

**STATE OF ALASKA  
ALASKA CLEAN/DRINKING WATER FUND  
GREEN PROJECT ASSESSMENT FORM**

As applicable under the EPA annual capitalization grants provided to the Alaska Clean Water Fund (ACWF) and Alaska Drinking Water Fund (ADWF) loan programs, a portion of funds appropriated shall be for projects to address green infrastructure, water or energy efficiency improvements or other environmentally innovative activities.” To meet this condition under the federal grant for administering these funds, this assessment form is provided to document this eligibility or what is termed a “Categorical” or “Business Case” justification, which will be reviewed by DEC for provisional compliance. For more information on green infrastructure development, please review the following EPA web site:

[http://cfpub.epa.gov/npdes/home.cfm?program\\_id=298](http://cfpub.epa.gov/npdes/home.cfm?program_id=298)

For those projects requiring a “Business Case,” Part 2 will require completion to qualify a “traditional project” as green; justification is broken down into two parts, technical and financial. The technical part should use information from a variety of sources such as maintenance or operation records, engineering studies, project plans or other applicable documentation to identify problems (including any data on water and/or energy inefficiencies) in the existing facility, and that clarifies the technical benefits from the project in water and/or energy efficiency terms. Financial justification needs to show estimated savings to a project based on the technical benefits, and demonstrate that the green component of the project provides a substantial savings and environmental benefit.

For more information and assistance in completing this assessment form, please contact the Municipal Matching Grants & Loans program in Anchorage at 907-269-7673, or in Juneau at 907-465-5300.

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**GENERAL INFORMATION**

Name of Community Anchorage

Address Eagle River Wastewater Treatment Facility, 15524 Artillery Road, Eagle River,  
Alaska.

Contact Name Todd Carroll, P.E. Title Project Mgr. Telephone (907)564-2753

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**PROJECT INFORMATION**

Project Name ERWWTF Rehabilitation Location Eagle River, AK

Project Type:          New Construction   x   Upgrades

         Stormwater Infrastructure   x   Energy Efficiency Project (portion of Phase 1)

         Water Efficiency Project          Innovative Environmental Project

Green Project Description: Replacement of old energy inefficient windows and overhead garage doors that are original from 1981. By replacing the items listed this project will reduce the consumption of heating energy.

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## PART 1 – GREEN PROJECT CATEGORY & COSTS

Identify the most appropriate “Green” Clean Water or Drinking Water category project type. Note, any selection with (BC) at the end will require a Business Case demonstration.

**ENERGY EFFICIENCY** – the use of improved technologies and practices to reduce the energy consumption of water quality projects.

Wastewater/water utility energy audits       Clean power for public owned facilities  
 Leak detection equipment       Retrofits/upgrades to pumps & treatment processes (BC)  
 Replace/rehabilitation of distribution (BC)     Other: Higher R-Value Windows/Doors (BC)

**WATER EFFICIENCY** – the use of improved technologies and practices to deliver equal or better services with less water.

Water meters       Fixture Retrofit       Landscape/Irrigation  
 Graywater or other water recycling       Replace/rehabilitation of distribution (BC)  
 Leak detection equipment       OTHER: \_\_\_\_\_ (BC)

**GREEN INFRASTRUCTURE** – Practices that manage and treat stormwater and that maintain and restore natural hydrology by infiltrating, evapotranspiring and capturing and using stormwater.

Green Streets       Water harvesting and reuse  
 Porous pavement, bioretention, trees, green roofs, water gardens, constructed wetlands  
 Hydromodification for riparian buffers, floodplains, and wetlands  
 Downspout disconnection to remove stormwater from combined sewers and storm sewers  
 OTHER: \_\_\_\_\_ (BC)

**ENVIRONMENTALLY INNOVATIVE PROJECTS** – Demonstrate new/innovative approaches to managing water resources in a more sustainable way. This may include projects that achieve pollution prevention or pollutant removal with reduced costs and projects that foster adaptation of water protection programs and practices to climate change.

Wetland restoration       Decentralized wastewater treatment solutions  
 Water reuse       Green stormwater infrastructure       Water balance approaches  
 Adaptation to climate change       Integrated water resource management  
 OTHER: \_\_\_\_\_ (BC)

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**PROJECT & GREEN COMPONENT COSTS**

	<b><u>TOTAL PROJECT COSTS</u></b>	<b><u>TOTAL "GREEN" COMPONENT COSTS</u></b>
Administration	\$ 1,000,000	\$ 0
Legal	\$	\$ 0
Preliminary Studies/Reports	\$	\$ 0
Engineering Design	\$ 1,400,000	\$ 50,000
Inspection/Surveying/Construction Management	\$ 300,000	\$ 25,000
Construction	\$ 10,000,000	\$ 125,000
Equipment	\$	\$
Contingencies	\$ 7,300,000	\$
Other	\$	\$ 25,000
Total Costs	\$ 20,000,000	\$ 225,000

**PART 2 – PROJECT “BUSINESS CASE” TECHNICAL/FINANCIAL ASSESSMENT**

**TECHNICAL ANALYSIS OF BENEFITS\***

In addition to this form, a supporting technical and financial analysis is required to verify energy and water saving efficiencies for any green component of the project. For green infrastructure and innovative environmental type projects, the analysis should include any applicable efficiency and environmental benefits. For assisting MGL in evaluating “Business Case” assessments of water main, meter, and pump facility replacement type projects, the attached form titled “ADWF - Water/Energy Efficiency Determination - Water Main Replacement/Meter/Pump Facility” is required to be completed. Once the form is complete along with any supporting documentation, please submit documentation to the MGL program for review and concurrence. Note, only water/energy efficiencies that achieve a 20% or greater increase in efficiency will categorically qualify as a Green project.

**CERTIFICATION STATEMENT:**

I certify the above information is current and accurate.

Todd Carroll, P.E.	Project Manager
_____ Name	_____ Title
 _____ Signature	10/24/2016 _____ Date

Submit Completed Form to:

Alaska Department of Environmental Conservation  
Municipal Matching Grants & Loans  
555 Cordova Street  
Anchorage, AK 99501-2617

# Thermacore® Door Systems



Product Line

MODELS

591 592 593 594 596 598 599 850



INDUSTRY LEADING  
COMMERCIAL & INDUSTRIAL SOLUTIONS

**THE TURNKEY SOURCE FOR COMMERCIAL AND INDUSTRIAL SOLUTIONS AND SERVICE**

Selection of Overhead Door products automatically includes the unequaled expertise and experience of Overhead Door Distributors. Nationwide coverage by our over 400 distributors is unique in our industry – providing a single source for design and application consulting, installation, service and ongoing maintenance. Turnkey services to maximize the lasting value of your product choice. Your Overhead Door Distributor is also your only source for a full line of commercial and industrial grille and operator systems specifically designed for integrated applications.



For over four generations, our distributors have been committed to providing commercial and industrial grille solutions. Combined with Overhead Door product design and manufacturing superiority, our distributors are a proud part of the Overhead Door family, sharing our name, our Red Ribbon logo and our commitment to industry leading innovation and excellence.

**GENERAL FEATURES AND BENEFITS**

**R-Values up to 26 (0.22 W/Msq) and air infiltration Performance up to .08 cfm/ft² at 25 MPH (1.46 m³/hr/m²)**

- Continuous foamed-in-place panel construction provides one of the highest R-values in the industry year in, year out
- Dual thermal break and joint seal between internal and external skins minimize air infiltration and provide the highest door system thermal efficiency in the industry
- Specially designed track and heavy-duty fixtures ensure a tight and reliable fit

**Lightweight, strong and durable panel construction**

- Continuous foamed-in-place panel construction provides superior thermal efficiency, and exceptional strength-to-weight ratio and proven durability
- Roll-formed, hot-dipped galvanized steel interior and exterior panels
- Two coats of baked-on polyester paint provide a durable finish

**Meets stringent wind load requirements (optional)**

- Exceptional panel strength and superior track design withstands harsh wind conditions.

**Environmentally friendly**

- Specially formulated polyurethane foam insulation ensures no ozone-damaging CFCs are used in the manufacturing process or in the panels

**Easy field repairability**

- Unique design allows on-site door customization for quick and precise installation, replacement or repairs

**A broad line to fit every application**

- Standard door widths up to 40'2" (12243 mm) and heights up to 32'1" (9779 mm)
- Doors for extra-heavy-duty, heavy-duty, medium-duty and light-duty applications

**Built to last**

- 10-year\* limited warranty against panel delamination of foam and steel skins
- 1-year limited warranty on door
- 3-year/20,000 cycle limited warranty on door and operator system

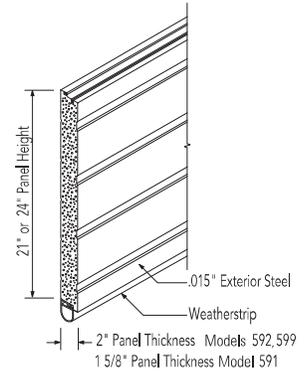
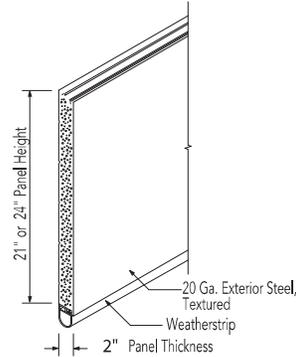
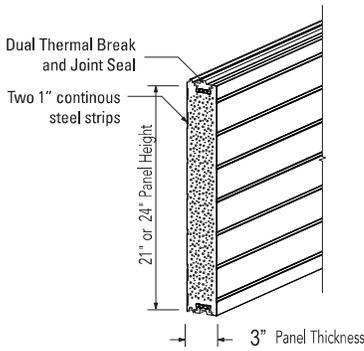
**High-usage components for special applications promotes long life and low maintenance**

- Heavy-duty, precision ground headplate bearings for enhanced counterbalance performance
- Oil-tempered, heavy-duty helical wound, torsion springs, available in 25,000, 50,000, 75,000 or 100,000 cycles for extra long life
- Solid-steel counterbalance shaft reduces fatigue and deflection
- Double end stiles and end hinges lessen loads on door-section
- Heavy-duty 3" (76 mm) hot-dipped galvanized steel track and 10 ball-bearing, long-stem rollers
- Additional center hinges reduce overall door section hinge loads
- Bottom sensing edge stops/reverses door upon contact with an obstruction

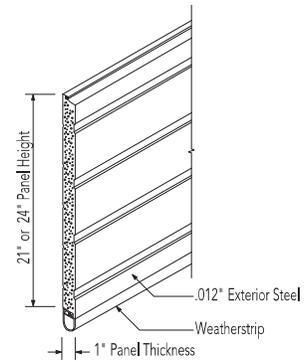
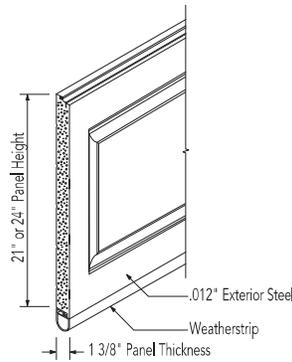
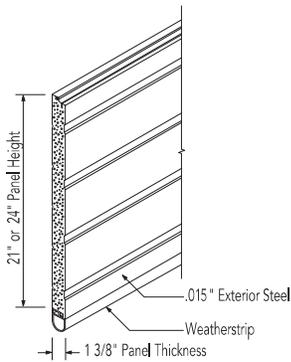
\*8-year on 598 Series



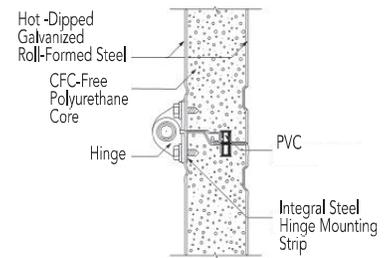
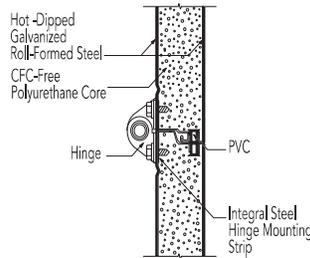
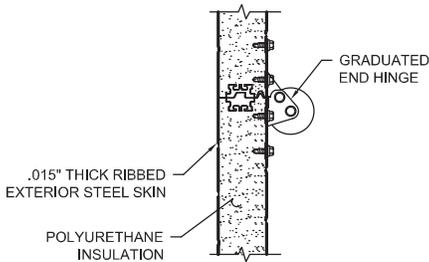
<b>Model 850</b>	<b>Model 596</b>	<b>Model 591</b> <span style="border: 1px solid red; padding: 2px;"><b>592</b></span> <b>Model 599 (flush)</b>
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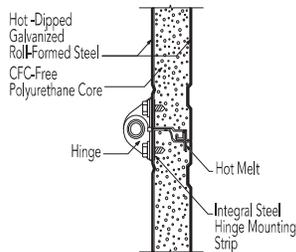
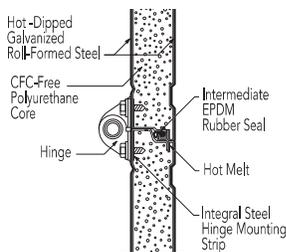
<b>Model 593</b>	<b>Model 594 (Raised Panel)</b>	<b>Model 598</b>
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<b>Model 850</b>	<b>Model 596 599</b>	<b>Model 591</b> <span style="border: 1px solid red; padding: 2px;"><b>592</b></span>
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<b>Model 593 594</b>	<b>Model 598</b>
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# Thermacore® Door Selection Chart

Model	592	591	593	598
Door Profile	 Double Thermal Acrylic (25" w by 12" h)	 Aluminum Sash Section* with DSB Glazing	 Insulated DSB* (24" w by 7" h)	
	 Clear Long (44" w by 15" h)**			
Glazing				

\*Not available on 598.  
\*\*Not available on 591. Not available on doors wider than 20'2".

