



PV Site Assessment Worksheet

Lead Assessor: Roger Date Assessed: 15 January 2016
 Organization: Solar Endowment Program: _____

Client Information

Name UMN Gortner Ave Parking Ramp			
Site Address 1395 Gortner Ave	City St. Paul	State MN	Zip 55108
Mailing Address	City	State	Zip
County Ramsey	GPS Coordinates	Township	Miles from HQ
Email	Phone(s)		
How did client hear of RREAL / REAL Solar?			
What are client's goals with the system?			

Solar Resource

Azimuth (90=E, 180=S, 270=W) 180, Due South	Tilt TBD	Shading (always take pathfinder photo) >95%, See Pathfinder Report
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Proposed System Type and Description

System Type, Description, Size Carport shade awning on top deck of parking ramp - Up to ~600kW depending on Design Awning mount array on South wall of parking ramp - ~250 ft long, ~21kW	
Rebate Program	PV Module and Inverter Make/Model

Mounting Options

Roof:

Contiguous Space (provide drawing, consider roof setback) 190'x220'=21,800sqft -OR- 300'x220'=66,000sqft [from google, get building plans]	Mounting Obstructions Existing lights	
Roof Trusses (size, spacing, material, span length) Existing ramp concrete structure will dictate carport design		
Roofing Material (make and model for metal)	Roof Pitch	Age of Roof
Roof Access Location and Method Road access from Gortner and Fitch Ave.	Height to Roof at Access Point ~20' to second level of carport	

Ground:

Soil Type and Condition	Obstructions (site, trench, buried)
Trench Route and Length	Building Entry Location

Utility and Building Details

Utility Company UMN and Excel Energy	Building Zoning Type Commercial	Building Permit Req'd? AHJ Contact
Utility Rate (special rate? off peak?) Special Metering with UMN Generation and Xcel Connection	Special Utility Req's (disconnect, meter) Check on Disconnect Location for Remote Metering	
Meter(s) (quantity, location, size/amp rating, type, off peak?) Remote metering, single meter for campus, each building not individually metered by Xcel. UMN has digital energy monitoring on each building		
Electrical Inspector Name and Contact Info	Within City Limits or Township St. Paul	

Electrical Details

Make and Model of Existing Main Service Panel Sq. D 12886434-004	Service Voltage and Phase 480/277V 3P	Main Breaker/Disconnect Location and Size 800A Main (500kVA 13.8V transformer)
Location of Service Panel In mech room at SE corner of first floor	Service Panel Bus Bar Amp Rating	
Point of Interconnection (location, type) Available 200A Bucket, or Line Side if large system	BOS Equipment Mounting Space (location, space) Some space available in Mech and Transformer room	
Rapid Shutdown (required, location, type)	Location of proposed PV disconnect	
AC Wire (length, route, obstructions)	DC Wire (length, route, obstructions)	

Data Monitoring

Monitoring Equipment (type, location)	Internet Equipment (type, model, location)
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Off Grid Details

Average Daily Consumption (complete load chart)	Maximum Amp Draw (simultaneous largest load usage)
Days of Autonomy	Generator (size, fuel, autostart) Battery Bank Location, Space

Use Space Below for Other Project Notes and Drawings

Awning Proposed: 40 degree tilt for awning mount, single row of panels in portrait using Schletter, DWP, AET or equivalent awning type rack. Hilti or equivalent epoxy anchor system into South wall masonry for attachment, subject to structural review. Standard 60 or 72 cell modules, string inverter or SolarEdge to accommodate deciduous tree shading. Expected system size of approximately ~21kW.

Carport Proposed: Rooftop carport system proposed. Design subject to existing structure and structural review. Target tilt angle of 25 degrees or greater for snow shedding and performance if manufacture design allows. Shallower tilt for less inter-row shade and more power density. Rack design from Schletter, Solarie Generation, Florian or other. Could be up to ~600kW depending on rack design, power density and existing structure. Use central inverter cabinet, likely located on rooftop.