style="list-style-type: none"> • Delete stick in Graphics Editor. • Insert doors in opening in Graphics Editor. • Set door properties in Door Editor. • Modify framing member in Graphics Editor.
----------------------	---

Frame Name: Frame 4
Panels: 5
Rows: 2
Number Thus: 1
Width: 17' 10"
Height: 8' 6"



1. Select Panel 3 Row 1 and set the DLO to a width of 36".
Note: DLO Width will be automatically selected and value can be entered without clicking in box to right of DLO Width in Daylight Opening properties.
2. Select Panel 2 Row 1 and Select the **Hinge Left Door** icon in the Tool Menu on Left.

Door Properties:

Name: Project 1 Left Door
Handing: HLSO
Doorlite PC: ¼ Bronze TE
Hinge Type: Offset Pivot
Frame Type: TF451-A1

Labor:

Labor (Shop): **Frame Fab:** 20 min
 Door Fab: 20 min
Labor (Field): **Frame Install:** 30 min
 Door Install: 30 min
 Hardware Install: 30 min
 Door Adjust: 15 min

Door / Frame: **Door #:** 190-ROPMS36
 Frame#: 451-ROPMS36-TR

Hardware Options:

Locking: (1) 138224A1 MS Cylinder Guard
Closer: 50879
Options: (1) Push/Pull C09CP2SAS #45 SS US32

4. Click **Save** icon on door screen to store door, then Left Click on the **OK** button to insert the door.
5. Select Panel 4 Row 1 and select the **Hinge Right Door** icon in the Tool Menu on the left.


Door Properties:

Name: Project 1 Right Door
Handing: HRSO
Doorlite PC: ¼ Bronze TE
Hinge Type: Offset Pivot
Frame Type: TF451-A1

Labor:

Labor (Shop): **Frame Fab:** 20 min
 Door Fab: 20 min
Labor (Field): **Frame Install:** 30 min
 Door Install: 30 min
 Hardware Install: 30 min

	Door Adjust:	15 min
Door/Frame: Door #:	190-LOPMS36	
Frame#:	451-LOPMS36-TR	
Hardware:		
Locking:	(1) 138224A1 MS Cylinder Guard	
Closer:	50879	
Options:	(1) Push/Pull C09CP2SAS	#45 SS US32

6. Click **Save** icon on door screen to store door, then Left Click on the **OK** button to insert the door.
7. Left Click on the horizontal *in* Panel 3 *between* Rows 1 & 2 and **Delete Stick**.
Note: *Command is on left Tool Menu or use the delete key on keyboard.*
8. Select interior horizontals *in* Panels 1 & 5 *between* Row 1 & 2 and set the bottom of horizontals to a height of 28". Use the position horizontal in Frame Information bar on right.
9. Left Click the **SAVE** icon.
10. Left Click on **NEW FRAME** icon .

RULE OF THUMB: DOORS

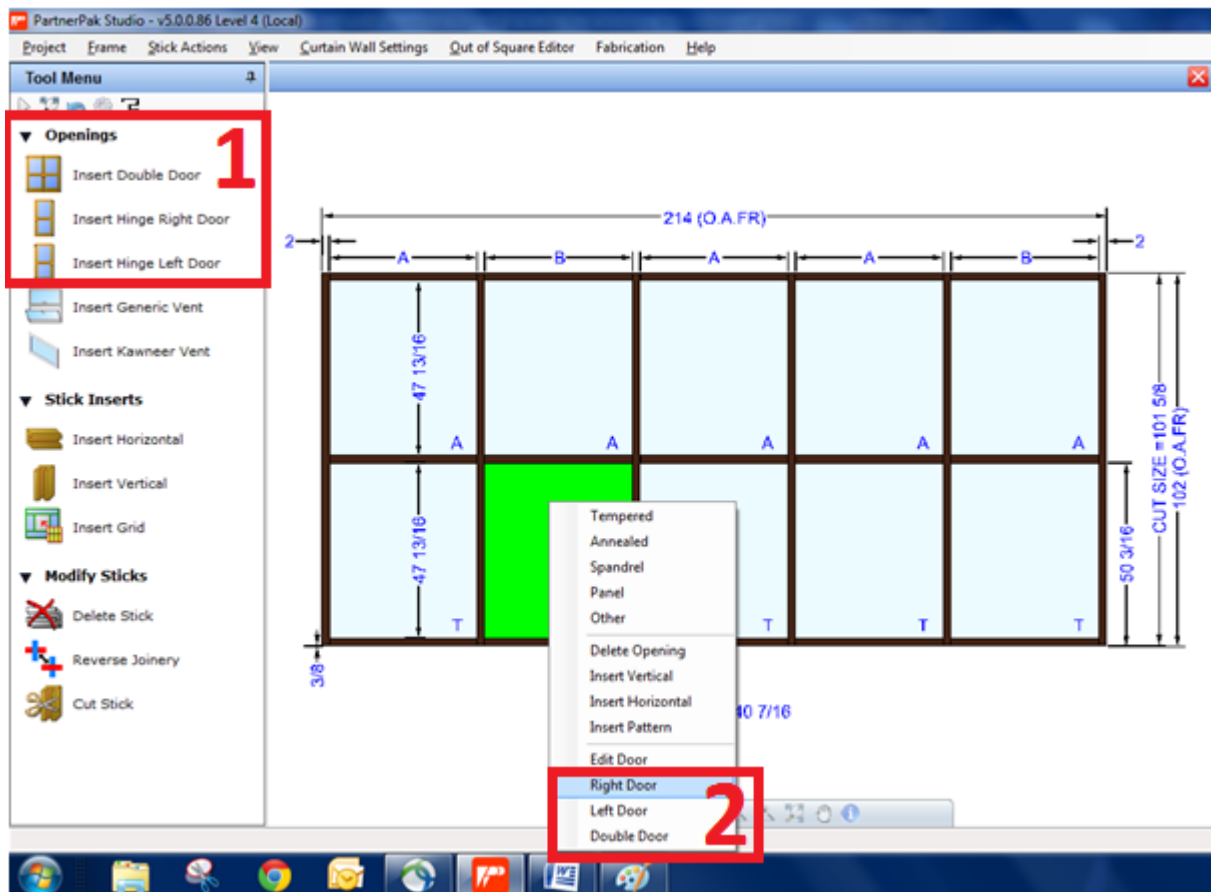
1. Doors should be inserted before any DLO's are set. Doors need a specific opening size based on the door width and height and the frame selected. Even if the opening that you put the door into states that it is big enough, it could be rounded to the nearest 1/32" and doors will not go in if they cannot fix.
2. You need to start with 2 rows in your frame if you have a glass lite above the door. Inserting horizontals and then sticking doors under the inserted horizontal is not allowed in the program as it sees that glass lite as split instead of its own. If you want no glass lite above the door, you must remove all intermediate horizontals before you insert the door.
3. When inserting a door and frame you are substituting all mullions around the frame with the selected framing. Most changes to the door frame must be done in the door configurator, not in the graphic editor. Exceptions are door jamb companions that can be modified to change from a Null part with a glass bite, to a pocket filler.
4. Doors set their own daylight opening based on frame size and door size. Don't set DLO of opening prior to inserting door to avoid conflicting opening information. The exception to this rule is some shaped frames where the doors are offset from center. Setting daylight openings then putting the doors in, may work better in those instances.
5. Add any necessary hardware before crippling door frames. Once crippled, if you edit the door, the software wants to replace the framing again and since the door jambs don't go to the head anymore, it could fracture the frame and require you to rebuild the elevation. When crippling door header, select the jamb up above the door header joint as close to the header as possible. The program will reverse the closest joint to where you clicked. If you click below the door header, it could reverse a door stile.

Inserting Doors

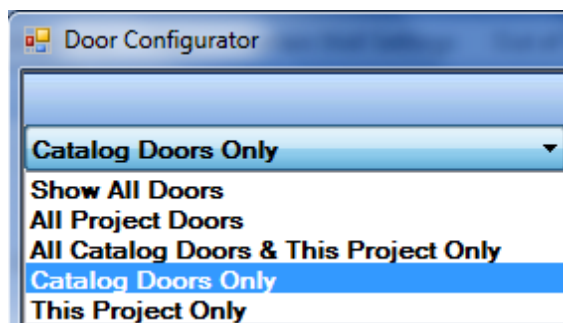
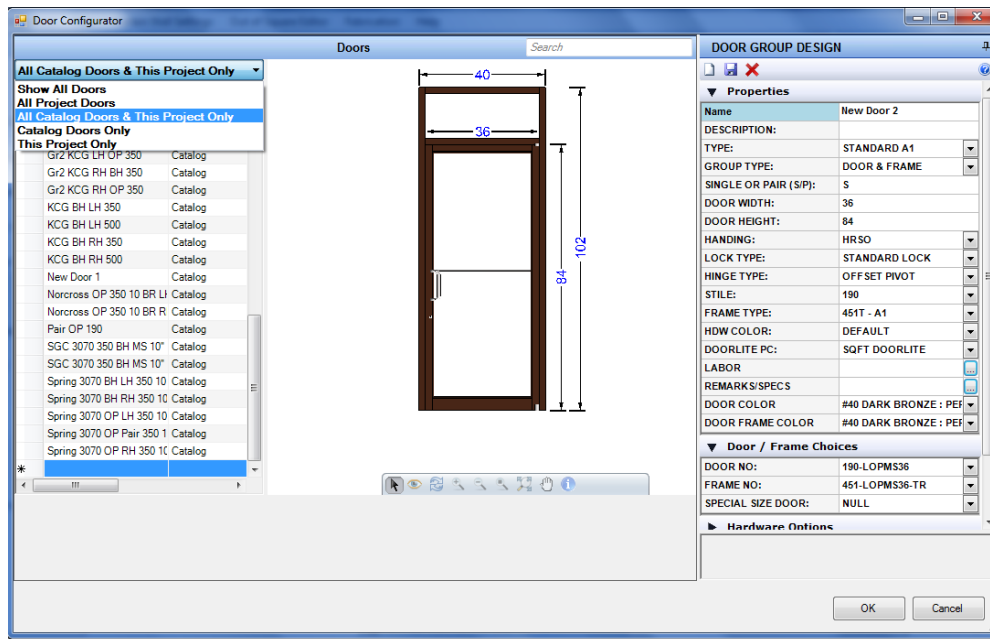
- | | |
|----------------------|--|
| Objective(s): | <ul style="list-style-type: none">• Create catalog door.• Insert project door.• Door Configurator Options. |
|----------------------|--|

To place an entrance into an opening **use one of the following methods:**

1. Select opening to insert entrance into and click on one of the icons on the left under openings.
 - a. Insert Double Door
 - b. Insert Hinge Right Door
 - c. Insert Hinge Left Door
2. Right click in opening where you want to place entrance and select from the pop-up menu.
 - a. Right Door
 - b. Left Door
 - c. Double Door



The Door Configurator opens:





The drop down menu on the left side of the screen shows previously created doors, both catalog doors and project doors.

Catalog doors are saved in the data base and can be reused or modified in future projects. These can be thought of as template doors.

Project doors are doors that have been used in a project and are often based on catalog doors.

A good strategy for getting started with a new door is to determine if an existing catalog door has the hardware components desired and use that catalog door to create the new project door.

If you desire to make the existing catalog door into a new catalog door, select the door from the catalog only list, use the copy button , make all desired changes to the door and **then save**  the new door as a catalog door with a new name.

Door Properties

DOOR GROUP DESIGN	
▼ Properties	
Name	350IR BH LH
DESCRIPTION:	
TYPE:	CUSTOM A4
GROUP TYPE:	DOOR & FRAME
SINGLE OR PAIR (S/P):	S
DOOR WIDTH:	36
DOOR HEIGHT:	84
HANDING:	HL SO
LOCK TYPE:	CONCEALED EXIT DEVIC
HINGE TYPE:	BUTT HINGE
STILE:	350 IR BEVELED
FRAME TYPE:	IR 500 FAB - A4
HDW COLOR:	DEFAULT
DOORLITE PC:	9/16" CLEAR INS TE
LABOR	
REMARKS/SPECS	
DOOR COLOR	#40 DARK BRONZE : PEF
DOOR FRAME COLOR	#40 DARK BRONZE : PEF

Name: Entrance Name - limited to 50 characters.

DESCRIPTION: Allows more complete definition of entrance - limited to 255 characters.

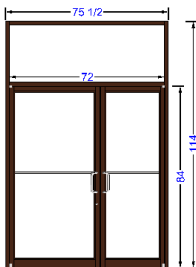
TYPE: Selects section of price book and the available options.

STANDARD A1
CUSTOM A2
CUSTOM A4
CUSTOM A4 HW
CUSTOM A7
CUSTOM A8
CUSTOM A9
STANDARD A1

GROUP TYPE: Allows for door, frame or door and frame to be created.

SINGLE OR PAIR (S/P): Single or pair of doors.

AUTO SHOWROOM DOOR



Properties	
Name	New Door 2
DESCRIPTION:	
TYPE:	CUSTOM A2
GROUP TYPE:	DOOR & FRAME
AUTO SHOWROOM TYPE:	SWING
OVERSIZE DOOR:	LEFT
OVERSIZE WIDTH:	42
SINGLE OR PAIR (S/P):	P
DOOR WIDTH:	72
DOOR HEIGHT:	84
HANDING:	SO
LOCK TYPE:	STANDARD LOCK
HINGE TYPE:	OFF SET PIVOT
STILE:	190 BEVELED
FRAME TYPE:	IR 500 FAB - A4
HDW COLOR:	DEFAULT

If **Custom A2 Pair** entrance selected, **Auto Showroom Type** (Swing or BiFold), **Oversize Door** (Left or Right), and **Oversize Width** (value for larger door leaf) options are displayed.

DOOR WIDTH: Defines width of entrance.

DOOR HEIGHT: Defines height of entrance.

HANDING: Handing of door.

LOCK TYPE: Locking options available for door, based options chosen.

HINGE TYPE: Select hinging hardware type based on door type.

STILE: Vertical stile selection which is dependent on door type selected.

Example:

Custom A2

STILE:	190 BEVELED
FRAME TYPE:	190 BEVELED
HDW COLOR:	190 RABBITED
DOORLITE PC:	350 BEVELED
LABOR	350 RABBITED
REMARKS/SPEC S	350 RADIUS
DOOR COLOR	500 BEVELED
DOOR FRAME COLOR	500 RABBITED

Custom A4

350 IR BEVELED
350 IR HW BEVELED
350 IR HW RABBETED
350 IR RABBETED
500 IR BEVELED
500 IR HW BEVELED
500 IR HW RABBETED
500 IR RABBETED

Custom A7

260 BEVELED
260 RABBITED
360 BEVELED
360 RABBITED
560 BEVELED
560 RABBITED

FRAME TYPE: Select door frame to place entrance into.

HDW COLOR: Select hardware finish.

DOORLITE PC: Select glazing to place into door opening.

LABOR: Allows labor values to be set for a specific door.

DOOR COLOR: Allows for a specific finish to be applied to a door.

DOOR FRAME COLOR: Allows for a specific finish to be applied to a frame.

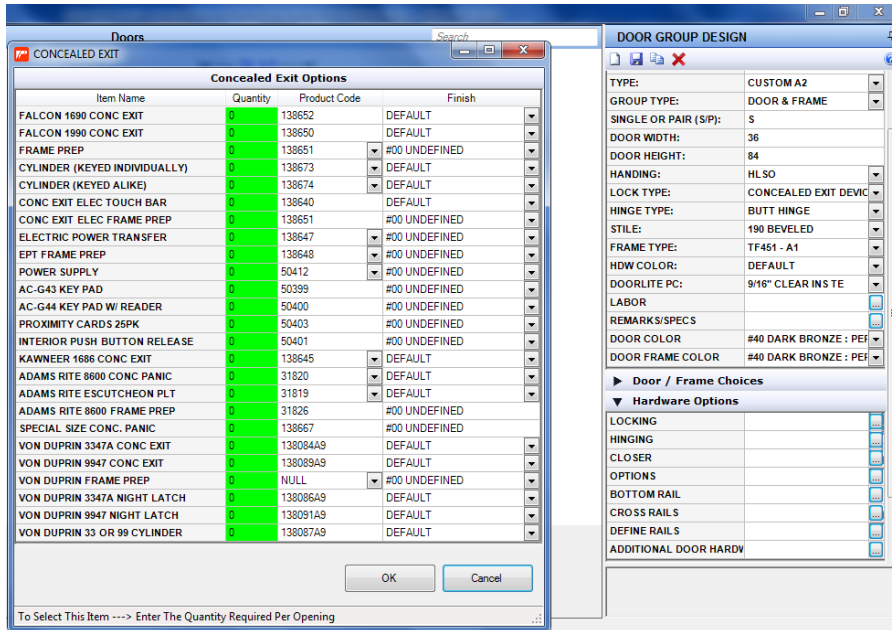
Note: Drawing in door configurator reflects changes made to door configuration options.

Each type of door has hardware options associated with the section of the price book that can be selected.

Example: Standard A1 Door with Concealed Rod Exit Device Locking Options

The screenshot shows two windows from a door configurator. The left window, titled 'Options', is a table with columns for Item Name, Quantity, Product Code, and Finish. It lists various exit device components like 'D.O.M. 1990 EXIT DEVICE', 'DEDUCT CYLINDER', and 'ADAMS RITE 8600 CONC PANIC'. The right window shows configuration parameters for a 'STANDARD A1' door, including 'GROUP TYPE: DOOR & FRAME', 'DOOR WIDTH: 36', 'DOOR HEIGHT: 84', 'HANDING: HL50', and 'LOCK TYPE: CONCEALED EXIT DEVC'. It also has sections for 'Door / Frame Choices' and 'Hardware Options'.

Example: Custom A2 Door with Concealed Rod Exit Device Locking Options



After all parameters are set and hardware options are selected, click on **Save** at top on right side. This creates a **catalog door** which can be used in all future projects.

When ready place entrance into opening, click on **OK** on bottom right of door configurator. This places a **project door** into the opening.

Exercise 12: Project 1 TF451 Frame 5

Objective(s):	<ul style="list-style-type: none"> • Delete stick in Graphics Editor. • Insert pair of doors in opening in Graphics Editor. • Set door properties in Door Editor. • Insert Vertical using Tool Menu. • Reverse Joinery in Tool Menu.
----------------------	---

Frame Name: Frame 5

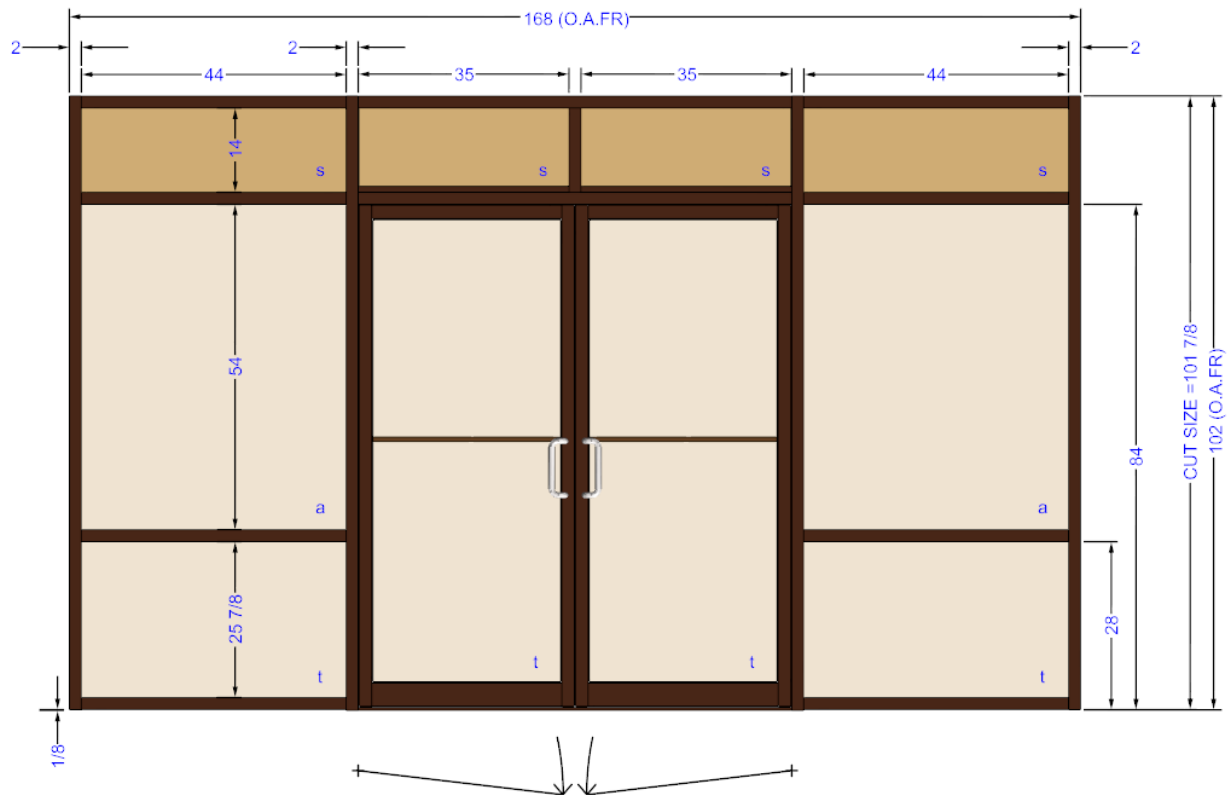
Panels: 3

Rows: 3

Number Thus: 1


Width: 14' 0"

Height: 8' 6"



1. Left Click on the horizontal *in* panel 2 *between* Rows 1 & 2 and Left Click on the Delete Stick Icon to remove the stick.
2. Select Panel 2 Row 1 and Select the Double Door Icon in the Tool Menu on the left