Model	594
Door Profile	 Insulated DSB (20.75" w by 15" h)
Glazing	 Aluminum Sash Section with DSB Glazing

Thermacore®		GENERAL SPECIFICATIONS													
	MODEL	Panel thickness	R-value (W/Msq)	U-value (Msq/W)	Air infiltration at 15 mph (at 24 kmph)	at 25 mph (at 40 kmph)	Thermal break	Sound transmission	Exterior steel	Exterior surface	Standard end stiles	Standard Maximum width	Standard Maximum height	Exterior color	Optional colors available
Advanced Performance (Pg. 4)	850	3" (76.2 mm)	26 (4.58)	.038 (.220)	.09 cfm (1.65 Lpm)	.21 cfm (5.95 Lpm)	Dual thermal break & joint seal	class 22	.015" (.38 mm)	micro-groove, texture	18 ga	40'2" (12243 mm)	32'1" (9753 mm)	white, tan, almond, Industrial Brown	
Extra Heavy Duty (Pg. 5)	596	2" (51 mm)	17.40 (3.06)	.057 (.327)	.08 cfm (2.26 Lpm)	.08 cfm (2.26 Lpm)	PVC	class 26	20-ga galv. (.91 mm)	flush	16 ga	36'2" (11024 mm)	24'1" (7341 mm)	white, tan, gray, Industrial Brown	
Heavy Duty (Pg. 6-7)	599	2" (51 mm)	17.50 (3.09)	.057 (.324)	.08 cfm (2.26 Lpm)	.08 cfm (2.26 Lpm)	PVC	class 26	.015" (.38 mm)	flush	16 ga	40'2" (12243 mm)	32'1" (9779 mm)	white	
	592	2" (51 mm)	17.50 (3.09)	.057 (.324)	.08 cfm (2.26 Lpm)	.08 cfm (2.26 Lpm)	PVC	N/A	.015" (.38 mm)	ribbed	16 ga	40'2" (12243 mm)	32'1" (9779 mm)	white, tan, gray, Industrial Brown	Trinar white, Trinar brown, Trinar beige
	591	1 5/8" (41 mm)	14.86 (2.63)	.067 (.380)	.08 cfm (2.26 Lpm)	.08 cfm (2.26 Lpm)	PVC	N/A	.015" (.38 mm)	ribbed	16 ga	35'2" (10719 mm)	24'1" (7341 mm)	white, tan, gray, Industrial Brown	Trinar white, Trinar brown, Trinar beige, Pep Boy gray
Medium Duty (Pg. 8)	593	1 3/8" (35 mm)	12.76 (2.26)	.078 (.443)	.08 cfm (2.26 Lpm)	.15 cfm (4.24 Lpm)	Hot melt	N/A	.015" (.38 mm)	ribbed	20 ga	20'2" (6147 mm)	16'1" (4902 mm)	white, tan, gray, Industrial Brown	Trinar white, Trinar brown, Trinar beige, Pep Boy gray
	594	1 3/8" (35 mm)	12.76 (2.26)	.078 (.443)	.08 cfm (2.26 Lpm)	.15 cfm (4.24 Lpm)	Hot melt	N/A	.012" (.30 mm)	raised panel	20 ga	20'2" (6147 mm)	16'1" (4902 mm)	white, almond, sandstone, hunter green, chestnut brown, terra bronze	Trinar white, Trinar brown, Trinar beige
Light Duty (Pg. 8)	598	1" (25 mm)	9.31 (1.64)	.107 (.608)	.24 cfm (6.80 Lpm)	.46 cfm (13.03 Lpm)	Hot melt	N/A	.012" (.30 mm)	ribbed	20 ga	16'2" (4928 mm)	14'1" (4293 mm)	white	

**Model 596 599**

Door Profile



Glazing



Double Thermal Acrylic (25" w by 12" h)



Insulated DSB (24" w by 7" h)



Aluminum Sash Section with DSB Glazing



Clear Long (44" w by 15" h)\*

\*Not available on doors wider than 20'2".

**Model 850**

Door Profile



Glazing



Large Lites (25" w by 13" h)

Available with insulated glass, tempered glass, or multi-wall polycarbonate glazing (brown, white or clear)†. Black frame is standard. Color matched frames are available.

Contact your local Overhead Door Distributor or refer to the Overhead Door Architectural Design Manual for specific glazing detail.

**AVAILABLE OPTIONS**

Electric operator	Chain hoist	Thermal glazing	Four-section pass door	High-usage components	Post-tension drums	Safety bottom fixture	Bottom sensing edge	EPDM rubber header seal	Aluminum full view sash section	Tumbler keyed lock	Exhaust ports
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# Heavy-Duty Thermacore® Doors

## MODELS 850

### Standard Features At a Glance

Panel thickness	3" (76.2 mm)
R-value <sup>1</sup>	26 (4.58 m <sup>2</sup> /W)
U-value <sup>2</sup>	.038 (.22 W/m <sup>2</sup> )
Installed U-factor <sup>3</sup>	.14 Btu/hr * ft <sup>2</sup> * F° (.80 W/m <sup>2</sup> )
STC Rating <sup>4</sup>	Class 22
Air infiltration: at 15 mph (24 kmph)	.09 cfm/sq ft (1.65 m <sup>3</sup> /hr/m <sup>2</sup> )
Maximum width	40' 2" (12243 mm)
Maximum height	32' 1" (9753 mm)
Exterior steel	.015" (.38 mm)
Exterior surface	Microgroove, textured
Exterior color	White, Brown, Almond, Taupe
Interior color	White
Joint profile:	Dual barrier tongue-in-groove meeting rail consists of the industry's first dual tongue and groove joint profile (patents pending).
Thermal break	1-3/4" wide PVC thermal break; PVC thermal break on end stiles
Perimeter protection	Header seal Bottom weather seal; rigid PVC retainer with dual-durometer PVC bulb seal Enhanced thermal performance jamb seal (option) EPDM <sup>5</sup> outer bulb seal recommended for more extreme environments (option)
Continuous hinge strip	Two continuous steel strips at top and bottom of section for hinge attachment
Standard springs	10,000 cycle
Limited Warranty	10-year delamination 1-year material and workmanship 3-year/20,000 cycle door and operator system (material and workmanship)

### Options

- Large thermal lites (25" w x 13" h); black frame standard; optional color matched frame available
- Glass: insulated, insulated tempered, multi-wall polycarbonate in clear, bronze, or white
- High-cycle springs
- High-usage components
- Electric operator
- Chain hoist
- Cable failure device
- Exhaust ports

The Thermacore® AP Model 850 is Overhead Door's strongest, most thermally efficient door providing a superior level of protection against heat and cold. With sections that feature 3" thick polyurethane foam insulation, this door is the best choice for thermal protection against heat or cold in heavy duty applications. Features of the Model 850 include an R-value of 26, a U-value of .038, a tested U-factor of .14 and a patent-pending dual barrier tongue and groove joint profile that creates a virtually impenetrable path for air leakage in between sections.

Colors available on Model 850



For drawings and specifications please visit our website, [www.OverheadDoor.com/architects corner](http://www.OverheadDoor.com/architects%20corner).

<sup>1</sup> R-value is a measure of thermal efficiency. The higher the R-value the greater the insulating properties of the door. Overhead Door Corporation uses a calculated door curtain R-value for our insulated doors.

<sup>2</sup> U-value is a measure of the flow of heat through an insulating or building material; the lower the U-value, the better the insulating ability. U-value is the inverse of R-value.

<sup>3</sup> A tested value of actual energy loss - whether heat or cold - of an installed door, wall, or window assembly. The lower the number the lower the energy loss and therefore the better the thermal performance. For best U-factor, choose finish and color with high solar reflectance (bright colors).

<sup>4</sup> Sound Transmission Class (STC): how well the door reduces airborne sound. The higher the number the better sound reduction.

<sup>5</sup> Ethylene propylene diene monomer rubber. Used in the automotive industry for its superior durability and wearability.





MODEL 596



Installation and service: Overhead Door Company of Glens Falls

**Standard Features At a Glance**

Panel thickness	2" (51 mm)
R-value	17.40 (3.06 W/Msq)
U-value	.057 (.327 Msq/W)
Air infiltration:	
at 15 mph (24 kmph)	.08 cfm/ft <sup>2</sup> (1.46 m <sup>3</sup> /hr/m <sup>2</sup> )
at 25 mph (40 kmph)	.08 cfm/ft <sup>2</sup> (1.46 m <sup>3</sup> /hr/m <sup>2</sup> )
Thermal break	PVC
Exterior steel	20-gauge galvanized
Exterior surface	Flush, textured
Standard Springs	10,000 cycle
Sound transmission rating	Class 26
Std. maximum width	36'2" (11024 mm)
Std. maximum height	24'1" (7341 mm)
Exterior color	White, Gray, Tan, Industrial Brown
Interior color	White
Limited warranty	10-year delamination 1-year door 3-year/20,000 cycle door and operator system

**Options**

- Thermal glazing
- Aluminum sash section available to 24'2" (7366 mm) wide
- Four-section pass door
- High-usage components\*
- Wind load options
- Electric operator
- Chain hoist
- Posi-Tension® drums
- Safety bottom fixtures
- Bottom-sensing edge
- Flexible jamb, header seal
- Exhaust ports

\* Refer to General Features and Benefits on inside front cover

The Thermacore® Model 596 offers superior thermal efficiency for heavy-duty applications. The 596 is constructed of 20-gauge galvanized steel with a flush, textured finish. The 596 doors also carry a Class 26 sound transmission rating for applications where sound suppression is desirable.

Colors available on Model 596



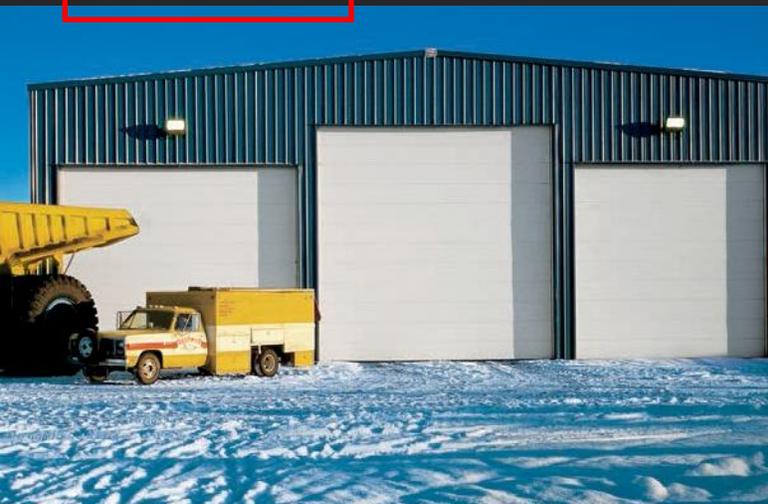
For drawings and specifications please visit our website, [www.OverheadDoor.com/architects corner](http://www.OverheadDoor.com/architects%20corner).

Installation and service: Overhead Door Company of Glens Falls



# Heavy-Duty Thermacore® Doors

**MODELS 592 599**



Installation and service: Overhead Door Company of Southwestern Idaho

## Standard Features At a Glance

Panel thickness	2" (51 mm)
R-value	17.50 (3.09 W/Msq)
U-value	.057 (.324 Msq/W)
Air infiltration:	
at 15 mph (24 kmph)	.08 cfm/ft <sup>2</sup> (1.46 m <sup>3</sup> /hr/m <sup>2</sup> )
at 25 mph (40 kmph)	.08 cfm/ft <sup>2</sup> (1.46 m <sup>3</sup> /hr/m <sup>2</sup> )
Thermal break	PVC
Exterior steel	.015" (.38 mm) galv.
Exterior surface	592–Ribbed, textured 599 –Flush, textured
Standard springs	10,000 cycle
Std. maximum width	40'2" (12243 mm)
Std. maximum height	32'1" (9779 mm)
Exterior color	592 - White, Tan, Gray, Industrial Brown, plus optional Trinar colors: White, Brown and Beige 599 - White only
Interior color	White
Limited warranty	10-year delamination 1-year door 3-year/20,000 cycle door and operator system

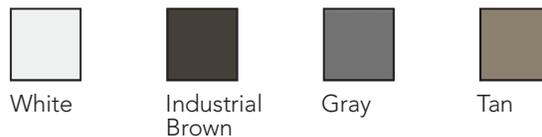
## Options

- Thermal glazing
- Aluminum sash section available to 24'2" (7366 mm) wide
- Four-section pass door
- High-usage components\*
- Wind load options
- Electric operator
- Chain hoist
- Posi-Tension® drums
- Safety bottom fixtures
- Bottom-sensing edge
- Flexible jamb, header seal
- Exhaust ports

\* Refer to General Features and Benefits on inside front cover

With a 17.50 R-value (3.09 W/Msq) and .057 U-value (.324 Msq/W), the Thermacore® Models 592/599 are the energy-efficient door of choice for commercial use. The 592/599 also incorporate a thermal break and joint seal to prevent thermal transfer between exterior and interior door panel skins. The door is designed for the most demanding situations, including high-cycle, wind load and thermal applications.

### Colors available on Model 592



Optional: Trinar White, Trinar Beige and Trinar Brown

### Color available on Model 599



White

For drawings and specifications please visit our website, [www.OverheadDoor.com/architects](http://www.OverheadDoor.com/architects) corner.

Installation and service: Overhead Door Company of Albany





MODEL 591



Installation and service: Overhead Door Company of Twin Falls

**Standard Features At a Glance**

Panel thickness	1 5/8" (41 mm)
R-value	14.86 (2.63 W/Msq)
U-value	.067 (.380 Msq/W)
Air infiltration:	
at 15 mph (24 kmph)	.08 cfm/ft <sup>2</sup> (1.46 m <sup>3</sup> /hr/m <sup>2</sup> )
at 25 mph (40 kmph)	.08 cfm/ft <sup>2</sup> (1.46 m <sup>3</sup> /hr/m <sup>2</sup> )
Thermal break	PVC
Exterior steel	.015" (.38 mm) galv.
Exterior surface	Ribbed, textured
Standard Springs	10,000 cycle
Std. maximum width	35'2" (10719 mm)
Std. maximum height	24'1" (7341 mm)
Exterior color	White, Tan, Gray, Industrial Brown plus optional Trinar colors: White, Brown and Beige
Interior color	White
Limited warranty	10-year delamination 1-year door 3-year/20,000 cycle door and operator system

**Options**

- Thermal glazing
- Aluminum sash section available to 24'2" (7366 mm) wide
- Four-section pass door
- High-usage components\*
- Wind load options
- Electric operator
- Chain hoist
- Posi-Tension® drums
- Safety bottom fixtures
- Bottom-sensing edge
- Flexible jamb, header seal
- Exhaust ports

\* Refer to General Features and Benefits on inside front cover

The Thermacore® 591 is the best-selling door in the Thermacore® line, and offers superior thermal efficiency to fit a broad range of applications. The Model 591 exterior skin is constructed of galvanized steel with a ribbed, textured finish. It is available with a white interior finish and a selection of colors for exterior, including white, Industrial Brown, gray and tan.

