

Village of Bayside 9075 N. Regent Rd. Architectural Review Committee Meeting April 8, 2019 Village Board Room, 6:00pm

## ARCHITECTURAL REVIEW COMMITTEE AGENDA

**PLEASE TAKE NOTICE** that a meeting of the Village of Bayside Architectural Review Committee will be held at Bayside Village Hall, 9075 North Regent Road, Bayside, Wisconsin at the above noted time and date, at which the following items of business will be discussed and possibly acted upon:

- I. CALL TO ORDER
- II. ROLL CALL
- III. APPROVAL OF MINUTES
  - A. Approval of the March 11, 2019 minutes.
- IV. BUSINESS
  - A. Landscape, Fence, Solar Panels, and Play Structure (already erected) 1476 E Bay Point Rd 020-8887-005
  - B. Room Addition, and Window Replacement 8840 N Rexleigh Dr 021-0149-000
- V. ADJOURNMENT

Cindy Baker

Accounting Assistant March 29, 2019

Upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. Contact Village Hall at 414-206-3915. It is possible that members of and possibly a quorum of members of other Boards, Commissions, or Committees of the Village including in particular the Board of Trustees may be in attendance in the above stated meeting to gather information; no action will be taken by any other Boards, Commissions, or Committees of the Village except by the Board, Commission, or Committee noticed above. Agendas and minutes are available on the Village webs).



## Village of Bayside 9075 N. Regent Rd. Architectural Review Committee Meeting Minutes March 11, 2019

## I. CALL TO ORDER

Chairperson Marisa Roberts called the meeting to order at 6:00pm.

## II. ROLL CALL

Trustee Liaison:

Mike Barth

Chair:

Marisa Roberts

Members:

Sandra Muchin-Kofman-excused

John Krampf Dan Zitzer

Tony Aiello-excused Liz Levins-arrived 6:04pm

Also Present:

Accounting Assistant, Cindy Baker

There were two people in the audience.

## III. APPROVAL OF MINUTES

A. Approval of the January 14, 2019 minutes.

Motion by Trustee Barth, seconded by Dan Zitzer, to approve the minutes of January 14, 2019. Motion carried unanimously.

## IV. BUSINESS

A. Spiral Staircase-set-back variance approved by Board of Zoning Appeals on 1/21/2019
 1250 E Brown Deer Rd
 020-0135-000

Heidi Dondlinger, homeowner, appeared on behalf of the project. There were no neighbors in attendance. A description of the project is as follows: Spiral Staircase.

Motion by Trustee Barth, seconded by John Krampf, to approve the Spiral Staircase, as described and presented in the application. Motion carried unanimously.

Window replacement-2<sup>nd</sup> floor, new eave over garage door,
 1434 E Brown Deer Rd
 020-9982-000

Kathryn Kamm, homeowner, appeared on behalf of the project. There were no neighbors in attendance. A description of the project is as follows: Window replacement and new eave over garage door.

Motion by Trustee Barth, seconded by John Krampf, to approve the window replacement and new eave over garage door as described and presented in the application. Motion carried unanimously.

## V. ADJOURNMENT

Motion by John Krampf seconded by Marissa Roberts, to adjourn the meeting at 6:17pm. Motion carried unanimously.

Respectfully submitted,

Cindy Baker Accounting Assistant March 12, 2019

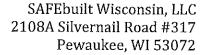
## **Project Proposal**

		Date 3-12-2019
		Property Address 1476 EAST BAY POINT ROAD BAYSIDE,
		Zoning DISTRICT "A"
		Zoning District A
	Accessory S	tructures/Generators D_New Construction
	Additions/R	emodel Play Structures
	Bluff Manag	ement   Recreational Facilities/Courts
	Commercia	ll Signage D Roofs
	Decks/Patic	Solar Panels/Skylights
V	Fence	☐ Swimming Pools
•		☐ Windows/Doors-change exceeds 25% of
	Fire Pits	opening
M	Landscapin	g requiring Impervious 🔲 Other
,,,	Surface/Fill/	Excavation Permit
ropose	ed project d	etails (type of work, size, materials, etc.):
ands		Fence.
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DI	Ch	utu - Double Fee m Permit - already up
Pla	y otvi	**************************************
Yes	No	, , , , , , , , , , , , , , , , , , , ,
163		Color what a manufactor was back to patient along those and aureounding views
<u> </u>		Color photographs showing project location, elevations and surrounding views  Two (2) complete sets of building plans (including elevations and grading)
	+ -	Survey
A		Samples or brochures showing materials, colors and designs
/Bo		Application Fee 60 - Co Cal 2
		Parcel Number
		ARC Agenda Date:
d		Building Permit
		Fill Permit
0		Impervious Surface Permit
П		Plan Commission/Conditional Use Permit
		Tax Key Number

020-9998.005

Right-of-Way/Excavation Permit

Variance Required





3/29/2019

Attention:

Village of Bayside, WI

Architecture Review Committee

PROJECT/SITE OWNER:

Aring Ravine LLC

PROJECT ADDRESS: 1476 East Bay Point Rd

PROJECT SUMMARY: Landscaping, New Fence, Solar Array, and Play Structure

## VILLAGE CODE REVIEW

## New Landscaping/Hard Scape:

All new proposed pavers and hard surfaces are pervious and as such, the design complies with impervious surface requirements per 125-3(g).

## PROPOSED HARD SCAPE COMPLIES

## New Fence:

New Fence along north property line: approximately 320 linear feet of new privacy fence. 6 ft maximum height. Approximate total property perimeter: 2,290 linear feet.

New privacy fence is approximately 14% of the total property perimeter. As such, the percentage of openness is not limited per village code section 14-125(L).

## PROPOSED FENCE TYPE AND LENGTH COMPLY

## Play Structure:

Regulation of children's play structures are specifically excluded from the building code. The zoning code includes the definitions for 'structure' per local chapter 125, Section 125-2: Structure means anything constructed or erected which, for its use, requires a permanent location on the ground or attached to something having a permanent location on the ground. Structures are regulated per the zoning code general requirements detailed in 125-3(f) and shall comply with setback requirements. The proposed play structure location is outside of the rear yard setback line as shown on the proposed site plan. The rear yard setback line was arbitrarily created based on the approximate location of neighboring homes, all of which are more than 200 feet away from the proposed play structure location. The setback requirements per 125-3(f) preclude the use of homes more than 200 feet away. As such, and considering the play structure will not be visible from the road or neighboring homes, reviewer believes the proposed location is acceptable.

## **ARC TO MAKE FINAL DETERMINATION**

## Solar Array:

The solar array is not restricted by the building or zoning code and is proposed within the property's setback requirements.

## PROPOSED SOLAR ARRAY COMPLIES

## Dan Hatch, RA

Plans Examiner SAFEbuilt Wisconsin, LLC dhatch@safebuilt.com

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NUSSCAPE ARCHITECT AND A WRITTEN NOTE OF
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12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORMED BY THEIR RESTORMED BY THEIR CONSTRUCTION OPERATIONS WHETHER WITHIN THE CONSTRUCTION LIMITS OR NOT.

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2. REFER TO CIVIL DRAWINGS FOR EROSION CONTROL VEEDED

2. INSTALL ALL HORIZONTAL MEMBERS WITH GOOD FACE OUTWARD.

3. LAGGING MATERIAL SHALL BE AS FOLLOWS:

A. COMPRESSED MIXED HARDWOODS WITH THE FOLLOWING MINIMUM PROPERTIES: F8-1200 PSI, FW-85 PSI, FX-1200 PSI, FW-85 PSI, FX-1200 PSI, FW-85 PSI, FX-1200 PSI, FX-85 PSI, F

Z. FINISH GRADES SHALL BE SMOOTH, EVEN, AND DH A INFERRIN PLANE WITH NO ABRUPT CHANGES OF SLIPHACE, SLOPE TO RUN UNIFORMLY BETWEEN GIVEN SPOT ELEVATIONS.

<u>IOLERANCES:</u> ALL PLAYTING AREAS, INCLLIDING LAWN AREAS, SHALL BE TRUE TO GRADE WITHIN 1 INCH WHEN TESTED WITH A 10' STRAIGHTELIGE,

ALL NOTES ON THIS SHEET ARE TO SE FOLLOWED UNLESS THEY ARE IN CONFLICT WITH LOCAL CODE IN WHICH CASE, LOCAL CODE SHALL PREVAIL.

4. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT COSTS. 3. CONTRACTOR SHALL ADJUST LAYOUT AS REQUIRED AT NO ADDITIONAL COSTS.

ALL LINES SMALL BE STRAIGHT AND TRUE IN
CORDANCE WITH THE DRAWNIGS.ALL AREAS TO BE
NITBULOUS OR TANGEVE, NO FLATTENED AREAS WILL
ACCEPTED.

11. CONTRACTOR TO SNAP SAWOUT LINES AND CONFIRM WITH LANDSCAPE ARCHITECT PRIOR TO WORK 10. CONTRACTOR TO PROVIDE A PERMENANT BENCH MARK ON SITE THAT WILL REMAIN PROTECTED DURING CONSTRUCTION. 9. LICENSED SURVEYOR TO PROVIDE FINAL PAVEMENT LAYOUT BL REFER TO CIVIL DRAWINGS FOR FINISH ELEVATIONS 7. CURVES SHALL BE SMOOTH AND WITHOUT KINKS

GRADING AND DRAINAGE NOTES

L. REFER TO CIVIL & MEP DRAWINGS FOR ALL

INDERGROUND UTILITY INFORMATION

3. COMPRACTOR WILL BE REQUIRED TO INSTALL, MAINTAIN, INSPECT AND MONITOR ALL EROSIGN CONTROL, ACTIVITIES FOR THE SITE, EROSION CONTROL ACTIVITIES FOR THE SITE.

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1. THE CONTRACTOR SHALL PROVIDER ALL MECESSARY

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ENIST CRADING.

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LINLESS OTHERWISE NOTED ON THE DRAWNISS.

IL CHADES NOT OTHERWISE NIDICATED SHALL BE IUNICORN AND LEWE, OR SLOPED BETWEEN PRINTS WHERE ELENATIONS ARE ORING AS NECESSARY BETWEEN POINTS ESTABLISHED BY WALKS, PAVING, CURBS, OR CATCH BASINS.

5. PREDRILL PILOT HOLES FOR ALL WOOD FASTENERS. A. ALL EXPOSED FASTENERS, NAUS, BOLTS, STAPLES, AND STEEL CONNECTORS OR PLATES SHALL BE STAINLESS STEEL

C. ALL WOOD IN CONTACT WITH SOIL SHALL BE PRESSURE TREATED, U.N.O. 9. ALL 3" LUMBER SHALL BE SEASONED TO 19% MAXIMUM MOISTURE CONTENT,

4, TOPS AND TOES OF ALL SLOPES SHALL BE ROUNDED TO PRODUCE A CRADUAL AND NATURAL APPEARING TRANSITION BETWEEN RELATIVELY LEVEL AREAS AND SLOPES.