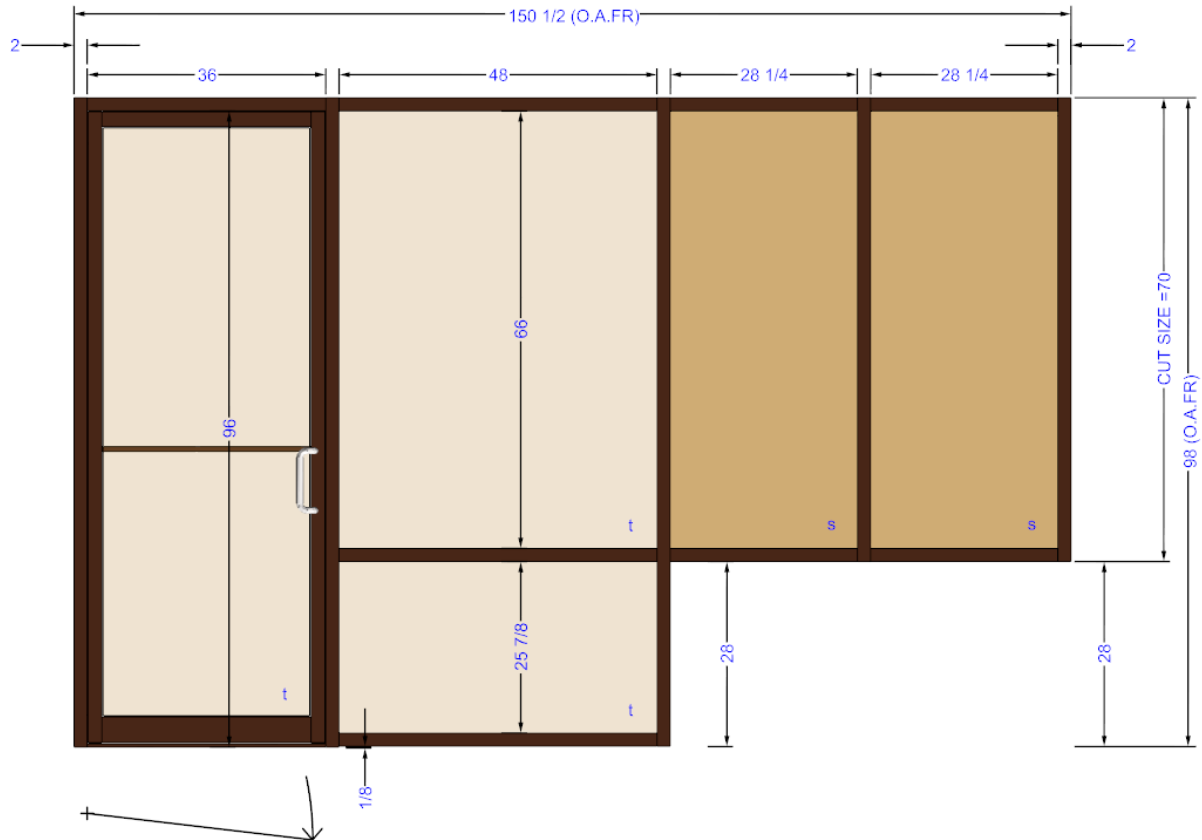
Door Properties:			
Name:	Project 1 Double Door		
Single or Pair:	P		
Handing:	SO		
Hinge Type:	Offset Pivot		
Doorlite PC:	¼ Bronze TE		
Frame Type:	TF451-A1		
Labor:			
Labor (Shop):	Frame Fab:	20 min	
	Door Fab:	20 min	
Labor (Field):	Frame Install:	30 min	
	Door Install:	30 min	
	Hardware Install:	30 min	
	Door Adjust:	15 min	
Door / Frame:	Door #:	190-POPMS72	
	Frame#:	451-POPMS72-TR	
Hardware:			
	Locking:	(1) 138224A1 MS Cylinder Guard	
	Closer:	#1	50879
		#2	50879
	Options:	(2) Push/Pull C09CP2SAS	#45 SS US32

3. Click **Save** icon on door screen to store door, then Left Click on the **OK** button to insert the door.
4. Select the horizontals *in* Panels 1 & 3 Row 1 and set the (BOH) bottom of horizontal to a height of 28".
5. Select the horizontals *in* Panels 1 & 3 Row 3 and set the BOH to a height of 84".
6. Select Panels 1, 2 & 3 Row 3 and change the infill to 1/4 Bronze SP.
7. Select Panel 2 Row 3 and insert a vertical (**Insert Vertical** on Tool Menu to the Left).
8. Left Click the **SAVE** icon.
9. Left Click on **NEW FRAME** icon .

Exercise 13: Project 1 TF451 Frame 6

Objective(s):	<ul style="list-style-type: none"> • Delete stick in Graphics Editor. • Insert pair of doors in opening in Graphics Editor. • Enter Labor in Door Editor. • Modify framing and glass properties.
----------------------	--

Frame Name: Frame 6
Panels: 4
Rows: 2
Number Thus: 1
Width: 12' 6 1/2"
Height: 8' 2"



1. Left Click on the horizontals *in* Panels 1, 3 & 4 *between* Rows 1 & 2 and Left Click on the **Delete Stick** icon to remove sticks.
2. Select Panel 1 Row 1, then select **Left Hinged Door** icon from menu on left.

Door Properties:

Name: Project 1 Special Height Door
Single or Pair: S
Door Width: 36
Door Height: 96
Transom: NO
Handing: HLSO
Doorlite PC: ¼ Bronze TE
Hinge Type: Offset Pivot
Frame Type: TF451 - A1


Labor:

Labor (Shop):	Frame Fab:	20 min
	Door Fab:	20 min
Labor (Field):	Frame Install:	30 min
	Door Install:	30 min
	Hardware Install:	30 min
	Door Adjust:	15 min

Door / Frame: **Door #:** 190-ROPMS36
 Frame#: 451-ROPMS36

Hardware:

Hinging: (1) 138210A1 Intermediate Offset Pivot
(1) 138211A1 Frame Prep Standard
Closer: 50879
Options: (1) Push/Pull C09CP2SAS #45 SS US32

3. Click **Save** icon on door screen to store door, then Left Click on the **OK** button to insert door.
4. Select the horizontal sill on Panels 3 & 4 Row 1 and set the BOH to a height of 28".
5. Select Panels 3 & 4 Row 1, view **Glass Properties** on right, change the infill to 1/4 Bronze SP.
6. Select the horizontal in Panel 2 Row 1 and set the BOH to a height of 28".
7. Select Panel 2 Row 1 and set the DLO to a width of 48".
8. Left Click the **SAVE** icon.
11. Left Click on **NEW FRAME** icon .

NOTE: Never delete a perimeter member like a sill, either give it a null value with frame width, or delete the intermediate and raise the sill. Deleting perimeter can cause problems with calculating frame perimeters and openings.

Exercise 14: Project 1 TF451 Frame 7

Objective(s):	• Reuse door created in Graphics Editor.
---------------	--

Frame Name: Frame 7

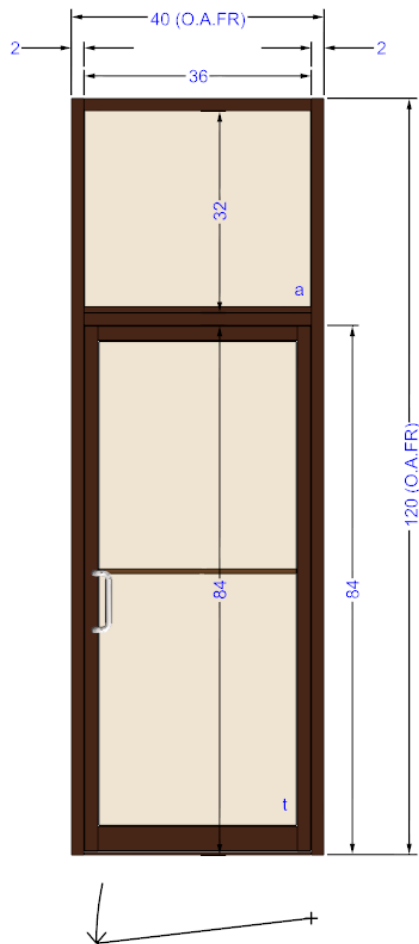
Panels: 1


Rows: 2

Number Thus: 1

Width: 3' 4"

Height: 10' 0"



1. Select Panel 1 Row 1, then select **Right Hinged Door** from menu on left.
2. Select the Project 1 Right Door from list on left and left click **OK**.
3. Left Click the **SAVE** icon.
4. Left Click on **NEW FRAME** icon .

Exercise 15: Adding a second frameset to a project: Project 1 2250 IG 7 ½” SB

Objective(s):	<ul style="list-style-type: none"> • Create frameset in Project Manager. • Create new frame in Project Manager.
----------------------	---

Frameset Name: Project 1 2250 IG

Metal Options:

Metal Group: M2250 IG 7 ½” /SB

Back Color: #26 LIGHT BRONZE: PERMANODIC

Face Color: #26 LIGHT BRONZE: PERMANODIC

Glazing Options:

Annealed: 1 CLEAR INS AN

Tempered: 1 CLEAR INS TE

Spandrel: 1 SPAN/INSUL

Sealants:

Caulking: Silicone

Backer Rod: 3/8” Backer Rod

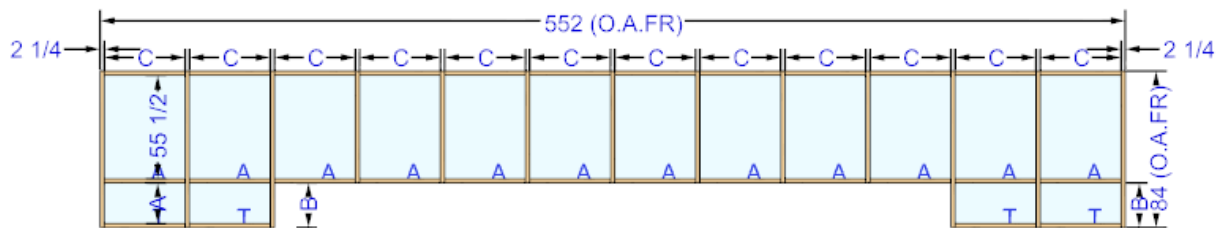
1. Left click on the Frame Set Name box on the top right side of the screen.
2. Change metal group
3. Change Infill
4. Name your new frameset name.
5. Name your Frame – next exercise
6. Input the width, height, panels and rows for the first frame of this set – next exercise.
7. Set sealants and backer rods that are going to be common with all the new frames for this frameset.

NOTE: When creating a new frameset, start by changing the metal group and work down the list on the right. If you set your frame info and then go up and change metal systems, it may reset the frame info back to defaults.


Exercise 16: Project 1 2250 IG Frame 1

Objective(s):	<ul style="list-style-type: none"> • Creating a Bulkhead condition in a frame. • Adjusting sills and intermediate horizontals at the same time.
----------------------	---

Frame Name:	Frame 1
Panels:	12
Rows:	2
Number Thus:	1
Width:	46' 0"
Height:	7' 0"



$$A=21 \frac{3}{4} \quad B=24 \quad C=43 \frac{9}{16}$$

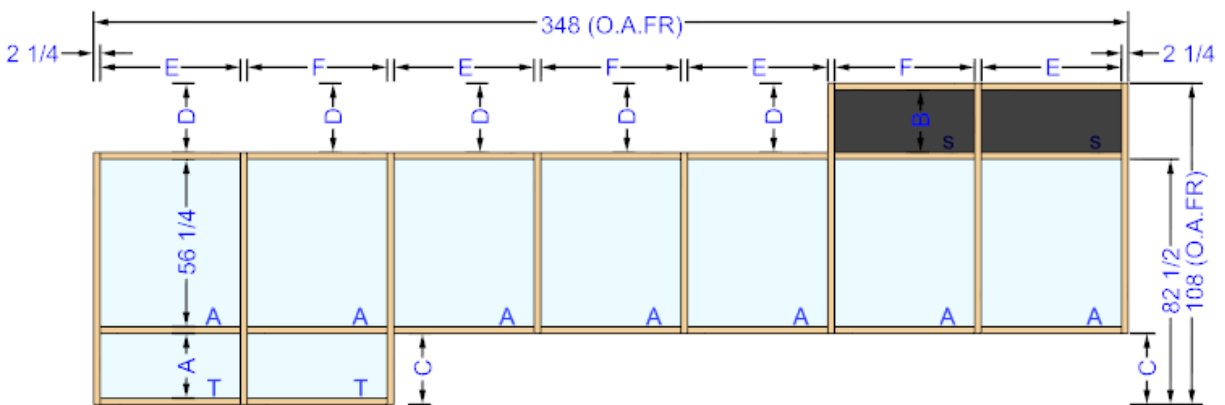
1. Select the horizontals *in* Panels 3 thru 10 *between* Rows 1 and 2 and **Delete Stick**.
2. Select the horizontal sills in Panels 3 thru 10 and set the BOH to 24".
3. Select Horizontals in Panels 1, 2, 11 & 12 Row 1 and set the BOH to 24".
4. Left Click the **SAVE** icon.
5. Left Click on **NEW FRAME** icon .

NOTE: You can combine steps 2 and 3 by selecting the Intermediate horizontals in panel 1 and 2, 11 and 12, then select the sills in panel 3 through 10, then position horizontal to 24"

Exercise 17: Project 1 2250 IG Frame 2

Objective(s):	<ul style="list-style-type: none"> • Set Bulkhead and Soffit Conditions. • Modify glazing in Graphics Editor.
----------------------	---

Frame Name:	Frame 2
Panels:	7
Rows:	2
Number Thus:	1
Width:	29' 0"
Height:	9' 0"



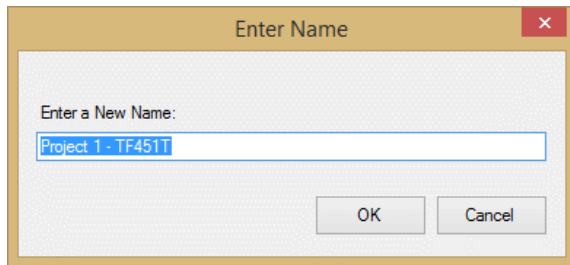
$$A=21 \frac{3}{4} \quad B=21 \quad C=24 \quad D=23 \frac{1}{4} \quad E=47 \frac{5}{32} \quad F=47 \frac{1}{8}$$

1. Select the horizontal head members *in* Panels 1 thru 5 and set the horizontal BOH to a height of 6' 10 1/2".
2. Select the horizontal sills *in* Panels 3 thru 7 and set the BOH to 24".
3. Select the horizontals *in* Panels 1 & 2, Row 1 and set the BOH to a height 24".
4. Select the horizontals *in* Panels 3, 4 & 5 *between* Rows 1 & 2 and delete the sticks.
5. Select the horizontals *in* Panels 6 & 7 *between* Rows 1 & 2 and set the BOH to 6' 10 1/2".
6. Select Panels 6 & 7 *in* Row 2 and view Glass Properties (**GLAZING**) on right, change the infill to 1 Span/Insul.
7. Left Click the **SAVE** icon.
8. Press the Red X in the center screen to close the graphics editor.

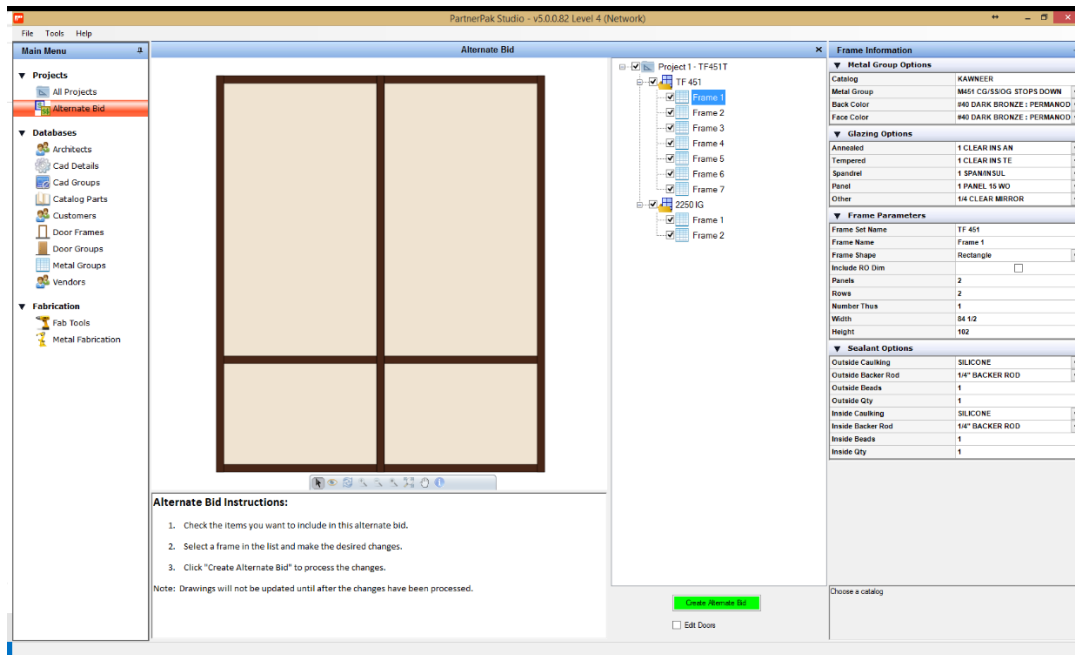
Advanced Exercise – Alt Bid

- | | |
|----------------------|--|
| Objective(s): | <ul style="list-style-type: none">• Creating an Alternate Bid.• Editing doors and changed parts during Alt Bid. |
|----------------------|--|

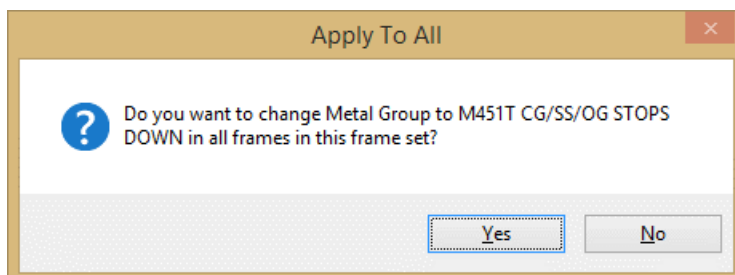
1. Select the Project **Project 1 TF451** and select Alternate Bid from Menu on Left.
2. Name Alt Bid project **Project 1 TF451T** and select OK.



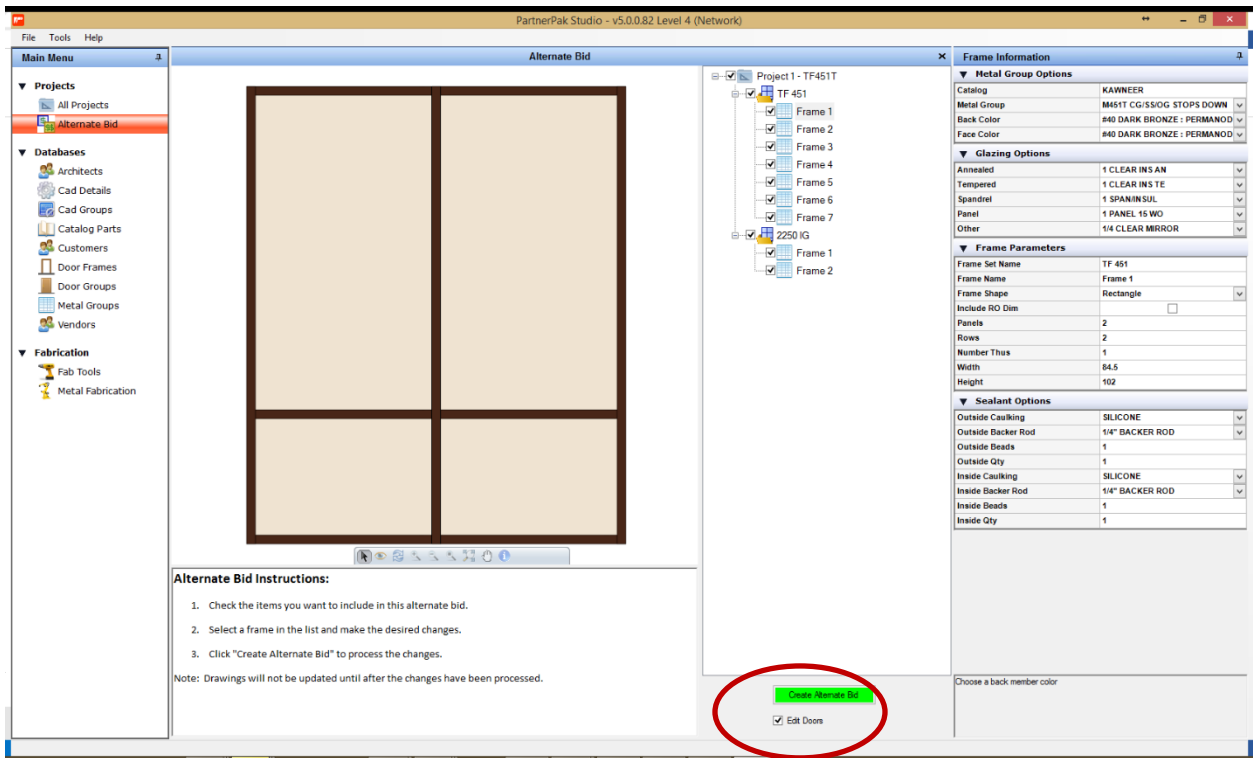
3. Select a frame in the TF451 Frameset and change the Metal System on the Left to M451T CG/SS/OG STOPS DOWN.



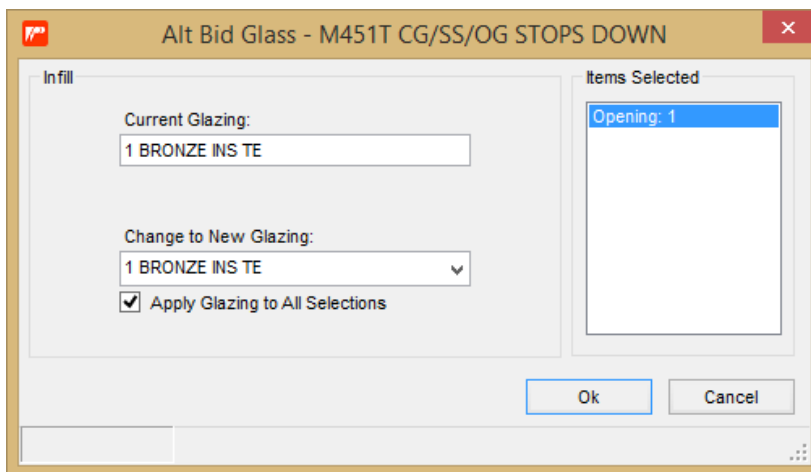
4. Press YES to change all frames in that frameset to the New Metal System.