Colors available on Model 591



White Industrial Brown Gray Tan

Optional: Trinar White, Trinar Beige and Trinar Brown

For drawings and specifications please visit our website, [www.OverheadDoor.com/architects corner](http://www.OverheadDoor.com/architects%20corner).

Installation and service: Overhead Door Company of Twin Falls



# Medium-Duty Thermacore® Doors

MODELS 593 594



Installation and service: Overhead Door Company of Twin Falls

## Standard Features At a Glance

Panel thickness	1 3/8" (35 mm)
R-value	12.76 (2.26 W/Msq)
U-value	.078 (.443 Msq/W)
Air infiltration:	
at 15 mph (24 kmph)	.08 cfm/ft <sup>2</sup> (1.46 m <sup>3</sup> /hr/m <sup>2</sup> )
at 25 mph (40 kmph)	.15 cfm/ft <sup>2</sup> (2.7 m <sup>3</sup> /hr/m <sup>2</sup> )
Thermal break	Hot melt
Exterior steel	.015" (.38 mm) galv. (593) .012" (.3 mm) galv. (594)
Exterior surface	593–Ribbed, textured 594–Raised-panel, textured
Standard Springs	10,000 cycle
Std. maximum width	20'2" (6147 mm)
Std. maximum height	16'1" (4902 mm)
Exterior color	593: White, Gray, Tan, Industrial Brown, plus optional Trinar colors: White, Brown, Beige and Pep Boy gray 594: White, Brown, Almond, Sandstone, Hunter Green, Terra Bronze, plus optional Trinar colors: White, Brown and Beige
Interior color	White
Limited warranty	10-year delamination 1-year door 3-year/20,000 cycle door and operator system

## Options

- Thermal glazing
- Aluminum sash section available
- High-usage components\*
- Wind load options
- Electric operator
- Chain hoist
- Posi-Tension® drums
- Safety bottom fixtures
- Bottom-sensing edge
- Flexible jamb, header seal
- Exhaust ports

\* Refer to General Features and Benefits on inside front cover

The Thermacore® Models 593 and 594 offer excellent thermal efficiency for medium-duty applications. The 593 features a ribbed, textured surface.

The 594 features a raised-panel, woodgrain textured surface for a more decorative appearance.

### Colors available on Model 593



White Industrial Brown Gray Tan

Optional: Trinar White, Trinar Beige and Trinar Brown

### Colors available on Model 594



White Almond Sandstone Hunter Green Brown Terra Bronze

Optional: Trinar White, Trinar Beige and Trinar Brown

For drawings and specifications please visit our website, [www.OverheadDoor.com/architects corner](http://www.OverheadDoor.com/architects%20corner).

Installation and service: Overhead Door Company of Twin Falls





**MODEL 598**



*Installation and service: Overhead Door Company of Albany*

**Standard Features At a Glance**

Panel thickness	1" (25.4 mm)
R-value	9.31 (1.64 W/Msq)
U-value	.107 (.608Msq/W)
Thermal break	Hot melt
Exterior steel	.012" (.3 mm) galv.
Exterior surface	Ribbed, textured
Standard Springs	10,000 cycle
Std. maximum width	16'2" (4928 mm)
Std. maximum height	14'1" (4293 mm)
Exterior color	White
Interior color	White
Limited warranty	8-year delamination 1-year door 3-year/20,000 cycle door and operator system

**Options**

- Thermal glazing
- High cycle springs
- Wind load options
- Electric operator
- Chain hoist
- Posi-Tension® drums
- Safety bottom fixture
- Flexible jamb, header seal

The Thermacore® Model 598 is a quality thermal door that provides a higher level of protection against heat and cold conductivity than standard insulated doors. The 598 door represents the economical choice for lighter-duty applications.

Color available on Model 598



White

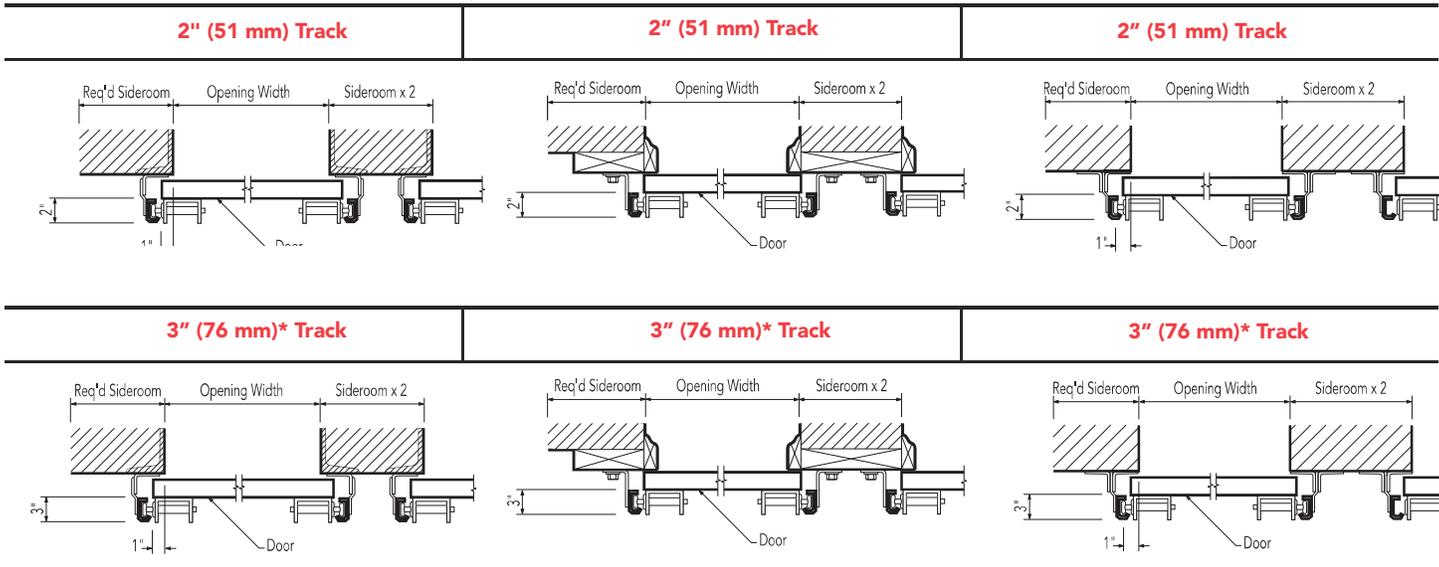
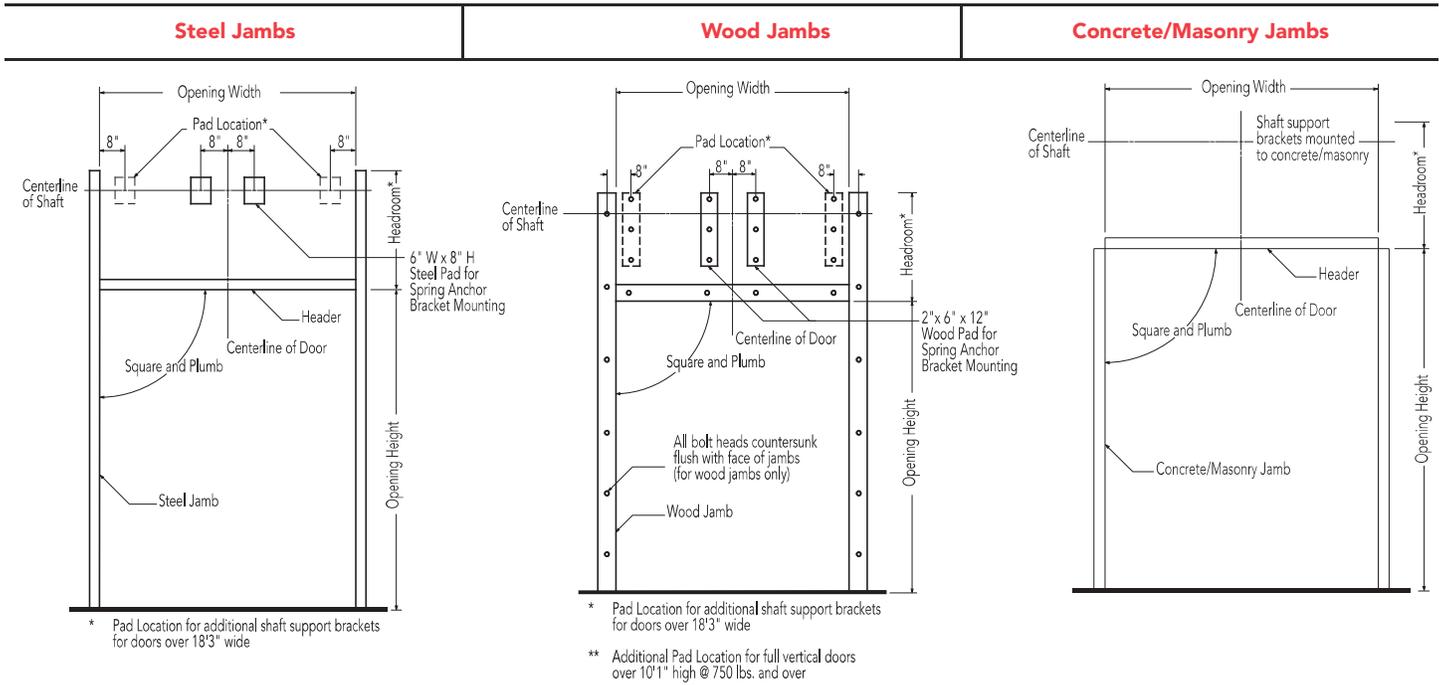
For drawings and specifications please visit our website, [www.OverheadDoor.com/architects corner](http://www.OverheadDoor.com/architects%20corner).

*Installation and service: Overhead Door Company of Southwestern Idaho*



# Framing & Pad Detail

Framing and pad details for common installation of Thermacore® doors in steel, wood, concrete and masonry jambs are provided here. If you require additional information or have special project requirements, refer to the Overhead Door Architectural Design Manual, or consult with the Overhead Door Applications Engineering Group or your local Overhead Door Distributor.



Minimum Required Sideroom		
Track Type	2" Track (51 mm)	3" Track (76 mm)*
Standard Lift	3 1/2" (89 mm)	5 1/2" (140 mm)
Low Headroom	8" (203 mm)	9" (229 mm)
Lift Clearance	3 1/2" (89 mm)	5 1/2" (140 mm)
Full Vertical	3 1/2" (89 mm)	5 1/2" (140 mm)

Minimum Required Sideroom		
Track Type	2" Track (51 mm)	3" Track (76 mm)*
Standard Lift	4 1/2" (114 mm)	6 1/2" (165 mm)
Low Headroom	9" (229 mm)	10" (254 mm)
Lift Clearance	4 1/2" (114 mm)	6 1/2" (165 mm)
Full Vertical	4 1/2" (114 mm)	5 1/2" (140 mm)

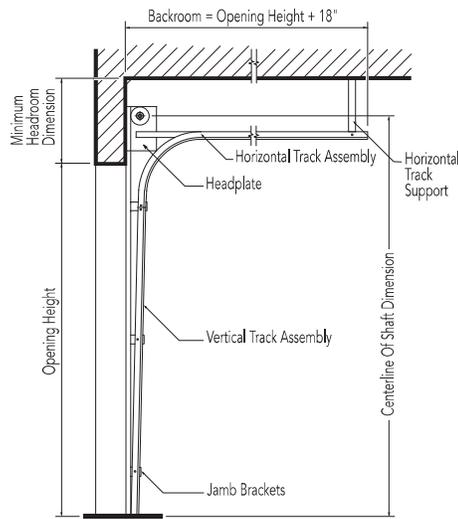
\* 3" (76 mm) track not available with Model 598.



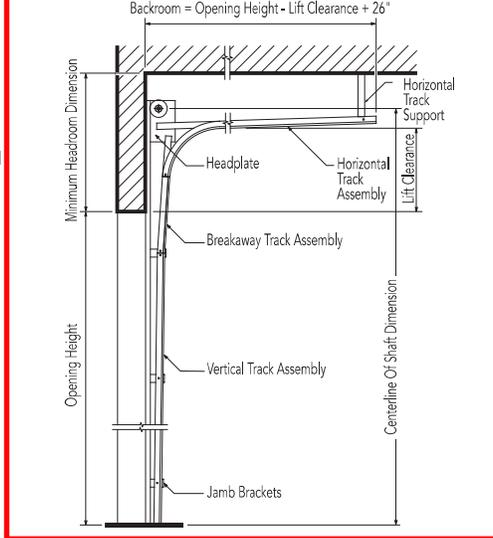
Any of the following track configurations can be selected for all Thermacore® Models.