2. LANDSCAPE ARCHITECT TO APPROVE STAKED LAYOUT IN THE FIELD. 

5. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHES AND MANTAHING LYCOLT POINTS THROUGHOUT CONSTRUCTION, THE COST OF SUBSECULENT LYCOLTS SHALL BE AT THE CONTRACTOR'S COST,

EXCAVATION NOTES

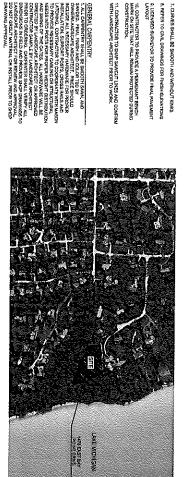
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	SCACE: 1:500	SITE AERIAL

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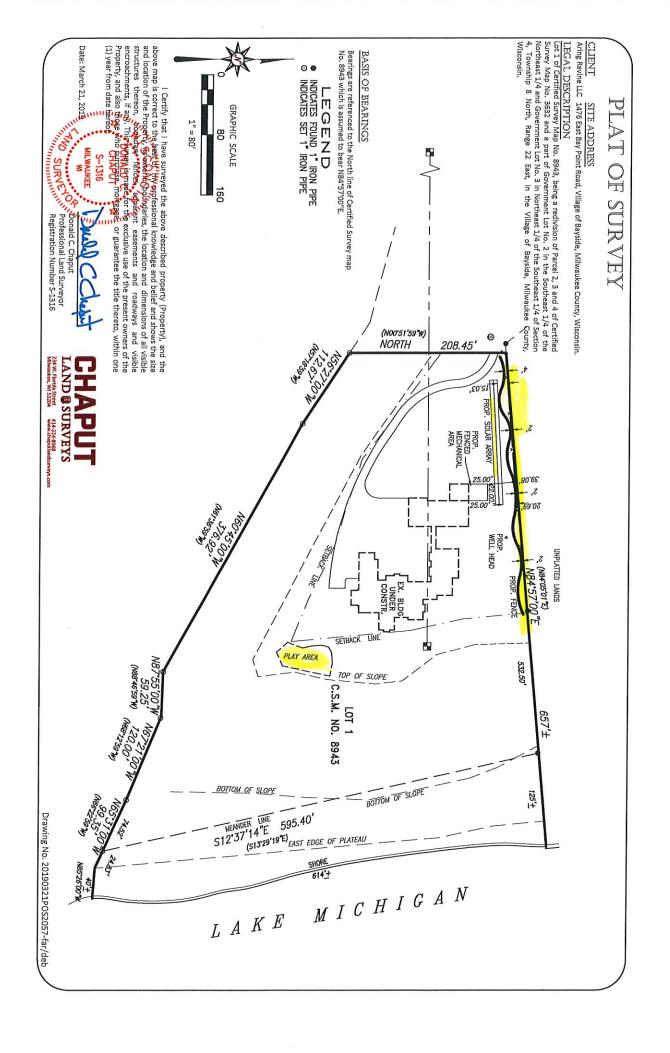
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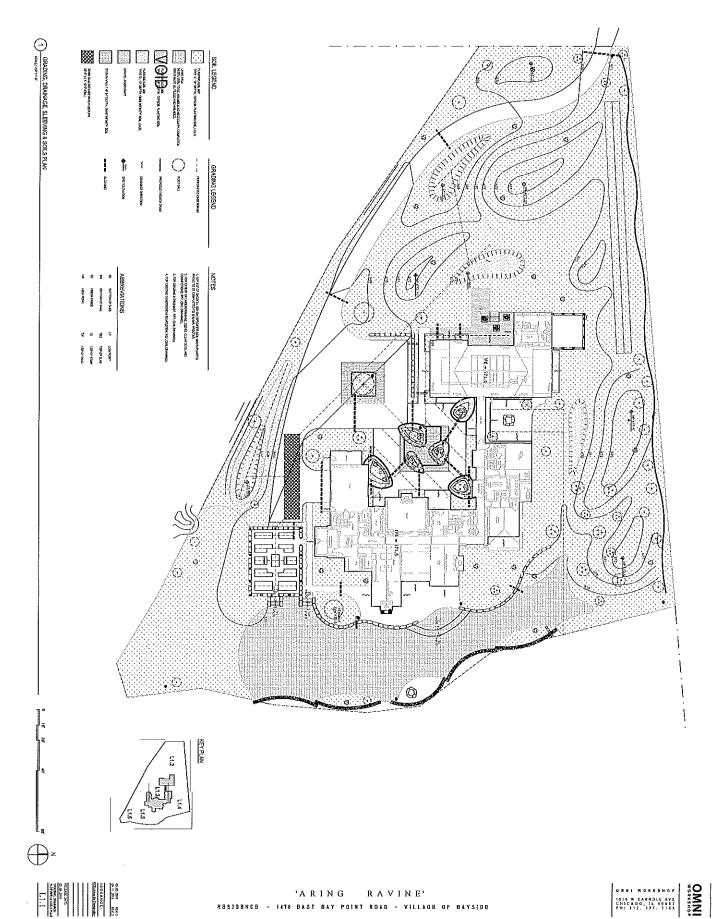
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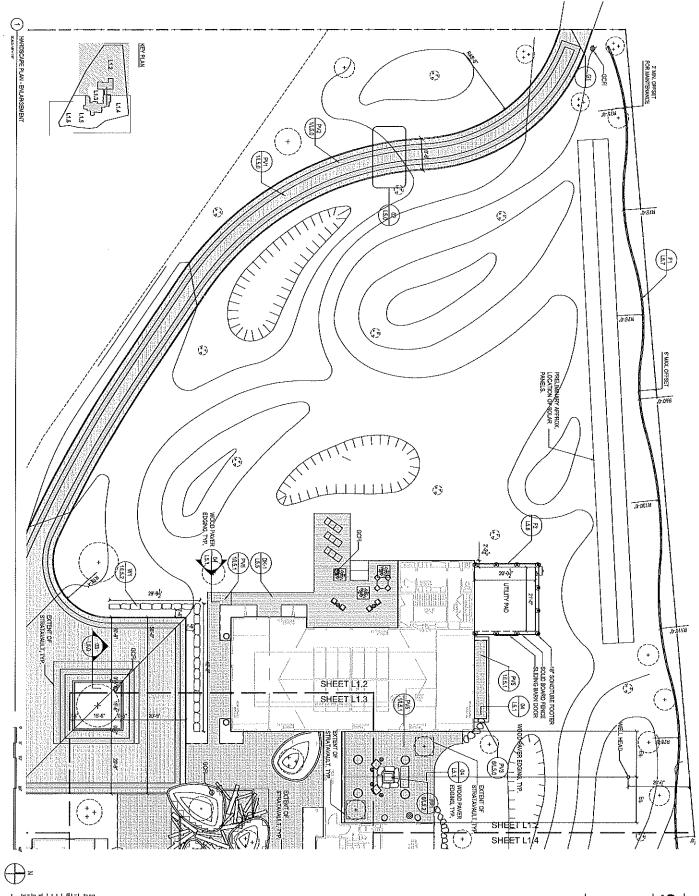
- 1475 BAST BAY POINT ROAD - VILLAGE OF BAYSIDE

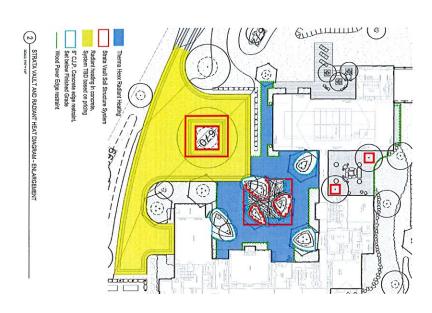
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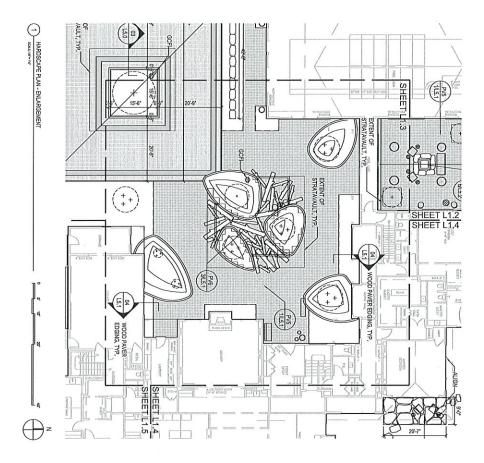




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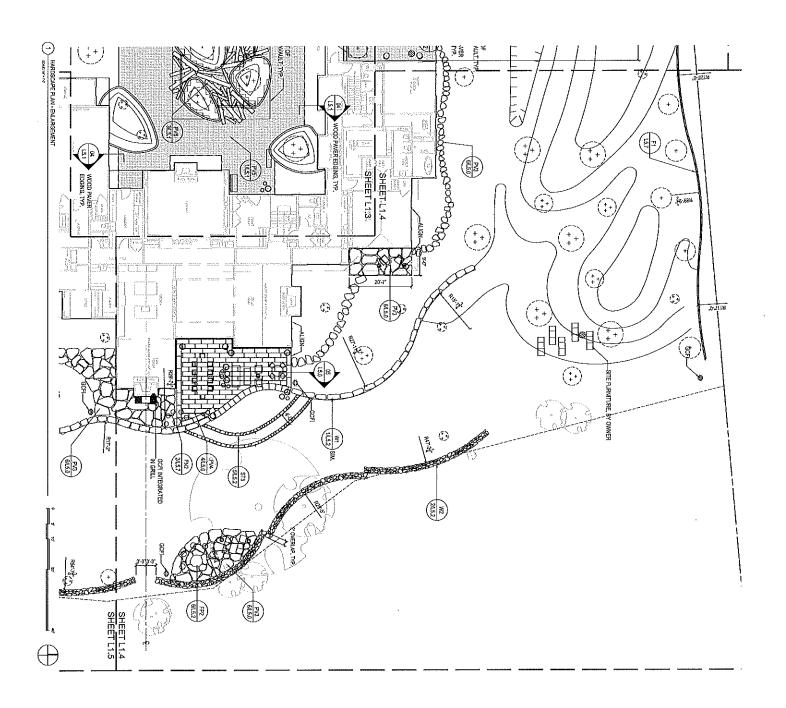








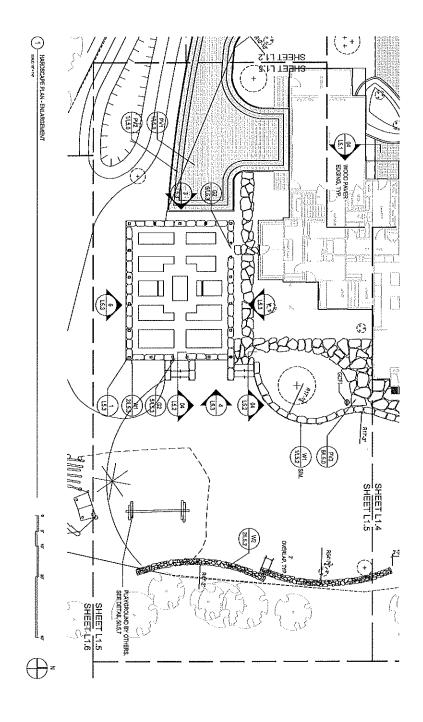






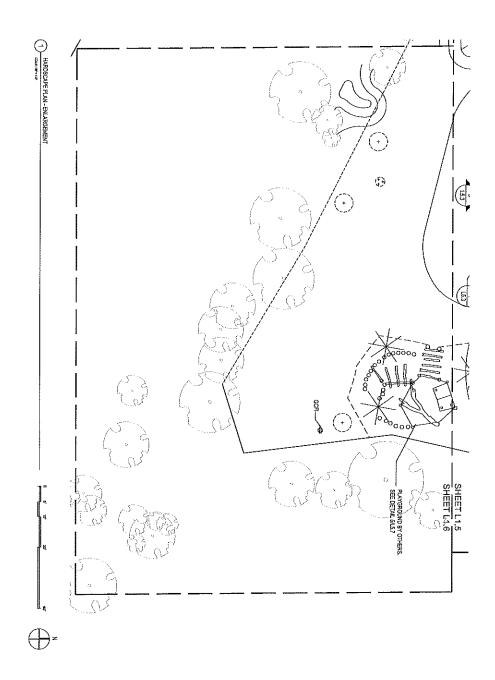










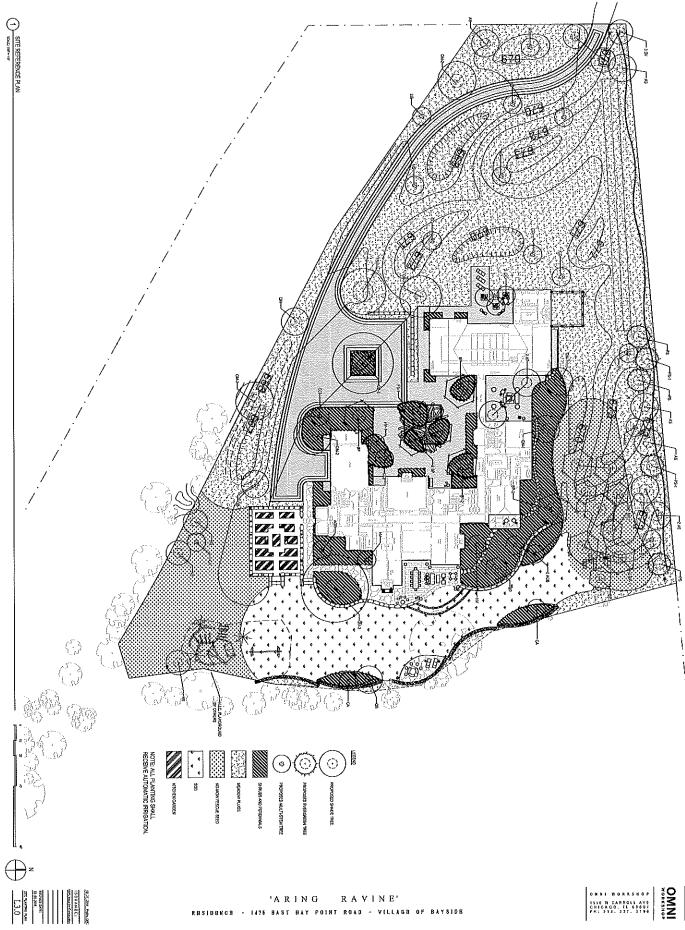






ELECTION SERVICE CONTROL OF THE CONT

'ARING RAVINE' RBSIDENCE - 1476 BAST BAY POINT ROAD - VILLAGE OF BAYSIDE



ONNI HORRSKOP

1316 H CARROLL AVE
CHICAGO, 11 61607
PK: 312: 337, 3196

There are two main type of base: the ballant and the concrete slab. Ballant is a layer of very well compacted growel or line; code of at least 5" blob. Concrete slab instead contribut in a 4" to 5 "blob layer of Jordand coments and concrete around. The base layer will create the necessary slape in order to drain the surface water.