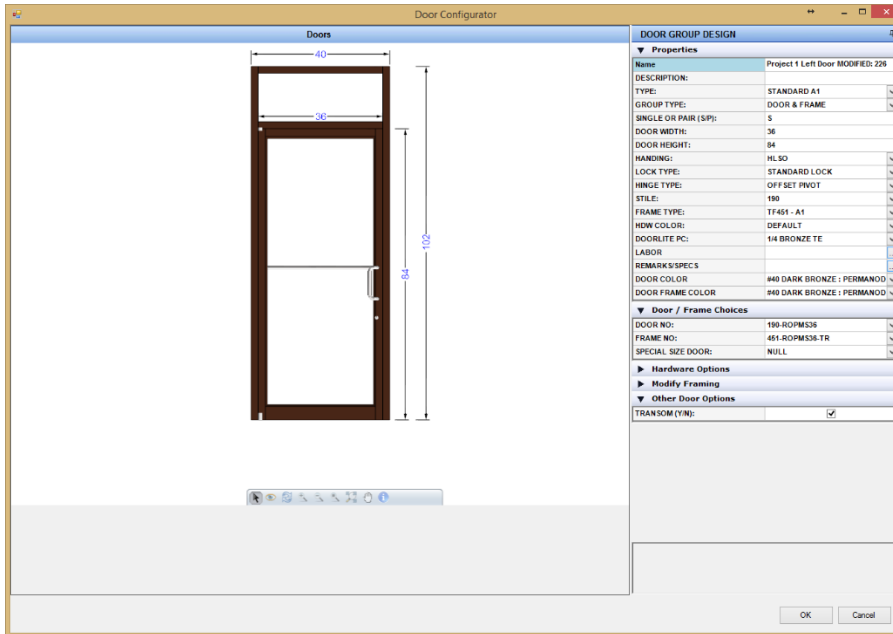
- If the Doors need to change because of the changed metal system, you must select the Edit Doors checkbox before continuing. Since there is no difference between 451 and 451T doors, you do not need to do this.



- Select Create Alternate Bid to start processing.
- Any changes that were modified in the graphic editor will now prompt you to manually change if needed. Glass and stick properties may prompt for replacement. If you are not changing glass press OK to accept the current products.



- If you chose to edit doors, then it will stop at each door insertion and allow you to change it. Press OK when changes are complete to move to the next door or changed part.



9. Once the alternate bid has completed, it will stop at the project screen and there will be a new project with the changes in it.

NOTE: Use BOM to verify that all the parts have been changed out for the new metal system parts. If there is a problem, it can be corrected by modifying that frame in the editor.

Project 2 TF451T

Exercise 18: Project 2 TF451T Project Data

Objective(s):	<ul style="list-style-type: none">• Introduction to Metal Groups Database.• Modify Metal Group in Graphic Editor.
----------------------	--

Project Name: Seminar Project 2

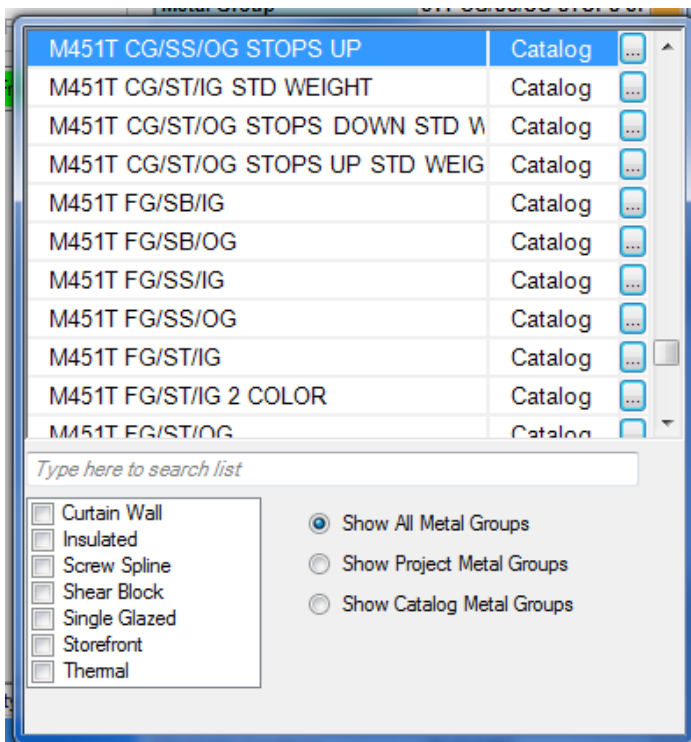
Customer: Hansen Construction

Project Location: 2600 Indian School Road
Phoenix, AZ 85224

Frameset Name: Project 2 TF451T

Metal Options:

Metal Group: M451T CG/SS/OG STOPS UP



Modify Metal Group

METAL GROUP DESIGN

Properties

NAME: M451T CG/SS/SG STOPS UP Mod: 1
 DESCRIPTION: 2 X 4 1/2" THERMAL-CENTER GLAZED-SCREW SPLINE-OUTS
 FRAME SERIES: 4 1/2" THERMAL F.G.
 SERIES SPEC: 4 1/2 THERMAL OUTSIDE GLAZE
 FAB STYLE: SCREW SPLINE
 GLAZING THICKNESS: 1"
 SYSTEM DEPTH: 4.5
 GLAZING Z LOC: 0
 DOOR FRAME: 451T - A1
 KEY WORDS: 2"4. 1/2"FLUSH GLAZEOUTSIDE:SCREW SPLINE:TRIFAB
 LABOR TYPE: STANDARD
 LABOR SETUP: STANDARD

Framing Components

PRIMARY METAL:
 OPTIONAL METAL:
 VINYL:
 HARDWARE:
 SPECIFY GLAZING STOPS:

Fabrication Options

DESIGN STYLE: VERTICAL S PENETRATE TOP AND BOTTOM
 JOINT ROLE: VERTICAL S PENETRATE TOP AND BOTTOM
 EXPANSION MULLION SPACING: 240
 HEAD/SILL CHANNEL MAX LENGTH: 144
 HEAD/SILL CHANNEL SPLICE GAP: 0.5
 SILL CHANNEL EXTENSION: 0.25
 HEAD CHANNEL EXTENSION: 0
 DON'T CUT SILL CHANNEL AT DOOR:
 VERTICAL FAB:
 HORIZONTAL FAB:
 JOINT GAPS:
 DEFAULT GLAZING DEPTHS:

Save To Main Database OK Cancel

Select: PRIMARY METAL

NAME	PRODUCT CODE	FINISH	DESCRIPTION	ANGLE X	ANGLE Y	ANGLE Z	LOCATION X	LOCATION Y	LOCATION Z	END FAB	END FAB INST	CE
LEFT JAMB	451TCG001	DEFAULT	MULLION/JAMB/SILL	180	270	0	0	0	0			
RIGHT JAMB	451TCG001	DEFAULT	MULLION/JAMB/SILL	90	90	90	0	0	0			
FEMALE VERTICAL	451TCG001	DEFAULT	MULLION/JAMB/SILL	180	90	0	0	0	0			
MALE VERTICAL	451TCG002	DEFAULT	THERMAL POCKET FILLER HALF	270	270	0	-0.7	0	0			
FEMALE EXPAN MULL	451TCG010	DEFAULT	FEMALE EXPANSION MULLION	180	90	90	0	0	0			
MALE EXPAN MULL	451TCG540	DEFAULT	MALE EXPANSION MULLION W/WEATHERING 27-0	90	180	0	0	0	0			
DOOR JAMB COMPANION	NULL 3/8 GD	DEFAULT	3/8 GLAZING DEPTH	90	180	90	0	0	0			
HEAD CHANNEL	NULL	DEFAULT		0	0	0	0	0	0			
HEAD	451TCG001	DEFAULT	MULLION/JAMB/SILL	90	0	90	0	0	0			
SILL CHANNEL	451TG037	DEFAULT	THERMAL FLASHING	90	0	0	0	0	0.4			
SILL	451TCG003	DEFAULT	THERMAL HEAD	270	0	-90	0	0	0			
FEMALE HORIZONTAL	451TCG011	DEFAULT	TUBE HORIZONTAL	90	180	90	0	0	0			
MALE HORIZONTAL	NULL 3/8 GD	DEFAULT	3/8 GLAZING DEPTH	90	0	90	0	0	0			
LEFT JAMB FACE	NULL	DEFAULT	CAULKING BACKER	0	0	0	0	0	0			
VERTICAL FACE	NULL	DEFAULT		0	0	0	0	0	0			
SILL FACE	NULL	DEFAULT		0	0	0	0	0	0			
HEAD FACE	NULL	DEFAULT	CAULKING BACKER	0	0	0	0	0	0			
HORIZONTAL FACE	NULL	DEFAULT		0	0	0	0	0	0			
LEFT JAMB PRESSURE PLATE	NULL	DEFAULT		0	0	0	0	0	0			
VERTICAL PRESSURE PLATE	NULL	DEFAULT		0	0	0	0	0	0			
SILL PRESSURE PLATE	NULL	DEFAULT		0	0	0	0	0	0			
HORIZONTAL PRESSURE PLATE	NULL	DEFAULT		0	0	0	0	0	0			
HEAD PRESSURE PLATE	NULL	DEFAULT		0	0	0	0	0	0			
LEFT JAMB PERMETER FILLER	NULL	DEFAULT		0	0	0	0	0	0			
RIGHT JAMB PERMETER FILLER	NULL	DEFAULT		0	0	0	0	0	0			
RIGHT JAMB FACE	NULL	DEFAULT		0	0	0	0	0	0			
RIGHT JAMB PRESSURE PLATE	NULL	DEFAULT		0	0	0	0	0	0			
HEAD PERMETER FILLER	NULL	DEFAULT		0	0	0	0	0	0			
SILL PERMETER FILLER	NULL	DEFAULT		0	0	0	0	0	0			
EXPAN MULL FACE	NULL	DEFAULT		0	0	0	0	0	0			
EXPAN MULL PRESSURE PLATE	NULL	DEFAULT		0	0	0	0	0	0			
THERMAL BREAK	NULL	DEFAULT		0	0	0	0	0	0			
CORNER	NULL	DEFAULT		0	0	0	0	0	0			
CORNER FACE	NULL	DEFAULT		0	0	0	0	0	0			
CORNER PRESSURE PLATE	NULL	DEFAULT		0	0	0	0	0	0			

New Sill: A/450027+451CG004

New Sill Channel: 451THP037 and press OK

NOTE: We are using an Assembly as designated by the A/ in front of the parts. We explain Assemblies in a later section. Please note the reason we use an assembly for the sill is because the height of the sill changes based on the stop used. If you use a 450 stop with the 450027 it has a height of 4.5" If you use the 451 stop with the 450027, the sill has a height of 4 11/16". If we didn't use the assembly and put the 450027 in the sill and the 451CG004 in the outside stop, we would pick up a 4.5" sill which would be incorrect and the glass would not fit when you tried to install it.

Select: **HARDWARE**

NAME	PRODUCT CODE	FINISH	QUAN	FREQ	DESCRIPTION
SETTING BLOCK	27073	#0 UNDEFINED	2	PER SILL	451T SETTING BLOCK
SETTING BLOCK CHAIR			0		
SCREWS	28856	#0 UNDEFINED	2	PER JOINT	#12 X 1 1/8" AB PAN HEAD SCREW
ANCHORS	ANCHOR PACK	#0 UNDEFINED	0.75	PER FT FRAME PERIM	ANCHOR PACK
ANCHOR SHIMS	451T126	#0 UNDEFINED	0.75	PER FT FRAME PERIM	SHIM BACKER THERMAL
HEAD SHEAR BLOCK	451C0524	#0 UNDEFINED	1	PER HEAD BUTT @ DOOR JAMB COMPANION	
SILL SHEAR BLOCK	451C0525	#0 UNDEFINED	1	PER SILL BUTT @ DOOR JAMB COMPANION	
INTER. HORIZ. SHEAR BLOCK	451C0525	#0 UNDEFINED	1	PER FEMALE HORIZ BUTT @ DOOR JAMB COMPANION	
GLAZING CLIPS			0		
WATER DEFLECTOR	451106	#0 UNDEFINED	2	PER INTER HORIZ	1" WATER DEFLECTOR
SPLICE SLEEVE	27094	#0 UNDEFINED	0.042	PER FT SILL CHANNEL	XPANDER SPLICE SLEEVE
PERIMETER VINYL	NULL	#0 UNDEFINED	0	PER FT FRAME PERIM	
MISC. HARDWARE1	450114	#0 UNDEFINED	1	PER JAMB	TRIFAB II END DAM STICK SYSTEM
MISC. HARDWARE2	450520	#0 UNDEFINED	1	PER OPENING	1/4 SIDE BLOCK 1MULLION & 1/4 MULLION
MISC. HARDWARE3	450520	#0 UNDEFINED	1	PER FEMALE HORIZ BUTT @ LEFT JAMB	1/4 SIDE BLOCK 1MULLION & 1/4 MULLION
MISC. HARDWARE4	450520	#0 UNDEFINED	1	PER LEFT JAMB	1/4 SIDE BLOCK 1MULLION & 1/4 MULLION
MISC. HARDWARE5	27073	#0 UNDEFINED	2	PER INTER HORIZ	451T SETTING BLOCK
MISC. HARDWARE6	451HP126		2	PER SILL	TRIFAB VG HP FLASHING CLIP
MISC. HARDWARE7			0		
MISC. HARDWARE8			0		
MISC. HARDWARE9			0		
MISC. HARDWARE10	NULL	#0 UNDEFINED	0	PER FRAME	
MISC. HARDWARE11			0		
MISC. HARDWARE12			0		
MISC. HARDWARE13			0		
MISC. HARDWARE14			0		
MISC. HARDWARE15			0		
MISC. HARDWARE16			0		
MISC. HARDWARE17			0		
MISC. HARDWARE18			0		
MISC. HARDWARE19			0		
MISC. HARDWARE20			0		
MISC. HARDWARE21			0		
MISC. HARDWARE22			0		
MISC. HARDWARE23			0		
MISC. HARDWARE24			0		
MISC. HARDWARE25			0		

**Misc Hardware 6: 451HP126 - #10 Unfinished - 2 per Sill
and press OK to continue.**

Select: **Press OK**

Back Color: **#26 LIGHT BRONZE: PERMANODIC**

Face Color: **#26 LIGHT BRONZE: PERMANODIC**

Glazing Options:

Tempered: **1 BRONZE INS TE**

Annealed: **1 BRONZE INS AN**

Spandrel: **1/4 BRONZE SP**

Sealants:

Caulking: **Silicone**

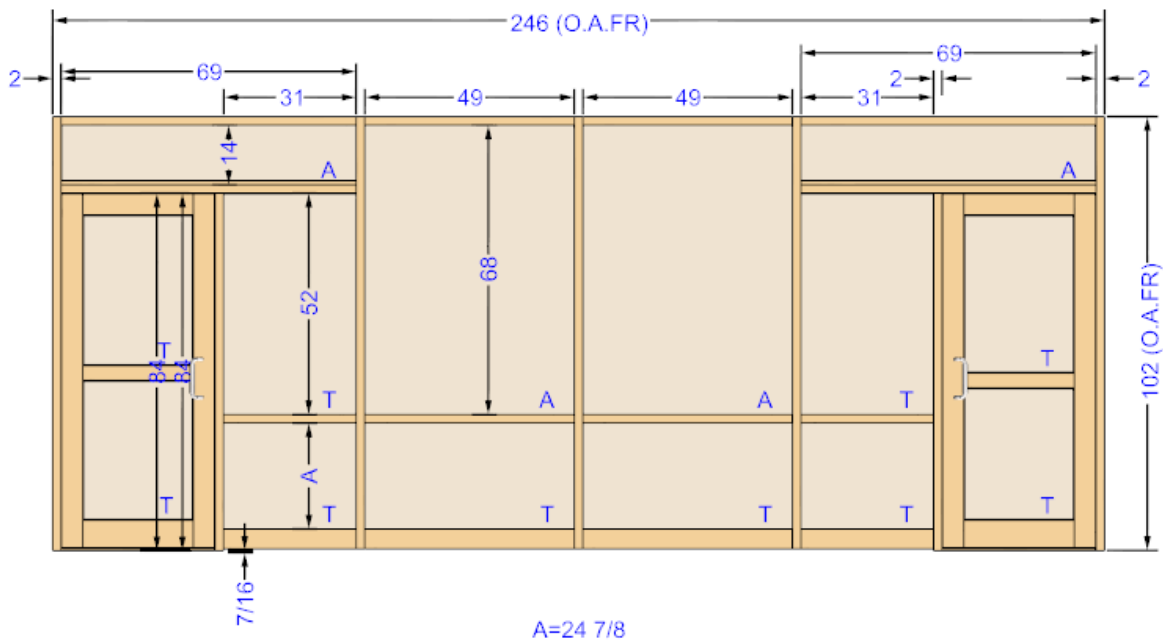
Backer Rod: **3/8" Backer Rod**

NOTE: When a metal group is modified, **Modified: ###** is added to the end of the metal group name. **### is generic for a one digit number like 2.** If you want to use this metal system in the future, change the name to M451T CG/SS/OG STOPS UP HIGH SILL and press the Save to Main Database button.

Exercise 19: Project 2 TF451T Frame 1 (Level 2 Required)

Objective(s):	<ul style="list-style-type: none"> • Enter door parameters in Door Editor. • Modify framing members in Graphics Editor. • Cripple Door Header
----------------------	--

Frame Name: Frame 1
Panels: 6
Rows: 2
Number Thus: 1
Width: 20' 6"
Height: 8' 6"



1. Select Panel 1 Row 1, then select **Insert Hinge Left Door** from menu on left.

Door Properties:

Name: Project 2 Left Door
Door Type: Custom A2
Handing: HLSO
Hinge Type: Butt Hinge
Stile: 500 Beveled
Frame Type: 451T FAB - A2
Hardware Color: Bronze
Doorlite PC: 1 Bronze Ins TE

Labor:

Labor (Shop):	Frame Fab:	20 min
	Door Fab:	20 min
Labor (Field):	Frame Install:	30 min
	Door Install:	30 min
	Hardware Install:	30 min
	Door Adjust:	15 min

Door / Frame: **Door #:** 500-SBVBK

Hardware:

Locking:	(1) 138120 ADAMS 4510 Latch Lock (1) 138121 ADAMS 4510 Lock Frame Prep. (1) 138241 Paddle 4590 (1) 138242 Electric Strike (1) 138243 Elect. Strike Frame Prep. (1) 138224 Cylinder Guard (1) 138672 Cylinders
Hinging:	(3) 138408 Hinge - #29 Black (3) 138418 Hinge Frame Prep.
Closer:	50924 Closer 138064 Hardware and Door Prep. 138065 Frame Prep.
Options:	(1) 137700P Push/Pull #29 Black

Cross Rails:

Cross Rails:	138713 3 1/2"
Finish:	#26 Light Bronze
Orient:	Horizontal
Location:	40
Btm/Left Stops:	138219
Finish:	#26 Light Bronze
Top/Right Stops:	138219
Finish:	#26 Light Bronze
Rail Prep:	138716
Muntin Config:	True Divided

2. **SAVE** door, then click on **OK** to insert the door.
3. Select Panel 6 Row 1, then select **Insert Hinge Right Door** from menu on left.

Door Properties:

Name: Project 2 Right Door
Door Type: Custom A2
Handing: HRSO
Hinge Type: Butt Hinge
Stile: 500 Beveled
Frame Type: 451T FAB- A2
Hardware Color: Bronze
Doorlite PC: 1 Bronze Ins TE

Labor:


Labor (Shop): **Frame Fab:** 20 min
 Door Fab: 20 min
Labor (Field): **Frame Install:** 30 min
 Door Install: 30 min
 Hardware Install: 30 min
 Door Adjust: 15 min

Door / Frame: **Door #:** 500-SBVBK

Hardware:

Locking: (1) 138120 ADAMS 4510 Latch Lock
 (1) 138121 ADAMS Lock Frame Prep.
 (1) 138241 Paddle 4590
 (1) 138242 Electric Strike
 (1) 138243 Elect. Strike Frame Prep.
 (1) 138224 Cylinder Guard
 (1) 138672 Cylinders
Hinging: (3) 138408 Hinge - #29 Black
 (3) 138418 Hinge Frame Prep.

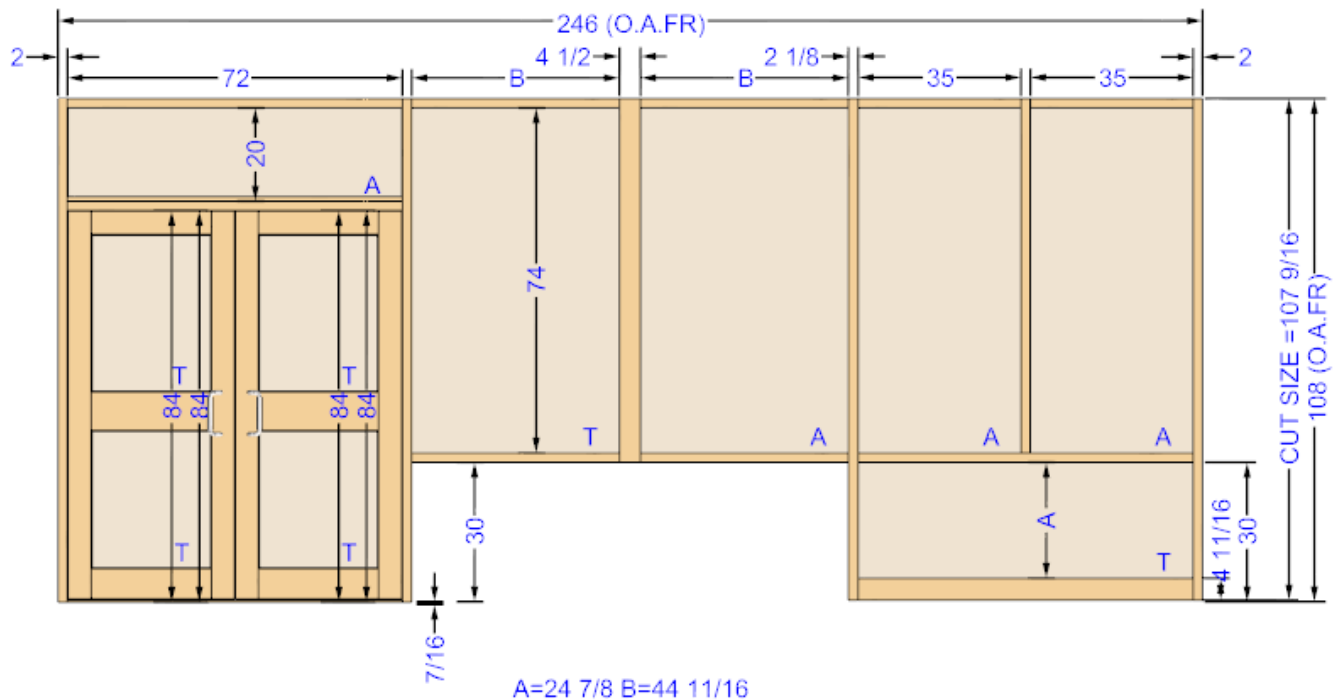
Closer:	50924 Closer 138064 Hardware and Door Prep. 138065 Frame Prep.
Options:	(1) 137700P Push/Pull #29 Black
Cross Rails:	
Cross Rail:	138713 3 1/2"
Finish:	#26 Light Bronze
Orient:	Horizontal
Location:	40
Btm/Left Stops:	138219
Finish:	#26 Light Bronze
Top/Right Stops:	138219
Finish:	#26 Light Bronze
Rail Prep:	138716
Muntin Config:	True Divided

4. **SAVE** door, then click on **OK** to insert the door.
5. Select the horizontals *in* Panels 2, 3, 4 & 5 *between* Rows 1 & 2 and set the BOH to a Height of 30".
6. Select the vertical *between* Panels 2 & 3 and set the Centerline to 6'.
7. Select the vertical *between* Panels 4 & 5 and set the Centerline to 14' 6".
8. Select the vertical *between* Panels 1 & 2 and Panels 5 & 6 at the joint closest to the door header and select **Reverse Joinery**. (Level 2 Feature)
9. Delete the door jamb in Panel 2 Row 3.
10. Delete the door jamb in Panel 6 Row 3.
11. Click **SAVE**.
12. Left Click on **NEW FRAME** icon .