O.H.=Opening Height L.C.=Lift Clearance D.H.=Door Height

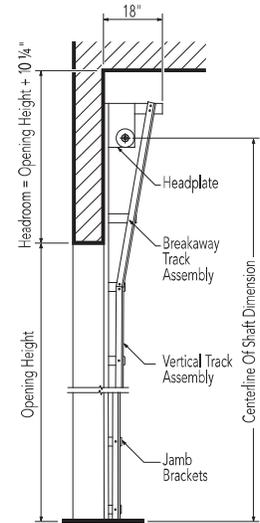
**Standard Lift Track**



**Lift Clearance Track Standard**



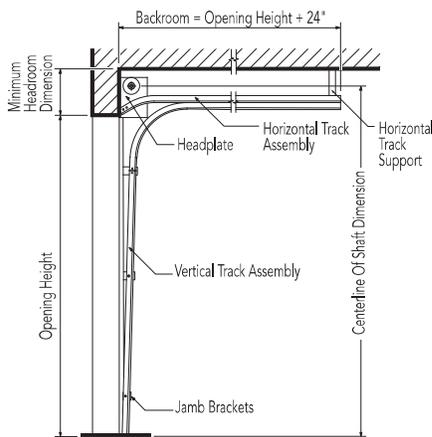
**Full Vertical Track**



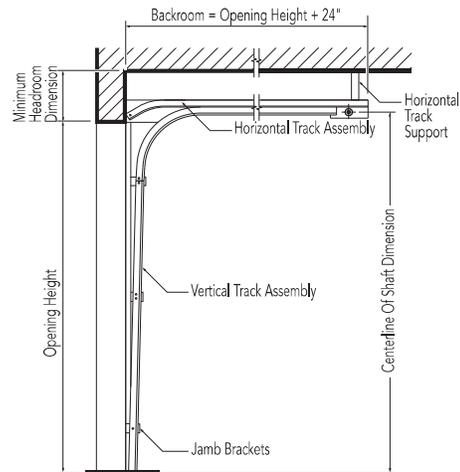
2" (51 mm) Track [15" (381 mm) Radius]		
Door Height	Centerline of Shaft	Minimum Headroom
Thru 120" (3658 mm)	O.H. + 11 5/8" (295 mm)	14 1/4" (362 mm)
Thru 160" (4877 mm)	O.H. + 12 5/8" (321 mm)	16" (406 mm)
3" (76 mm) Track [15" (381 mm) Radius]		
Thru 180" (5486 mm)	O.H. + 14 5/8" (372 mm)	18" (457 mm)
Thru 320" (9754 mm)	O.H. + 16 7/8" (429 mm)	21 1/2" (546 mm)

2" (51 mm) Track [15" (381 mm) Radius]		
Door Height	Centerline of Shaft	Minimum Headroom
Thru 120" (3658 mm)	O.H. + L.C. + 5 5/8" (143 mm)	L.C. + 8 3/4" (222 mm)
Thru 160" (4877 mm)	O.H. + L.C. + 5 5/8" (143 mm)	L.C. + 11 1/4" (286 mm)
3" (76 mm) Track [15" (381 mm) Radius]		
Thru 220" (6706 mm)	O.H. + L.C. + 6 5/8" (168 mm)	L.C. + 11 1/2" (292 mm)
Thru 320" (9754 mm)	O.H. + L.C. + 6 5/8" (168 mm)	L.C. + 12 1/4" (311 mm)

**Low Headroom Track Springs to Front**



**Low Headroom Track Springs to Rear**



2" (51 mm) Track [15" (381 mm) Radius]		
Door Height	Centerline of Shaft	Minimum Headroom
Thru 120" (3658 mm)	D.H. + 8" (203 mm)	11 3/4" (299 mm)
Thru 160" (4877 mm)	D.H. + 8" (203 mm)	12 1/2" (318 mm)
3" (76 mm) Track [15" (381 mm) Radius]		
Thru 120" (3658 mm)	D.H. + 9" (229 mm)	13" (330 mm)
Thru 320" (5486 mm)	D.H. + 9" (229 mm)	13 3/4" (349 mm)

## Operator Control Options

- Push-button, key or combination stations; surface or flush-mounted for interior and/or exterior locations
- Vehicle detectors, key card reader, photocell and door timer controls
- Treadle or pull switch stations
- Telephone entry and coded keyboard stations
- Universal programmable door timer
- Commercial light package
- Radio control systems (24 VAC or 120 VAC)
- Explosion and dust ignition-proof systems

## Electric Operator Selection Guide

	Horsepower/ Newtons	Max. height of door	Max. weight of door	SuperBelt™/Polybelt	Worm gear	Adjustable clutch	Totally enclosed	Continuous duty	Explosion proof	Mounting type
<b>RHX®</b>	1/2 HP, 3/4 HP 1 HP, 3 HP	24' (7315 mm)	3996 lbs (1676 kg)		•	•		•	•	T, S, C
<b>RSX®</b>	1/2 HP, 3/4 HP 1 HP	24' (7315 mm)	1620 (735 kg)	•		•	•	•		T, S, C
<b>RMX®</b>	1/2 HP	14' (4267 mm)	620 (281 kg)							T, S

Mounting Options: T=Trolley S=Side mount C= Center mount

## Safety Recommendations

Overhead Door Corporation strongly recommends the use of a primary safety device as defined by UL325 2010. A primary safety device can be approved monitored photo-eyes or an approved monitored sensing edge. If a primary safety device is not installed, a constant contact control switch must be used to close the door. Contact Overhead Door for more information.

Overhead Door Corporation offers the broadest line of electric operators to suit new construction and retrofit applications, as well as unusual or special requirements.

Manufactured by Overhead Door Corporation to meet the exacting performance requirements of Overhead Door's upward-acting doors, our ribbon branded operators afford precise control of door action for years of trouble-free operation.

In order to improve safety and enhance door and motor life, industry quality assurance guidelines recommend the choice of a single manufacturer for both door and operator applications. Overhead Door Corporation is the only national manufacturer of a full line of commercial and industrial doors and operators specifically designed for integral applications.

## Operator Models

### Model RMX®

Model RMX® is an advanced medium-duty operator. It is designed for quicker installation and hassle-free operation and operates doors up to 14' (4267 mm) in height and 620 pounds (281 kg). It is available as a trolley-type or side-mounted unit.



### Model RSX®

Model RSX® is a standard duty commercial operator designed to operate doors up to 24' (7315 mm) in height and 1,620 pounds (735 kg). It offers unique features like LimitLock®, SuperBelt™ & 16 digit menu setup.



### Model RHX®

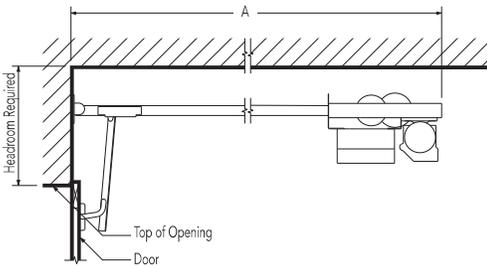
Model RHX® is a heavy duty commercial operator designed to operate doors up to 24' (7315 mm) in height and 3,696 pounds (1676 kg). Available as either a trolley, sidemount or centermount.



**Mounting Details**

Trolley-type (Drawbar) operators feature a power unit mounted between, above and to the rear of the horizontal tracks. The drawbar drive provides positive control of the door at all times, making this operator the preferred choice whenever possible. Maximum door width is 20' per drawbar. Door width over 20' requires dual drawbar installation. Available on Models RMX®, RSX® and RHX®.

**Trolley-type (Drawbar)  
RMX®, RSX®, RHX®**

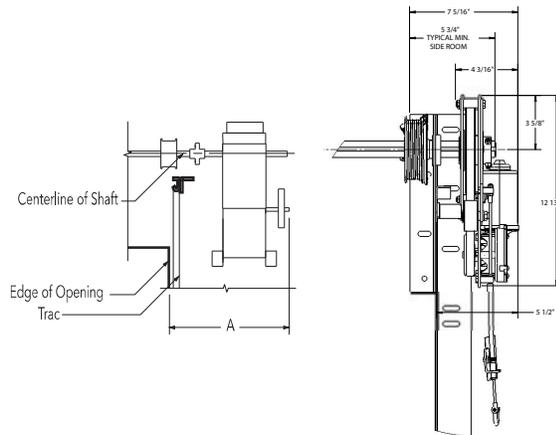


Minimum Headroom Requirements	
<b>RMX</b>	Track Requirements +4 1/2" (114 mm)
<b>RSX</b>	Track Requirements +5" (127 mm)
<b>RHX</b>	Track Requirements +5" (127 mm)

Depth Requirements - "A" Dimension (Backroom)	
<b>RMX</b>	Door Height +3' 9" (1143 mm)
<b>RSX</b>	Door Height +4' 1" (1244 mm)
<b>RHX</b>	Door Height +5' 10" (1524 mm)

Side-mounted (Jackshaft) RMX®, RSX®, and RHX® operators feature a power unit mounted on the inside front wall and connected to the crosshead shaft, with an adjustable coupling or drive chain and sprockets.

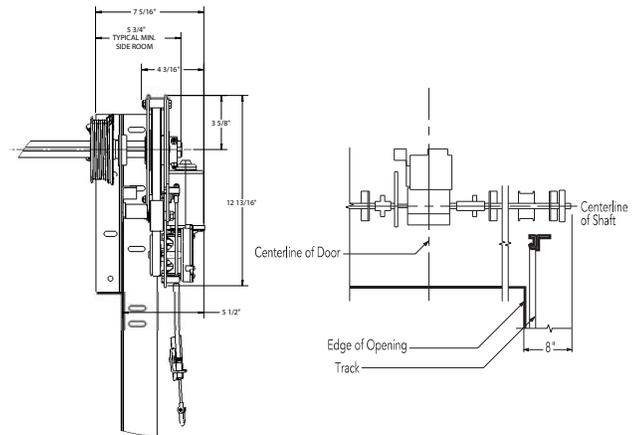
**Side Mount Type (Jackshaft)  
RMX®, RSX®**



	"A" Dimension - Minimum (Sideroom)	
	2" Track (51 mm)	3" Track (76 mm)*
<b>RMX</b>	18 1/2" (470 mm)	19 1/2" (495 mm)
<b>RSX</b>	21" (533 mm)	22" (559 mm)
<b>RHX</b>	21" (533 mm)	22" (559 mm)

Center-mounted (Jackshaft) operators feature a power unit on the front wall above the door opening. No additional backroom is required. Available on models RSX® and RMX®.

**Center Mount Type (Jackshaft)  
RMX®**



Minimum Headroom Requirements	
<b>RSX</b>	Track Requirements +14" (356 mm)
<b>RHX</b>	Track Requirements +23 5/8" (600 mm)

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## The Original, Innovative Choice for Unequalled Quality and Service

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The Overhead Door Red Ribbon is a mark of quality that also reflects the pride we take in the people who support our products. Our family of over 400 Overhead Door Distributors across the country not only share our name and logo, but also our commitment to excellence. Your Overhead Door Distributor will work with you in a consultative role to ensure that product selections achieve your design and application requirements — in addition to offering expert installation, professional field service and ongoing maintenance. From project design and manufacturing to installation and service, the Overhead Door Red Ribbon is your guarantee of genuine quality and turnkey service excellence.

**Together with our distributors, we offer comprehensive technical information and resource materials to support your project, including:**

- Architectural Design Manual – a comprehensive guide to selecting, specifying and detailing all commercial and industrial Overhead Door products can be found at [www.OverheadDoor.com/ADM/base.html](http://www.OverheadDoor.com/ADM/base.html)
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- Custom application and technical assistance through ordering plants' customer service and technical services respectively
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Advanced Rolling Steel Door  
RapidSlat®



Thermacore® Sectional Doors



Rolling & Side Folding  
Security Grilles & Closures



Rolling Service Doors



Commercial Operators

Today, Overhead Door Corporation – along with our Horton Automatics division, for automated pedestrian entrances – is recognized as the leading, single-source manufacturer of integrated door and operator systems for commercial, industrial and residential applications. With multiple manufacturing locations throughout the United States, a state-of-the-art TREQ (Testing, Reliability, Engineering, and Quality) Center for design and engineering, and a national network of authorized Overhead Door Distributors, our capabilities are leading-edge and our field service and technical support second to none. Built best and backed best, Overhead Door is the industry's leading choice for quality that shows and lasts.

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2501 S. State Hwy. 121 Bus., Suite 200

Lewisville, Texas 75067

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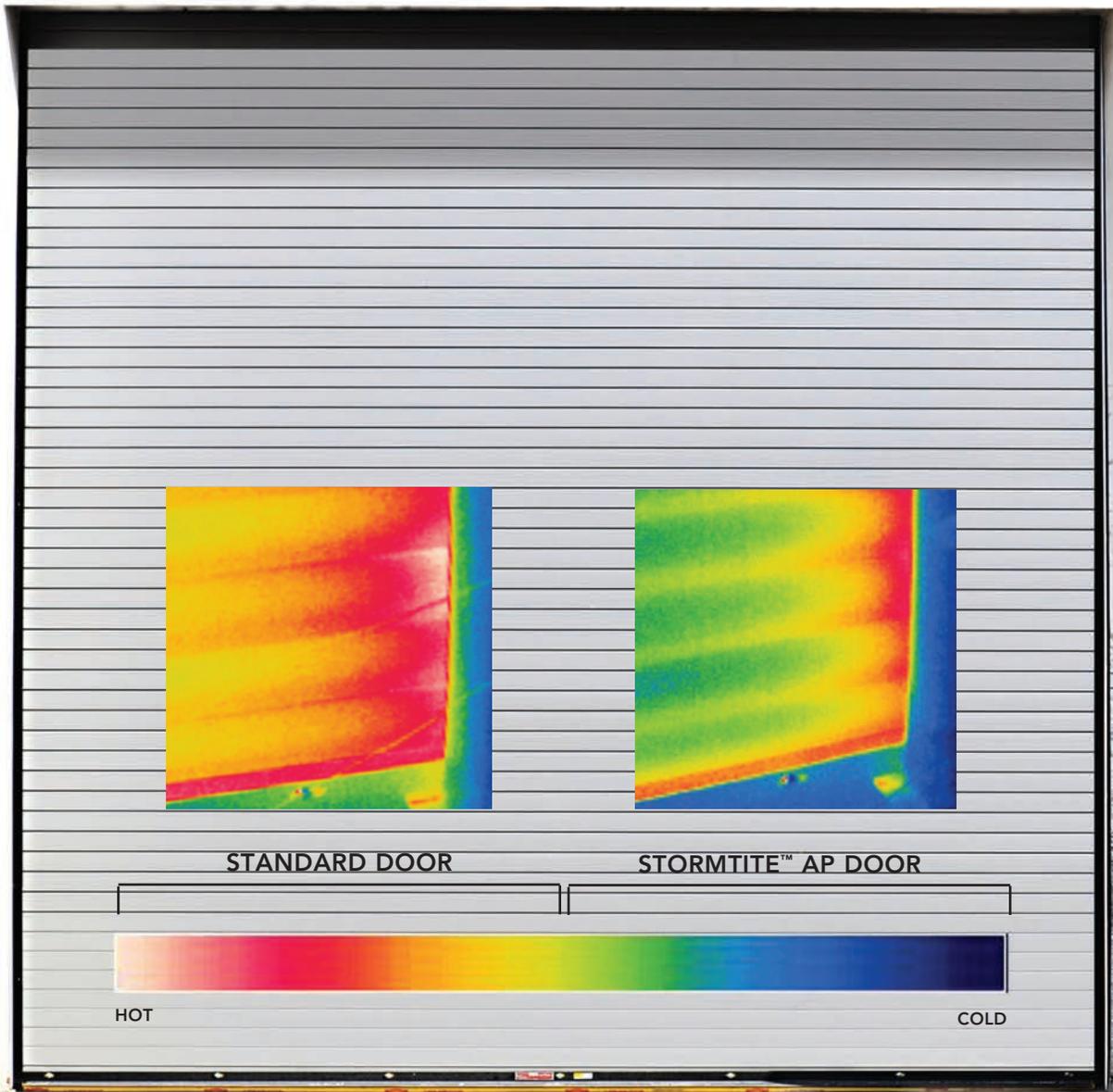
INDUSTRY LEADING  
COMMERCIAL & INDUSTRIAL SOLUTIONS