The bedding layer contrict of a drypack, mixed and and cement in a ratio 3:1. The initial thickness of the bed should be about 5°, according to the thickness of the piece to be placed on it. After setting the pieces we "I have about 11/2" of comparted dry-pack.

# 3 Installing

3.1 Setting borders: Usually materialized by large pieces like tites, will be set at the desired level all around the paving trea with a 3:1 sand and cement wet mortar

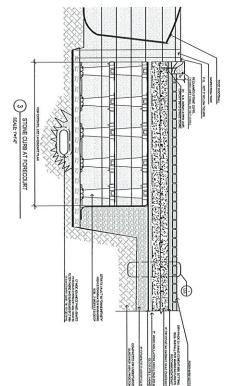
3.2. Filling out the entire area between borders maintaining the desired levels and slopes. The inside paving will be set on a dry-pack 3:1 sand and cement. Each piece will be compacted and levelled with a rubber hammer.

3.3 After installation is completed, wet the hole area by spraying water on too of the pothyry stones and joints. The sprayed area will remain writious any transit nor it for at local 13 hours and 10 days hofore beary stansituse.
I hours and 10 days hofore beary stansituse.
When they appear installation words for 10 by vanable length pieces or smaller, larger pieces must be installed with a wer, mortar 3:1 sand and coment setting bed, like any molder granite setting.

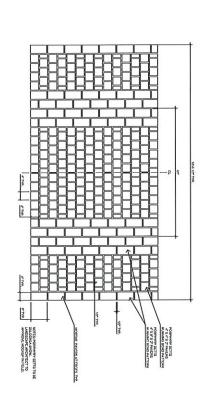
Once setting of the stone is completed, openal stage brushes are used to dean up the safeties. Defere stating specting, the whole area must be trained with a grout reference product, there are many available in the market. For availing comet to give state in the purpose, varieties, after the grout reference gets only, the metric area is covered with a basic product, should be used a best of the grout reference gets only, the entire available in the purpose year area. After the grout reference gets only, the entire available content of the product of the product of the grout reference gets only the entire available content of the grout of the product of the content of the product of the grout of the grout of the grout of the ground of the product of the ground of

MANUFACTURE'S RECOMMENDED INSTALL FOR PORPHYRY PAVING SYSTEM





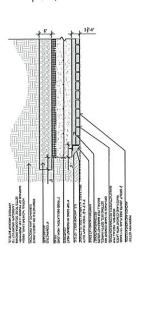
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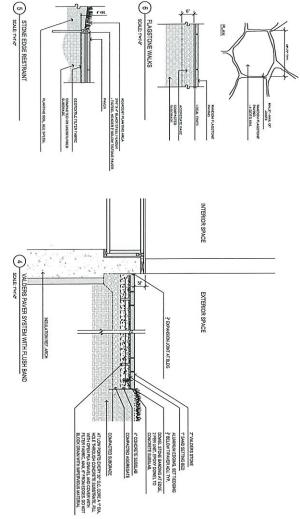
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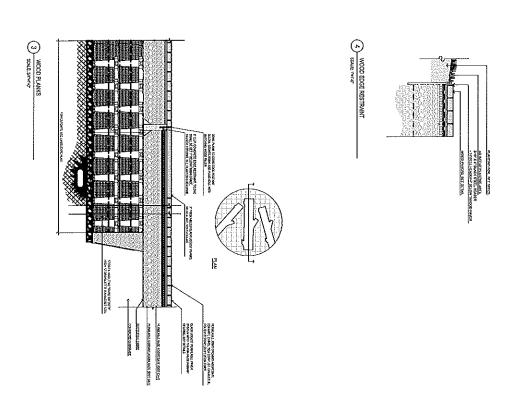
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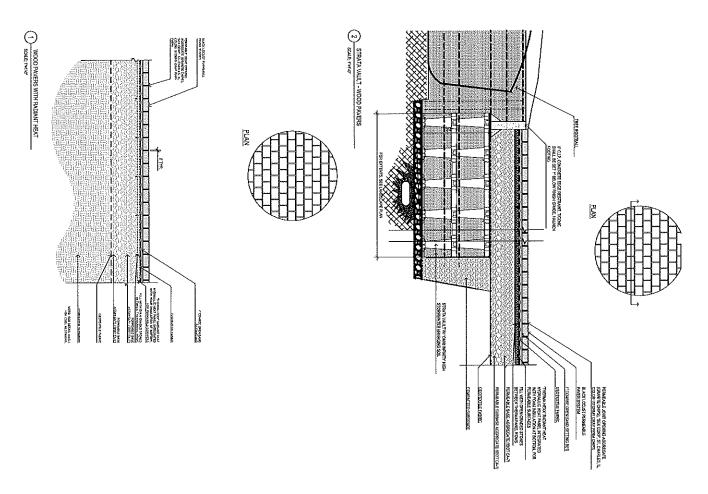


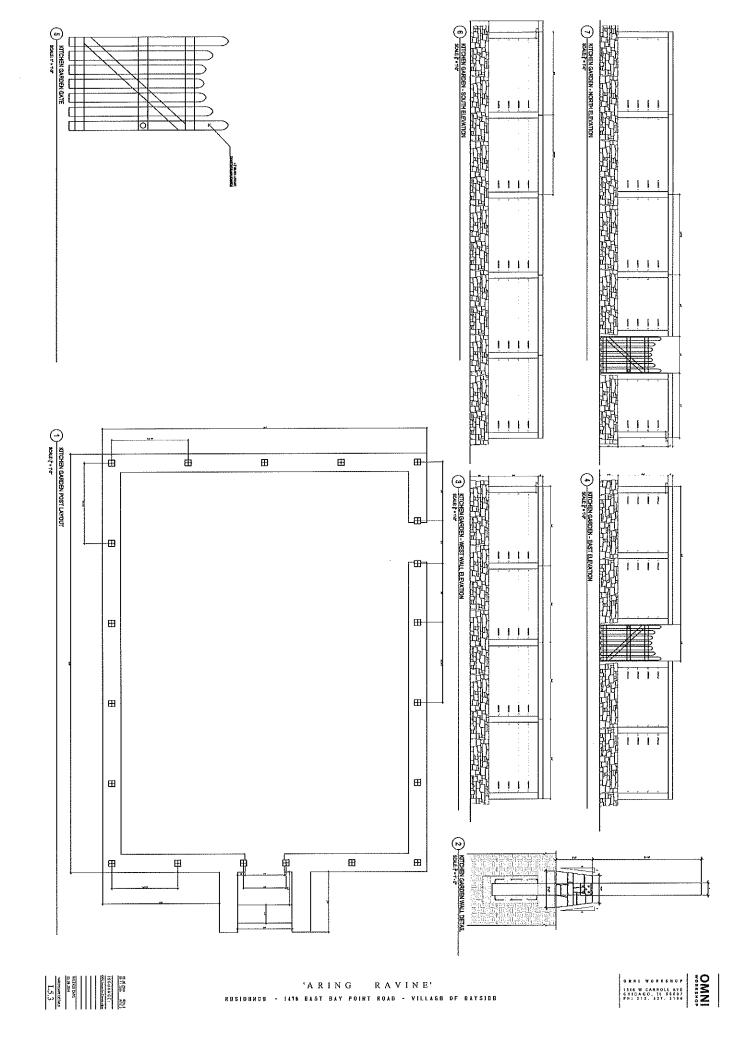
DRIVEWAY PATTERN ENLARGEMENT - PORPHYRY PAVERS SCALE: 1\*\*1'0"

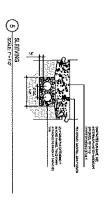


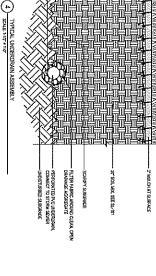


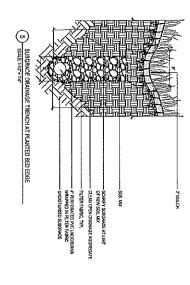




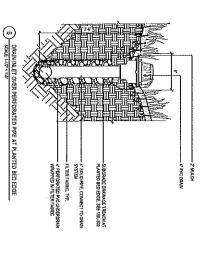


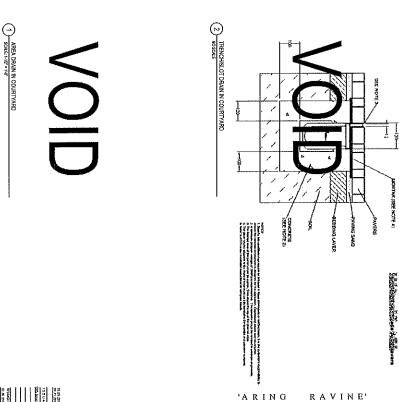




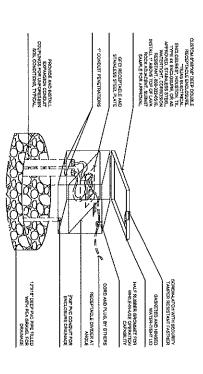


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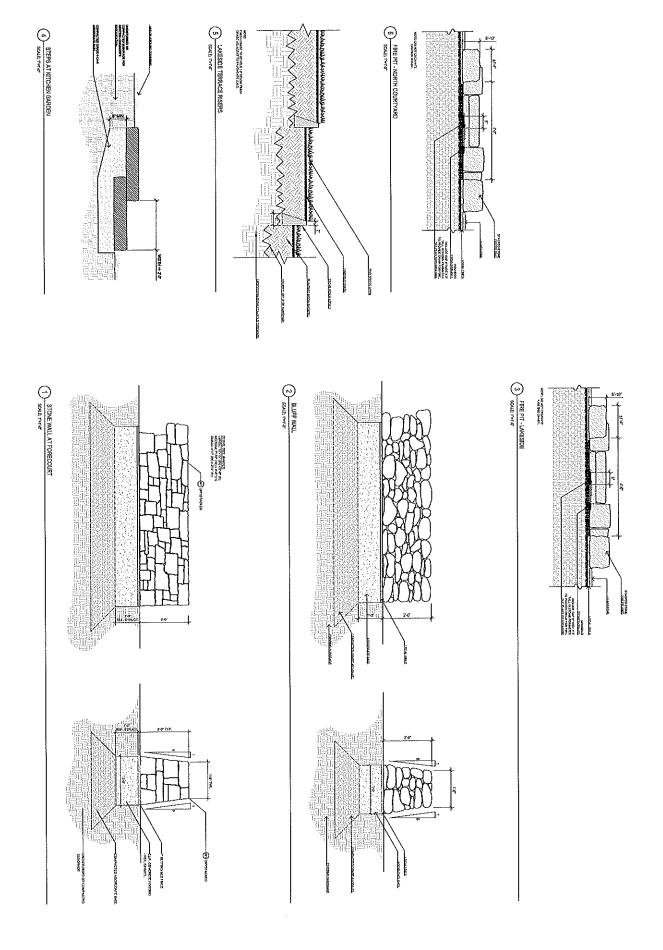