Exercise 20: Project 2 TF451T Frame 2 (Level 2 Required)

Objective(s):	<ul style="list-style-type: none"> • Enter door in Door Editor. • Modify framing members in Graphics Editor. • Insert a 4 ½ inch post into frame.
----------------------	--

Frame Name:	Frame 2
Panels:	4
Rows:	2
Number Thus:	1
Width:	20' 6"
Height:	9' 0"



1. Click on **NEW FRAME** icon and enter frame above.
2. Select Panel 1 Row 1, then select **Insert Double Door** icon from menu on left.

Door Properties:

Name:	Project 2 Double Door
Door Type:	Custom A2
Single or Pair:	P
Handing:	SO

Lock Type: Paneline Exit Device
Hinge Type: Butt Hinge
Stile: 500 Beveled
Frame Type: 451T FAB- A2
Hardware Color: Bronze
Doorlite PC: 1 Bronze Ins TE

Labor:


Labor (Shop): **Frame Fab:** 40 min
 Door Fab: 40 min
Labor (Field): **Frame Install:** 60 min
 Door Install: 60 min
 Hardware Install: 60 min
 Door Adjust: 30 min


Door / Frame: Door #: 500-PBVBK

Hardware:

Locking: (2) 138659 Paneline Exit
 (2) 138651 Paneline Frame Prep.
 (1) 138680 Paneline Cylinders(Alike)
Hinging: (6) 138408 Hinge - #29 Black
 (6) 138418 Hinge Frame Prep.
Closer #1: 130885 Closer
 138066 Door Prep.
 138067 Frame Prep.
Closer #2: 130884 Closer
 138066 Door Prep.
 138067 Frame Prep.
Options: (1) A/137732P+733P Pull Handle #29 Black

2. **Save** door, then click on **OK** to insert door.
3. Select the horizontals *in* Panels 2 & 3 *between* Rows 1 & 2 and **Delete Sticks**.
4. Select Panel 4 Row 1 and set the DLO to a Width of 72"
5. Select the Bottom Sill in Panels 2 & 3 and view the Stick Properties on right. Change sill to 451TCG003.
6. Select the Bottom Sill *in* Panels 2 & 3 and set the BOH to 30"

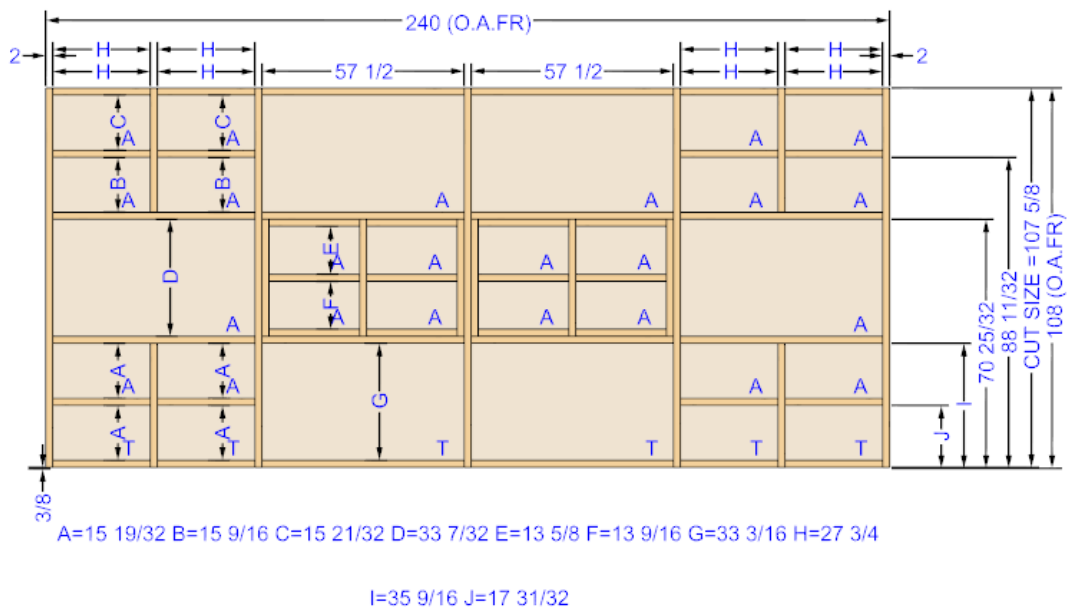
7. Select the vertical *between* Panels 2 & 3 and view Stick Properties on right.
8. Change the Male Vertical to NULL 3/8 GD and change the Female Vertical to A/451TCG015+CG015.
9. Select the horizontal in Panel 4 between Rows 1 & 2 and set the BOH to Height of 30".
10. Select Panel 4 Row 2 and insert a vertical stick.
11. **Reverse Joinery** of inserted vertical in panel 4 at the head. (Level 2 Feature)
12. Click **SAVE**.
13. Left Click on **NEW FRAME** icon  .

1. Change the Metal Group to **M451T CG/SS/OG STOPS UP**.
2. Enter width, height, panels and rows for Frame 3.
3. Select left vertical jamb and use **Cut Stick** icon and select joint selection. Click **OK** and click below of the horizontal between Rows 1 & 2. (Level 2 Feature)
4. Select bottom left vertical jamb and set the Centerline at 25".
5. Select right vertical jamb and use **Cut Stick** icon and select **Joint Selection**. Click **OK** and click above the horizontal between Rows 1 & 2. (Level 2 Feature)
6. Select top right vertical jamb and set centerline at 95".
7. Select Panel 2 Row 1 and set the DLO to width of 37 5/16"
8. Click **SAVE**.
9. Left Click on **NEW FRAME** icon .

Exercise 22: Project 2 TF451T Frame 4 (Level 2 Required)

Objective(s):	<ul style="list-style-type: none"> • Insert and configure utility frames. • Insert and configure a grid. • Reverse joinery.
----------------------	--

Frame Name:	Frame 4
Panels:	4
Rows:	3
Number Thus:	1
Width:	20' 0"
Height:	9' 0"

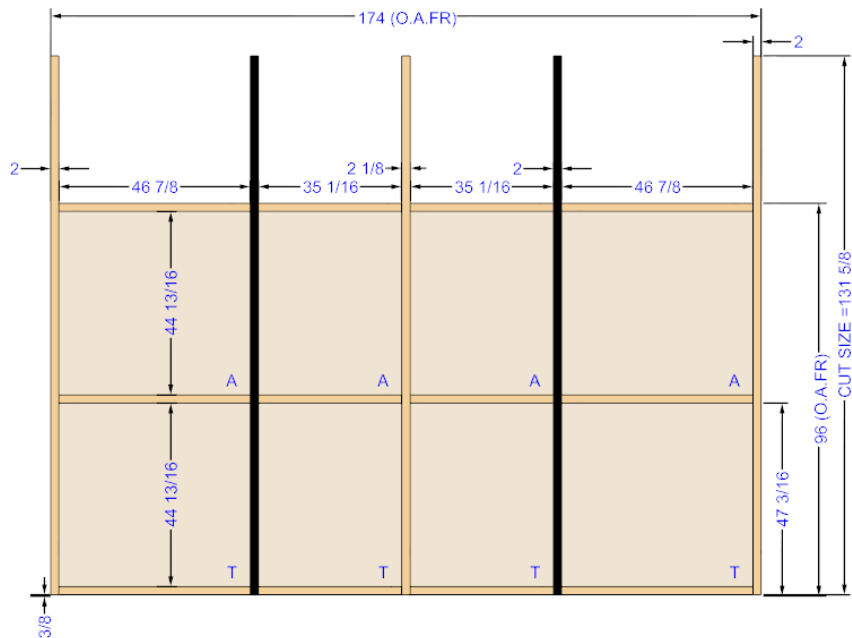


1. Select Panel 2 Row 2 and select **FRAME | INSERT UTILITY FRAME** from the dropdown menus and Set Panel 2 and Rows 2 and press **OK**. (Level 2 Feature)
2. Select Panel 3 Row 2 and select **FRAME | INSERT UTILITY FRAME** from the dropdown menus and Set Panel 2 and Row 2 and press **OK**. (Level 2 Feature)
3. Select Panels 1 & 4 Rows 1 & 3 and select **Insert Grid** on left, then insert a **2 x 2 Grid Pattern**.
4. Select the **Grid Pattern Vertical** in Panels 1 & 4 Row 3 and **reverse join** the vertical through the head. (Level 2 Feature)
5. Select the **Grid Pattern Vertical** in Panels 1 & 4 Row 1 and **reverse join** the vertical through the sill.
6. Click **SAVE**.
7. Click **NEW FRAME** icon.

Exercise 23: Project 2 TF451T Frame 5 (Level 2 Required)

Objective(s):	<ul style="list-style-type: none"> • Use Stick Actions Menu. • Extend Back Members. • Change Stick Properties.
----------------------	---

Frame Name: Frame 5
Panels: 4
Rows: 2
Number Thus: 1
Width: 14' 6"
Height: 8' 0"

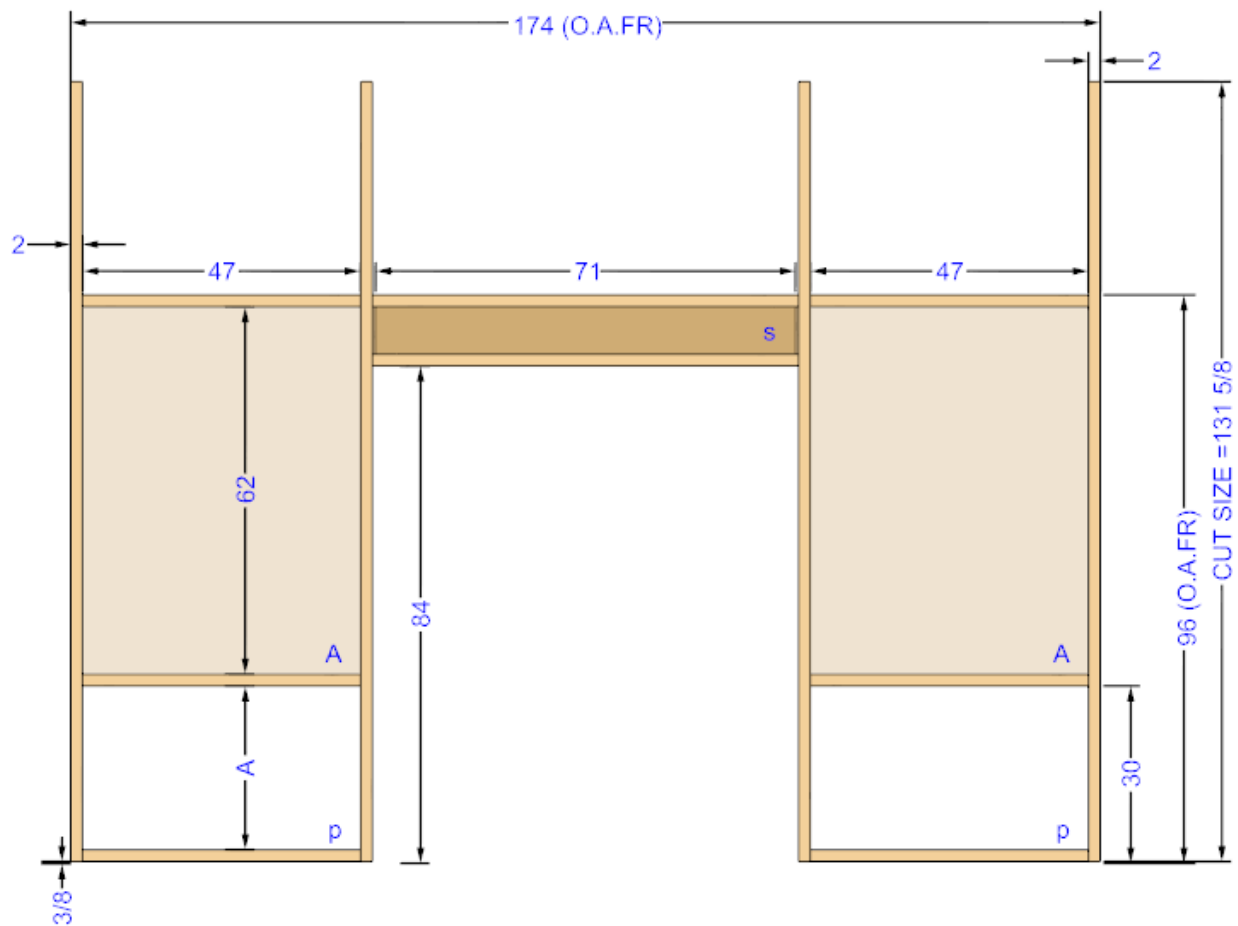


1. Select all verticals and select **Stick Actions, Back Member, Extend Stick 36"**. (Level 2 Feature)
2. Select Verticals 2 & 4 and View Stick Properties on right.
3. Change color of Male and Female Vertical to #29 Black and click **Apply**.
4. Select Vertical 3 and view Stick Properties on right.
5. Change Male Vertical to product number 451TCG540 and change the Female Vertical to product number 451TCG010 and select **OK**.
6. Select Panel 2 & 3 Row 1 and set the DLO to width of 35 1/16"
7. Click **SAVE** icon.
8. Select **New Frame** Icon on Right.

Exercise 24: Project 2 TF451T Frame 6 (Level 2 Required)

Objective(s):	<ul style="list-style-type: none"> • Set Glass Properties • Set Stick Properties
---------------	--

Frame Name: Frame 6
Panels: 3
Rows: 2
Number Thus: 1
Width: 14' 6"
Height: 8' 0"



$$A = 27 \frac{5}{8}$$

1. Select Panels 1 & 3 Row 1 and view Glass Properties on right.
2. Change glazing infill to ¼ Panel 15 WO and press Enter.
3. Select horizontal in Panel 2 between Rows 1 & 2 and delete stick.
4. Select Panel 2 Row 1 and set DLO width to 72".

5. Select horizontals in Panels 1 & 3 between Rows 1 & 2 and set BOH to 30".
6. Select Vertical 2 and view Stick Properties on right.
7. Change Female Vertical to product 451599 and Male Vertical to NULL 3/8 GD then click Apply.
8. Select Vertical 3 and view Stick Properties on right.
9. Change Female Vertical to product 451TCG002 and Male Vertical to 451599 then click Apply.
10. Select Sill in panel 2 and view Stick Properties on right.
11. Change Sill to product 451502, change Outside Stop to A/450022+022 and Sill Receptor to NULL. Select Apply.
12. Select sill in Panel 2 and set BOH height to 84".
13. Select Panel 2 Row 2 and view Glass Properties on right. Change glass to 1/4 Bronze SP.
14. Select Panel 2 Row 2 and insert a vertical stick.
15. Select the inserted vertical stick and view Stick Properties on right.
16. Set Male Vertical to NULL 3/8 GD and change Female Vertical to 450033. Select Apply.
17. Select inserted vertical stick, select Centerline icon and set Width to 122 3/4".
18. Select Panel 2 Row 2 and insert a vertical stick.
19. Select inserted vertical stick and view Stick Properties.
20. Set Male Vertical to NULL 3/8 GD and change the Female Vertical to 450033. Select Apply.
21. Select inserted vertical stick. Select Centerline Icon and set Width to 51 1/4".
22. Select all verticals and use menu Stick Actions – Back Member - Extend Stick, type 36" and press OK. (Level 2 Feature)
23. Click SAVE icon on the right side.
24. Exit the Graphics Editor by clicking on New Frame.

Note: When inserting sticks, it is best to set the properties before any movement. The program will automatically adjust a stick position if it is placed improperly. I.e. the 451TCG001 because its properties as an inserted stick are 2" and when adjusted to the 450033, its size is only 1/2" wide.

Following this procedure will ensure that you do not get the wrong glass size in this area.

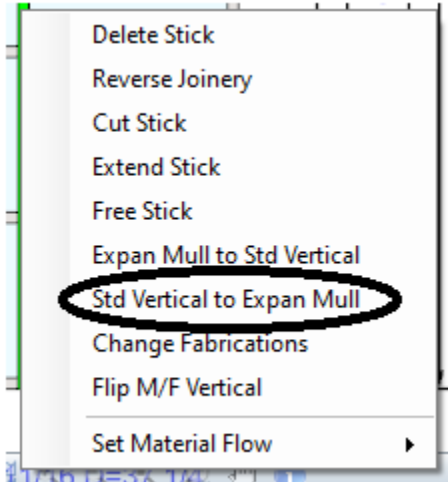
Add Bottom Weathering
Add Sub Correct Glass Stops
Add Threshold

4. **SAVE** door, then click on **OK** to insert the door.
5. Select the horizontals *in* Panels 1, 3 & 5 *between* Rows 1 & 2 and set the BOH to a Height of 30".
6. Select the header *above either entrance* **and** select the upper horizontals *in* Panels 1,3 & 5 and set the BOH to a Height of 86".
7. Click **SAVE**.
8. Click New Frame icon on the right.

Note: There are no longer any A4 door frame kits. There is only framing components that are fabricated by Kawneer or Fabricated by You. IF the Frame type has FAB in it, then it is fabricated by Kawneer and we pick up pricing per square foot materials and do not send those components to the optimizer for cutting. If you select the frame without the FAB in the name, then it prices the framing per stick and is processed by the optimizer for you to produce.

Note: You can mix A1 and A2 so you have an A1 door and an A2 frame or vice versa. For A4, A7, A8 and A9 you must select the same catalog section for both doors and frames.

2. Modify vertical mullion *between* Panel 3 and 4 to be an expansion mullion. Ensure all other verticals are standard mullions.
 - a. Right Click on the vertical between panel 3 and 4 and select standard Vertical to Expansion Mull



3. Select Panel 1 Row 1 and **Insert Double Door.**

Door Properties:			
Name:	IR 500 PAIR CGH		
Door Type:	Custom A4		
Single or Pair:	P		
Door Width:	6' 4		
Door Height:	7'		
Handing:	SO		
Lock Type:	Concealed Exit Device		
Hinge Type:	Continuous Hinge		
Stile:	500 IR Rabbeted		
Frame Type:	IR 501 FAB – A4		
Hardware Color:	Bronze		
Doorlite PC:	1 Clear Ins TE		
Labor:			
Labor (Shop):	Frame Fab:		40 min
	Door Fab:		40 min
Labor (Field):	Frame Install:		60 min

	Door Install:	60 min
	Hardware Install:	60 min
	Door Adjust:	30 min
	Door / Frame: Door #:	500IRPBRBK
Hardware:		
Locking:	(2) 138645A4 Kawneer 1686 Conc Exit	
	(2) 1386546A4 Kawneer 1686 Conc Exit Frame Prep.	
	(2) 138644A4 Kawneer 1686 Conc Exit Cylinders (Alike)	
	(2) 138667A4 Kawneer 1686 Conc Exit	
		Special Width Add Charge
Hinging:	(2) 138420A4 Hinge Up to 7'0	
	(2) 138429A4 Hinge Frame Prep.	
Closer #1:	130885 Closer	
	138066 Door Prep.	
	138067 Frame Prep.	
Closer #2:	130884 Closer	
	138066 Door Prep.	
	138067 Frame Prep.	
Options:	(2) 137730PA4 Pull Handle #29 Black	
	Add Bottom Weathering	
	Add Sub Correct Glass Stops	
	Add Threshold	

2. **Save** door, then click on **OK** to insert door.
3. Select Panel 1 Row 1 and **Insert Double Door**.

Door Properties:	
Name:	IR 500 PAIR CGH
Door Type:	Custom A4
Single or Pair:	P
Door Width:	6' 4
Door Height:	7'
Handing:	SO
Lock Type:	Concealed Exit Device

5. Select the Bottom Sill in Panels 2, 3 & 4 and set the Bottom Sill *in* Panels 2 & 3 and set the BOH to 30"
6. Set intermediate horizontals in panels 2, 3 and 4 to be at 84".
7. Set DLO width for panels 2 and 4 to 18".
12. Click **SAVE**.