The Overhead Door Corporation family of quality commercial and industrial products includes:



A part of Sanwa Holdings Corporation

# Stormtite™ AP Door System



STANDARD DOOR

STORMTITE™ AP DOOR



HOT

COLD

MODEL

627



INDUSTRY LEADING  
COMMERCIAL & INDUSTRIAL SOLUTIONS

# Stormtite™ AP Advanced Performance Insulated Rolling Doors

## MODEL 627

### Standard Features At a Glance

Max. standard width	30' (9144 mm)
Max. standard height	19' (8534 mm)
Curtain	24 gauge galvanized steel front 24 gauge galvanized steel back
Slat profile	Flat, insulated, type FIT-265
Insulation	Foamed-in-place, CFC and HCFC-free polyurethane
R-value*	10.9 (1.91 W/Msq)
U-factor†	0.84
STC Rating	Through Curtain 28; Installed System; 21
Flame Spread and Smoke Index	Class A or 1
Finish	Gray, tan, brown or white
Hood	24 ga. galvanized steel
Wind load	20 psf
Standard mounting	Face of wall
Operation	Chain hoist
Standard springs	20,000 cycle
Advanced Perimeter Protection	Bottom weatherseal, interior and exterior EPDM triple-finned guide brush weatherseals, interior hood baffle, and lintel seal
Guides	3-angle structural steel; black powder coated
Bottom bar	Black powder coated steel with vinyl weatherseal
Lock	Chain keeper
Warranty	24-month limited on door or 3 year limited on door and operator system

### Options

- Between-jamb mounting
- Electric (RHX®, RSX®, RMX®) or crank operation
- Bottom sensing edge
- Sloping bottom bar
- Stainless steel (22 gauge front/24 gauge back) or aluminum slats
- PowderGuard™ Zinc or Weathered finishes available on curtain, steel bottom bar angles and guides
- PowderGuard™ Premium powder coat paint finish in 197 standard colors, or color-matched to specification
- Insulated vision lites uniformly spaced of 1" x 10" (25.4 mm x 254 mm)
- High cycle counter balance with high usage package
- High-wind load option
- Cylinder lock
- Special application doors:
  - Oversized doors
  - Combination doors (2 doors on a single head plate)
  - Pass doors

## Stormtite™ AP delivers advanced

The Stormtite™ AP Model 627 is engineered to supply advanced performance in industrial and general commercial applications where thermal performance, climate control and security are primary concerns.

### The Solution for Demanding Application Needs

Backed by an industry leading 3 year door and operator system warranty, the Stormtite™ AP door system's advanced performance answers the demand for more reliability, durability, security, flexibility and thermal efficiency. Ideal applications include the following:

- Industrial manufacturing facilities
- Government facilities
- Public facilities
- Food and beverage distribution facilities
- Climate controlled facilities
- Healthcare facilities
- Shipping and receiving docks

### Advanced Performance in an Insulated Rolling Door System

This door system presents the most advanced thermal performance values published by any major US manufacturer of insulated rolling steel doors, with an R-value\* of 10.9, U-value\*\* of 0.09 and a tested installed U-factor† of 0.84. When compared to the International Energy Conservation Code (IECC) 2012 requirements, the Stormtite™ AP Model 627 far surpasses these. The superior construction of this rolling service door and the advanced design of the perimeter seals offer superior door protection against air leakage. The innovative EPDM triple-finned guide brush weatherseals (located on interior and exterior of guide), work in tandem with the hood baffle and bottom bar weather seals to reduce air leakage through the entire door system perimeter.

The sound performance of the Stormtite™ AP Model 627 furnishes a through curtain Sound Transmission Class (STC) rating of 28 and installed system rating of 21. The higher the STC rating the better the buffering is from the transmission of sound through and around the door. This insulated door system also includes a flame spread and smoke index of class A or 1, the highest rating possible and complies with National Fire Protection Association (NFPA), Underwriters Laboratories (UL) and International Building Code (IBC) requirements.

### Stormtite™ Secures Against Elements and Forced Entry

The Stormtite™ AP Model 627 is constructed of interlocking slats with endlocks and/or windlocks. This design supplies

\* R-value is a measure of thermal efficiency. The higher the R-value the greater the insulating properties of the door. Overhead Door Corporation uses a calculated door curtain R-value for our insulated doors.

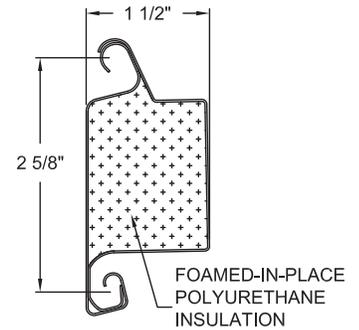
\*\* U-value is a measure of the flow of heat through an insulating or building material: the lower the U-value, the better the insulating ability. U-value is the inverse of R-value.



## of thermal performance, climate control and security.



Stormtite™ AP Model 627 insulated rolling service door installed at a manufacturing plant in Lewistown, Pennsylvania.



This uniquely designed rolling door slat measuring 1.4" in thickness, provides advanced thermal performance and increased durability.



This innovative triple-finned EPDM brush seal protects the interior and exterior perimeter of the door system against the elements.

resistance against forced exterior entry and several interior lock options can supply additional security. The 627 delivers 20 psf (design pressure) wind load protection, which is equivalent to approximately 90 to 110 mph wind speed (comparable to hurricane force wind category 1 to 2). This model can be built to accommodate higher wind loading upon request.

### Flexibility in Operation

This Stormtite™ AP door system comes with chain hoist operation standard; crank and motor operation options are also available. The varied options of operation and mounting (left or right handed) afford flexibility to meet the needs of the facility and application.

### Many Options, Customized Solutions

The Stormtite™ AP Model 627 is available with a number of options to meet individual application needs. The large insulated vision lite features thick dual-wall polycarbonate which affords advanced

insulation properties as well as maximum visibility and light transmittance. Slat options include a choice of steel (standard), stainless steel or aluminum. Finish options include a choice of 4 standard colors as well as the PowderGuard™ Zinc Premium powder coat finish in 197 standard colors or color-matched to specification. The PowderGuard™ Zinc and PowderGuard™ Weathered finishes are also available for the door curtain as well as bottom bar angles and guides.

Special application options include oversized doors, combination doors (2 doors on a single head plate), and pass doors. Ask your Overhead Door Distributor for more information about the special applications options.

For additional information, or special project requirements, consult your Overhead Door Distributor or the Overhead Door Architectural Design Manual.

† Installed U-Factor - A tested value of actual energy loss - whether heat or cold - of an installed door, wall, or window assembly. The lower the number the lower the energy loss and therefore the better the thermal performance. U-factor will vary between 0.66 and 1.00 depending on finish and color selection. For best U-factor, choose finish and color with high solar reflectance (bright colors).

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Rolling Service Doors



Commercial Operators

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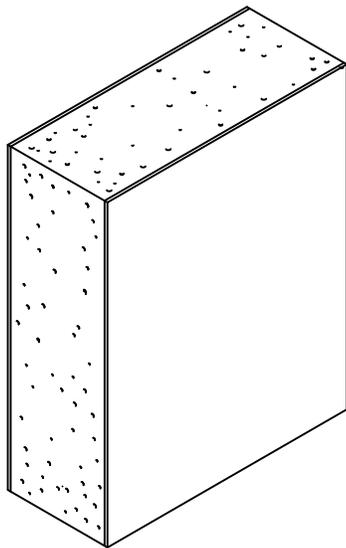
The Overhead Door Corporation family of quality commercial and industrial products includes:



A part of Sanwa Holdings Corporation

## 1-3/4" LEGION (LP) POLYSTYRENE CORE DOORS

FLUSH PANEL STEEL DOORS  
BEVELED LOCK EDGE, HANDED

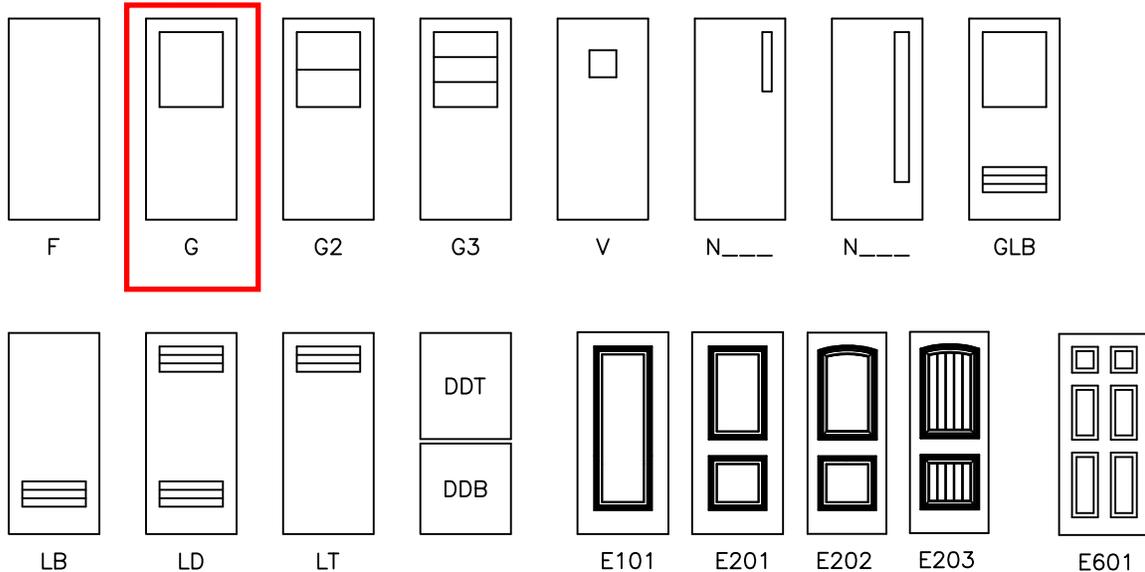


*Polystyrene slab, bonded to the inside of both face sheets with a waterproof, contact adhesive.*

**Suggested Use:**

- Interior or Exterior ...*
- Office*
- Motel/Hotel*
- Apartment*
- Condominiums*
- Dormitories*
- Urban Renewal*
- Health Care*
- Institutional*
- Mercantile*
- Public Utility*
- Factory*
- Warehouse*

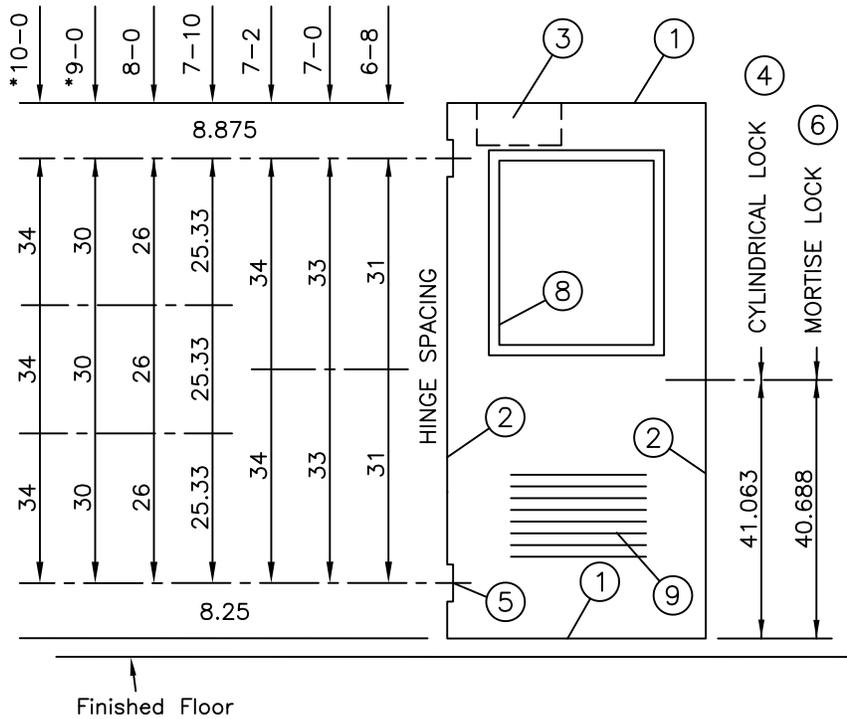
**DOOR DESIGNS**



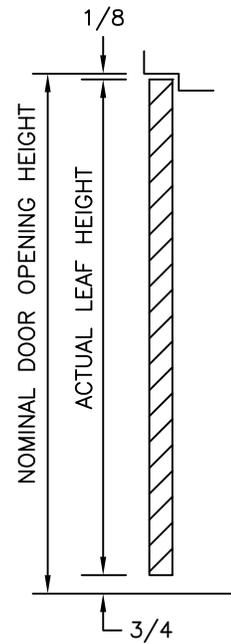
6-PANEL EMBOSSED  
DESIGN 4070 MAX.

D4A-2

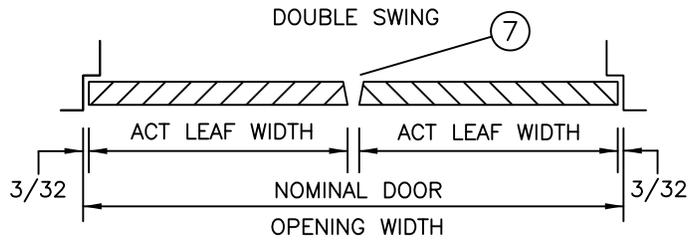
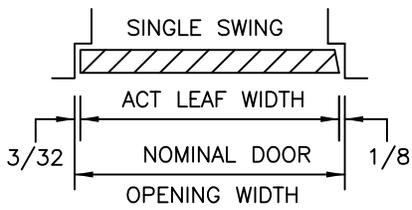
Hardware locations shown match Ceco standard frames.