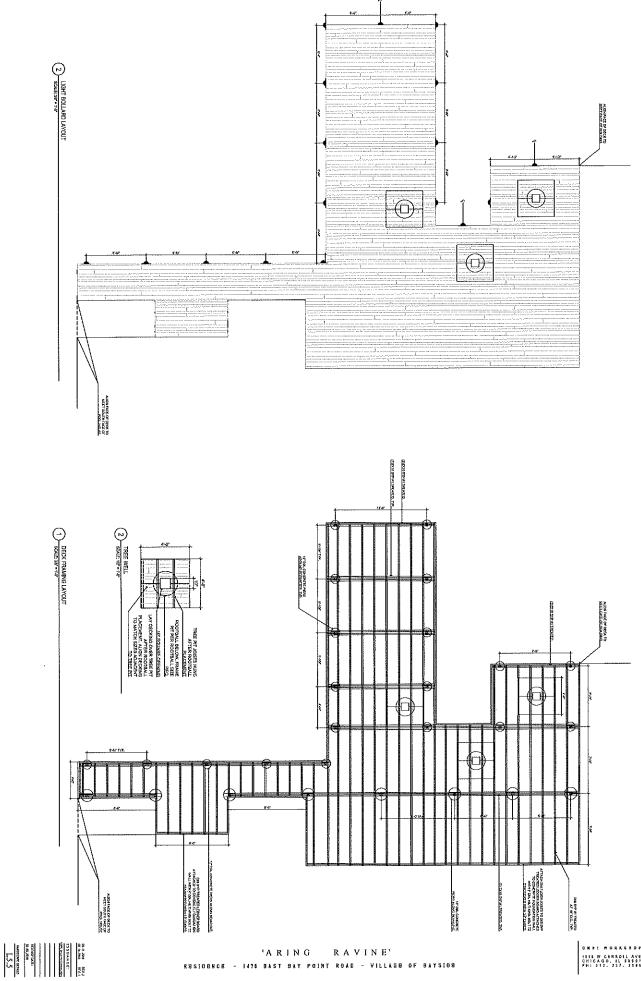


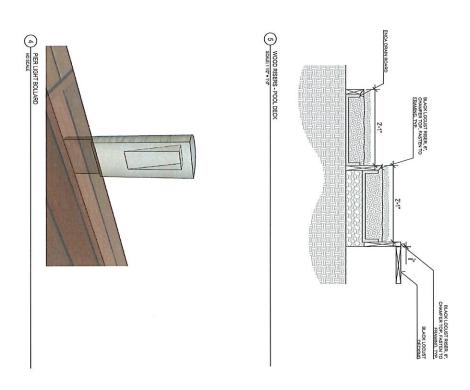
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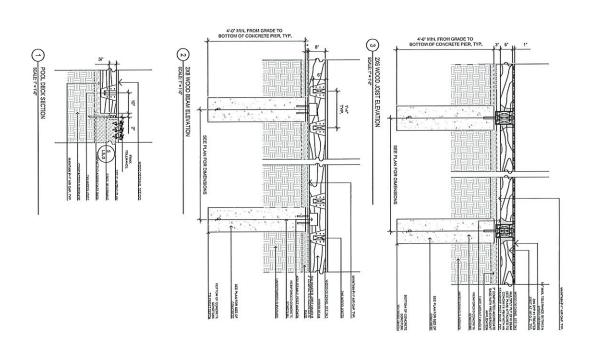


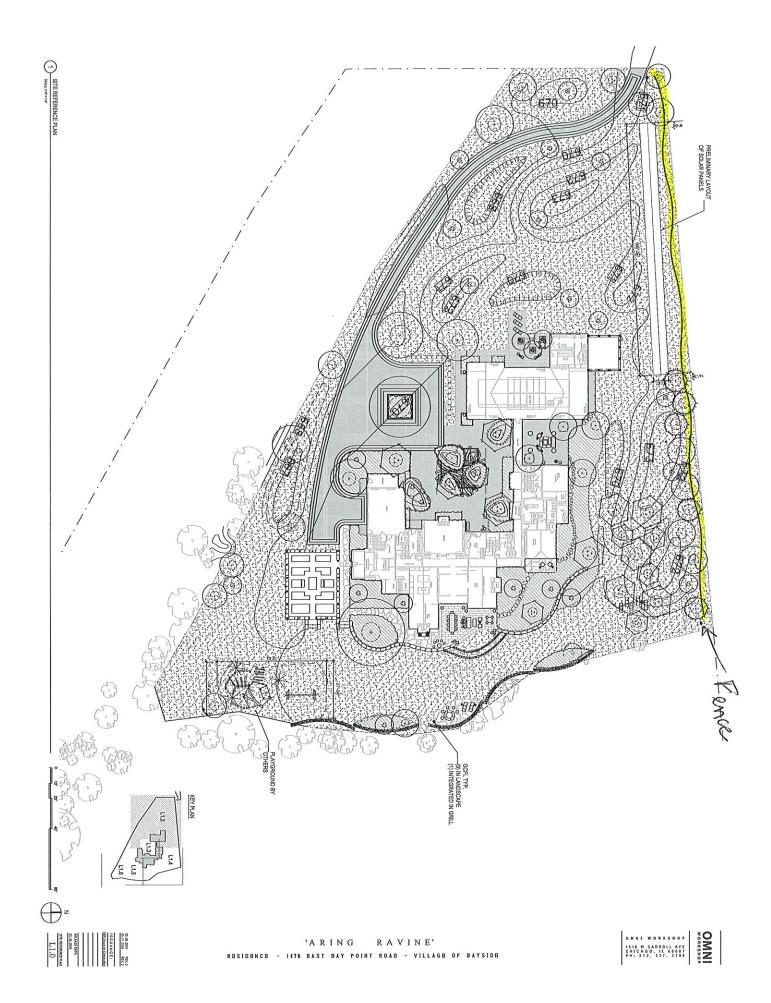
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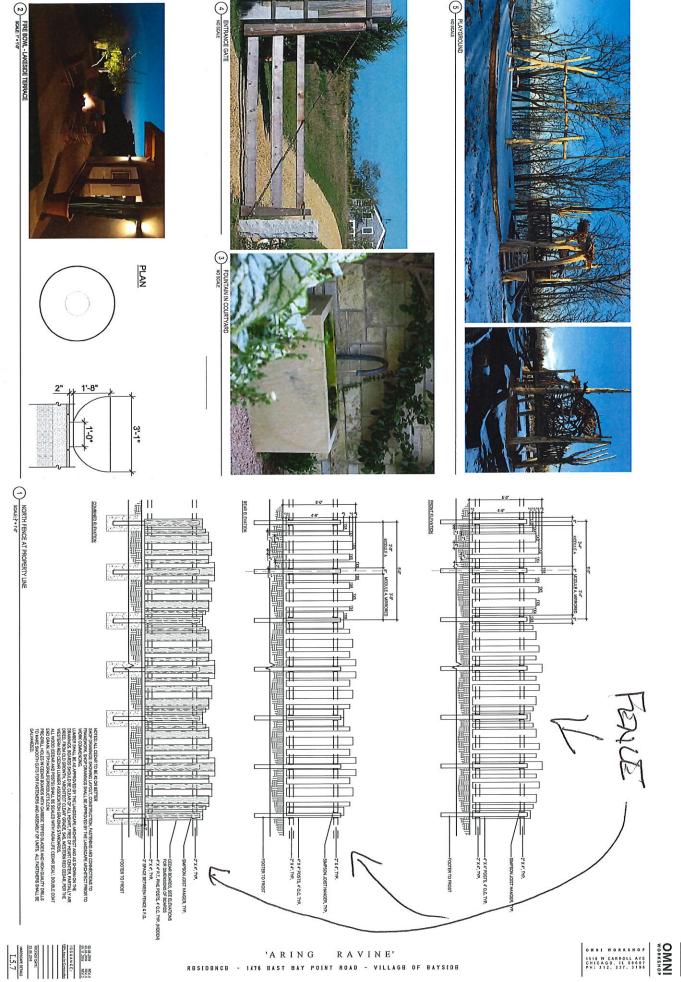


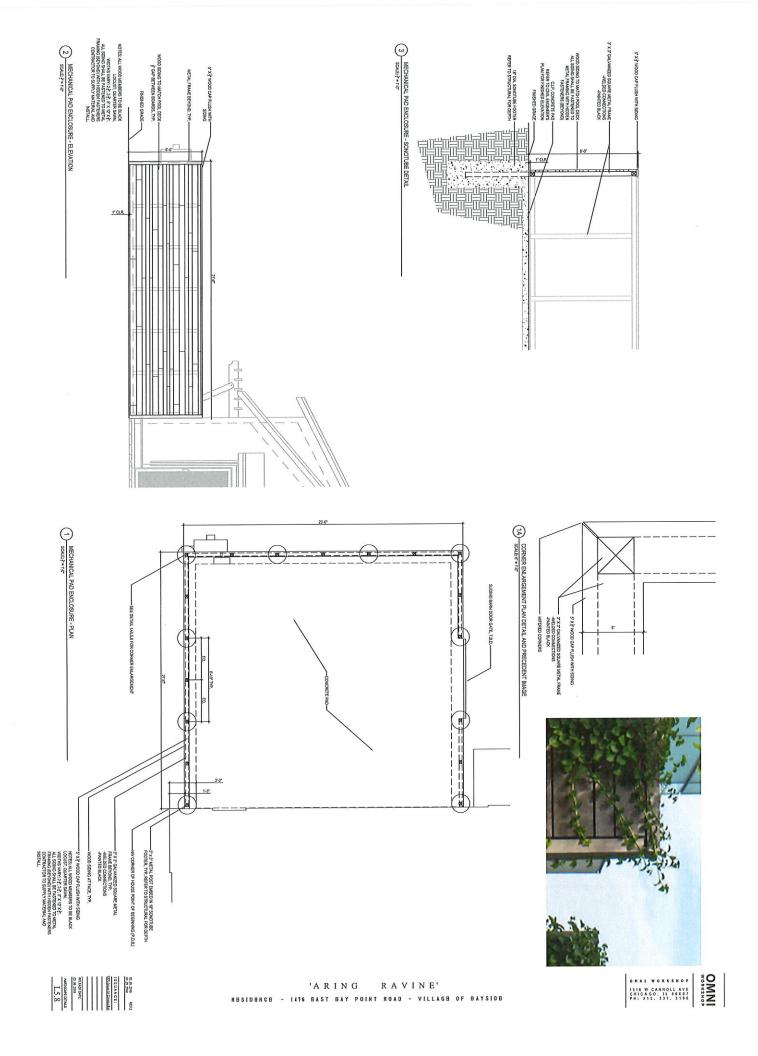


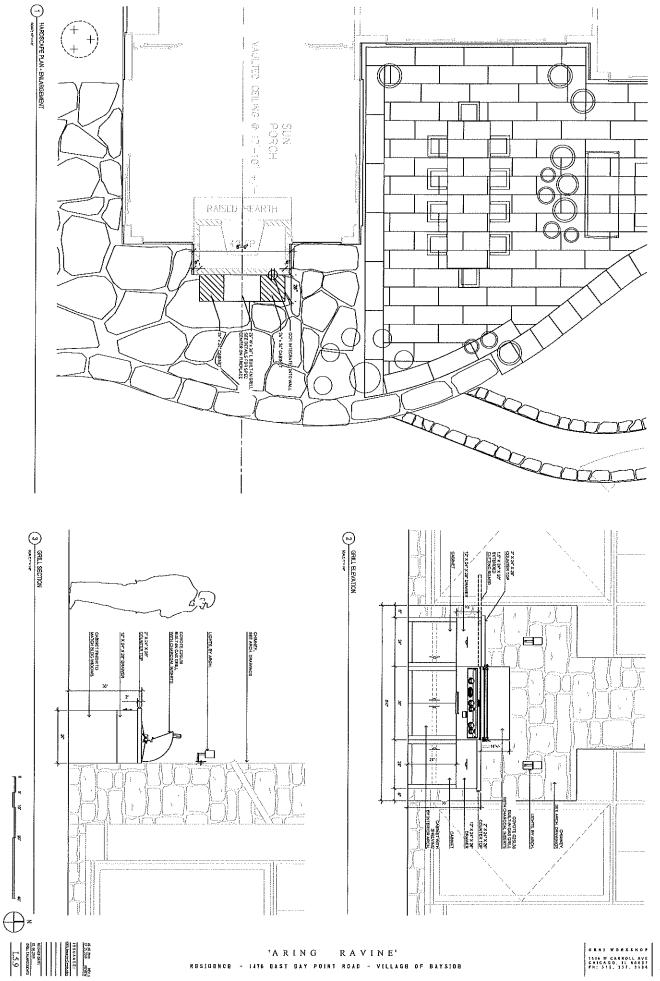












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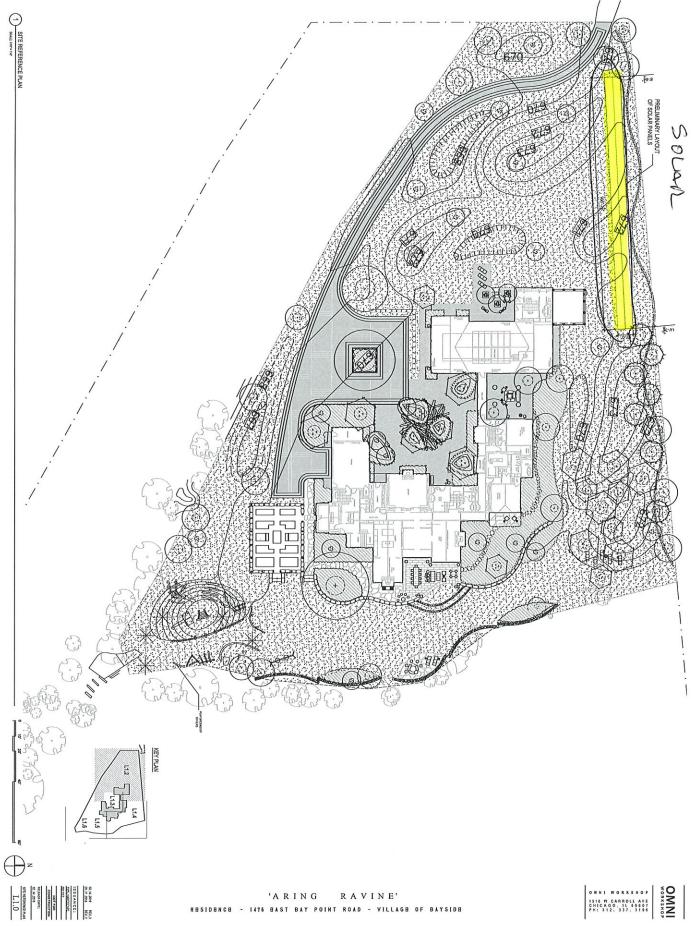
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OMN1 WORKSHOP
1515 W CARROLL AVE
CHICAGO, 11 80897
PH: 312. 337. 3198

RITAGE CATE
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EDANGE



OMNI WORKSHOP
1516 W CARROLL AVE
CHICAGO. 11 69607
PH: 312. 337. 3196

## **Cindy Baker**

From:

Andy Pederson

Sent:

Monday, March 18, 2019 2:36 PM

To:

Cindy Baker Lynn Galyardt

Cc: Subject:

FW: Solar Panels

You can add the solar panels to the ARC, but they have very limited ability to regulate them. See below from Chris.