Curtain Wall Frame

Exercise 25: Curtain Wall Project Data

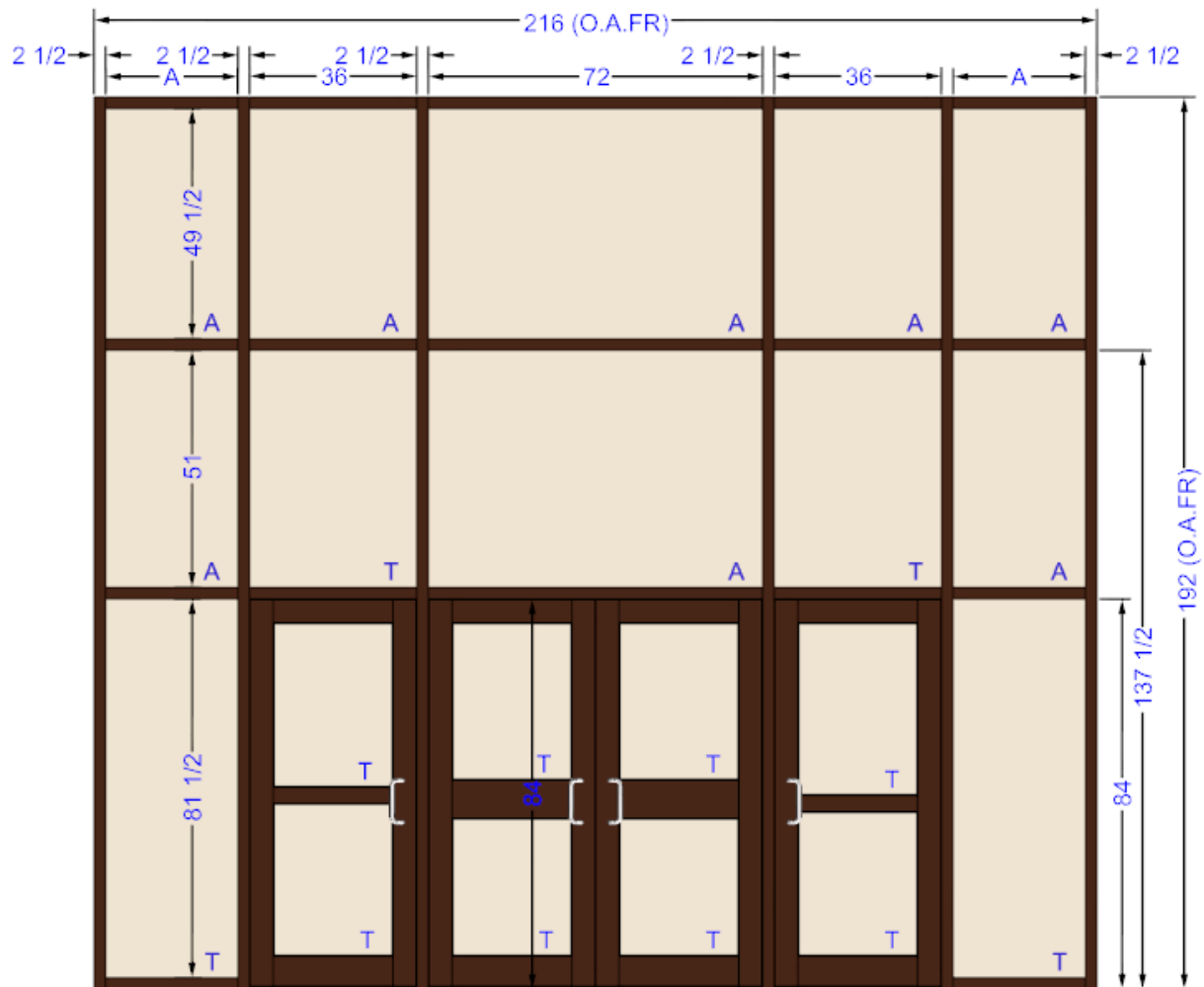
Objective(s):	<ul style="list-style-type: none">• Create new curtain wall project in Project Manager.
----------------------	---

Project Name: Curtain Wall Project
Customer: Hansen Construction
Project Location: 233 Alma School Road
Mesa, AZ 85214
Date of Plans: (Today's Date)
Addendums: 1
Bid Date: (one week from today)
Remarks: Bank of America Building
Frameset Name: Curtain Wall Frame
Metal Options:
Metal Group: M1600 SYS1 7 1/2" 1600SB 1" W/F&T
Back Color: #40 DARK BRONZE: PERMANODIC
Glazing Options:
Tempered: 1 BRONZE INS TE
Annealed: 1 BRONZE INS AN
Spandrel: 1/4 BRONZE SP
Sealants:
Caulking: SILICONE
Backer Rod: 5/8" BACKER ROD

Exercise 26: Curtain Wall Frame 1

Objective(s):	<ul style="list-style-type: none"> • Create a Curtainwall Door • Share vertical members with A2 Door Frames
----------------------	---

Frame Name: Frame 1
Panels: 5
Rows: 3
Number Thus: 1
Width: 18' 0"
Height: 16' 0"



A=28 1/2

1. Select Panel 3 Row 1, then select Insert Double Door icon from menu on left.

2. Name door Curtain Wall Double Door and select OK.

Door Properties:

Name: Curtain Wall Double Door
Door Type: Custom A2
Single or Pair: P
Handing: SO
Doorlite PC: 1 Bronze Ins TE
Lock Type: Paneline Exit Device
Hinge Type: Butt Hinge
Stile: 500 Beveled
Frame Type: 1600 WALL 7 1/2" FLUSH FAB - A2

Labor:

Labor (Shop): **Frame Fab:** 20 min
 Door Fab: 20 min
Labor (Field): **Frame Install:** 30 min
 Door Install: 30 min
 Hardware Install: 30 min
 Door Adjust: 15 min
 Hardware Fab: 0 min

Door / Frame: **Door #:** 500-PBVBK

Hardware:

Locking: (2) 138659 Paneline Exit
 (2) 138651 Paneline Frame Prep.
 (1) 138680 Paneline Cylinders (Alike)
Hinging: (6) 138408 Hinge - #29 Black
 (6) 138418 Hinge Frame Prep.
Closer #1: 130885 Closer
 138066 Door Prep.
 138067 Frame Prep.
Closer #2: 130884 Closer
 138066 Door Prep.

Options:	138067 Frame Prep. (1) A/137732P+733P Pull Handle #40 Dark Bronze
-----------------	---

3. Save door, then Left click on the OK button to insert door.
4. Select Panel 2 Row 1, then select the left door icon from menu on left.
5. Name the door Curtain Wall Left Door.

Door Properties:	
Name:	Curtain Wall Left Door
Door Type:	Custom A2
Handing:	HLSO
Doorlite PC:	1 Bronze Ins TE
Hinge Type:	Butt Hinge
Stile:	500 Beveled
Frame Type:	1600 WALL 7 1/2" FLUSH FAB - A2
Labor:	
Labor (Shop):	Frame Fab: 20 min
	Door Fab: 20 min
Labor (Field):	Frame Install: 30 min
	Door Install: 30 min
	Hardware Install: 30 min
	Door Adjust: 15 min
	Hardware Fab: 0 min
Door / Frame:	Door #: 500-SBVBK
Hardware:	
Locking:	(1) 138120 ADAMS 4510 Latch Lock (1) 138125 ADAMS 4510 Lock Frame Prep. (1) 138241 Paddle 4590 (1) 138242 Electric Strike (1) 138243 Electric Strike Frame Prep. (1) 138224 Cylinder Guard (1) 138672 Cylinders

Hinging:	(3) 138408 Hinge - #29 Black (3) 138418 Hinge Frame Prep.
Closer:	50924 Closer 138064 Hardware and Door Prep. 138065 Frame Prep.
Options:	(1) 137700P Push/Pull#40 Dark Bronze
Cross Rails:	
Cross Rails:	138713 3 1/2"
Finish:	#40 Dark Bronze
Orient:	Horizontal
Location:	40
Btm/Left Stops:	138219
Finish:	#40 Dark Bronze
Top/Right Stops:	138219
Finish:	#40 Dark Bronze
Rail Prep:	138716
Muntin Config:	True Divided

6. SAVE door, then click OK to insert the door.
7. Select Panel 4 Row 1, then select the Insert Hinge Right Door icon from menu on left.
8. Name the door Curtain Wall Right Door

Door Properties:	
Name:	Curtain Wall Right Door
Door Type:	Custom A2
Handing:	HRSO
Doorlite PC:	1 Bronze Ins TE
Hinge Type:	Butt Hinge
Stile:	500 Beveled
Frame Type:	1600 WALL 7 1/2" FLUSH FAB - A2
Labor:	
Labor (Shop):	Frame Fab: 20 min Door Fab: 20 min

Labor (Field):	Frame Install: 30 min
	Door Install: 30 min
	Hardware Install: 30 min
	Door Adjust: 15 min
	Hardware Fab: 0 min
Door / Frame:	Door #: 500-SBVBK
Hardware:	
Locking:	(1) 138120 ADAMS 4510 Latch Lock (1) 138125 ADAMS 4510 Lock Frame Prep. (1) 138241 Paddle 4590 (1) 138242 Electric Strike (1) 138243 Electric Strike Fame Prep. (1) 138224 Cylinder Guard (1) 138672 Cylinders
Hinging:	(3) 138408 Hinge - #29 Black (3) 138418 Hinge Frame Prep.
Options:	(1) 137700P Push/Pull#40 Dark Bronze
Closer:	50924 Closer 138064 Hardware and Door Prep. 138065 Frame Prep.
Cross Rails:	
Cross Rails:	138713 3 1/2"
Finish:	#40 Dark Bronze
Orient:	Horizontal
Location:	40
Btm/Left Stops:	138219
Finish:	#40 Dark Bronze
Top/Right Stops:	138219
Finish:	#40 Dark Bronze
Rail Prep:	138716
Muntin Config:	True Divided

9. SAVE door, then click OK to insert the door.
10. Select all intermediate horizontals between rows 2 & 3 and set the BOH to 137 1/2".
11. Select intermediate horizontals in panels 1 & 5 between rows 1 & 2 and set the BOH to 84".
12. Click SAVE.
13. Click on NEW FRAME icon.

Note: Curtain wall door frames can be Flush or Adapter. Flush adds the door stop to the glass pocket and sits flush with the vertical member. Adapter frames add an additional interior framing member to the door opening taking up ¾" at jambs and 2" at head of door.

1. Hold ALT key and SHIFT key and click in Panel 1 -rows 1, 4, 7, 10, 13 at panel 1 and set the DLO height to 21 ½”.
2. Hold ALT key and SHIFT key and click in Panel 1 - rows 1, 4, 7, 10, 13 at panel 1 and set the infill to Spandrel. Right click on glass lite and go to **SPANDREL**.
3. Hold ALT key and SHIFT key and click in Panel 1 - Rows 2, 5, 8, and 11 at panel 1 and set the infill to Tempered. Right click on glass lite and go to **TEMPERED**.
4. Select Face Member Color in Frame Information Bar on right and change color to #26 Light Bronze.
7. Left Click the SAVE Icon.
8. Select Frame - Copy Frame.
9. Name the Frame – Frame 2 Right
10. Left Click the Save Icon.
11. Exit Graphics Editor.

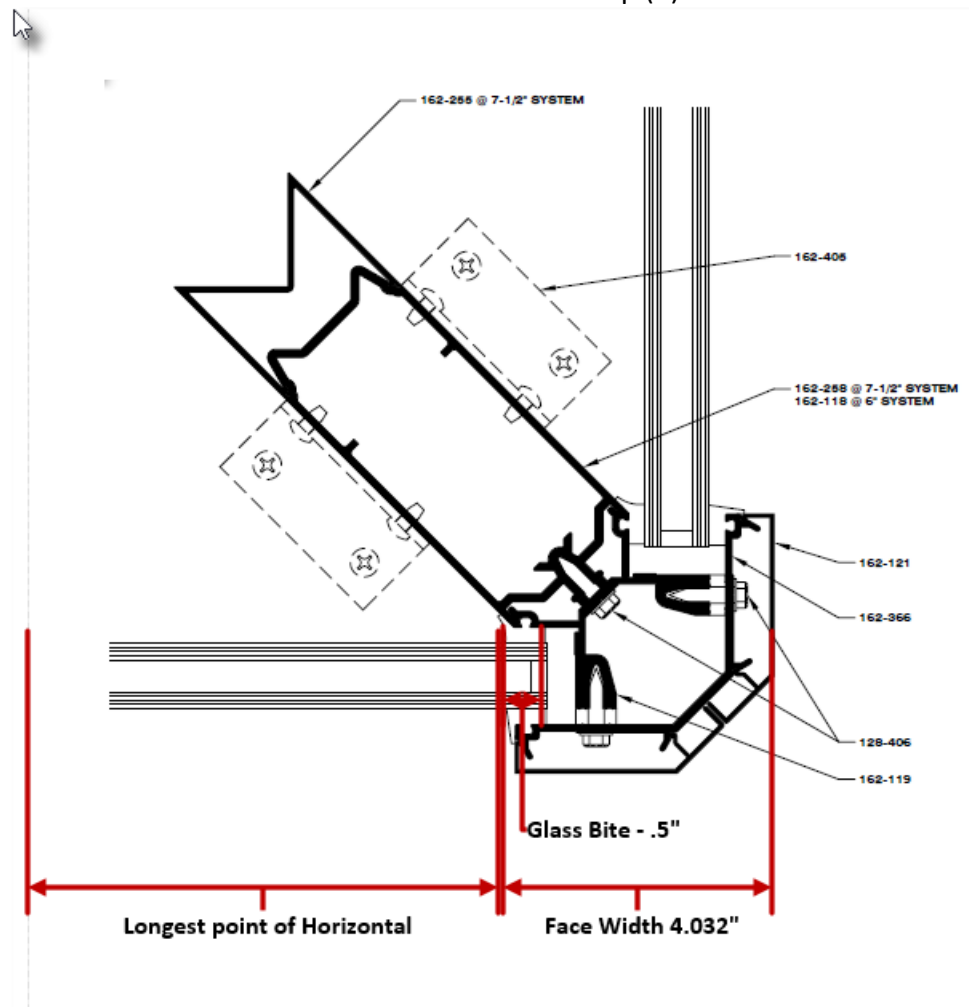
Adding Parts to Catalog Parts

Exercise 28: Add Catalog Parts for Curtain Wall Corner

Objective(s):	<ul style="list-style-type: none">• Copy existing part to create a NULL part with similar attributes.• Copy an existing part for creating an ASSEMBLY PART.• Inserting Parts into an existing elevation.
----------------------	--

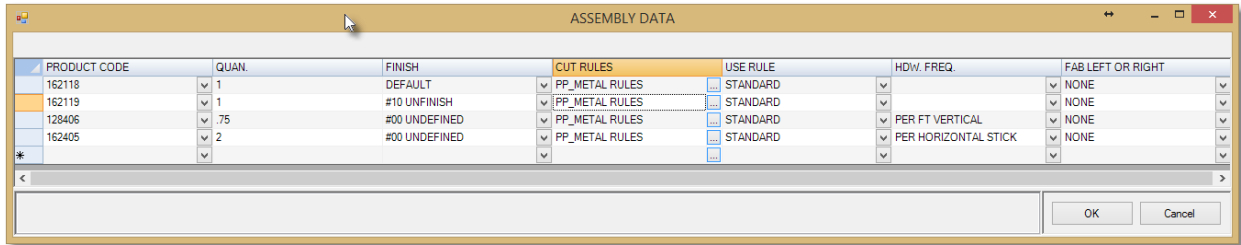
We are going to put a corner into our curtain wall frame, since the 2 frames will share a common jamb, we will need to create a NULL part that has the same framing and glass values as the corner condition. We will also need to create an assembly for the back member and an assembly for the face cover.

We have to manage the curtain wall in layers. 1. Back Member Layer, 2. Pressure Plate Layer and 3. Face Cap Layer. Our Back Member is a combination of 162118+162119. Our Pressure Plate is a 162366 and our Face Cap (2) of the 162121.



First we need to create 2 assemblies for the back member parts and face cap. We don't need one for the pressure plate because it is only one part that wraps around the corner.

- I. Create a Back Member Assembly
 1. Under Search – **162118** and Select it.
 2. Press the **Copy Icon** to make a copy
 3. Change the Name to **A/162118+162119**.
 4. Select the Assembly Data



5. In the first dropdown for Product Code put **162118**.
6. Quantity – **1**
7. Finish – **Default**
8. In the Second put **162119**
9. Quantity – **1**
10. Finish – **#10 Unfinished**
11. In the Third put the **128406**
12. Quantity – **.75**
13. Finish - **#00 Undefined**
14. Under Hardware frequency select **PER FT VERTICAL**
15. In the Fourth product code put **162405**
16. Quantity - **2**
17. Finish - **#00 Undefined**
18. Under Hardware frequency select **Per Horizontal Stick**
19. Press **OK** to close the Assembly Data.
20. Press the **Save Icon** to save the new assembly.

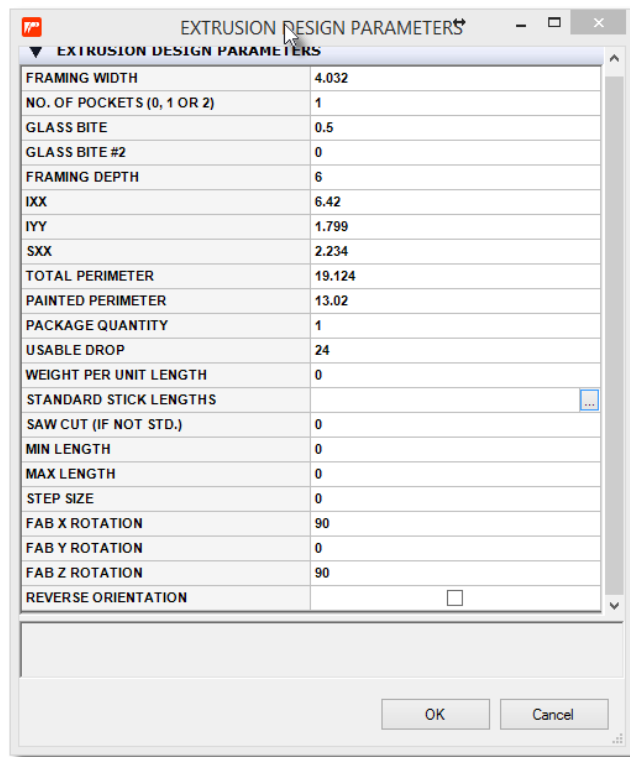
- II. Create a Face Cap Assembly
 1. Under Search – **162121** and Select it.
 2. Press the **Copy Icon** to make a copy
 3. Change the Name to **A/162121+162121**.
 4. Select the Assembly Data
 5. In the first dropdown for Product Code put **162121**.
 6. Quantity – **2**
 7. Finish – **Default**
 8. Press **OK** to close the Assembly Data.
 9. Press the **Save Icon** to save the new assembly.

Now, we need to create a III. Null 162118 part, a IV. Null 162366 part and a V. Null 162121.

To create a Null part with the same framing values and glass pockets we need to find the primary back member of the corner in the catalog parts, verify framing width and glass bite is accurate and then make a copy. Anything with NULL in the name is ignored in the optimization and recap, so it creates a ghost part that will still pick up hardware etc.

III. Create a Null Back Member

1. Select **CATALOG PARTS** on Left Main Menu bar under **DATABASES**.
2. Under Search – **162118** and Select it.
3. Go to **Extrusion Design Parameters**.



4. Make sure **Framing Width** is **4.032**
5. Number of Pockets **1**
6. Glass Bite **.5"**
7. Press **OK** to close.
8. Press the **Save Icon** to store the part.
9. Press the **Copy Icon** to make a copy
10. Change the Name to **NULL 162118**.
11. Press the Save Icon to store the new part.

- IV. Create a Null Pressure Plate
 1. Under Search – **162366** and Select it.
 2. Go to **Extrusion Design Parameters**.
 3. Make sure **Framing Width** is **4.032**
 4. Number of Pockets **0**
 5. Glass Bite **0**
 6. Press **OK** to close.
 7. Press the **Save Icon** to store the part.
 8. Press the **Copy Icon** to make a copy
 9. Change the Name to **NULL 162366**.
 10. Press the **Save Icon** to store the new part.

- V. Create a Null Face Cap
 1. Under Search – **162121** and Select it.
 2. Go to **Extrusion Design Parameters**.
 3. Make sure **Framing Width** is **4.032**
 4. Number of Pockets **0**
 5. Glass Bite **0**
 6. Press **OK** to close.
 7. Press the **Save Icon** to store the part.
 8. Press the **Copy Icon** to make a copy
 9. Change the Name to **NULL 162121**.
 10. Press the **Save Icon** to store the new part.

The above 3 parts will be used on one elevation's jamb to create the illusion that there is a corner on that frame, but will not actually pick up any parts on that frame for that jamb's back member, pressure plate or face cap since the other frame contains the parts needed for the corner.

Note: Anything with NULL in front of the Name is ignored during recap and optimization, but it does affect size, glass area and hardware selections.

