



Photo credit:
Larry Kelley

Energy Partnership with SunEdison

Town of Amherst
October 27th, 2015

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Regional Sales Manager
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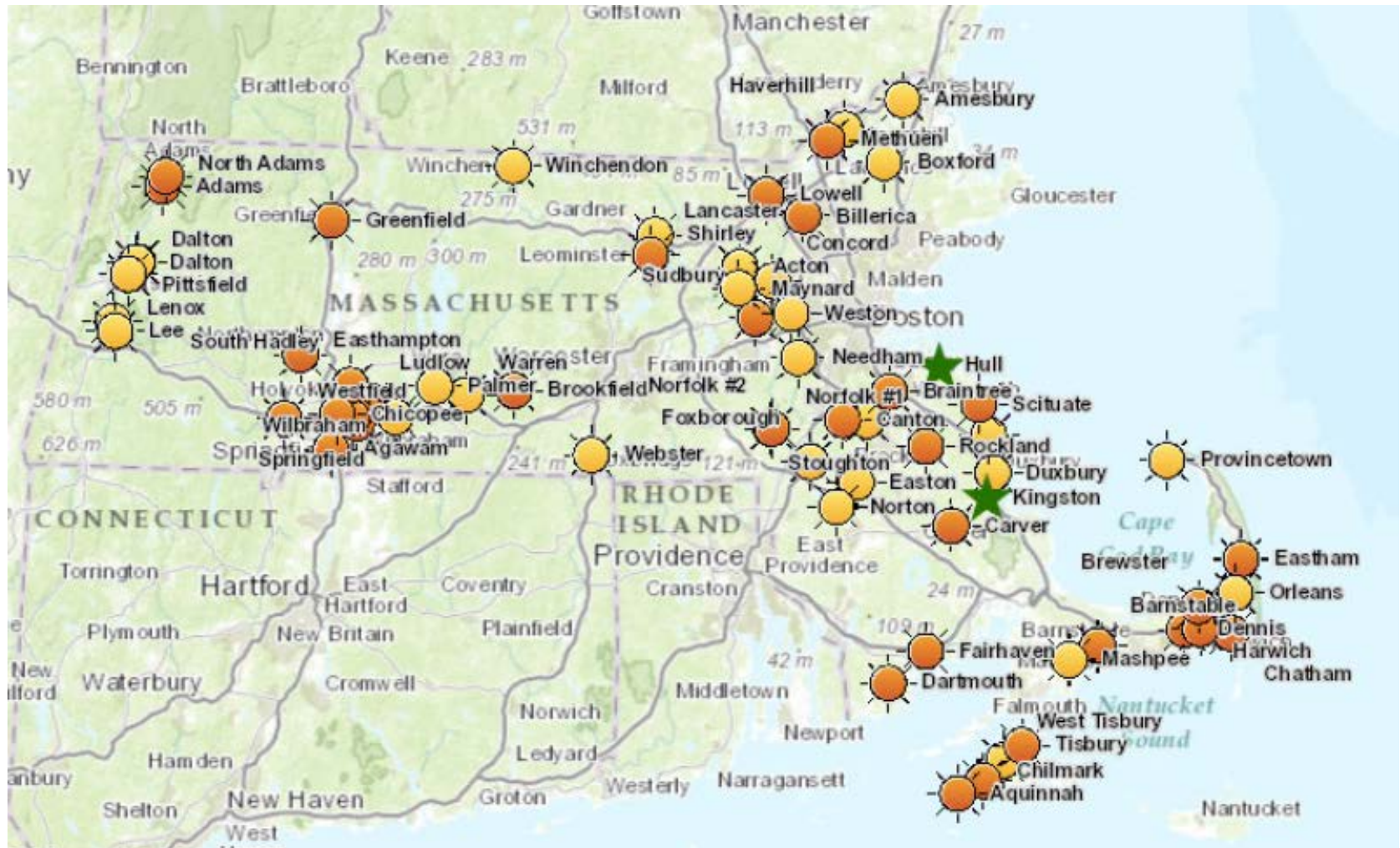


Agenda

- (Recap) Overview of Landfill Solar
- Amherst Sites and Sensitivities
- Permitting Steps Forward