Andy

Have you signed up for the Bayside Buzz?

Andy Pederson Village Manager, Village of Bayside

Direct: 414.206.3925 Main: 414.206.3915

www.baysidewi.gov

From: Chris Jaekels < CJaekels@dkattorneys.com > Date: Monday, March 18, 2019 at 12:44 PM To: Andy Pederson < apederson@baysidewi.gov >

Subject: RE: Solar Panels

Local restrictions are permitted only if they serve the public health or safety, do not significantly increase the cost or decrease the efficiency of the system, or allow for an alternative system of comparable cost and efficiency. Beyond those, no other restrictions are allowed. The statute is not trumped, qualified or limited by §66.032 or by a municipality's zoning and conditional use powers.



Christopher J. Jackels Attorney T: 414.225.1409 F: 414.278.3609 cjaekels@dkattomeys.com 111 E. Kilbourn Avenue, Suite 1400 Milwaukee, WI 53202-6613 www.dkattorneys.com

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UNIRAC'S DGFT DISTRIBUTION GROUND FIXED TILT

STRUCTURAL RACKING DRAWINGS

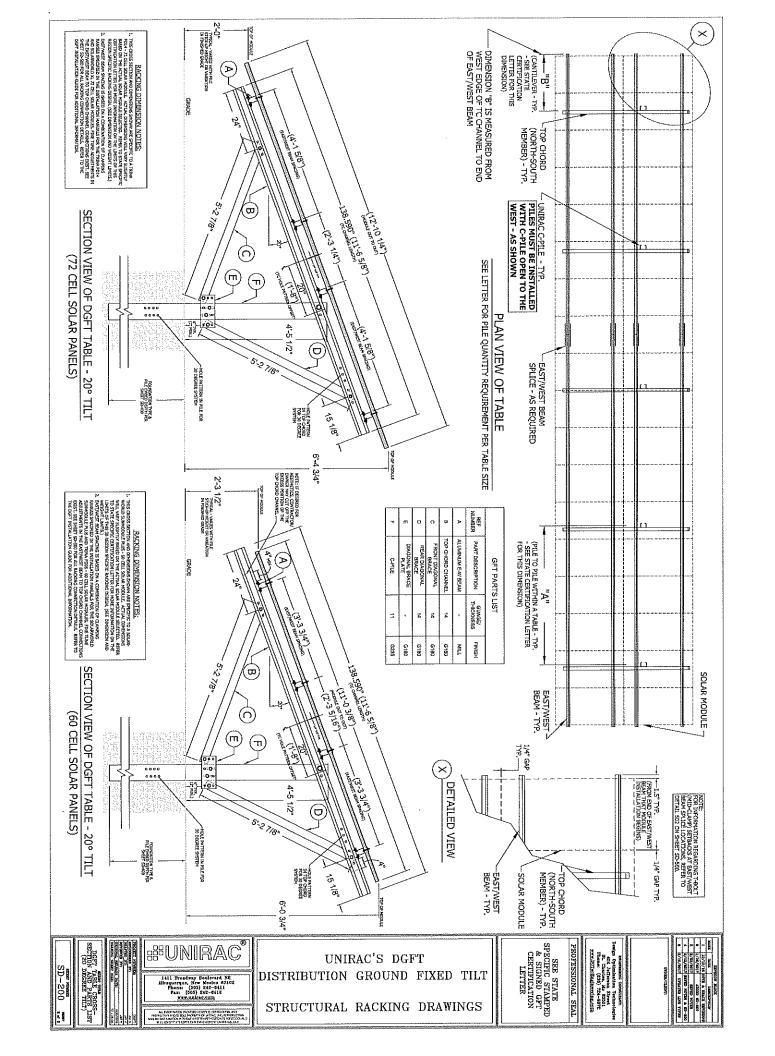
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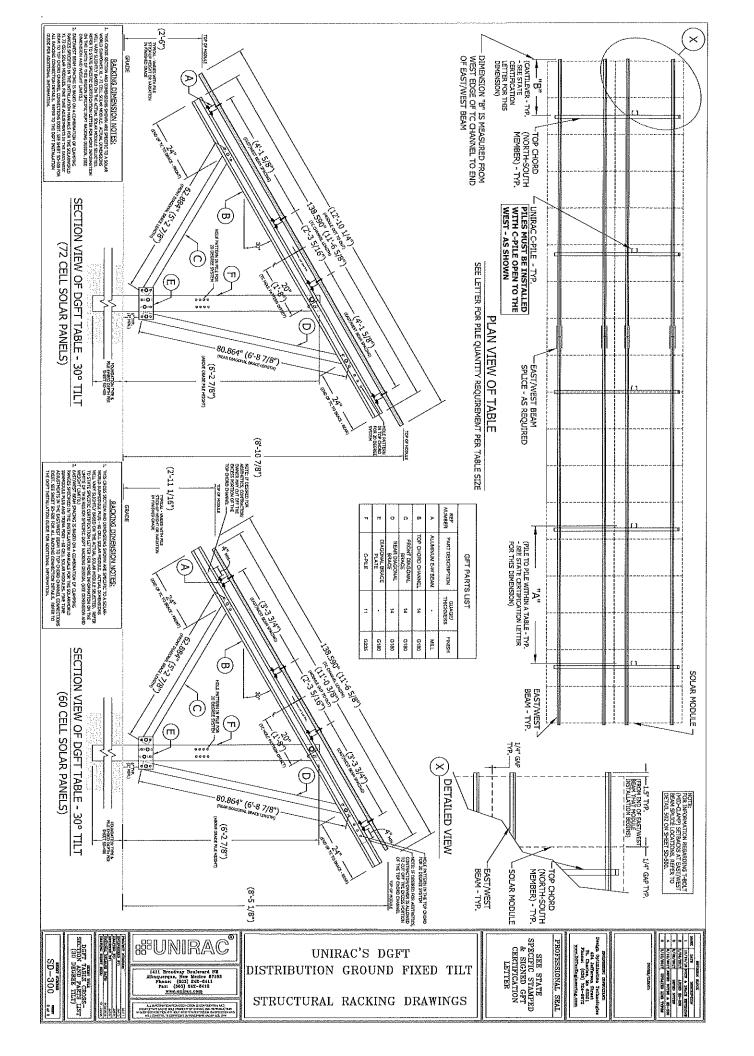
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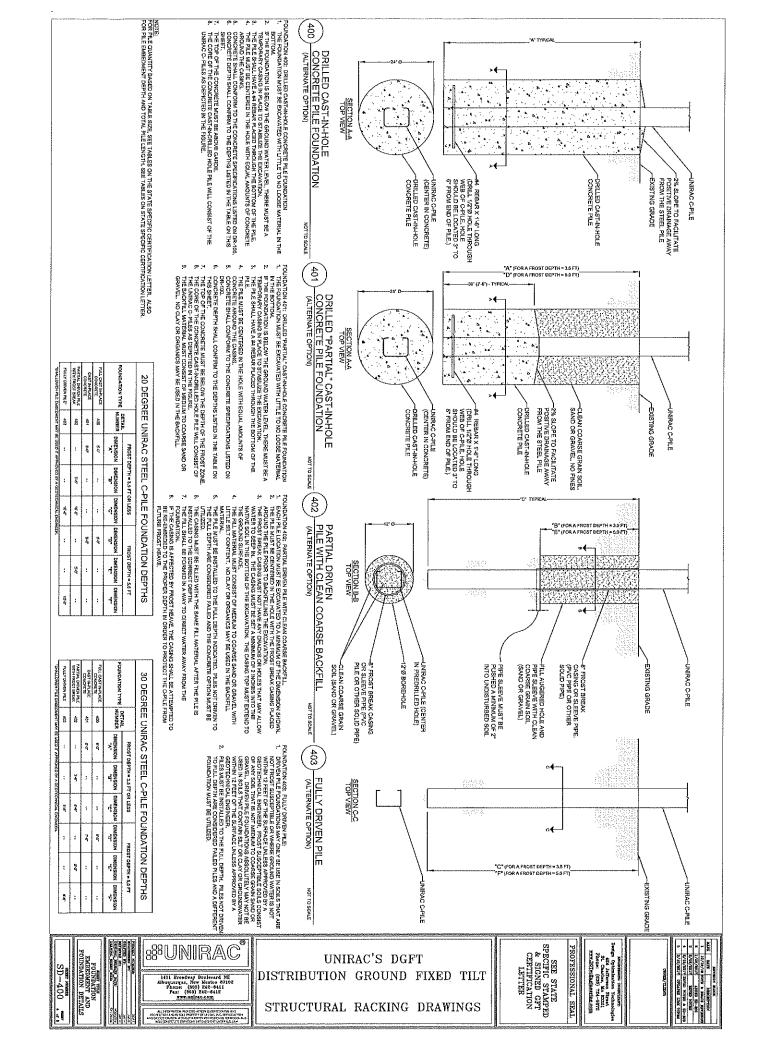
Entertain Colonianh
estra Optimisation Technologie
422 Istiernon Street
St. Charles, Mo 63301
Phone: (\$36) 724-9872
www.307ee2nglassring.com

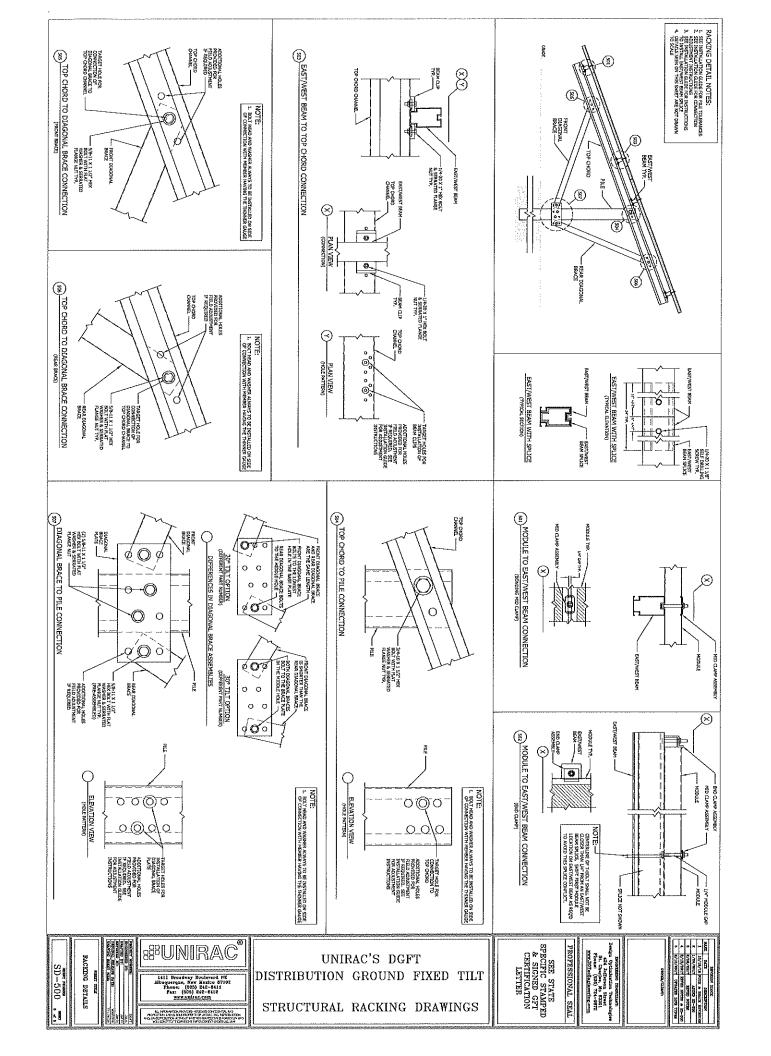
GZ35

#UNIRAC









THE



60 CELL

MONOCRYSTALLINE MODULE

275-315W

**POWER OUTPUT RANGE** 

19,2%

**MAXIMUM EFFICIENCY** 

## 0~+5W

**POSITIVE POWER TOLERANCE** 

Founded in 1997, Trina Solar is the world's leading comprehensive solutions provider for solar energy. we believe close cooperation with our partners is critical to success. Trina Solar now distributes its PV products to over 60 countries all over the world. Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong bankable partners whe are of Trina as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.