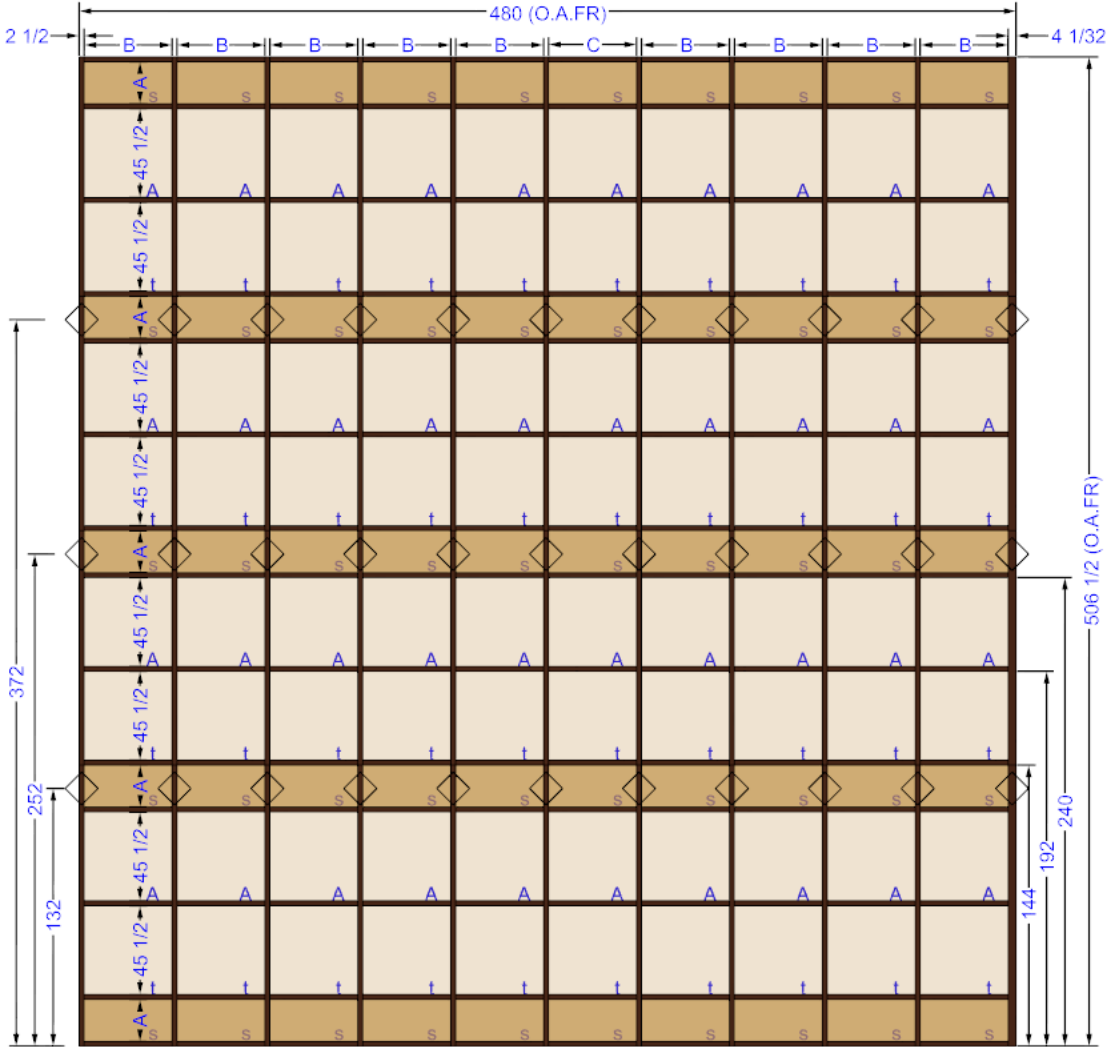
Assemblies are not defined by their name as much as the EXTRUSION DESIGN PARAMETERS and the ASSEMBLY DATA. Extrusion design parameters of an assembly tells us how much space that assembly should take in the editor, and the glass bite. The assembly data tells us what individual catalog parts are needed to create that assembly. Once we price or optimize, we are optimizing the individual parts instead of the Assembly.

Using New Parts on an Existing Project

Exercise 29: Add corner condition and splicing to existing frames.

Objective(s):	<ul style="list-style-type: none"> • Change Jamb to Assembly parts to create corner condition. • Set Anchor Points and Splice Locations. • Setting a NULL or Ghost Jamb.
---------------	---

We are going to put a corner into our curtain wall frame, since the 2 frames will share a common jamb, we need to start by opening one of the frames.

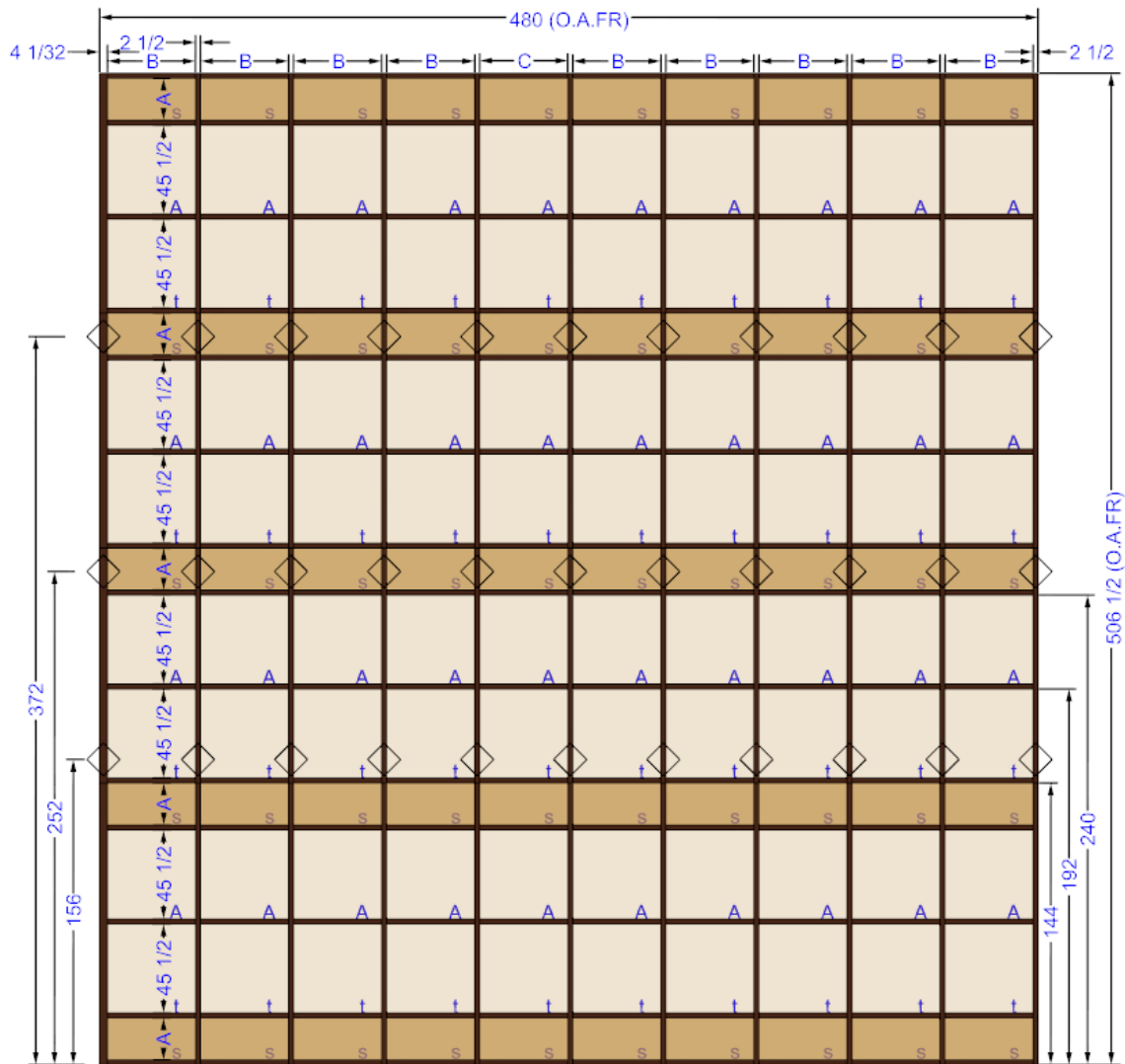


A=21 1/2 B=45 3/32 C=45 1/8

Edit Frame 2 Left

1. Open **Curtain Wall Project**

2. Open **Frame 2 Left**
3. Select **Right Jamb**
4. Under Stick Properties, go to **Right Jamb** and Change the Product Code to **A/162118+162119**.
5. Select Pressure plate and change the Product Code to **162366**
6. Select Face Member and change the Product Code to **A/162121+162121**.
7. Press **Apply** to change parts.
8. Select all verticals below the first splice, select Curtain Wall settings and set anchor points:
 - a. Set Anchor Location 1 to **11'**
 - b. Set Anchor Location 2 to **21'**
 - c. Set Anchor Location 3 to **31'**
 - d. Set Anchor Product Code to **Windload Clip**
9. Press **OK** to set Anchor Points.
10. Select all the verticals (hold ALT +Left Click on Left Jamb), select Curtain Wall settings and set splice location:
 - a. Set Splice Location 1 to **12'**
 - b. Set Splice Location 2 to **22'**
 - c. Set Splice Location 3 to **32'**
 - d. Set Splice Product Code to **Splice Sleeve**
 - e. Set Splice Gap to **1/2"**
 - f. Set Face Member Offset to **-6"**
 - g. Set Face Member Gap to **1/2"**
 - h. Set Pressure Plate Offset to **-3"**
 - i. Set Pressure Plate Gap to **1/2"**
11. Press **OK** to set Splices.
12. **Save** frame and press the **Red X** in the center window to go back to the project manager.



A=21 1/2 B=45 3/32 C=45 1/8

Edit Frame 2 Right

1. Open **Frame 2 Right**
2. Select **Left Jamb**
3. Under Stick Properties, go to Left Jamb and Change the Product Code to **NULL 162118**.
4. Select Pressure plate and change the Product Code to **NULL 162366**
5. Select Face Member and change the Product Code to **NULL 162121**.
6. Press **Apply** to change parts.
7. Select all the verticals (hold ALT +Left Click on Left Jamb), select Curtain Wall settings and set splice location:
8. Press **OK** button 2 times to clear the NULL Warning.
9. Select all verticals below the first splice, select Curtain Wall settings and set anchor points:
10. Press **OK** button 2 times to clear the NULL Warning.

- a. Set Anchor Location 1 to **11'**
 - b. Set Anchor Location 2 to **21'**
 - c. Set Anchor Location 3 to **31'**
 - d. Set Anchor Product Code to **Windload Clip**
11. Press **OK** to set Anchor Points.
12. Select all the verticals (hold ALT +Left Click on Left Jamb), select Curtain Wall settings and set splice location:
 - a. Set Splice Location 1 to **12'**
 - b. Set Splice Location 2 to **22'**
 - c. Set Splice Location 3 to **32'**
 - d. Set Splice Product Code to **Splice Sleeve**
 - e. Set Splice Gap to **1/2"**
 - f. Set Face Member Offset to **-6"**
 - g. Set Face Member Gap to **1/2"**
 - h. Set Pressure Plate Offset to **-3"**
 - i. Set Pressure Plate Gap to **1/2"**
13. Press **OK** to set Splices.
14. **Save** Frame and exit editor.

Project 3 Out of Square Framing (Level 3 Required)

Exercise 30: Project 3 Out of Square Project Data

Objective(s):	<ul style="list-style-type: none"> • Configure new Out of Square Project.
----------------------	---

Project Name: Seminar Project 3
Customer: Hansen Construction
Project Location: 1300 S Power Rd
 Mesa, AZ 85206
Date of Plans: (Today's Date)
Addendums: 1
Bid Date: (one week from today)
Remarks: Mall
Frameset Name: Project 3 Out of Squares

Metal Options:

Metal Group: M451 CG/SS/OG STOPS UP
Back Color: #40 DARK BRONZE: PERMANODIC

Glazing Options:

Annealed: 1 BRONZE INS AN
Tempered: 1 BRONZE INS TE

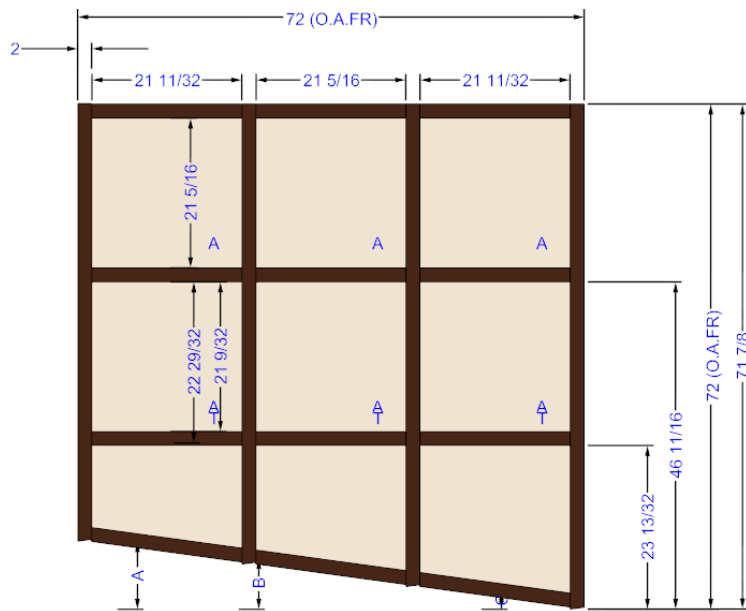
Sealants:

Caulking: Silicone
Backer Rod: 3/8" Backer Rod

Exercise 31: Project 3 OOS Frame 1 (Level 3 Required)

Objective(s):	<ul style="list-style-type: none"> • Create new frame in Project Manager. • Use Out of Square Editor – Move Perimeter Segment
---------------	---

Frame Name: Frame 1
Frame Shape: Rectangle
Panels: 3
Rows: 3
Number Thus: 1
Width: 6'
Height: 6'



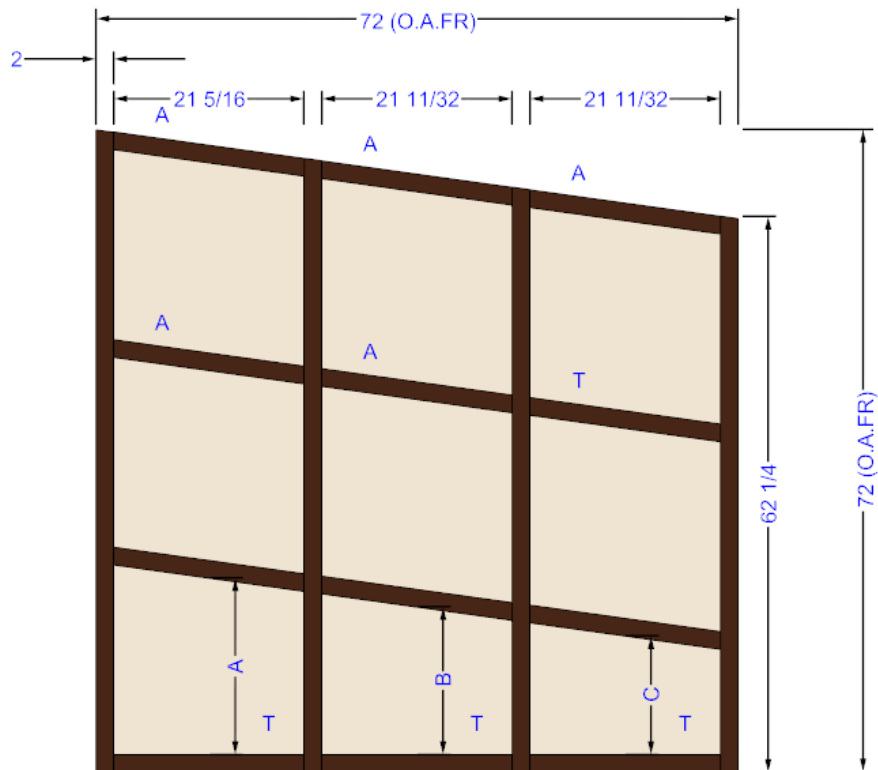
$$A=9 \frac{11}{16} \quad B=7 \frac{5}{16} \quad C=2 \frac{19}{32}$$

1. Select the Sill Member in Panel 1, select Out Of Square Editor, then select Move Perimeter Segment. (Level 3 Feature)
 - a. Corner to move: 1
 - b. Hold Corner: 2
 - c. Hold Corner: 4
2. Click OK.
3. Set X Location to 0 and Y Location to 10.
4. Click OK.
5. Click SAVE, then select NEW FRAME button on right.

Exercise 32: Project 3 OOS Frame 2 (Level 3 Required)

Objective(s):	<ul style="list-style-type: none"> • Create new Out of Square frame in Project Manager. • Use Out of Square Editor - Align Horizontals with Head.
---------------	---

Frame Name: Frame 2
Frame Shape: Right Trap
Panels: 3
Rows: 3
Number Thus: 1
Base: 6'
Height: 6'
Side: 62"



1. Select intermediate horizontals *in* Panels 1, 2 & 3 *between* Row 2 & 3 and select Out of Square Editor, then select align horizontals with head. (Level 3 Feature)
2. Select intermediate horizontals *in* Panels 1, 2 & 3 *between* Row 1 & 2 and select Out of Square Editor, then select align horizontals with head. (Level 3 Feature)
3. Left Click on the SAVE button, then select the NEW FRAME button on right.

2. Select panel 2 row 1 and then select the Insert Double Door icon.

Door Properties:	
Name:	Project 3 Dome Door
Door Type:	Custom A2
Single or Pair:	P
Handing:	SO
Lock Type:	Standard MS Lock
Hinge Type:	Butt Hinge
Stile:	500
Frame Type:	451T FAB - A2
Hardware Color:	Bronze
Doorlite PC:	1 Bronze Ins TE
Labor:	
Labor (Shop):	
Frame Fab:	40 min
Door Fab:	40 min
Labor (Field):	
Frame Install:	60 min
Door Install:	60 min
Hardware Install:	60 min
Door Adjust:	30 min
Door / Frame:	
Door #:	500-PBHMS72
Hardware:	
Locking:	(1) 138224 MS Cylinder Guard
Hinging:	(6) 138408 (6) 138418 Hinge Frame Prep.
Closer #1:	130885 Closer 138067 Frame Prep.
Closer #2:	130884 Closer 138067 Frame Prep.
Options:	(1) A/137732P+733P Pull Handle #29 Black

3. Save Door, and then Left click on the OK button to insert the door.

4. Click the horizontals *in* panels 1 & 3 and set the BOH to 30”.

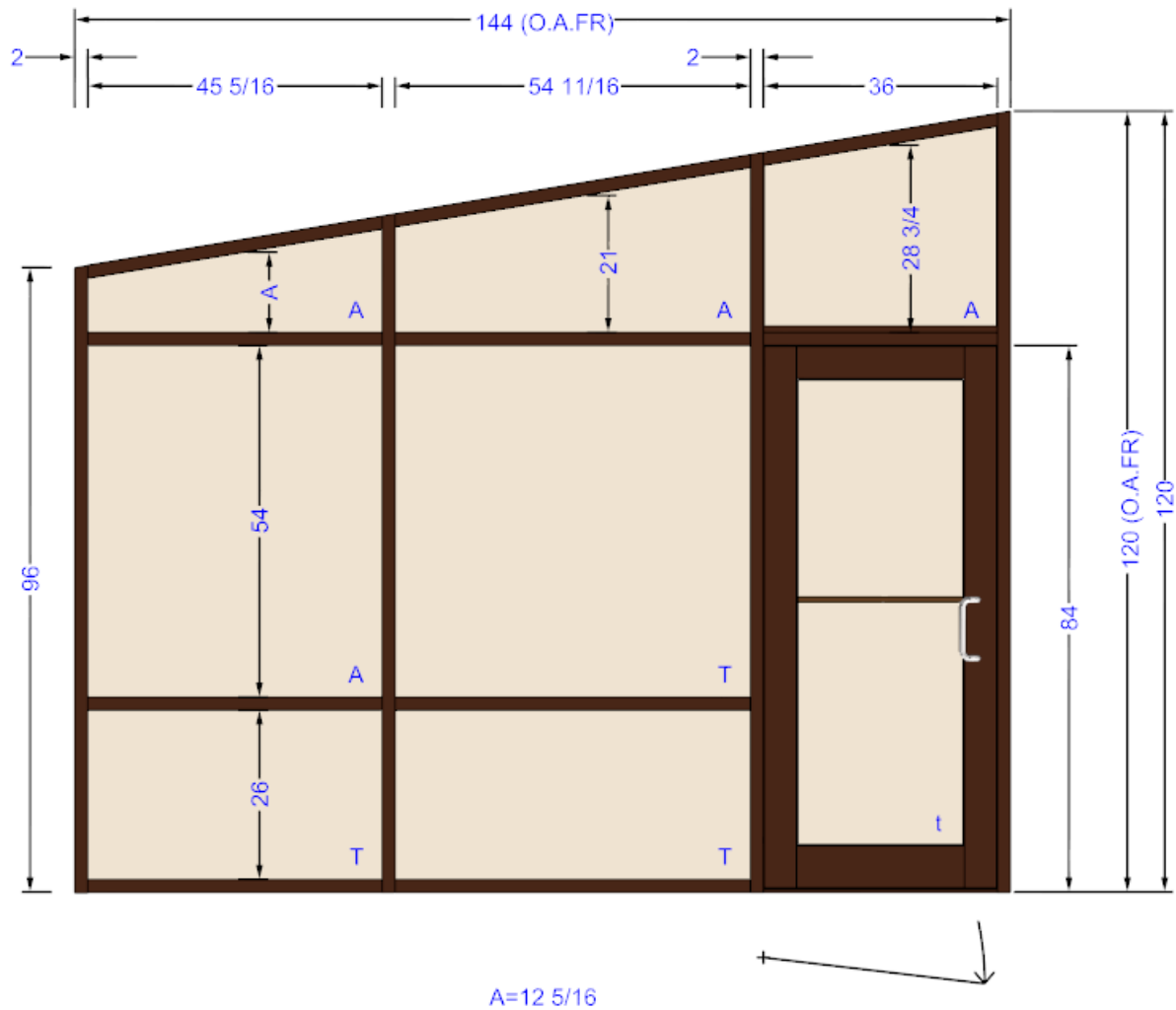
5. Click on the left door jamb just above the door header and click the Reverse Joinery icon.
6. Click on the right door jamb just above the door header and click the Reverse Joinery icon.
7. Click on both verticals in row 2 above the door header and click the Delete Stick icon.
8. Click in the opening of row 2 above the door and click on Out of Square Editor then Insert Shape and Sunburst.
 - a. Select Bottom Centered
 - b. Select True Divided Lites
 - c. Select Standard Product and click OK.
 - d. Sunburst Outside Radius: 38"
 - e. Number of Rays: 5
 - f. Select Don't Cut Arcs with Rays.
9. Click on the middle ray stick towards the top of the frame and click the Reverse Joinery icon.
10. Left Click on the SAVE button, then select the NEW FRAME button on right.

Note: Because of Microsoft Direct X – There will be times that we cannot shade in a glass lite to the appropriate color in the editor. This still picks up the glass at the right size and type, just has no color in the editor. If you click on the glass lite that has no color, it will show you the info on the right, but you will notice that the lite will not highlight in green like the others. This is the Graphic Card not responding to our draw request. We are working to resolve this for a future update, but it doesn't have any bearing on pricing or fabrication of the elevation.