Landfill development in Massachusetts



Significant amount of renewable energy development on Massachusetts Landfills

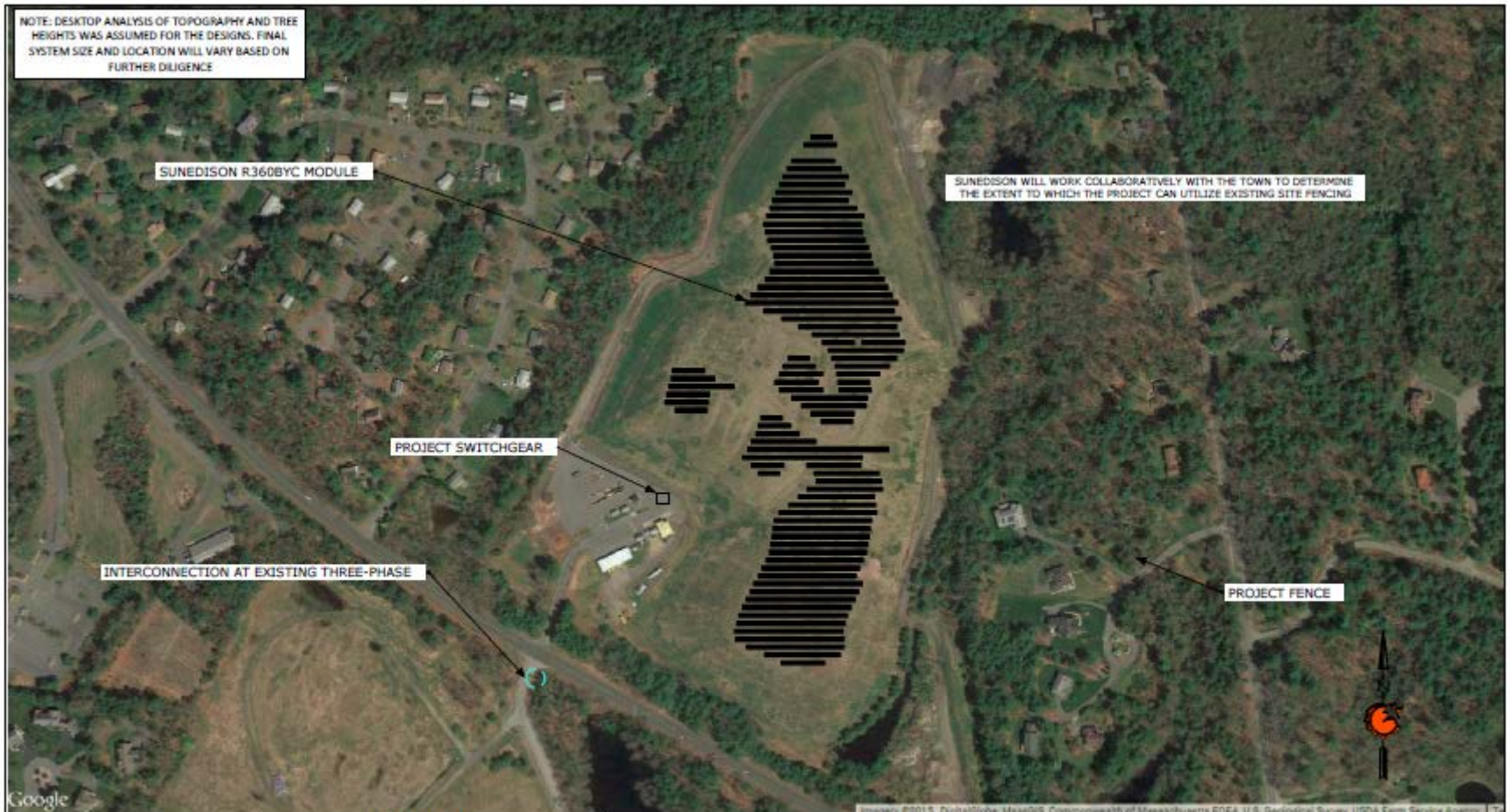
SunEdison Landfill/Brownfield Experience


- SunEdison has significant success in Developing, Financing, and Operating PV systems for landfill, brownfield, and Superfund sites.
- Very experienced in working in-house and with consultants to negotiate the Post Closure Use Permit process
- Operational Landfill systems in Massachusetts, Maryland, New Jersey, and Colorado. Additional projects in 2015 construction queue in New York.
 - Partnering with New York City to develop a 10 MW at Freshkills Park, a landfill closed in 2001. This is slated for construction in 2015 and will be the City's largest solar project to date.
 - We total over 7.5 MW of operational Landfill projects, and over 30 MW in development.
- Accomplishments in Massachusetts include:
 - Greenfield Landfill, completed 2012
 - Sullivan's Ledge Superfund Site in New Bedford, completed 2014