## **Comprehensive Products And System Certificates**

IEC61215/IEC61730/UL1703/IEC61701/IEC62716 ISO 9001: Quality Management System ISO 14001: Environmental Management System ISO14064: Greenhouse gases Emissions Verification OHSAS 18001: Occupation Health and Safety Management System













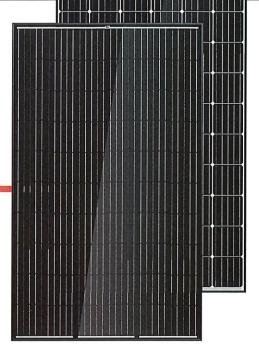














## Maximize limited space with top-end efficiency

- Up to 192W/m² power density
- Low thermal coefficients for greater energy production at high operating temperatures



## Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- PID resistant
- 100% EL double inspection
- · Selective emitter, advanced surface texturing



## Certified to withstand the most challenging environmental conditions

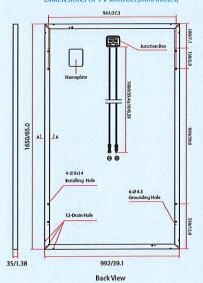
- · 2400 Pa wind load
- 5400 Pa snow load
- · 35 mm hail stones at 97 km/h

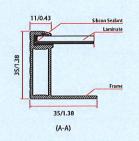




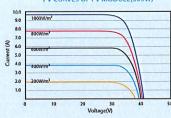
PRODUCTS **POWER RANGE** TSM-DD05A.08(II) 280-315W 275-310W TSM-DD05A.05(II)

## DIMENSIONS OF PV MODULE(mm/inches)

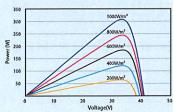




## I-V CURVES OF PV MODULE(305W)



## P-V CURVES OF PV MODULE(305W)



## **ELECTRICAL DATA (STC)**

Peak Power Watts-PHAX (Wp)*	275	280	285	290	295	300	305	310	315
Power Output Tolerance-PHAX (W)				0	~ +5				
Maximum Power Voltage-VMPP (V)	31.4	31.7	31.8	32.2	32.5	32.6	32.9	33.1	33.3
Maximum Power Current-IMPP (A)	8.76	8.84	8.97	9.01	9.08	9.19	9.28	9.37	9.46
Open Circuit Voltage-V∞ (V)	38.4	38.4	38.5	38.9	39.6	39.8	40.0	40.2	40.5
Short Circuit Current-Isc (A)	9.24	9,42	9.51	9,66	9.68	9.77	9.85	9.94	10.0
Module Efficiency n₁ (%)	16.8	17.1	17.4	17.7	18.0	18.3	18.6	18.9	19.2

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5. \*Measuring tolerance: ±3%.

## **ELECTRICAL DATA (NOCT)**

Maximum Power-PMAX (Wp)	205	209	212	216	220	223	227	231	235
Maximum Power Voltage-VHPP (V)	29.1	29.4	29.5	29.9	30.1	30.2	30.5	30.7	30.9
Maximum Power Current-IMPP (A)	7.04	7.10	7.21	7.24	7.30	7.38	7.46	7.53	7.60
Open Circuit Voltage-Voc (V)	35.7	35.7	35.8	36.2	36.8	37.0	37.2	37.4	37.6
Short Circuit Current-Isc (A)	7.46	7.61	7,68	7.80	7.82	7.89	7.95	8.03	8.10

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

### MECHANICAL DATA

Solar Cells	Monocrystalline 156.75 × 156.75 mm (6 inches)
Cell Orientation	60 cells (6 × 10)
Module Dimensions	1650 × 992 × 35 mm (65.0 × 39.1 × 1.38 inches)
Weight	18.6 kg (41.0 lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Tempered Glass
Backsheet	White [DD05A.08(II)];
	Black [DD05A.05(II)]
Frame	Black Anodized Aluminium Alloy [DD05A.08(II), DD05A.05(II)]
J-Box	IP 67 or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²),
	1000 mm (39.4 inches)
Connector	Trina TS4 (MC4 upon request)
Fire Type	Type 1 or Type 2

### **TEMPERATURE RATINGS**

NOCT (Nominal Operating Cell Temperature)	44°C (±2°C)
Temperature Coefficient of PMAX	-0.39%/°C
Temperature Coefficient of Voc	-0.29%/°C
Temperature Coefficient of Isc	0.05%/°C

## **MAXIMUM RATINGS**

Operational Temperature	-40~+85°C
Maximum System Voltage	1000V DC (IEC)
	1000V DC (UL)
Max Series Fuse Rating	15A (Power ≤285W)
	20A (Power ≥290W)

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

### WARRANTY

10 year Product Workmanship Warranty

25 year Linear Power Warranty

(Please refer to product warranty for details)

## PACKAGING CONFIGURATION

Modules per box: 30 pieces

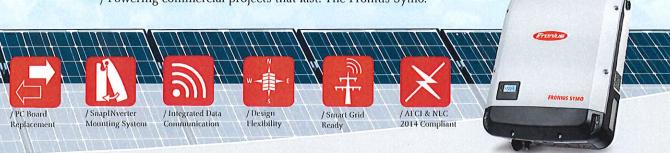
Modules per 40' container: 840 pieces





## **FRONIUS SYMO**

/ Powering commercial projects that last. The Fronius Symo.



/ Featuring ten models ranging from 10 kW to 24 kW, the transformerless Fronius Symo is the ideal compact three-phase inverter for all commercial applications. The high system voltage and wide input range ensure maximum flexibility in system design. With low roof loading, NEMA 4X and 1000 V DC rating, the Fronius Symo can be mounted in many different ways, including flat on a roof or on a pole. The modern design is equipped with the SnapINverter mounting system, allowing for lightweight, secure and convenient installation. Several industry-leading features are available with the Fronius Symo including Wi-Fi<sup>®\*</sup> and SunSpec Modbus interfaces for seamless monitoring and datalogging, field proven Arc Fault Circuit Interruption (AFCI), NEC 2014 compliant, and Fronius' superb online and mobile monitoring platform Fronius Solar.web.

INPUT DATA		SYMO 10.0-3 208-240	SYMO 12.0-3 208-240	SYMO 10.0-3 480	SYMO 12.5-3 480	SYMO 15.0-3 208
Recommended PV power (kWp)		8.0 - 13.0	9.5 - 15.5	8.0 - 13.0	10.0 - 16.0	12.0 - 19.5
Max. usable input current (MPPT1/MI	PPT 2)		25.0 A / 16.5	5 Λ		50.0 A
Max. usable input current total (MPPT	1 + MPPT 2)		41.5 A			50.0 A
Max. array short circuit current			37.5 A / 24.8	3 A		75.0 A
Nominal input voltage	208 V	350 V	350 V	N/A	N/A	325 V
	240 V	370 V	370 V	N/A	N/A	N/A
	480 V	N/A	N/A	675 V	685 V	N/A
Operating voltage range		200-6	00 V	200-1	000 V	325-1000 V
DC startup voltage			200 V			360 V
MPP Voltage range		300-5	00 V	300-8	800 V	325-850 V
Max. input voltage		600	) V		1000 V	
Admissable conductor size DC		AWG 14-AWG 6 cop	per direct, AWG 6 aluminum	direct, AWG 4-AWG 2 co	opper or aluminum with	input combiner
Integrated DC string fuse holders			NA			6- and 6+
Max (Isc) input terminal rating			33A			12Λ
Number of MPPT			2			1

OUTPUT DATA		SYMO 10.0-3 208-240	SYMO 12.0-3 208-240	SYMO 10.0-3 480	SYMO 12.5-3 480	SYMO 15.0-3 208
Max. output power	208 V	9995 VA	11995 VA	NΛ	NA	15000 VA
	240 V	9995 VA	11995 VA	NA	NA	NA
	480 V	NA	NA	9995 VA	12495 VA	NA
Output configuration		208/2	240 V	480 V D	elta +N**	208 V
Frequency range (adjustable)				45-65 Hz		
Nominal operating frequency				60 Hz		
Admissable conductor size AC			AWG 14-AWG 6			
Total harmonic distortion		<1.5 %	<1.75	%	<1.5 %	<3.5 %
Power factor range				0-1 ind./cap.		
Max. continuous output current	208 V	27.7 A	33.3 A	NA	NA	41.6 A
	240 V	24.0 A	28.9 Λ	NA	NΛ	NA
	480 V	NΛ	NΛ	12.0 A	15.0 Λ	NΛ
OCPD/AC breaker size	208 V	35 A	45 A	NA	NA	60 A
	240 V	30 A	40 A	NA	NA	NA
	480 V	NA	NΛ	15 A	20 A	NA
Max. Efficiency		97.0 %	97.0 %	98.1 %	98.1 %	97.3%
CEC Efficiency	208 V	96.5 %	96,5 %	NA	NA	96.5%
	240 V	96,5 %	96,5 %	NA	NΛ	NΛ
	480 V	NΛ	NΛ	96.5 %	97.0 %	NΛ

## TECHNICAL DATA (10.0-3 208/240, 12.0-3 208/240, 10.0-3 480, 12.5-3 480, 15.0-3 208)

GENERAL DATA	STANDARD WITH ALL FRONIUS SYMO MODELS
Dimensions (width x height x depth)	20.1 x 28.5 x 8.9 inches
Protection Class	NEMA 4X
Night time consumption	< 1 W
Inverter topology	Transformerless
Cooling	Variable speed fan
Installation	Indoor and outdoor installation
Ambient operating temperature range	-40°F - + 140 °F (-40 - +60 °C)
Permitted humidity	0 - 100 % (non-condensing)
Elevation	2000 m (6562 ft) with a max. input voltage of 1000 V / 3400 m (11155 ft) with a max. input voltage of 850 V
DC connection terminals	6x DC+ and 6x DC- screw terminals for copper (solid / stranded / fine stranded) or aluminum (solid / stranded)
AC connection terminals	Screw terminals 14-6 AWG
Certificates and compliance with standards	UL 1741-2010 Second Edition (incl. UL1741 Supplement SA 2016-09 for California Rule 21 and Hawaiian Electric Code Rule 14H), UL1998 (for functions: AFCI, RCMU and isolation monitoring), IEEE 1547-2003, IEEE 1547a-2014, IEEE 1547.1-2003, ANSI/IEEE C62.41, FCC Part 15 A & B, NEC 2017 Article 690, C22. 2 No. 107.1-16, UL1699B Issue 2 -2013, CSA TIL M-07 Issue 1 -2013

GENERAL DATA	SYMO 10.0-3 208-240	SYMO 12.0-3 208-240	SYMO 10.0-3 480	SYMO 12.5-3 480	SYMO 15.0-3 208
Weight	91.9	lbs.	76.	7 lbs.	78.3 lbs,

PROTECTIVE DEVICES	STANDARD WITH ALL FRONIUS SYMO MODELS
DC reverse polarity protection	Yes
Anti islanding	Internal; in accordance with UL 1741-2010, IEEE 1547-2003 and NEC
Over temperature protection	Output power derating /Active cooling
AFCI	Yes
Rapid shutdown compliant	Yes (according to NEC 2014)
Ground Fault Protection with Isolation Monitor Interrupter	Yes
DC disconnect	Yes

INTERFACES	AVAILABLE WITH ALL FRONIUS SYMO MODELS			
USB (A socket)	Datalogging and inverter update possible via USB			
2x RS422 (RJ45 socket)	Fronius Solar Net, interface protocol			
AVAILABLE WITH THE FRON	IUS DATAMANAGER 2.0 CARD ( ONLY ONE CARD REQUIRED FOR UP TO 100 INVERTERS )			
Wi-Fi/Ethernet/Serial/ Datalogger and webserver	Wireless standard 802.11 b/g/n / Fronius Solar, web, SunSpec Modbus TCP, JSON / SunSpec Modbus RTU			
6 inputs and 4 digital I/Os	Load management; signaling, multipurpose I/O			