Exercise 34: Project 3 OOS Frame 4 (Level 3 Required)

Objective(s):	<ul style="list-style-type: none"> • Create new Out of Square project in Project Manager. • Edit OOS project, including inserting Single Door.
---------------	--

Frame Name:	Frame 4
Frame Shape:	Left Trapezoid
Panels:	3
Rows:	3
Number Thus:	1
Width:	144"
Height:	120"
Side:	96"



1. Select Intermediate horizontal in Panel 3, Row 1 and 2. Delete Stick.

2. Select the Panel 3 Row 1 panel and insert Left Hinge Door.

Door Properties:

Name: Project 3 Left Door
Type: Custom A2
Single or Pair: S
Handing: HLSO
Lock Type: Standard MS Lock
Hinge Type: Butt Hinge
Stile: 500
Doorlite PC: ¼ Bronze TE
Frame Type: TF451 FAB - A2

Labor:

Labor (Shop):

Frame Fab: 20 min
Door Fab: 20 min

Labor (Field):

Frame Install: 30 min
Door Install: 30 min
Hardware Install: 30 min
Door Adjust: 15 min
Hardware Fab: 0 min

Door / Frame:

Door #: 500-SBVBK36
Frame#: NULL

Hardware:

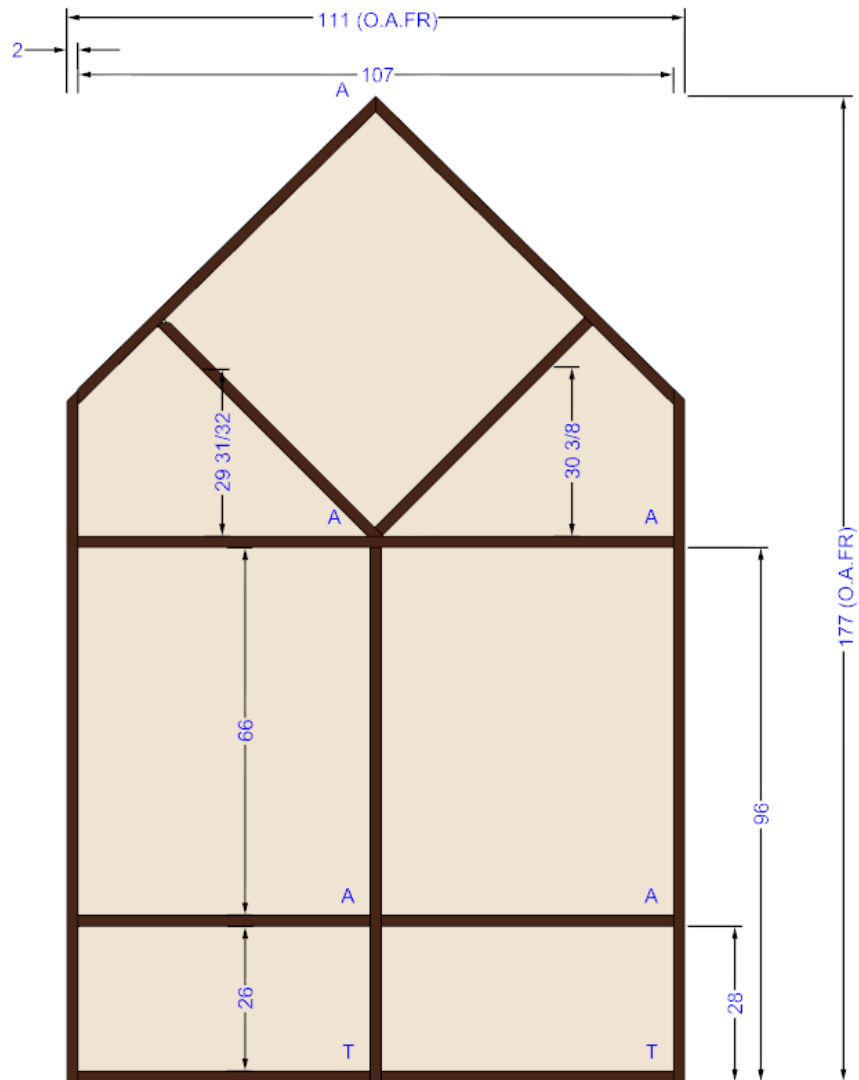
Locking: (1) 138123 Latch Lock
(1) 138224 MS Cylinder Guard
Hinging: (3) 138408 Butt Hinge
(3) 138418 Hinge Frame Prep.
Closer: 130884 Closer
138067 Frame Prep.
Options: (1) A/137732P+733P Pull Handle #29 Black

3. Save Door, then Left click on the OK button to insert the door.
4. Select the intermediate horizontal in Panel 1 and 2, Row 1 and 2 and set the Bottom of Horizontal height to 28"
5. Select the horizontals in Panels 1 & 2, Row 2 and 3 and set the (BOH) bottom of horizontal to a height of 84".
6. Click SAVE, then select NEW FRAME button on right.

Exercise 36: Project 3 OOS Frame 6 (Level 3 Required)

Objective(s):	<ul style="list-style-type: none"> • Create shape with Out of Square Editor. • Tilt a stick with Out of Square Editor.
---------------	--

Frame Name: Frame 6
Frame Shape: House
Panels: 2
Rows: 3
Number Thus: 1
Base: 9' 3"
Height: 14' 9"
Side: 10' 2 1/2"



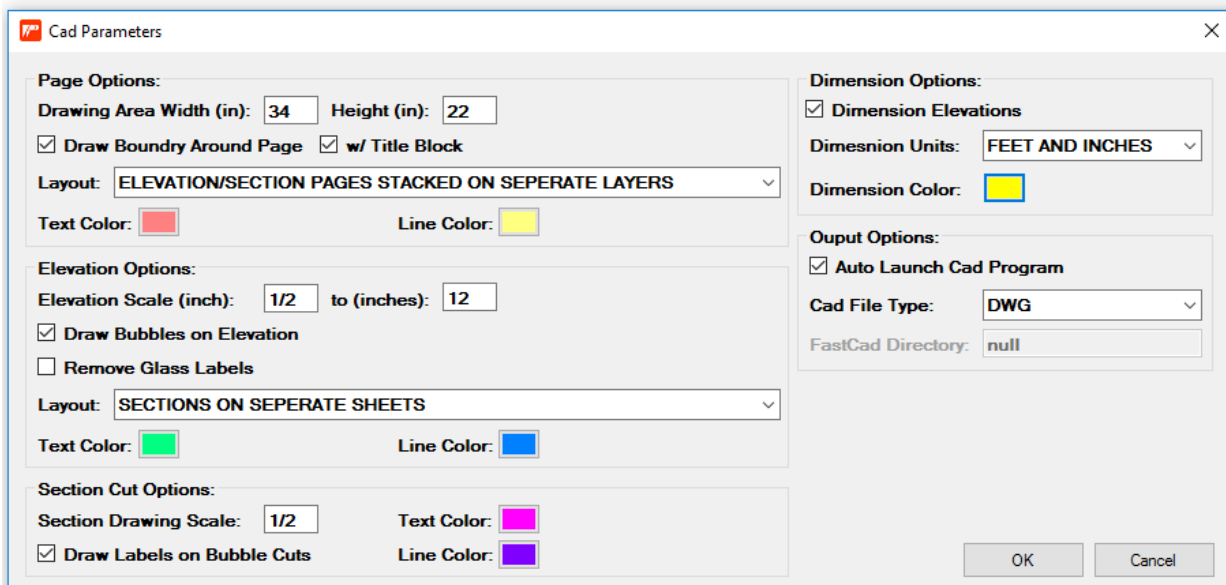
1. Select Intermediate Horizontals *in* Panels 1 & 2 *between* Row 1 & 2 and set BOH to 28".
2. Select Intermediate Horizontals *in* Panels 1 & 2 *between* Row 2 & 3 and set BOH to 8'.
3. Reverse Joinery of Intermediate Horizontals *between* Row 2 & 3 at the Intermediate vertical.
4. Select the vertical in the pitch area of the roof and Delete the vertical.
5. Select Glass Lite in house roof area and select Out Of Square Editor, then select Insert Shape, Sunburst.
 - a. Select Bottom Centered
 - b. Select True Divided Lites
 - c. Select Standard Product and click OK.
 - d. Sunburst Outside Radius: 10
 - e. Number of Rays: 2
 - f. Leave other options at defaults and click OK.
6. Select the Half Circle member of the sunburst and Delete the stick.
7. Select Left angle of ray and then select Out of Square Editor, Tilt a Stick.
 - a. Specify Stick: 16
 - b. Specify Fixed End: 1
 - c. Direction: 2
 - d. Angle: 15
8. Select right angle of ray and then select Out of Square Editor, Tilt a Stick.
 - a. Specify Stick: 17
 - b. Specify Fixed End: 1
 - c. Direction: 1
 - d. Angle: 15
9. Save and select the Project menu and then select Exit Editor.

CAD Setup

CAD Setup and Configuration in PartnerPak Studio

Objective(s):	<ul style="list-style-type: none">Configure PartnerPak Studio to be able to generate CAD details in AutoCAD/FastCAD.
---------------	--

Before you can use PartnerPak Studio to generate CAD Shop Drawings, you must set up the parameters for the CAD Program that you intend to use to receive the shop drawings. Select **Tools** then **Options** and click on the **CAD Parameters** button to configure the shop drawing layout.

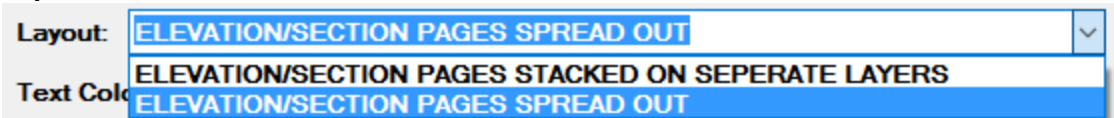


Now you must define the layout you will expect for your CAD programs, and this will vary for each CAD Program. We will start by going over the standard settings for all CAD based programs, then finish with the unique settings for FASTCAD v32, FASTCAD v7 and AUTOCAD.

Page Options:

Drawing Area Width (in): How large the printable area of your printer can take or how large you wish to print the drawing.

Layout:



Draw a boundary around the plot area: Sets a border around your shop drawing with a title block.

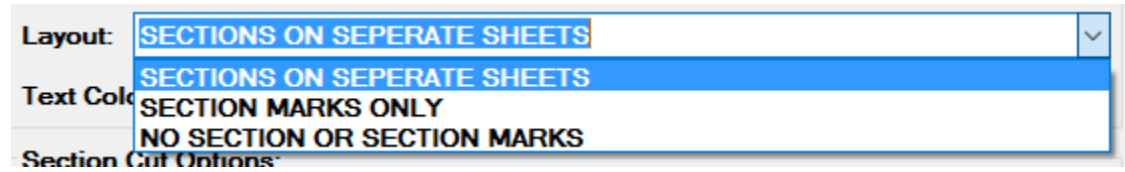
Elevation Options:

Elevation Scale (inch): This feature is used with the drawing size to make sure that your elevation drawing fits in the selected border size of the shop drawing. If you are printing large elevations on 17" x 11" paper, you may have to go to 1/4 scale to get the frame to fit.

Draw bubbles on elevations: Draws bubble markers on each elevation that corresponds with section details.

Remove Glass Labels: Will not include the glass type being used on the elevations.

Layout: Sections can be drawn on Separate sheets, with marks only, or with no section or section marks



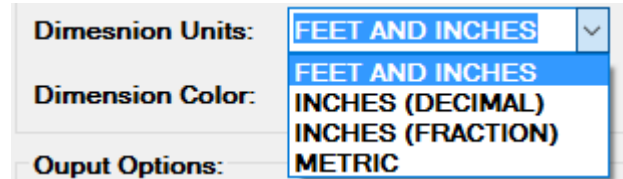
Section Cut Options:

Section Drawing Scale: This is for the scale size of the details.

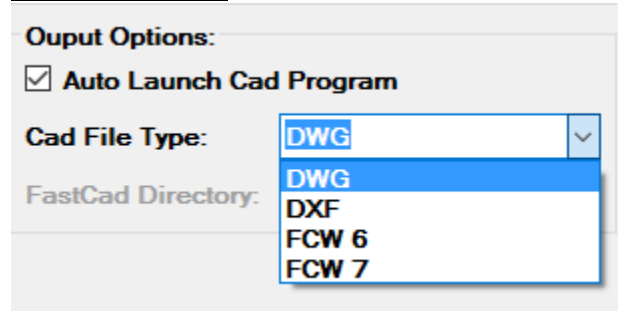
Dimension Options:

Draw labels on bubble cuts: Draws the corresponding layer and detail number in the bubble on each elevation.

Dimension Units: Standard dimensions or eliminate dimension lines altogether.



Output Options:



CAD FILE TYPE: DWG, DXF, FCW 6 or FCW 7.

Color Options Are For DWG ONLY

CAD Setup for Individual Programs

CAD Setup for Fastcad32 v6

File Type should be set to FCW 6.

Automatically Launch CAD Program should have a checkmark.

CAD Directory Location should have C:\FCAD32\ in the textbox.

Press the OK button to accept the changes and proceed to the Create Shop Drawings section for further instructions.

CAD Setup for Fastcad v7

File Type should be set to FCW 7.

Automatically Launch CAD Program should not have a checkmark.

CAD Directory Location should have C:\FASTCAD7\ or be Blank in the textbox.

Press the OK button to accept the changes and proceed to the Create Shop Drawings section for further instructions.

CAD Setup for AutoCad r14-2000LT– through 2012

File Type should be set to DXF or DWG.

Automatically Launch CAD Program should have a checkmark.

CAD Directory Location should have NULL or Blank in the textbox.

Press the OK button to accept the changes and proceed to the Create Shop Drawings section for further instructions.

CAD Setup for All other CAD Programs

File Type should be set to DXF.

Automatically Launch CAD Program should not have a checkmark.

CAD Directory Location should have NULL or Blank in the textbox.

PartnerPak for windows cannot control how many levels of details other CAD programs can handle, and therefore recommends that FASTCAD or AutoCad be used with the PartnerPak Program.

Press the OK button to accept the changes and proceed to the Create Shop Drawings section for further instructions.

Creating Shop Drawings

Creating shop drawings through PartnerPak Studio is the same for all CAD Programs.

The differences arrive when you use each individual CAD program for viewing and editing the shop drawings.

First we will look at how to create the shop drawings based on the settings that you have selected from the CAD Parameter Setup section.

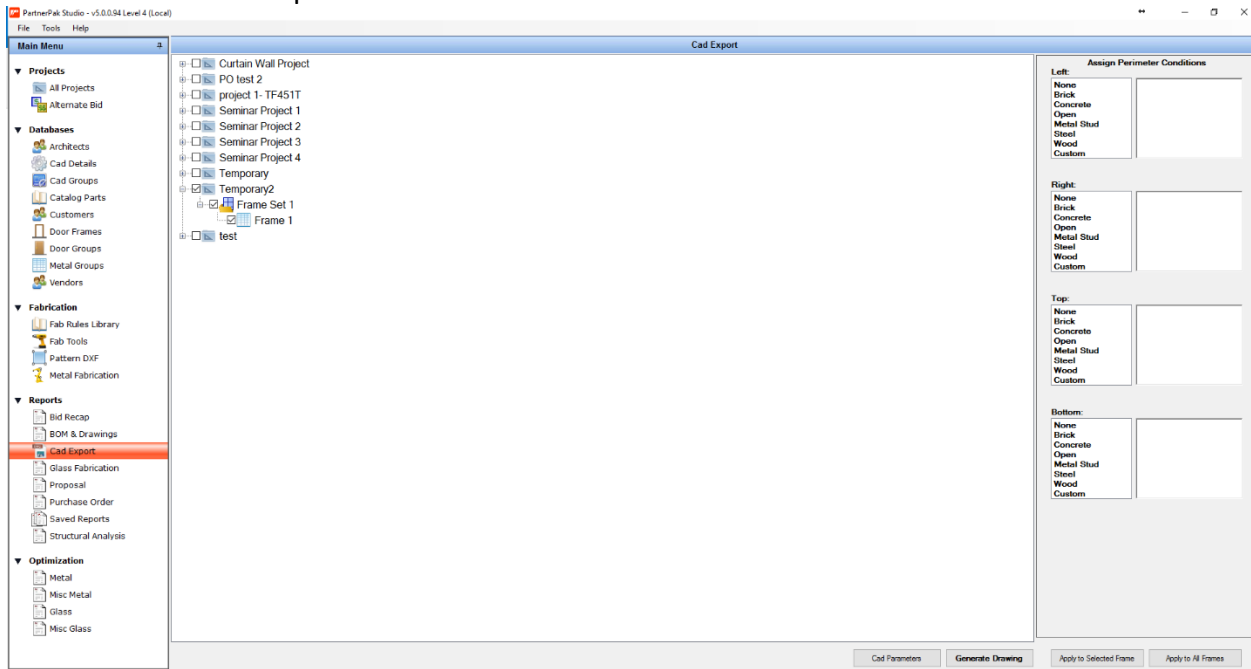
To begin, you must have built your elevations in PartnerPak Studio. Based on the materials you selected for your project, we can generate CAD elevations and details directly into your CAD Program.

When you create shop drawings through PartnerPak Studio, it will create 2 files based on what settings have been configured. It will create the actual CAD file in the appropriate format, and it will create a script file that will import the details into the drawing. This can be done automatically from some programs, and manually from others. See the section best describing your CAD program for basic assistance.

PartnerPak Studio Shop Drawings

To create shop drawings select from the main menu:

1. Click on a project in the project list.
2. Click on the CAD Export icon in the toolbar.

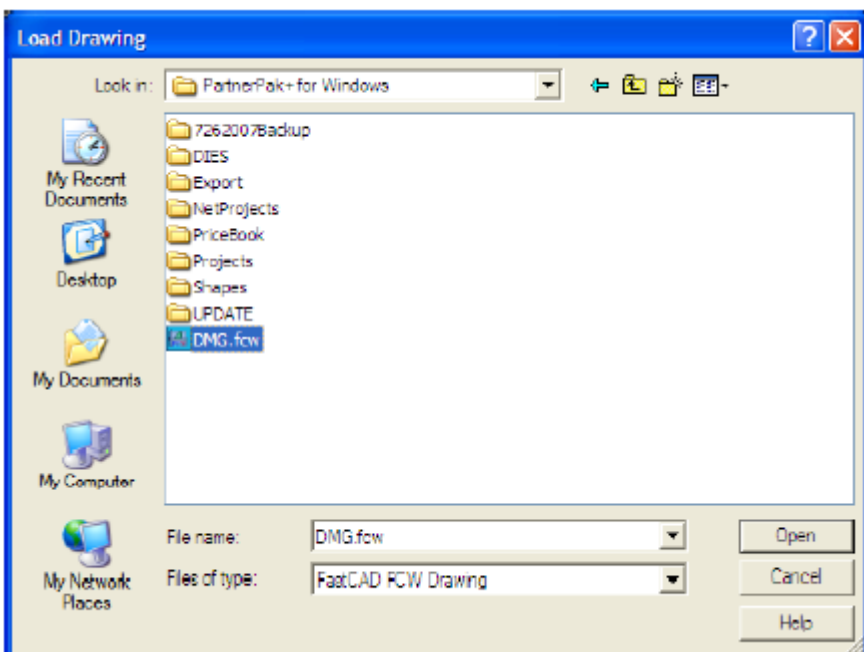


3. Uncheck any frames not to be included
4. Assign perimeter conditions to individual frames or click on the Apply to All Frames button.
5. Make any changes required on the CAD Parameter screen and then click **OK**.
6. Click the Generate Drawings button when completed.
7. When the CAD drawings are complete, you will see a Confirmation Screen appear and click the **OK** button.
8. If you had the Automatically Launch CAD Program checked then you should be sent into the CAD program type you specified.

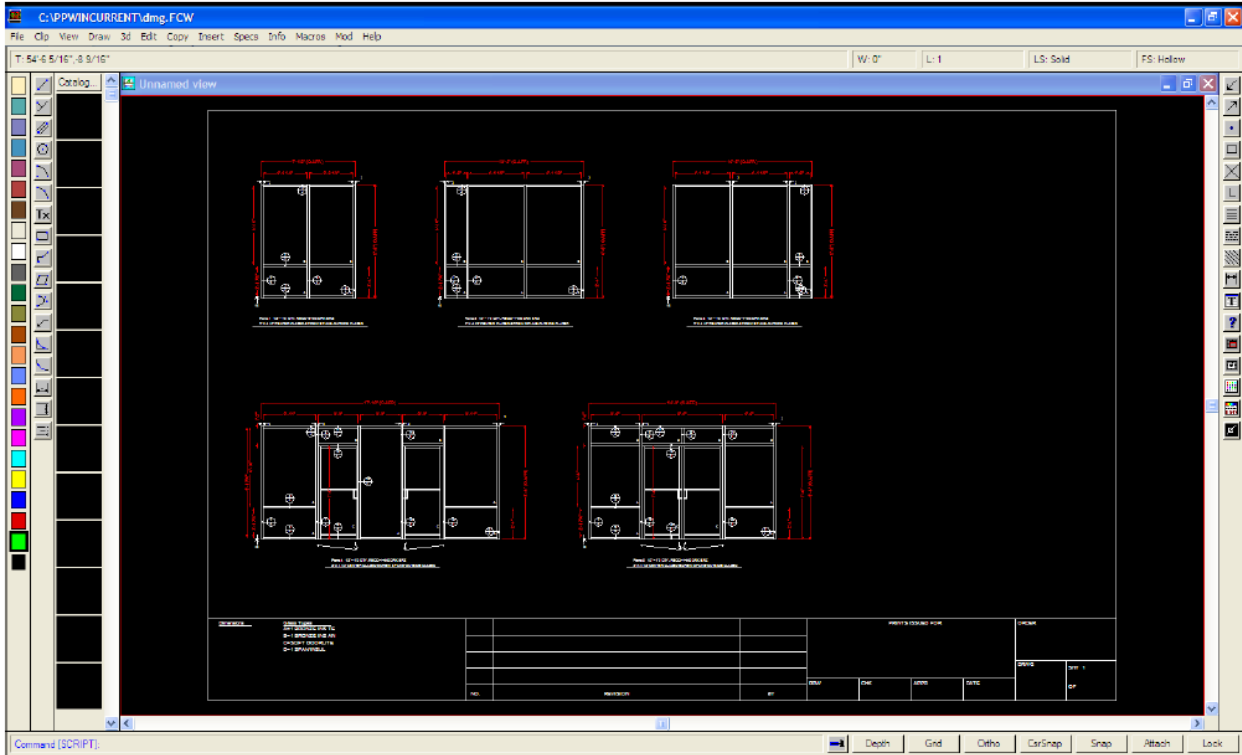
FastCAD32 to Version 7

FastCAD32 through Version 7 use the same tools and controls to manipulate the shop drawing. Below are some instructions on how to move around and view the different layers in the FastCAD program.