**DOOR ELEVATION**



**VERTICAL SECTION**

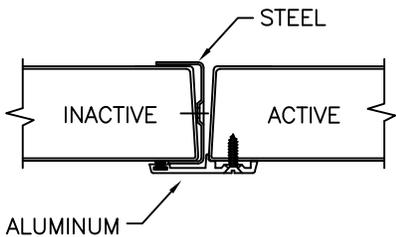


**HORIZONTAL SECTIONS**

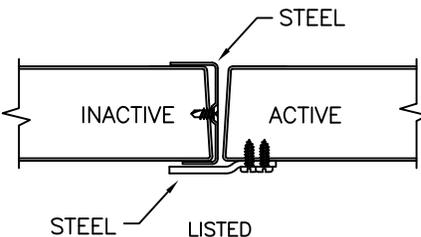
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

\*1 panel & 2 panel designs are limited to 8'0 hgt.

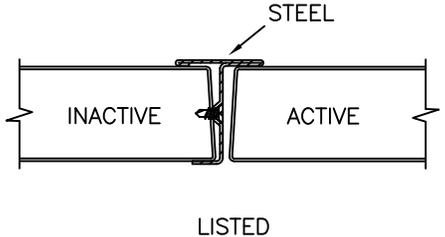
**OVERLAPPING ASTRAGAL 4451**  
 FOR 1-3/4" THICK DOORS WITH OPTIONAL POLY-PILE INSERT



**OVERLAPPING ASTRAGAL 4441**  
 FOR 1-3/4" THICK DOORS



**OVERLAPPING ASTRAGAL 4471**  
 FOR 1-3/4" THICK DOORS



01/24/13

# TECH-DATA

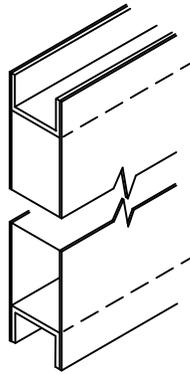
## LEGION DOORS

D4A-3

16 GAGE STEEL  
END CHANNELS

WELDED  
TO BOTH  
FACE SHEETS

INVERTED  
TOP AND  
BOTTOM



OPTIONAL TOP AND  
BOTTOM CAPS ARE AVAILABLE

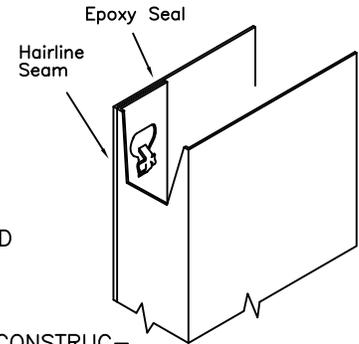
①

VERTICAL EDGES

②

MECHANICALLY  
INTERLOCKED  
HEMMED EDGES

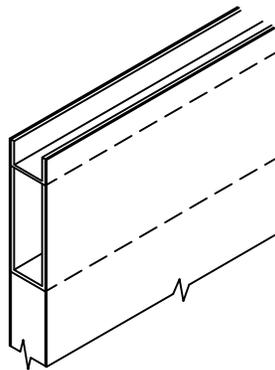
ALSO AVAILABLE  
SEAMLESS (WELDED  
OR BODY FILLER)



CENTER EDGE SEAM CONSTRUCTION PROVIDED WHEN OVER 9'0" OR 14 GAGE SKINS

CLOSER  
REINFORCEMENT  
(OPTIONAL)

14 GAGE STEEL  
CHANNEL 20" LONG

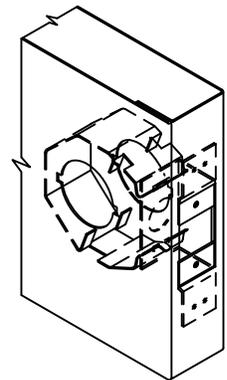


③

LOCK PREPARATION  
GOV. 160/161  
CYLINDRICAL TYPE

④

(LC1)  
(ANSI A115.2)  
2-3/4"  
BACKSET

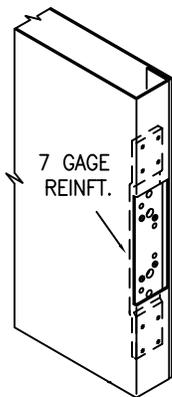


LOCK EDGE IS BEVELED  
1/8" in 2" (1:16)

HINGE  
PREPARATION

4-1/2 OR 5 IN.  
HIGH, STANDARD  
OR HEAVY WEIGHT,  
FULL MORTISE  
HINGES

HINGE EDGE IS HANDED  
AND NOT BEVELED.



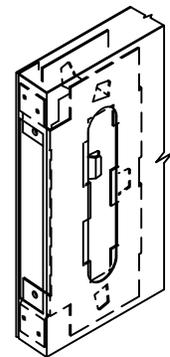
ANSI A156.7  
TEMPLATE

⑤

LOCK  
PREPARATION  
GOV. 86-4  
MORTISE TYPE

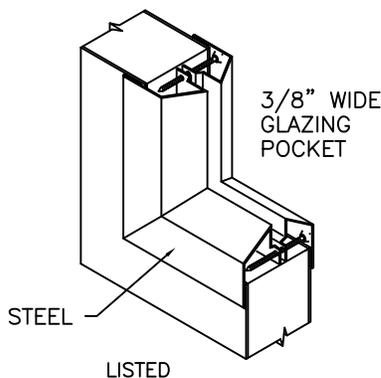
⑥

(LM1) (ANSI A115.1)  
2-3/4" BACKSET  
(LM0) SIMILAR TO DETAIL  
LESS FACE CUTOUT  
(LP0) SIMILAR TO DETAIL  
LESS ALL CUTOUTS  
AND REINFORCEMENT



GLAZING TRIM  
SlimTrim

⑧



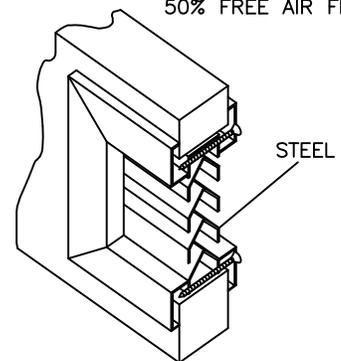
STEEL

LISTED

FIXED SLAT TYPE LOUVER  
4634  
FOR 1-3/4" THICK  
DOORS

⑨

50% FREE AIR FLOW



STEEL

3/08/11

CecoDoor

ASSA ABLOY

D4A-4

### STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	
2'-4"	4'-8"	
2'-6"	5'-0"	6'-8"
2'-8"	5'-4"	7'-0"
2'-10"	5'-8"	7'-2"
3'-0"	6'-0"	7'-10"
3'-4"	6'-8"	8'-0"
3'-6"	7'-0"	9'-0"
3'-8"	7'-4"	10'-0"
3'-10"	7'-8"	
4'-0"	8'-0"	

### FIRE DOORS

<b>LABELING AGENCIES:</b>
<ul style="list-style-type: none"> <li>• UNDERWRITERS LABORATORY</li> <li>• WARNOCK HERSEY</li> </ul>
<b>TEST: UL 10C, UL10B &amp; UL1784</b>
<ul style="list-style-type: none"> <li>• RATING: 20 MIN, 3/4 HR, 1-1/2 HR, OR 3 HR</li> <li>• MAX. SIZE: 40 x 80 SINGLE 80 x 80 PAIR *</li> <li>• *80 x 90 with VERTICAL RODS</li> <li>• DESIGNS: F, G, N, &amp; V</li> </ul>
Not all ratings are available in all sizes, designs and materials.

### SIZE LIMITS - DESIGNS

	FLUSH DESIGN	1 PANEL	2 PANEL	6 PANEL
MAX.	40100	3080	3080	4070
MIN.	2068	2868	2868	2668

### PRODUCT SPECIFICATIONS:

1-3/4" Thick steel doors shall be as manufactured by Ceco Door Products. Doors shall conform to the Steel Door Institute guide specification, ANSI A250.8; see chart below for performance classifications.

**LEGION** doors are made full-flush or (optional) seamless style. Face sheets are commercial quality cold rolled steel conforming to ASTM A1008...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 -- see chart below.

**Legion full-flush doors** have mechanically interlocked, hemmed, hairline seams on vertical edges and have no visible seams on faces. Doors specified "seamless" have no visible seams on faces or vertical edges (S.D.I. Model 2). A one piece, polystyrene slab, conforming to ASTM C578 TYPE 1, is bonded to the inside of both face sheets with a waterproof contact adhesive. The top and bottom door edges are closed with 16 gage steel channels welded to both face sheets.

**Hardware Provisions:** Hinge preparations are handed. Hinge edges are mortised for 4-1/2" or 5" high, standard and heavy weight hinges (specify which). 7 gage steel hinge reinforcements are welded inside the door edge and are drilled and tapped for fasteners in accordance with ANSI A156.7. The lock edge has a standard bevel (1:16) and is prepared for Gov. series 86, 160/161, or 90 locks in accordance with ANSI A115 (specify which). Optional closer reinforcement is a 14 gage steel channel.

**Paint:** 1-3/4" steel doors shall be provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel and shall conform to ANSI A250.3. For accurate color selectors ask for a Ceco Colorstyle chart.

#### EXEPTIONS:

- E1, E2, and E6 designs: mortise lock preparation limited to 3'0" width, minimum.
- 1 & 2 panel doors are available in 18 gage face sheets only.
- 6 panel doors are available in 20, 18, & 16 gage face sheets only.
- Panel design door face sheets are formed from A40 galv. steel.

### MATERIAL

DOOR FACE SHEETS	LEVEL	C.R.	GALV		RECOMMENDED DOOR FRAME MATERIAL
			A60	G90	
20 Gage Steel (4080 max.)	Standard Duty	STD	-	-	16 Gage Steel
20 Gage Textured Steel (4080 max.)	Standard Duty	-	STD	-	16 Gage Steel
18 Gage Steel	Heavy Duty	STD	OPT	OPT	16 Gage Steel
16 Gage Steel	Extra heavy Duty	STD	OPT	OPT	16 or 14 Gage Steel
14 Gage Steel	Maximum Duty	STD	OPT	OPT	14 or 12 Gage Steel

### PERFORMANCE

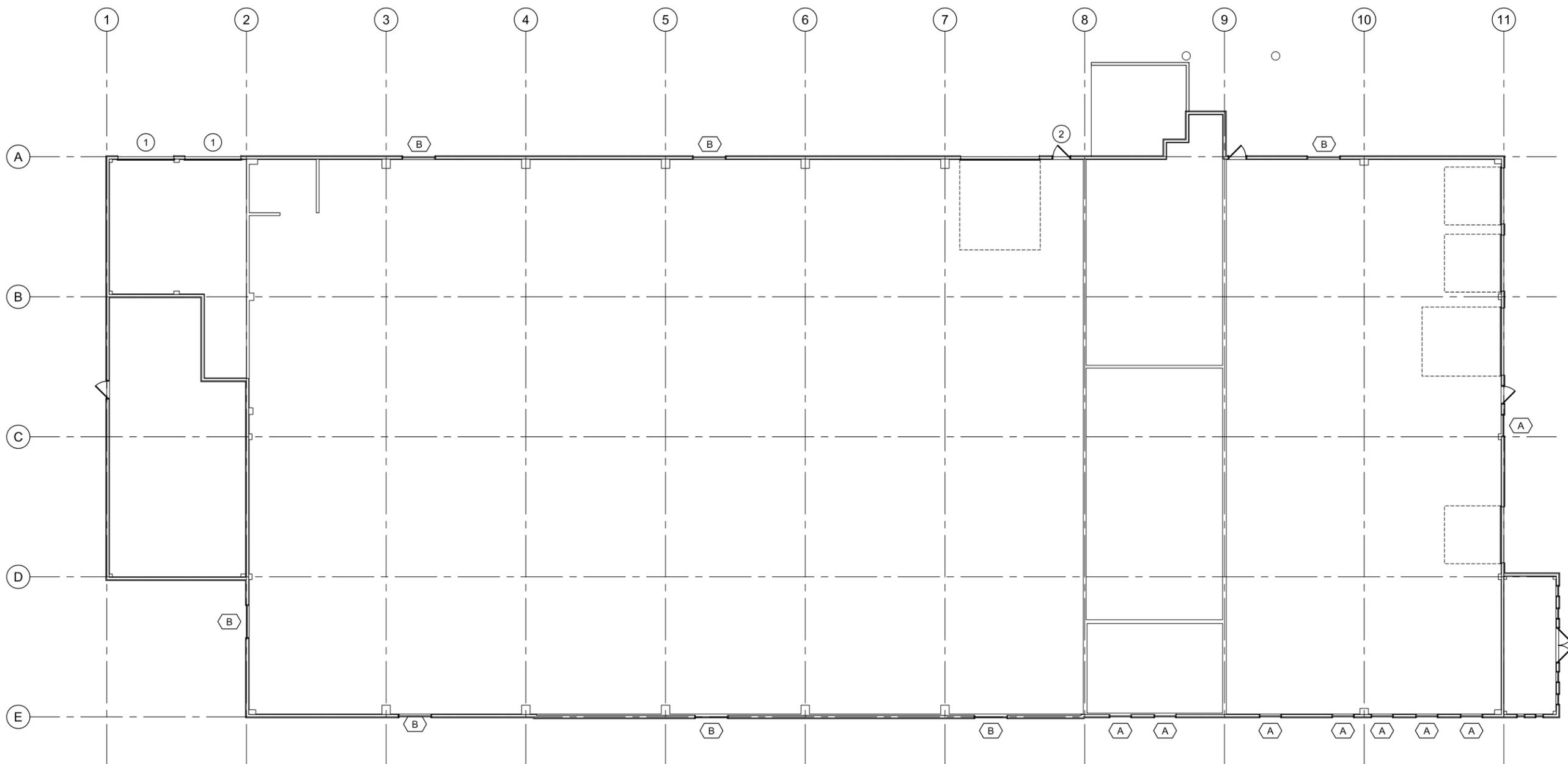
Thermal Characteristic Value:	FULLY OPERABLE ASSEMBLIES (ASTM C1363)	R = 2.83	U = 0.35
	CORE CALCULATED (ASTM C518)	R = 6.35	U = 0.157
Sound Transmission Class:	STC 27 (F Design, 18 Gage Face Sheets, ASTM E90 & E413 [Fully Operable])		
Physical Endurance /Level:	Meets ANSI A250.4 Performance Test, 20 GAGE: Level B (500,000 Cycles); 18 and 16 Gage: Level A (1,000,000 Cycles)		