## TECHNICAL DATA (15.0-3 480, 17.5-3 480, 20.0-3 480, 22.7-3 480, 24.0-3 480)

INPUT DATA	SYMO 15.0-3 480	SYMO 17.5-3 480	SYMO 20.0-3 480	SYMO 22.7-3 480	SYMO 24.0-3 480
Recommended PV power (kWp)	12.0 - 19.5	14.0 - 23.0	16.0 - 26.0	18.0 - 29.5	19.0 - 31.0
Max. usable input current (MPPT1/MPPT 2)			33.0 A / 25.0 A		
Max. usable input current total (MPPT 1 + MPPT 2)			51 A		
Max. array short circuit current (MPPT 1/MPPT 2)			49.5 A / 37.5 A		
Nominal input voltage 480 V	685 V	695 V	710 V	720	V
Operating voltage range			200-1000 V		
DC startup voltage	200 V				
MPP-voltage range	350-800 V	400-800 V	450-800 V	500-8	00 V
Max. input voltage			1000 V		
Admissable conductor size DC	AWG 14 - AWG 6 copper direct, AWG 6 aluminum direct, AWG 4 - AWG 2 copper or aluminum with input combiner			put combiner	
Integrated DC string fuse holders	NA	NΛ		6- and 6+	
Max (Isc) input terminal rating	33Λ	33∧		12A	
Number of MPPT	2				

## TECHNICAL DATA (15.0-3 480, 17.5-3 480, 20.0-3 480, 22.7-3 480, 24.0-3 480)

OUTPUT DATA		SYMO 15.0-3 480	SYMO 17.5-3 480	SYMO 20.0-3 480	SYMO 22.7-3 480	SYMO 24.0-3 480
Max. ouput power	480 V	14995 VA	17495 VA	19995 VA	22727 VA	23995 VA
Ouput configuration				480 V Delta +N**		
Frequency range (adjustable)				45-65 Hz		
Nominal operating frequency				60 Hz		
Admissable conductor size (AC)				AWG 14-AWG 6		
Total harmonic distortion		<1.5 %	<1,25 %	<1.0 %	<1.25 %	<1.0 %
Power factor range				0 - 1 ind./cap.		
Max, continuous output current	480 V	18.0 A	21.0 A	24.0 Λ	27,3 A	28.9 A
OCPD/AC breaker size	480 V	25 A	30 A	30 A	35 A	40 A
Max. Efficiency				98.0 %		
CEC Efficiency	480 V	97.0 %	97.5 %	97.5 %	97.5 %	97.5 %

## TECHNICAL DATA (15.0-3 480, 17.5-3 480, 20.0-3 480, 22.7-3 480, 24.0-3 480)

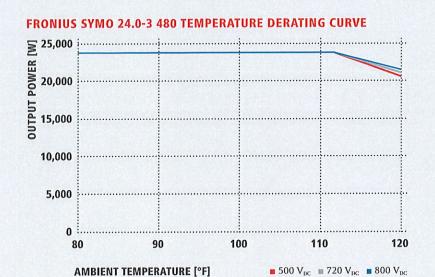
GENERAL DATA	STANDARD WITH ALL FRONIUS SYMO MODELS
Dimensions (width x height x depth)	20.1 x 28.5 x 8.9 inches
Protection Class	NEMA 4X
Night time consumption	< 1 W
Inverter topology	Transformerless
Cooling	Variable speed fan
Installation	Indoor and outdoor installation
Ambient operating temperature range	-40°F -+ 140°F (-40 - +60°C)
Permitted humidity	0 - 100 % (non-condensing)
Elevation	2000 m (6562 ft) with a max. input voltage of 1000 V / 3400 m (11155 ft) with a max. input voltage of 850 V
DC connection terminals	6x DC+ and 6x DC- screw terminals for copper (solid / stranded / fine stranded) or aluminum (solid / stranded)
AC connection terminals	Screw terminals 14-6 AWG
Certificates and compliance with standards	UL 1741-2010 Second Edition (incl. UL1741 Supplement SA 2016-09 for California Rule 21 and Hawaiian Electric Code Rule 14H), UL1998 (for functions: AFCI, RCMU and isolation monitoring), IEEE 1547-2003, IEEE 1547a-2014, IEEE 1547.1-2003, ANSI/IEEE C62.41, FCC Part 15 A & B, NEC 2017 Article 690, C22. 2 No. 107.1-16, UL1699B Issue 2 -2013, CSA TIL M-07 Issue 1 -2013

GENERAL DATA	SYMO 15.0-3 480	SYMO 17.5-3 480	SYMO 20.0-3 480	SYMO 22.7-3 480	SYMO 24.0-3 480
Weight			95.7 lbs.		

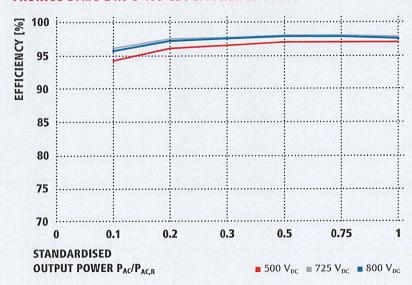
PROTECTIVE DEVICES	STANDARD WITH ALL FRONIUS SYMO MODELS
DC reverse polarity protection	Yes
Anti islanding	internal; in accordance with UL 1741-2010, IEEE 1547-2003 and NEC
Over temperature protection	Ouput power derating/Active cooling
AFCI	Yes
Rapid shutdown compliant	Yes (according to NEC 2014)
Ground Fault Protection with Isolation Monitor Interrupter	Yes
DC disconnect	Yes

INTERFACES	AVAILABLE WITH ALL FRONIUS SYMO MODELS			
USB (A socket)	Datalogging and inverter update possible via USB			
2x RS422 (RJ45 socket)	Fronius Solar Net, interface protocol			
AVAILABLE WITH THE FROM	IIUS DATAMANAGER 2.0 CARD ( ONLY ONE CARD REQUIRED FOR UP TO 100 INVERTERS )			
Wi-Fi/Ethernet/Serial/ Datalogger and webserver	Wireless standard 802.11 b/g/n / Fronius Solar.web, SunSpec Modbus TCP, JSON / SunSpec Modbus RTU			
6 inputs and 4 digital I/Os	Load management; signaling, multipurpose I/O			

<sup>\*\*+</sup>N FOR SENSING PURPOSES - NO CURRENT CARRYING CONDUCTOR.



## FRONIUS SYMO 24.0-3 480 CEC EFFICIENCY CURVE



/ Perfect Welding / Solar Energy / Perfect Charging

## WE HAVE THREE DIVISIONS AND ONE PASSION: SHIFTING THE LIMITS OF POSSIBILITY.

/ Whether welding technology, photovoltaics or battery charging technology – our goal is clearly defined: to be the innovation leader. With around 3,700 employees worldwide, we shift the limits of what's possible - our record of over 800 granted patents is testimony to this. While others progress step by step, we innovate in leaps and bounds. Just as we've always done. The responsible use of our resources forms the basis of our corporate policy.

Further information about all Fronius products and our global sales partners and representatives can be found at www.fronius.com

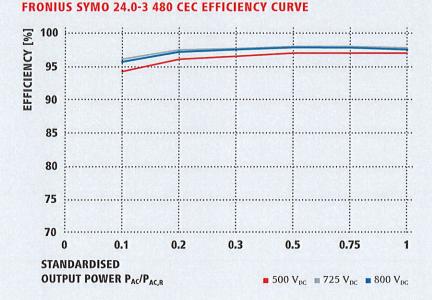




Fronius USA LLC 6797 Fronius Drive Portage, IN 46368 USA pv-support-usa@fronius.com www.fronius-usa.com

## FRONIUS SYMO 24.0-3 480 TEMPERATURE DERATING CURVE 25,000 10,000 5,000

AMBIENT TEMPERATURE [°F]



/ Perfect Welding / Solar Energy / Perfect Charging

## WE HAVE THREE DIVISIONS AND ONE PASSION: SHIFTING THE LIMITS OF POSSIBILITY.

/ Whether welding technology, photovoltaics or battery charging technology – our goal is clearly defined: to be the innovation leader. With around 3,700 employees worldwide, we shift the limits of what's possible - our record of over 800 granted patents is testimony to this. While others progress step by step, we innovate in leaps and bounds. Just as we've always done. The responsible use of our resources forms the basis of our corporate policy.

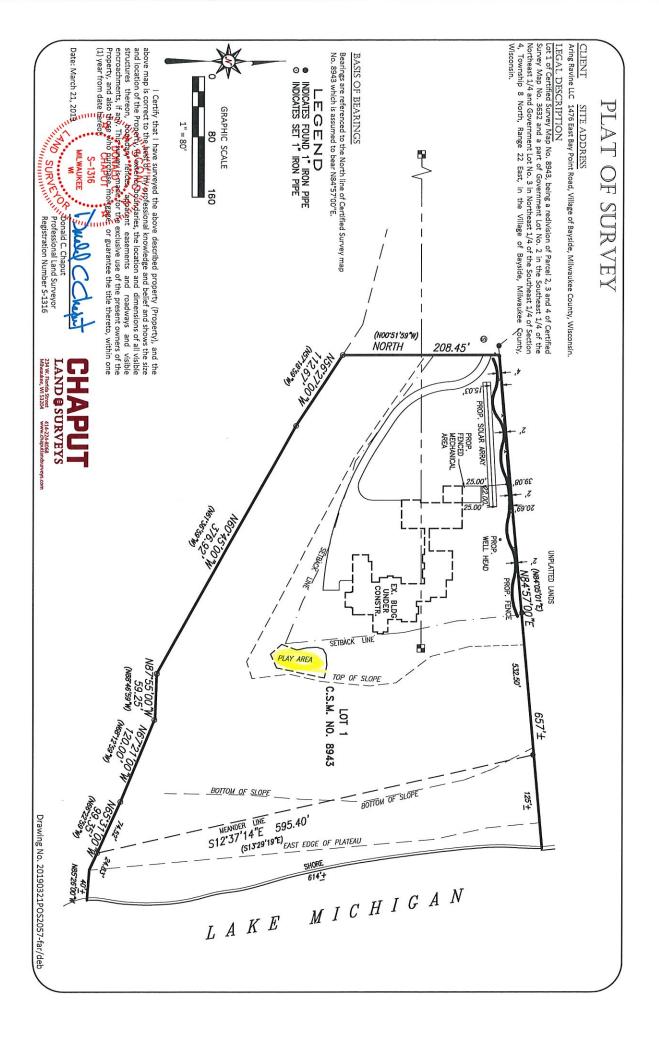
■  $500 V_{DC}$  ■  $720 V_{DC}$  ■  $800 V_{DC}$ 

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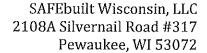


Fronius USA LLC 6797 Fronius Drive Portage, IN 46368 USA pv-support-usa@fronius.com www.fronius-usa.com



transtructur

		Project Proposal
		Date 3 24 17
		0010 N Parl 12 Q 151A 12
		Property Address 88 to 10 rock of by Bay 8100 cm
		Zoning
□ A	ccessory S	tructures/Generators   New Construction
/	dditions/Re	200 200 200 200 200 200 200 200 200 200
	uff Manag	,
	ommercia	
	ecks/Patio	
	ence	□ Swimming Pools
	e Pits	Windows/Doors
_		
		g requiring Impervious  Excavation Permit  Other
ranasaa	l project d	etails (type of work, size, materials, etc.):
20	latte	iched
Ne	w Ada	dition to include sunroom & inlaw suite
	- <u></u>	
Ne	w W	inclosos (Total House) I window changed to bay.
•		************** For Office Use Only ***********
Yes	No	
		Color photographs showing project location, elevations and surrounding views
尸		Two (2) complete sets of building plans (including elevations and grading)
9		Survey
₽b		Samples or brochures showing materials, colors and designs
<b>'</b> B'		Application Fee 60
0		ARC Agenda Date: 4-8-19
P		Building Permit
		Fill Permit
100		Impervious Surface Permit
		Plan Commission/Conditional Use Permit
		Right-of-Way/Excavation Permit
		Variance Required
	Grosim	021-0149-000





3/29/2019

Attention:

Village of Bayside, WI Architecture Review Committee

PROJECT/SITE OWNER:

Dropp-Johnstone

PROJECT ADDRESS:

8840 N Rexleigh

PROJECT SUMMARY:

New sunroom to match existing exterior finishes

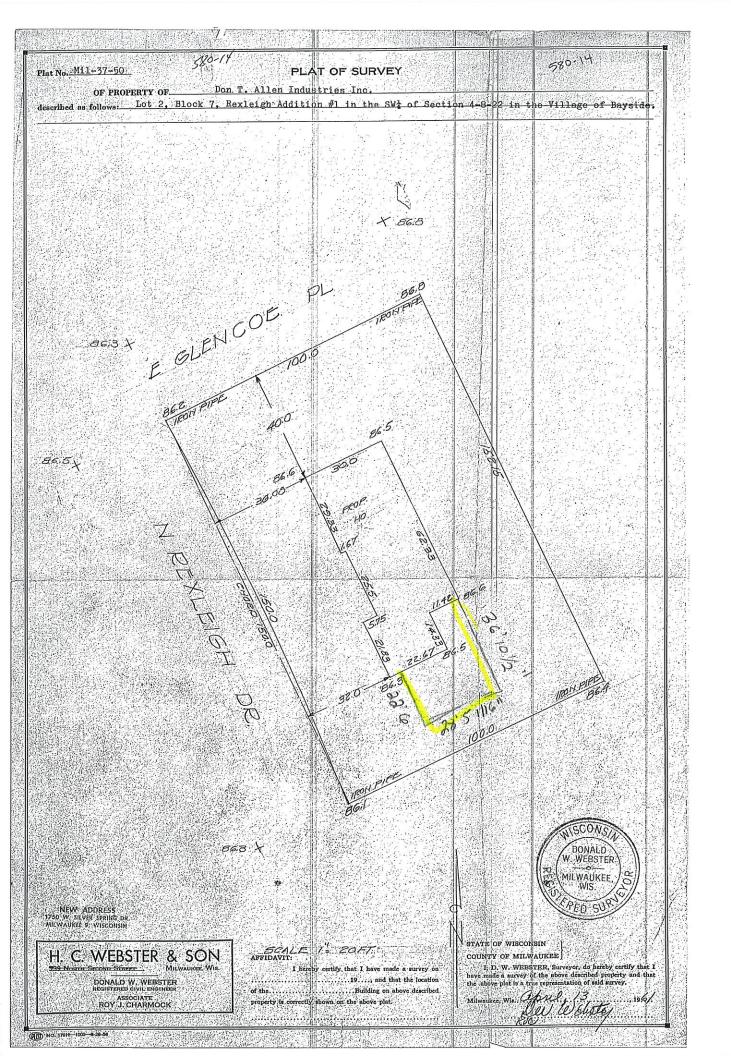
## **VILLAGE CODE REVIEW**

Reviewer believes this project complies with the following Village Code sections:

104-2(a)(2) Architectural Review Committee: Construction and renovation should be made so that exterior architectural appearance shall be substantially consistent with structures already constructed in the immediate neighborhood, or with the character of the applicable district.

Dan Hatch, Architect

Plans Examiner dhatch@safebuilt.com



JT Contractors LLC 2414 S Chicago Ave South Milwaukee, WI 53172 US jtcontracting414@gmail.com



## **ESTIMATE**

ADDRESS DROPP Heather Johnstone 8840 N Rexleigh Dr Bayside, WI 53217 ESTIMATE # 1248

DATE 03/24/2019

ACTIVITY	QTY	RATE	AMOUNT	
New Addition Deck Framing.  Installation new deck framing. Framing consists of 2x10 standard construction lumber and sheeted with 3/4" subfloor glued and screwed. Includes installation of blocking typical to building code. Per SQFT.	965	7.50	7,237.50	
Exterior Wall Framing. Frame 2x6 exterior wall. Includes framing, sheeting and house wrap.	1,016	7.50	7,620.00	
2x4 Interior Wall Frame tradition 2x4 interior wall. Includes green treated bottom plate. Per SQFT.	800	3.75	3,000.00	
Roof Framing Installation of new roof trusses and roof decking. Includes necessary standard framing to tie into existing structure. Per SQFT.	833.25	8.50	7,082.63	
Vinyl window. Installation of new double hung vinyl window.	9	300.00	2,700.00	
Patio Door Installation of new 72"x80" patio door.	1	1,250.00	1,250.00	
Exterior Entry Door Installation of new exterior entry door.	2	500.00	1,000.00	
Interior Door Installation of new interior door.	11	200.00	2,200.00	
Insterior Closet Door Installation of new inter closet door.	1	500.00	500.00	
Insualtion installation of new R-19Kraft Insulation Batts. Per SQFT.	1,016	3.50	3,556.00	
Attic Insulation Installation of proper attic insulation baffles. Uncover and seal any ceiling penetrations. Installation of Owens Corening blown in insulation. Per SQFT.	965	1.75	1,688.75	
Plumbing Plumbing allowance.	1	3,800.00	3,800.00	

Drywall. Installation of new drywall. Per 32 sqft. Includes hanging, taping, coating,	80	125.00	10,000.00
texture and primer.  LVT  Installation of new Luxury Vinyl Plank. Per SQFT	665	5.65	3,757.25
Floor Tile Installation of new floor tile. Per SQFT	300	15.00	4,500.00
Shower Wall Tile Installation of new shower wall tile and grout. Per SQFT	72	15.00	1,080.00
Interior Trim Install new Interior base trimAnd shoe trim. Includes caulk and painting. Per	310	7.50	2,325.00
LN FT.  Interior Trim Install new Interior Window and door trim. Includes caulking and painting. Per LN FT.	370	5.50	2,035.00
Vinyl window. Installation of new double hung vinyl window.	11	300.00	3,300.00
Vinyl Siding Installation of new Ply Gem Mastic Ovation vinyl siding.	20	400.00	8,000.00
Aluminum Soffit Installation of new aluminum soffit. Per LN FT.	329	12.50	4,112.50
Aluminum Fascia Installation of new custom aluminum fascia. Per LN FT.	329	9.00	2,961.00
Aluminum Gutters Installation of new custom seamless gutters. Includes downspouts. Per LN	209	9.00	1,881.00
FT.  Tear Off  Tear off of up to 2 layers of asphalt shingles. Ground will be clear of all nails	21	100.00	2,100.00
and debris.  Ice and Water.  Installation of new Tarco Leak Barrier Granulated Ice & Water Barrier 3' X 65' (195 sq. ft.)	5	180.00	900.00
Felt Installation of new Synthetic Roofing Underlayment - 1000 sq. ft.	3	180.00	540.00
Gutter Apron	18	12.50	225.00
Installation of metal gutter apron. Per 10'.  W Valley	10	40.00	400.00
Installation of new aluminum W Valley.  Drip Edge	18	10.00	180.00
Installation of new metal drip edge protection.  Roofing:Shingles Installation of new Owens Corning Oakridge Driftwood Laminated Architectural Roof Shingles Per Bundle	95	56.50	5,367.50
Ridge Vent Installation of new 4' Shingle Over Ridge Vent. Per LN FT	100	7.00	700.00
Hvac Hvac allowance.	1	8,294.00	8,294.00
Concrete allowance.	1	29,114.00	29,114.00

( program



# Y OF EFFICIENCY Energy efficient windows provide an effective barrier to any weather condition.

Iffi rail and strength and insulation for forming dates as natural insulation rame and sale informing and sale insulation pression sail at stoped still reads all and water penetration pression sail at spowdes optimal reading as infiltration (stewnth Argan Gas provides optimal errors of efficiency we conductance spacer resists energy flow through the

balance system ne for added strength and rigidity



FICHARDS BUILDING SUPPLY

## 0.27 0.30 Bow/Bay Double Hung Casement Patio Door 0.30 0.29 0.29 0.29 0.28 0.29 Double-Hung Pidure Slider

0.30

0.27 0.28

TERMINOLOGY
Uvalue: Is the rate of them flow through a glazing system:
Uvalue: Is the rate of them flow through a glazing system;
the lover the value the bester in the insulating quality. Uvalue
can be compared to Rivalue by didding 1 by the Uvalue.
(Thus, a value of 0.3 equals an Rivalue of 2) Expressed in
Burbritch.

Sokar Heat Gain Operflictent is the fraction of inddent solar radiator entering a home through the windows. The lower the number, the better the window is at preventing solar gain – critical to reducing summer cooling costs.

ENERGY STAR ENERGY STAR The Continuous Plan and Energy Star State Greater

# RBS PERFORMANCE PLUS

RICHARDS BUILDING

SUPPLY COMPANY

RBS PERFORMANCE PLUS

1. Fusion Wedged

2. Low Edass with Argon Gas

3. Extraded Half Streem

5. 12 Year Glass Preskage Warrainy

6. Lifeting warrainy on all operating parts and
firstlated glass-also transferable.

7. Therety Star Parked

8. NRC Certified

9. Rapid Delivery



Engineering Details | Grid Design Options | Built To Perform



# RBS PERFORMANCE PLUS

## BUILDING SUPPLY - focusing on

d way.

d operated, Richards Building Supply has contrador chromers sente 17th Beginning. In Olicage, sticknets she sgown to a network rist all with one goal and purpose. To provide and customers service at a fair price, Today syncial over 9 spaces.

Deep pocketed head with compression seal weather strip

Dual layers of wool pile wearther stripping

Form filed frame

DOUBLE-HUNG FEATURES

Low E insulated glass with Argon Cas and a warm edge technology spacer

Vent Lutches

tde in offering a complete line of building control exidential and commercial roofing. Cap guiters, windows, exterior doors, as well and rinibows, in availety of styles and colors istomer needs.

oyees are trained to focus on the customer's you have many options to choose from in your it. We will continue to provide you the utmost in and quality at competitive prices.

- Top a bottom sach interfock at meeting rails for added security and to minimize all infiltration

Diecast cam -and keeper lock

Such lift in for easy cleaning

Supply- LET US BE YOUR CHOICE



Integral finger lift on top and bottom sach for ease of operation

CUSTOM SIZING Available for Each Fit FACTORY MULLING

WHITE DESERT SAND
EXTERIOR COLORS AVAILABLE

Window deaning is a breeze, with upper and lower sashes that lift in easily.

## **RBS PERFORMANCE PLUS**

RBS PERFORMANCE PLUS



Dark Oak, and Cherry Interlor Patio Doors Available with Windows and Light Oak,

- BOW & BAY FEATURES

   Adjustable steel cable support system allows for maximum support and precision adjustment. Knee braces are also available Insulated mullions minimize cold spots and drafts
- Insulated head and seatboard provides greating its stance to cold and condensation. Stainabligade oak veneer
- Weatherproof vinyl capping system for maximum weather protection and minimal maintenance
- OPTIONAL FEATURES ON PATIO DOOR

   Beaufiful Brass, Brushed Chrome and Dark Oil
  Rubbed Bronze keyed or non keyed handle
  - Optional grids, Colonial or Prairie Style
- Multi-point keyed or non keyed locking system for greater security (highest security rating based on forced entry tests 2000 lbs.)
  - Double weather stripped interlocking sashes

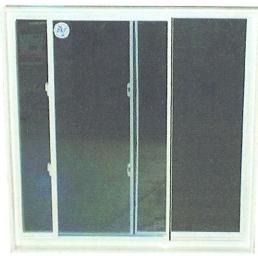


IIV 22 led brass rollers transfer weight of glass rectoring stress on seah members to in inegal tark system allowing the staff to potation and these seals if it and for easy cleaning these seals if it and for easy cleaning we water funder we water funder.



7277 S $10^{th}$  St • Oak Creek WI 53154 • Phone: (800) 848 -6213 • Fax (414) 764 -1016 www.WindowsByUnlimited.com

## FREEDOM EGRESS WINDOWS



FWS-4848

		-	
•	Available in full and nominal wall thickness (8", 10", and 12" walls – No pouring bucks)	•	Reversible if poured incorrectly – Header, jamb and sill parts snap-in for correction
•	All vinyl frame is maintenance free – No painting or rusting	•	Fully braced to support window during the concrete pour
•	Window is poly-wrapped before pour to prevent any concrete getting on window	•	5/8" insulated Low-E glass is standard – U-value of 0.34
•	Sashes are removable from the inside	•	Half screen is removable from the inside
•	Both sashes and frame are weeped for superior water drainage to the outside	•	Sashes are double-weatherstripped to protect from outside weather infiltration
•	All egress sizes below have a minimum unobstructed opening of 5.7 sq./ft.	•	All styles below operate without intruding into the areawall

## **Specifications**

FWS-4848				
Frame Dimension (Outside)	48" wide x 48" high			
Net Clear Opening A*:	20" wide x 44 1/4" high (6.14 sq. ft.)			
Net Clear Opening B**:	44 1/2" wide x 44 1/4" high (13.67 sq. ft.)			
Net Clear Glass Area:	21 9/16" wide x 42 3/4" high/per sash			
	(6.4 sq. ft./sash -or- 12.8 sq. ft./window)			

<sup>\*</sup>One sash opened in the normal operating position

<sup>\*\*</sup>Both sash and screen removed from the frame