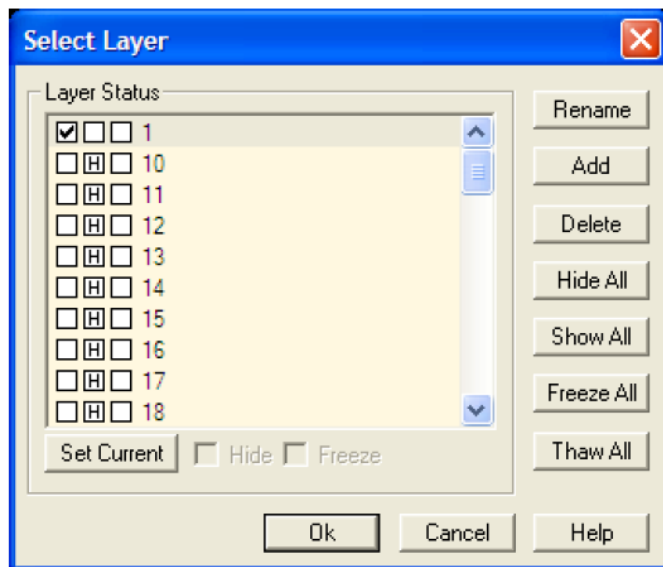
1. FastCAD32 should already have your drawing with elevations shown. If they do not, follow instructions 2 through 6. Otherwise skip to step 8.
2. Select File then select Open.
3. In the Look In dropdown box, select the C:\ drive.
4. Double Click Program Files then double click the DeMichele Group then on the PartnerPak Studio folder.
5. Locate the DMG.FCW for FastCAD32, or FastCAD v6 or FastCAD v7. You must change the Files of Type for FastCAD v7 to FCW – FastCAD32 and double click.



6. Select File then select Script and select the FCW32.SCR file.
7. It is either in the FastCAD7, FCAD32 or PartnerPak+ for Windows directory on your C: drive. Follow instruction 4 again to find the file. Select OK to run the script.



8. All of the DETAILS and ELEVATIONS are to scale, so the details are very small. We import all the layers at one time, so all are currently viewed. To select a specific layer, follow the instructions below.
9. Select Specs and click on Select Layer.
10. You will see layers available like 0, 1, 2, 3 .etc. For Fastcad V7 only. Click on the Button Purge Unused. This will get rid of the unused layers.



11. Click on the first box of the layer that you want to view. This will place a check mark in the box.

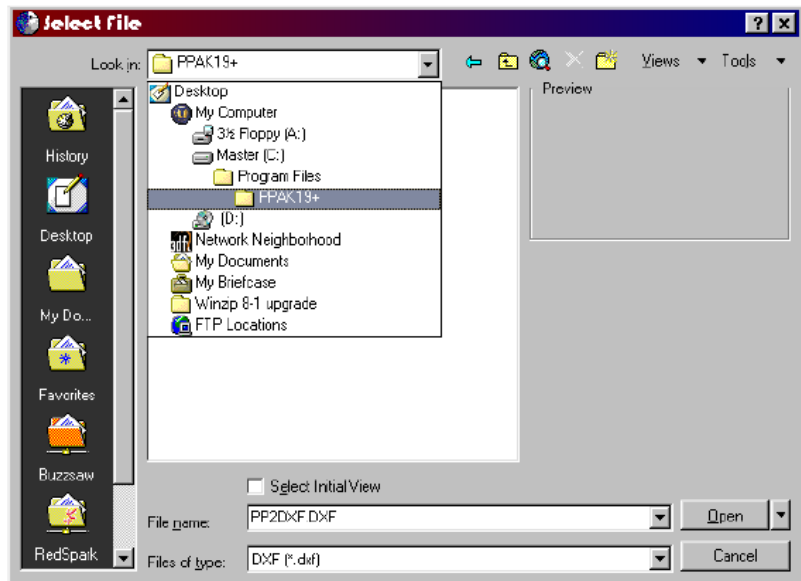
12. Select the Hide all button to hide the other layers. This will put an H in the second box of the other layers.
13. Select the OK button to go back to CAD.
14. Select View and then select Zoom Extents to view the entire current layer.
15. Repeat steps 9 through 13 to see different layers.
16. The FastCAD program has shortcut bars to assist with the view and zoom features.
17. Select File then Save As.
18. Save your file under a different name so that PartnerPak+ for Windows does not overwrite this file with the next shop drawing.
19. For further assistance with FastCAD, contact Evolution Computing at:
Evolution Computing
7000 N. 16th Street
Suite 120-514
Phoenix, AZ 85020
(800) 874-4028
www.fastcad.com

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AutoCAD r14 to Current

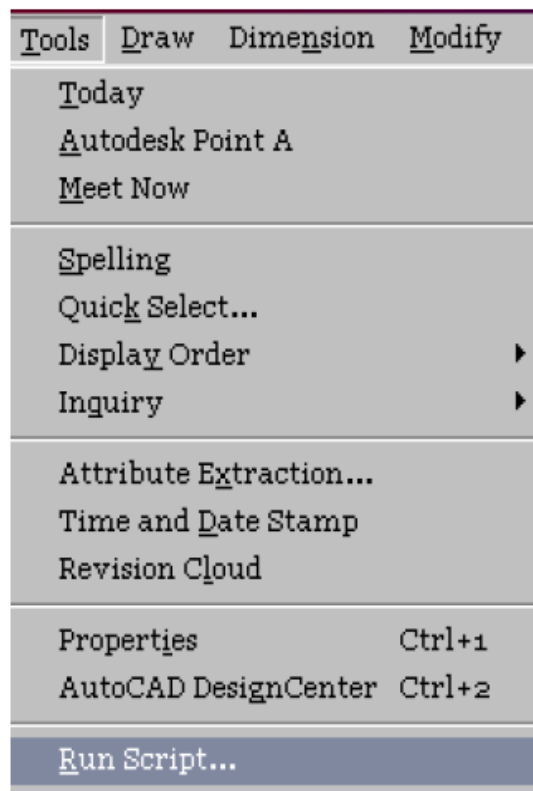
AutoCAD from version R14 to current uses similar tools and controls to manipulate the shop drawing. Below is some instructions on how to move around and view the different layers in the AutoCAD program.

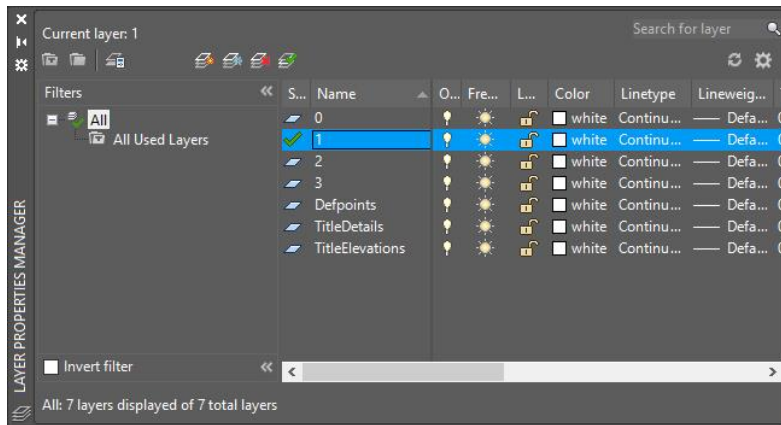
1. AutoCAD should already have your drawing with elevations shown. If they do not, follow instructions 2 through 6. Skip to step 7 if the drawing has appeared.
2. Select **File** then select **Open**.
3. In the **Look in** dropdown box, select the **C:** drive.
4. Double Click **Program files** then double click **Demichele Group** then double click the **PartnerPak Studio** folder.
5. Change **Files of Type** dropdown box to **.DXF or DWG** and then locate the **PP2DXF.dxf** or **PROJECT NAME.DWG** and double click.



Project name is the name assigned in PartnerPak Studio for that project.

6. IF you used DWG, script is automatic, if you use DXF format, Select **Tools** then **select Run Script** and select the **FCW32.SCR** file.
7. It is located in the PartnerPak Studio directory on your C: drive. Follow instruction 4 again to find the file. Select OK to run the script.
8. All of the DETAILS and ELEVATIONS are to scale, so the details are very small. We import all the layers at one time, so all are currently viewed. To select a specific layer, follow the below instructions.
9. Select **Format** and click on **Layer**.





10. You will see layers available like 0, 1, 2, 3 .etc.

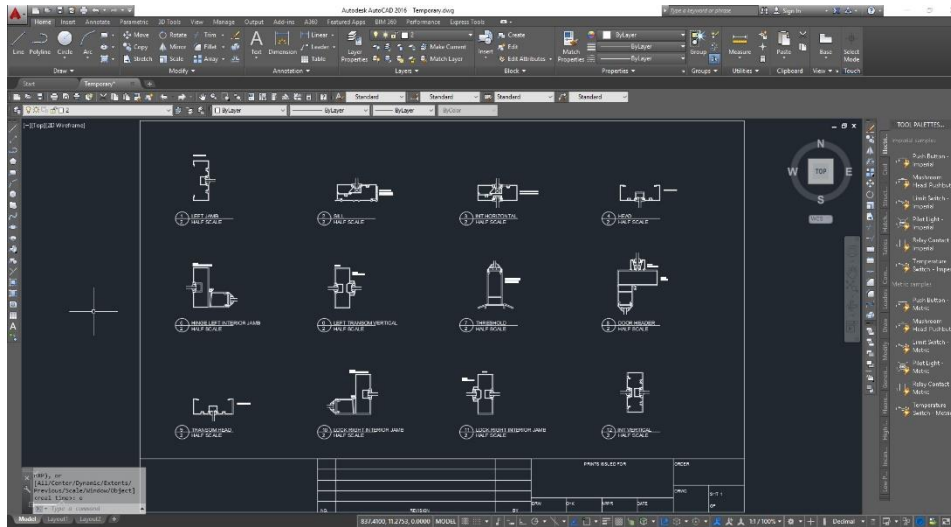
11. Click on the number of the layer that you want to view and select the **Current** button.

12. Click on the **Sun** icon for the other layers changing them to **Snowflakes**.

You only have to do this with the numbered layers.

13. Select the **OK** button to go

back to CAD.



14. Select **View** and then select **Zoom** then select **Extents** to view the entire current layer.

15. Repeat steps 7 through 12 to see different layers.

16. The AutoCAD Window has shortcut bars to assist with the view and zoom features.

17. Select **File** then **Save As**.

18. Save your file under a different name so that PartnerPak Studio does not overwrite this file with the next shop drawing.

For further CAD assistance contact AutoDesk at:

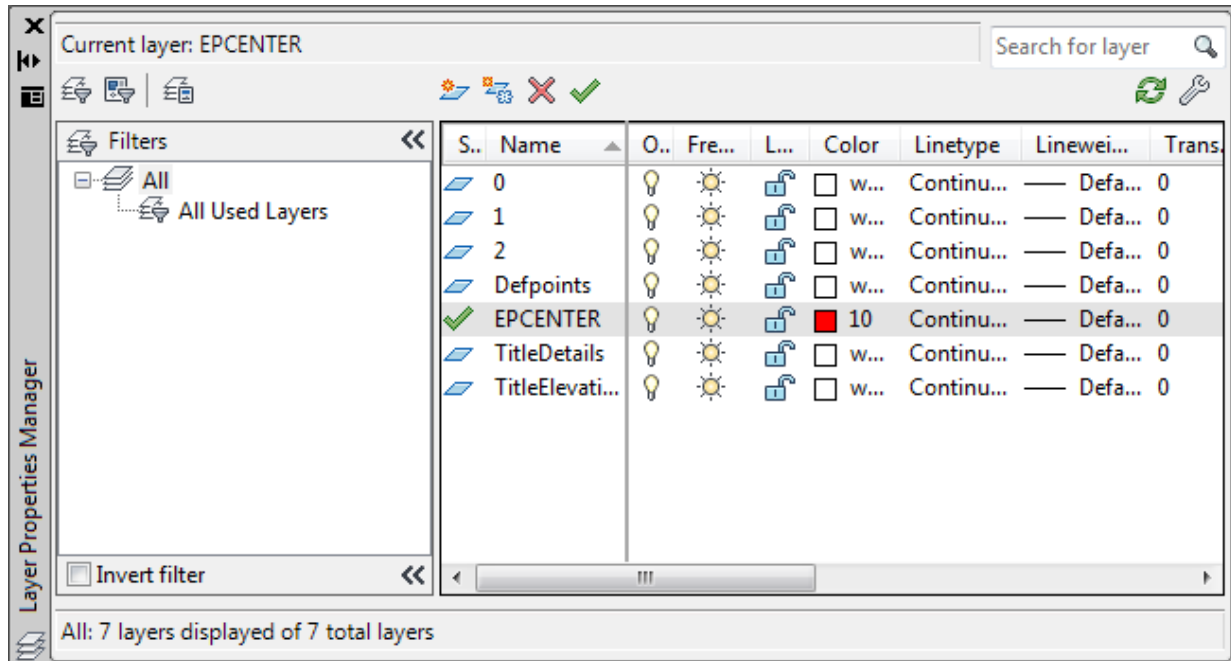
Autodesk Inc
 111 McInnis Parkway
 San Rafael, CA 94903
 415-507-5000
www.autodesk.com

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Importing DXF files into PartnerPak Studio

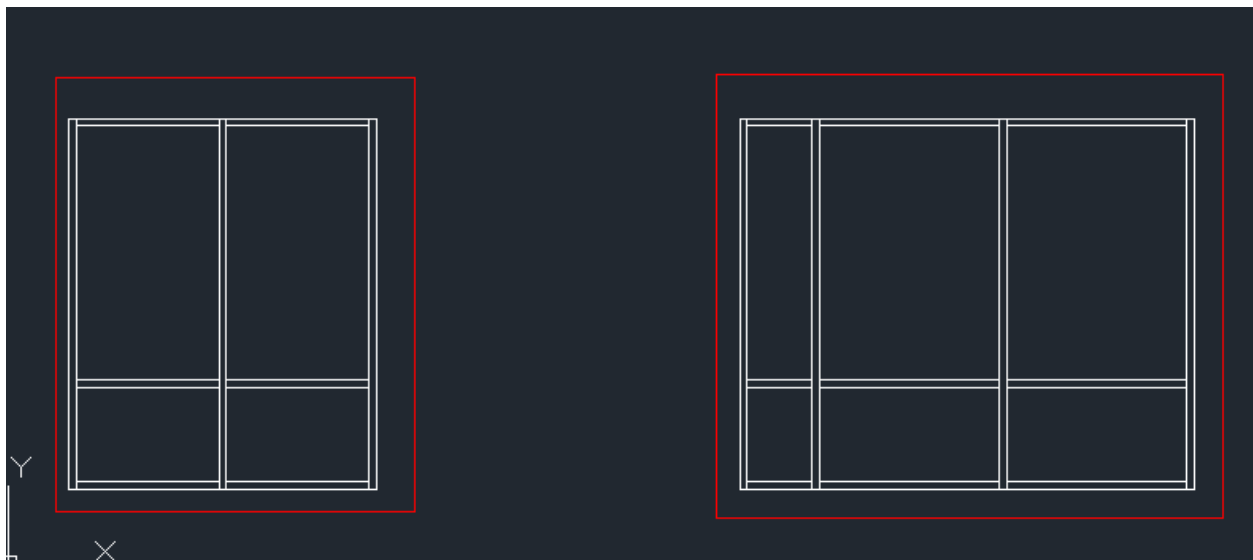
Objective(s): • Import elevations from CAD drawings.

1. Open CAD file with CAD program.
2. Create a layer named **EPCENTER** and set as current layer.



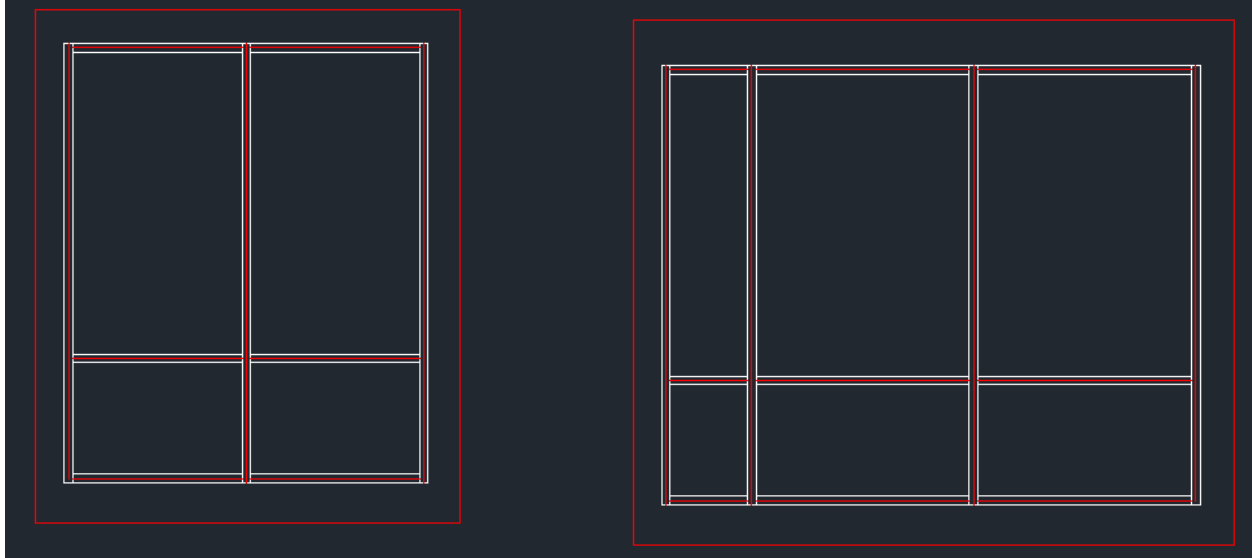
3. Use the draw rectangle box tool or command and draw boxes around each elevation to be imported.

Note: Do not overlap boxes between elevations or touch the elevations to be imported.



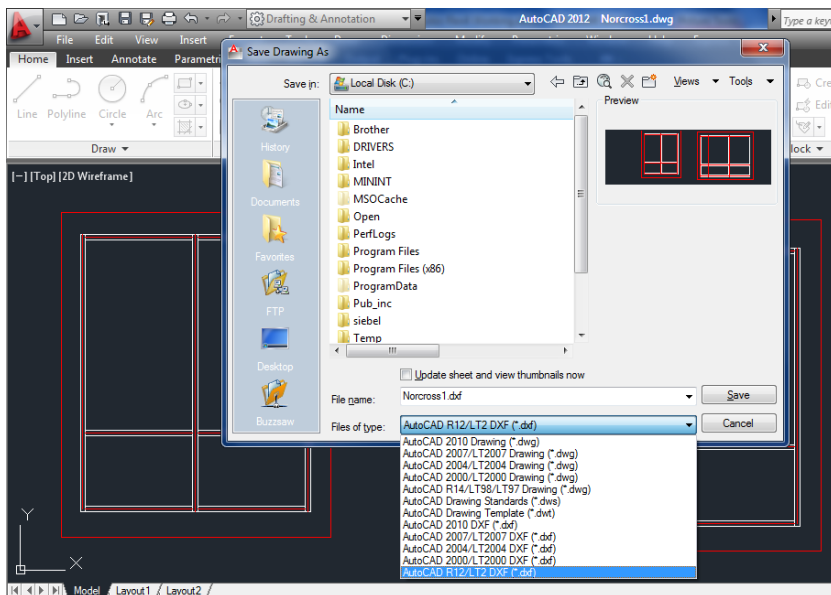
4. Use the draw LINE tool or command to draw vertical and horizontal centerlines of each stick of the elevation.

Note: Do not use the Polyline tool or command.

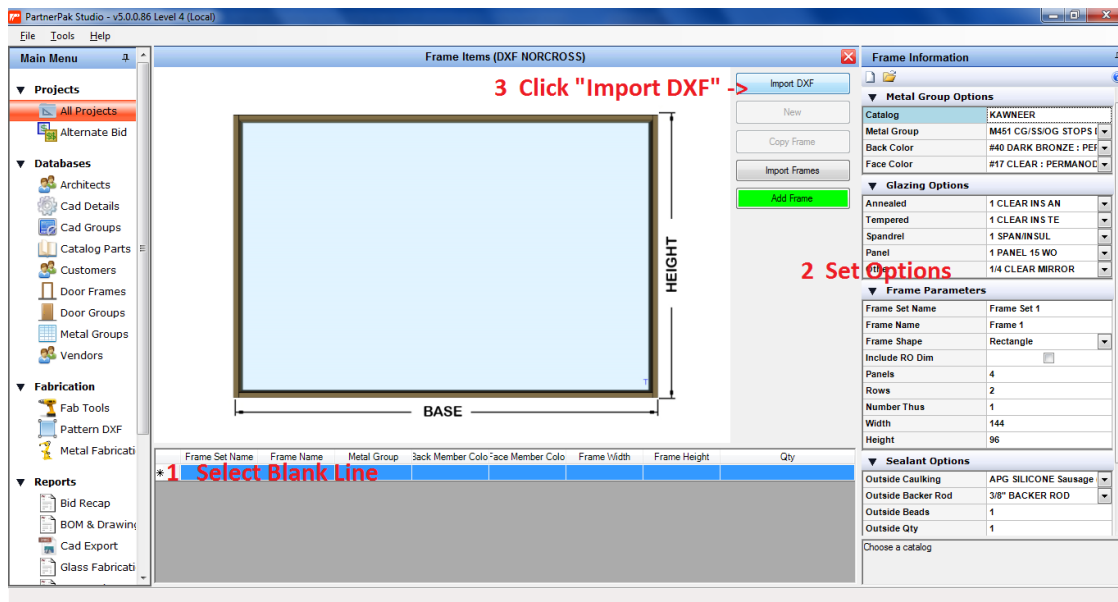


5. You can add centerlines to door frames, but leave the door stiles and rails empty.
(You will have to manually place the door in Studio)
6. Save the drawing as the lowest possible release of **DXF**.

(Recommended: AutoCAD R12 DXF)



7. Open PartnerPak Studio. Open an existing project or start a new project to import the DXF frames into.
8. Select a new line in the project for the frame to be added to.
9. Setup all your options for the frames that you are about to import
 Select desired **Metal Group**, **Glazing**, and **Sealant** options in **Frame Information** on right side.



10. Click **Import DXF** button and select DXF file.
11. Each frame in the DXF file will be created.