03/15/13

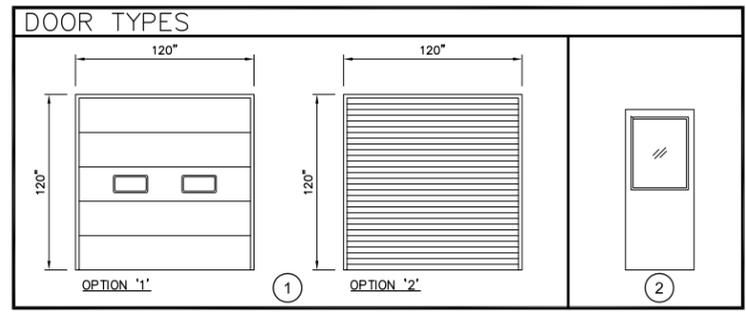
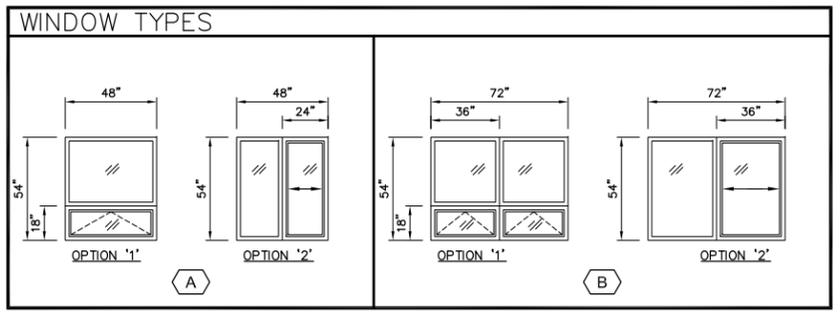


ACAD FILE: M:\Design\Architecture\PROJECTS\60073.14 Eagle River WWTF  
 Renab\DESIGN\Drawings\ARCH\XR\_A25100\_BLDG-1 - edits.dwg  
 PAGE SETUP NAME: PDF PLOT DATE: March 20, 2015

**AWWU PLAN SET**  
**NO. ###**



**FLOOR PLAN**  
 1/16" = 1'-0"



**VERIFY SCALE** IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY. 0" = 1"

REV	DATE	DESCRIPTION	BY

REVISIONS

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

1. DATA PROVIDED BY: \_\_\_\_\_  
 This will serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.  
 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.  
 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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**QUINCY ENGINEERING**

3400 Douglas Blvd., Suite 190  
 Roseville, CA 95661  
 P: 916.368.9181  
 F: 916.368.1308  
 www.quincyeng.com

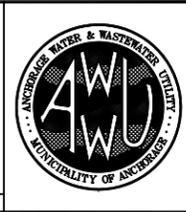
PRIME CONSULTANT

**UMIAQ**

8700 Arctic Spur Road  
 Anchorage, AK 99518 (907) 877-8220

CONSULTANT

SEAL



**MUNICIPALITY OF ANCHORAGE**  
**WATER & WASTEWATER UTILITY**

EAGLE RIVER WWTF REHABILITATION  
 TM 4 - WINDOWS AND DOORS

**BUILDING ONE**  
**FLOOR PLAN / WINDOW TYPES**

PROJ. ID.: #####  
 DATE: 03/10/2015  
 GRID: 1

SHEET **A-1** of ###

#####



**Eagle River Wastewater Treatment Facility  
Rehabilitation Project**

<b>Window and Door Options</b>				
<b>Item</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Cost</b>	<b>Total</b>
<b>Materials</b>				
<b>Windows</b>				
"A" Option 1	8	EA	\$554	\$4,430
"A" Option 2	8	EA	\$557	\$4,457
"B" Option 1	7	EA	\$1,015	\$7,103
"B" Option 2	7	EA	\$648	\$4,539
<b>Door Options</b>				
Thermacore Model 592	1	Material + Labor	\$8,100	\$8,100
Stormtyte AP Model 627	1	Material + Labor	\$18,190	\$18,190
Ceco man door only	1	EA	\$2,451	\$2,451
Ceco man door with frame	1	EA	\$2,793	\$2,793
<b>Material Sub-Total</b>				<b>\$46,819</b>
<b>Labor</b>				
				
<b>Window Installation</b>				
"A" Window	16	Man Hrs	\$150	\$2,400
"B" Window	14	Man Hrs	\$150	\$2,100
<b>Door Installation</b>				
Man door only	3	Man Hrs	\$150	\$450
Man door with frame	6	Man Hrs	\$150	\$900
<b>Labor Sub-Total</b>				<b>\$5,850</b>
<b>TOTAL INSTALL</b>				<b>\$52,669</b>
<b>Total With 25% Contingency</b>				<b>\$65,837</b>

# MEMORANDUM

To: Todd Carroll  
Will O'Malley  
Kevin McKinnon

From: Todd Jagels

Copy: Todd Kotey, Linda Scroggs

Subject: Eagle River Wastewater Treatment Facility  
Windows and Doors

Date: March 2015

## ***Introduction***

The Anchorage Water and Wastewater Utility (AWWU) owns and operates the Eagle River Wastewater Treatment Facility (ERWWTF), which provides wastewater treatment services for Eagle River customers. As part of the Phase 1 upgrades to the facility, outdated windows and roll-up doors in Building One will be replaced with new, more weather appropriate models. Two (2) coil-up doors and fifteen (15) windows are identified to be replaced. One additional man door, located on the west elevation from the Process Area, was identified by ERWWTF staff as needing replacement due to weather infiltration and lack of door relite for safety.

There are two (2) different window styles/sizes in Building One that will be replaced. The existing Window Types 'A' & 'B' (refer to Appendix C) are aluminum window frames with insulated double glazing. The seals and gasketing on these windows have failed, and have reached their service life and are scheduled to be replaced. These windows will be replaced with extruded, high impact resistant, rigid polyvinyl chloride (PVC) units with double pane insulated glazing. The new windows will be corrosion resistant and weather tight, similar to what was installed in the ERWWTF UV upgrades project.

Two (2) existing coil-up doors, located in the southwest corner of Building One, are also scheduled to be replaced. These existing doors are exterior doors into the Chlorine Storage and Sulfur Dioxide Storage areas. Record drawings indicate the original doors were 10' x 10' overhead doors, which were replaced in the late 1980's with coil-up doors. Replacing these doors with overhead sectional doors will provide a higher thermal value (R-value) and standardize the facility by providing overhead sectional doors throughout the plant. The replacement roll-up doors will be more adequately insulated than the existing coil-up doors. Because of the overhead door panel thickness, the door will roll up to a horizontal position, rather than into a coil. Conflicts between the proposed roll up doors and the existing air handling units will be addressed by removing the unused air handling units.

During the recent site visit, it was noted by ERWWTF staff that one single man door, located on the west side of the building into the Process Area, is recommended to be replaced. The existing steel door/frame is experiencing weather infiltration due to poor weather seals. Staff requested a door with a relite to ensure visual safety when opening the door from the inside to check for obstructions on the outside.

## **Design Criteria**

The following criteria will be used for the design of new windows and doors for the facility.

### **Performance Objectives**

For this memorandum the following is assumed for performance criteria:

#### **Window Replacements**

1. Dimensions (refer to Appendix C for profile):
  - a. Type 'A': Rough opening equals 48" wide x 54" high.
  - b. Type 'B': Rough opening equals 72" wide x 54" high.
2. Weatherstripping: All operating sash shall be double weather stripped with extruded EPDM bulb, and be shall be factory applied. Weather stripping shall be replaceable without the use of special tools or skills.
3. Glass and Glazing /glass type: Double glazing material consisting of 0.12" inside and 0.12" outside clear sealed insulating glazing which is at least 7/8" overall thickness, Cardinal 270 Low-E soft coat glass, and filled with argon gas. Overall product performance minimum allowed shall be "U" value = 0.28 (R=3.57) for awnings and "U" value = 0.26 (R=3.85) for fixed units. Sash shall be factory glazed from the interior by the use of applied PVC glazing beads with EPDM glazing gaskets. The size of the bead shall accommodate the glass thickness. Tempered or safety glazing shall be provided where required by building code or industry safety standards. Glazing shall comply with the International Building Code.
4. Frame and sash: Construction shall be extruded, high impact resistant, ultra-violet resistant rigid polyvinyl chloride (PVC), factory fabricated with vision glass, related flashings, anchorage, and attachment devices. All corners of the frame, sash, and mullions shall be miter cut and fusion welded. Welds are to be dressed and finished to match the surrounding surfaces. Provisions for pressure equalization with baffled internal weepage shall be incorporated in the system. Profile to include concealed fastening clips.
5. Finish/color: Color of PVC window units shall be integral color, and be selected from the manufacturer's full line of colors to complement the existing building color scheme. Recommend white PVC frame color.
6. Hardware: All hardware shall be heavy duty type with "E-Gard" finish or stainless steel components. Ventilators shall be rotary crank operated with hardened steel worm gear arm with 4-bar stainless steel hinge assembly. All screws and ancillary hardware shall be from stainless steel. Windows 24" high and over shall utilize multipoint locking hardware, operable by a single handle with 3 locking points.
7. Screens: All operating vents shall be equipped with insect screens of aluminum extruded frames and 18x14 fiberglass mesh and vinyl spline. The frames shall have a baked enamel finish to match the window frame. Screens shall be removable from the inside with no special tools or knowledge required.

## **Roll-Up Door Replacements**

1. Dimensions (refer to Appendix C for profile): Finished opening equals 119” wide x 119” high.
  - a. Type ‘1’: 120” wide x 120” high.
2. R-Value: 17.5 minimum.
3. Material/Finish: Structural-quality carbon-steel hot-dipped galvanized sheets with a thickness of 0.15”. Door panels shall be fabricated from a single sheet to provide sections not more than 24” high x 2” deep. Roll horizontal meeting edges to a continuous, interlocking, weathertight seal, with a reinforcing flange return. Sections to be reinforced with continuous horizontal and diagonal galvanized steel as required to stiffen the door and for wind loading, formed to depth, and bolted or welded in place. Door sections will be provided with continuous thermal-break construction, separating faces of the door. Dual PVC thermal-break and joint seals will be incorporated to prevent heat or cold conductivity. Two (2) vision panels will be provided consisting of clear double acrylic glazing set in vinyl, rubber, or neoprene glazing channel with removable extruded-vinyl stops.
4. Wind load: Overhead sectional doors will be designed to meet the wind loads in accordance with the building code.
5. Seals and Weatherstripping: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene will be provided, fitted to jambs and at top of overhead door. A continuous EPDM bulb type rubber strip will be provided at the door bottom. The door bottom will include a combination bottom weatherseal and sensor edge tied into the electric motor operator.
6. Operator: The type, size, and capacity of electric door operator will be as recommended by the door manufacturer for door, track configuration, and operational life specified, with electric motor and factory-pre-wired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, remote-control stations, control devices, integral gearing for locking door, disconnect device, emergency auxiliary operator, and accessories required for proper operation.

## **Window and Door Replacement Options**

### **Windows**

Type ‘A’ and ‘B’ window units:

Manufacturer: Capitol Glass/Northern Windows

Style: 3800 Series

#### **Option 1**

Type ‘A’ and ‘B’ – Option 1 window units will consist of PVC extruded frames with dual glazed insulated units. Refer to Appendix C for drawing profile of Option 1 layout. Both types will consist of fixed upper glazing and operable awning style lower vent units. Operable vents will be provided with removable insect screens as define above in Performance Objectives.

#### **Option 2**

Type ‘A’ and ‘B’ – Option 2 window units will consist of PVC extruded frames with dual glazed insulated units. Refer to Appendix C for drawing profile of Option 2 layout. Both types will consist of a fixed left panel and a sliding right panel. Sliding panel will be provided with removable insect screens as defined above in Performance Objectives.

## Roll-Up Doors

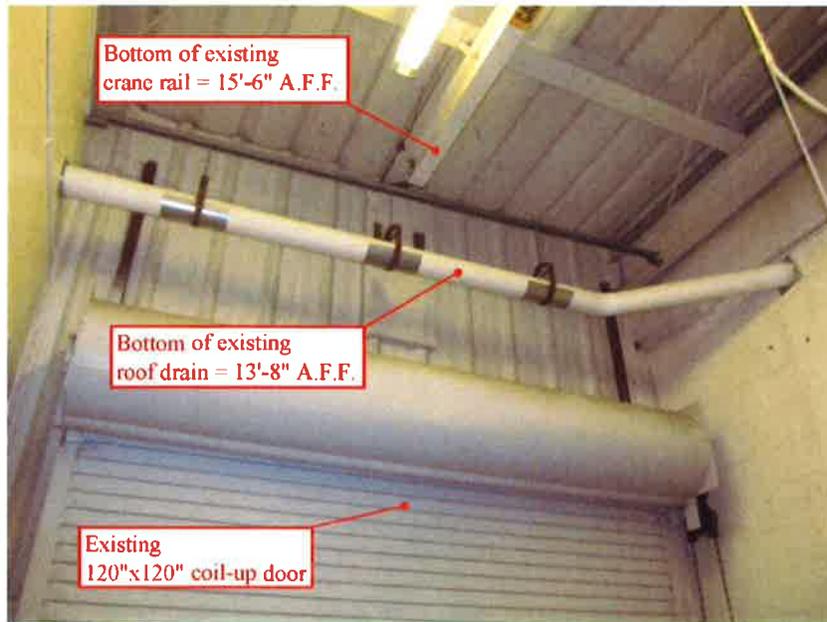
Type '1' Overhead Sectional Doors:

Manufacturer: Overhead Door Corporation

Style: Thermacore Series 592 Insulated Steel Sectional Door

### Option 1

Type '1' - Option 1 door consists of an overhead sectional energy-efficient door with an R-value listed at 17.5. These doors will replace the existing non-insulated coil-up doors. Due to height restrictions in both the Chlorine Storage and Sulfur Dioxide Storage rooms, it is recommended that a "Lift Clearance Track" style be provided to minimize the obstruction of the door at the ceiling when in the open position. The existing opening head height is located 9'-11" from finish floor, allowing the installation of a 10'-0" high door surface mounted to the inside of the exterior wall. The bottom of an existing crane rail beam is currently located at 15'-6" from finish floor; however, there is also an existing roof drain pipe located at 13'-8" from finish floor which prohibits the vertical track path to extend above this elevation unless relocated to a higher elevation in both storage spaces. If the roof drain elevation is not raised, the horizontal portion of the track would need to be located below the 13'-8" elevation. If the roof drain is relocated, the horizontal track portion could be raised to an elevation below the crane rail beam at 15'-6" (see photo below for existing conditions).



Existing HVAC equipment located in both storage spaces will need to be relocated or removed to allow for travel clearance of the door in the open position. Currently, there is mechanical equipment hanging from the ceiling that is located approximately 7'-6" from the interior face of the exterior wall.

With the horizontal portion of the track assembly located below the crane rail, it is important to note that this will reduce the travel distance of the crane rail with the door in the open position. Either signage shall be provided to alert operators that the crane rail is restricted with the door in the

open position (the full path of the crane rail would not be restricted with the door in the closed position), or a stop be provided on the crane rail itself to limit the travel distance permanently.

### Option 2

Type '1' - Option 2 door consists of a high performance insulated coil-up door. The same manufacturer that provides the overhead sectional door mentioned above, manufactures a higher thermal performance insulated rolling steel (coil-up) door that has published R-Values of 10.9. The Stormtite AP door manufactured by Overhead Door Corporation, has individual coil sections 1-1/2" thick with foamed-in-place polyurethane insulation. Although this door does not have the R-Value of the sectional door mentioned above, it does have its advantages when looking at height clearance and existing obstructions. An insulated coil-up door would not interfere with the existing crane rail beam, the existing roof drains, or the existing mechanical equipment whether the door was in the open or closed position. This door is available with customized options, such as including large insulated vision lites featuring dual-wall polycarbonate to provide maximum visibility and light transmittance.

## **Steel Doors and Frames**

Type '2' Man Door:

Manufacturer: Assa Abloy /Ceco, Curries, or Fleming

Style: Exterior ANSI A250.8 Level 3, physical performance Level A, Model 2, seamless insulated steel door.

### **Option 1**

Weather infiltration and poor door weatherstripping was mentioned while on-site as discussed with ERWWTF staff. This door was replaced in the late 1980's; however, it is now lacking proper weatherstripping and threshold to provide protection from the exterior elements. Safety was also discussed with staff for this door and, since the existing door is a solid insulated steel door, a door with a relite located in it was recommended to allow users to visually look outside for obstruction prior to opening the door. Replacement of this door would include a new insulated steel door painted to match the existing color scheme at the facility. This door would include an insulated window unit in the upper portion of the door. Panic door hardware would also be replaced, along with new door hinges and door closer. The existing Sentrol door sensor and card access control could be reinstalled.

### **Option 2**

This option would provide a completely new insulated steel door, including a new door frame, and all new door hardware in its entirety. This option would have a higher cost over option 1 as it is a complete replacement rather than just a portion of the door assembly mentioned in option 1.

## **Window and Door Recommendations**

The following addresses recommendations for replacement of the existing windows and doors.

### **Windows**

The recommended option for replacing the existing aluminum frame windows is Option 1 which provides new PVC window Type 'A' and 'B' in their respective locations. It was noted while on-site, that staff indicated a preference of option 2 style windows, which are the sliding style. Awning style windows are recommended however over sliding type windows, as slider style windows can have water/snow build-up in the track causing the window to freeze shut in the winter months. An awning style (or casement if preferred) allows for increased thermal protection and increased energy efficiency by providing a tighter compression seal around the operable portion of the window when closed. This is due to the EPDM bulb seal that is continuous around the perimeter of the operable vent that provides a tight compression seal when the window is locked, versus the typical felt and pile type weatherstripping seen around the perimeter of sliding windows that becomes loose with time. Awning style windows are therefore recommended as they provide a higher thermal performance and better perimeter seal around the operable portion of the window unit over a sliding style window unit.

### **Roll-Up Doors**

The recommended option for replacing the existing coil-up doors is Option 1, which provides the highest R-Value of door for the application. This will require removal/relocation of existing HVAC mechanical equipment to allow for the door to be unobstructed while in the open position. The user should also be aware that the installation of an overhead sectional door will limit the travel distance that can be obtained by the overhead crane when the door is in the open position, as the door will be required to travel below the crane rail during operation. This travel restriction will be further reduced if the horizontal travel of the door is required to be below the existing roof drain locations. If the existing roof drains are raised to a higher elevation, the overall horizontal travel of the door in the open position could be reduced.

If full travel of the crane rail is needed whether the door is in the open or closed position, the recommendation would be to pursue Option 2.

***Steel Doors and Frames***

The recommended option for replacing the single man door on the west elevation is Option 1. This will replace the existing insulated solid panel steel door with a new insulated steel door with a window in the door panel for visual safety. New weatherstripping, panic hardware, and door closer will be provided. The new door will be installed in the existing steel door frame and the entire door/frame assembly will be painted to match the existing building color scheme.

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**Appendix A**  
**Windows (*Manufacturers information; cut sheets*)**

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# VINYL WINDOWS

[Home](#) / [Vinyl Windows](#)



## The Northern Advantage

### Locally Engineered & Manufactured

Northern's Energy Star® qualified windows have the following features:

- Triple glazing with a sealed insulating glass unit
- Low conductivity or 'warm edge' insulating glass spacer
- Optional Low-emissivity (low-e) glass
- CSA-A440, CMHC, IGMA and Energy Star® standards.
- Optional argon gas in the sealed unit
- Air tight dual rubber compression seals
- Multi-chamber vinyl frames which reduce heat and cold transfer
- Welded corners prevent air and water leaks

### Why Choose Northern?

- + Our Top Quality Products
- + Energy Savings

### Section Menu

- > Casement & Awning Windows
- > Picture & Fixed Windows
- > Rakes & Curved

### FAQ & Warranty

- > Warranty Information
- > F.A.Q
- > Installation Information

### Connect with Northern

Phone:  
**(867) 668-**

+ Our Customer Care

Our Windows are Yukon Made

+ Maintenance Free  
Windows

+ Vinyl is Final

**5088**

Toll Free:

**1-800-661-0442**

### 3800 Series



This is  
the

industry standard. Our 3800 series is available in dual or triple glazed, with brickmolding available in brown, green, blue, beige or our standard white.

### 4000 Series



This is our  
next  
generation  
of windows;  
equipped  
with up to  
quad-pane  
glazing and  
paintable

vinyl. Providing increased R-value, thicker reinforced frames, and heavy-duty hardware, the 4000 series are a step in the right direction. Come in to see the difference between the 3800 and 4000 series!

## Available Windows Configurations

 Casement & Awning

 Picture & Fixed

 Rake & Curved

Casement



Awning





Awning windows are hinged at the top and open outwards. These windows are commonly found in bathrooms and kitchens, often in combination with fixed sections.

Casement windows are hinged on one side and open outwards. These windows are the most common openers in our line-up, and are the required style for egress-compliant bedroom windows. They can and often are coupled with fixed sections.

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## Want More Information?

Please visit Northerm's Casement & Awning detailed page now!

[READ MORE](#)

### HEAD OFFICE

1-17 Burns Road

Phone: (867) 668-5088

Fax: (867) 668-7474

Email: sales [at] northerm.yk.ca

Web: <http://www.northerm.yk.ca>

## HOURS OF OPERATION

Mon to Fri: 8:00am to 5:00pm  
Weekends & Holidays: Closed

## COMPANY INFORMATION

[About](#) | [F.A.Q.](#) | [Careers](#)

### COMPANY NEWS

Northern's Website Updated  
January 3, 2015

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Check Back Soon!  
August 14, 2014

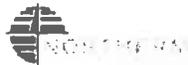
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## ABOUT NORTHERM

Northern is northern Canada's premiere window & door manufacturer.

Northern supplies Yukon made, ENERGY STAR rated, windows and doors engineered with leading window glass technology;

[Read More..](#)



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## CASEMENT & AWNING WINDOWS

### Overview



#### Premium Opener Windows

Casement windows are hinged on one side and open outwards. These windows are the most common openers in our line-up, and are the required style for egress-compliant bedroom windows. They can and often are coupled with fixed sections.



Awning windows are hinged at the top and open outwards. These windows are commonly found in bathrooms and kitchens, often in combination with fixed sections.

All of our opening windows are provided with premium-quality Truth hardware™, which carries a lifetime warranty.

Our opening windows are designed to be as energy efficient as possible and incorporate double bulb-seal weather-strip and multi-point locking hardware.

All Northern opening windows include screens!

### Section Menu

- > [Casement & Awning Windows](#)
- > [Picture & Fixed Windows](#)
- > [Rakes & Curved](#)

### FAQ & Warranty

- > [Warranty Information](#)
- > [F.A.Q](#)
- > [Installation Information](#)

### Connect with Northern

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Toll Free:  
**1-800-661-0442**

## Options

### Window Sizes

### Window Configurations

#### **Glazing**

- Dual or Triple Pane
- Obscured glass
- Safety Glass
- Low-E glass with Argon for energy efficiency, up to two panes in a triple glazed unit
- Visit our Glass Section

#### **Jamb Extensions**

- 1/2" or 3/4" return channel with which to finish with your own wood or drywall
- "Econo" jambs, combined with our regular or large brickmolding, to accommodate 4-1/2" or 6-1/2" walls
- "Tremplank" cellular vinyl returns, provided in 16' lengths at 7-1/4" depth, can accommodate walls up to 13-3/4" deep when combined with our 3/4" return channel

#### **Grills**

- 5/8" "Standard" Grills available in white or brass
- 5/16" "Slim" Grills available in white, brass, or charcoal
- Configured to your specifications

#### **Hardware**

- Standard, Folding or Round handles

#### **Brickmolding**

- "Regular" 1" wide brickmold in white
- "Large" 1-3/4" wide brickmold in white, brown, green, blue or beige
- "Deep-set" 1" wide brickmold for deeper walls, available in white
- "Shallow-set" 1-3/4" wide brickmold for deeper walls, available in white

✂ Window Sizes

⚙ Window Configurations

### Casement Window Sizes Chart

#### Casement Window Sizes

Please note: This chart shows sample sizes only. It is meant as a reference for the minimum, maximum and egress size requirements for the casement portion of any window. All of our windows are custom-built to your specifications.

RO		16	24	31	34	39	48	54	61
	OSB	18	26	33	36	41	50	56	63
16	18	✓	✓	✓	✓	✓	✓	✓	✓
20	22	✓	✓	✓	✓	✓	✓	✓	✓
24	26	✓	✓	✓	✓	✓	✓	✓	✓
28	30	✓	✓	✓	✓	✓	✓	✓	✓
31	32	✓	✓	✓	✓	✓	✓	✓	✓

■ = Minimum or Maximum Size  
■ = Meets Egress Requirements

### Awning Window Sizes Chart

#### Awning Window Sizes

Please note: This chart reflects only a sample of possible sizes and is meant to indicate maximum and minimum sizes. We custom-build all windows to your specifications.

■ = Minimum & Maximum Sizes

RO	Height	21	26	30	34	37	43
Width	OSB	23	28	32	36	39	45
21	23	✓	✓	✓	✓	✓	✓
24	26	✓	✓	✓	✓	✓	✓
30	32	✓	✓	✓	✓	✓	✓
37	39	✓	✓	✓	✓	✓	✓
40	42	✓	✓	✓	✓	✓	✗
44	46	✓	✓	✓	✓	✓	✗
49	51	✓	✓	✓	✓	✓	✗

### Still Have Vinyl Window Questions?

Contact our sales staff who'll be happy to assist you!

[CONTACT US!](#)

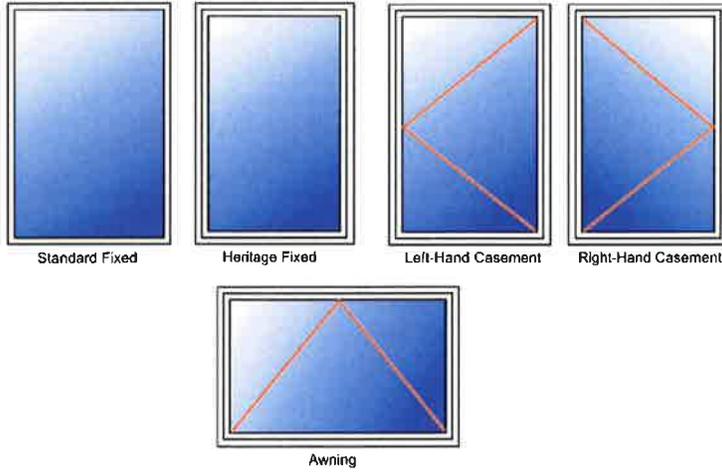
i Options

✘ Window Sizes

⚙ Window Configurations

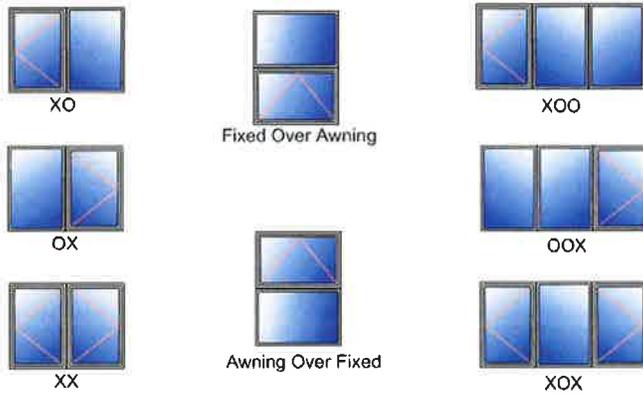
Simple Window Configurations Chart

Simple Window Configurations



Classic Combinations Options

Classic Combination Options



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Northerm supplies Yukon made, ENERGY STAR rated, windows and doors engineered with leading window glass technology;

## F.A.Q

### Customer Care Here

[All](#) [Condensation](#) [Energy Efficiency](#) [Why New](#) [Why Northern](#) [Why Vinyl](#)

#### – Why change to vinyl windows instead of aluminium or wood windows?

Vinyl withstands assaults from moisture, heat, cold, humidity, salt, pollutants and acid rain; assaults that can and do affect wood and metal. Vinyl windows and patio doors never flake, blister, stick, rot, rust, peel or corrode. Vinyl's color is integral throughout the material, so scratches go virtually unnoticed. You never have to paint, strip and sand or lubricate vinyl windows or patio doors. Vinyl is truly the most durable, lowest maintenance window and patio door material available.

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### COMPANY INFORMATION

**Appendix B**  
**Doors (*Manufacturers information; cut sheets*)**

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**Appendix C**  
**Drawings (Building One Floor Plan and Exterior Elevations)**

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