Structure of Agreement

- “New” Landfill:
 - Power Purchase Agreement between Town of Amherst and SunEdison for 3.7MW array
 - No money paid until system is operational
 - Expected to result in \$128,000 in year 1 savings in addition to \$45,000+ in annual tax revenues for Town.
 - Total value for Amherst in the range of \$2.5M+ over 20 years
- “Old” Landfill:
 - Structure and value are based on path forward with options including:
 - 3.3 MW installation with Power Purchase Agreement benefitting Town and Regional School District
 - 1.7MW installation benefitting only Town of Amherst
 - 2.8MW “Community Solar” installation benefitting Town of Amherst and ~250-300 local homeowners

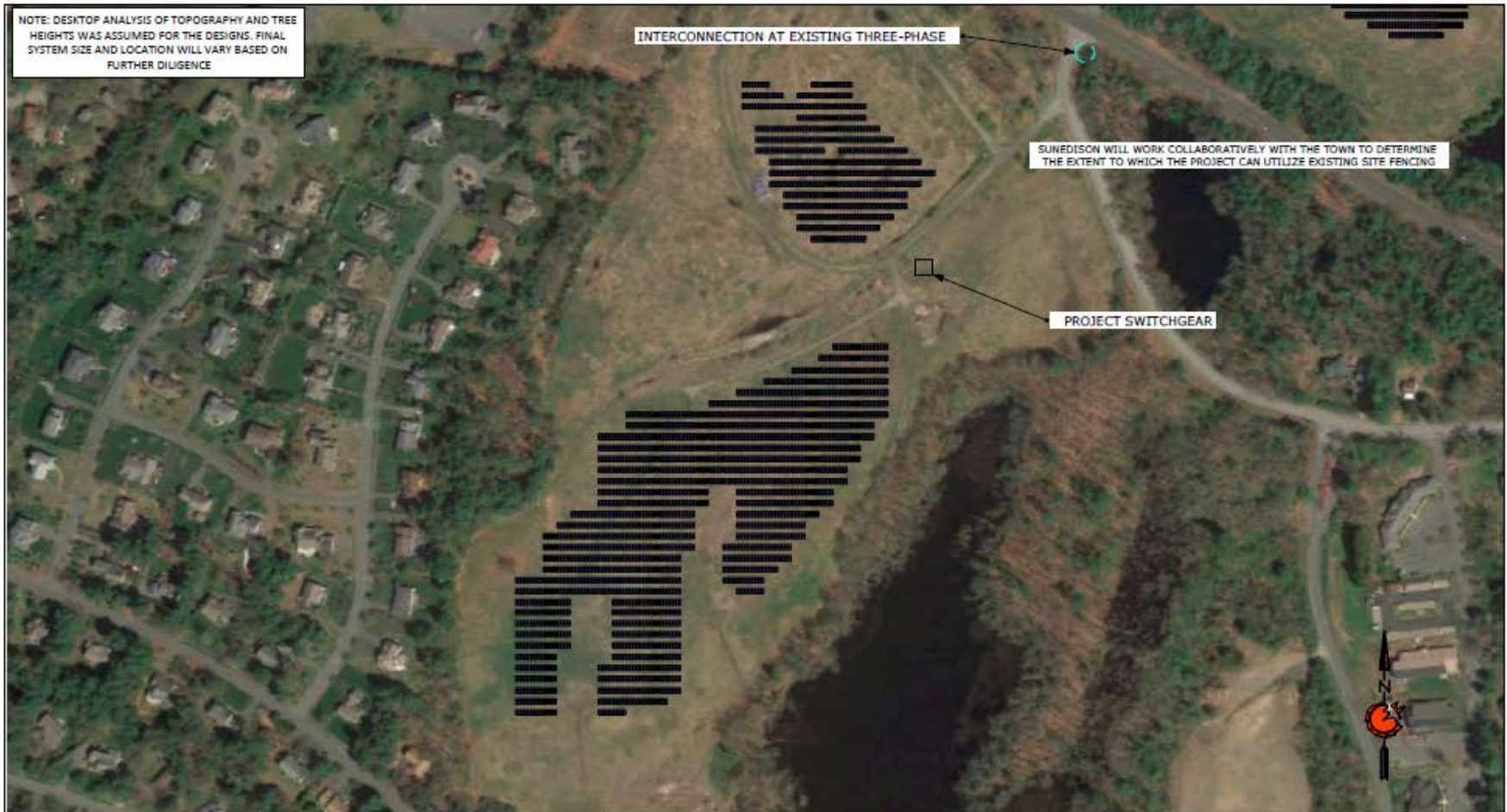
“New” Landfill – Potential Layout




 <p>600 Clipper Drive Belmont, CA 94002 (866)-SUNEDISON (866)-786-3347</p> <p>(c) 2014 SUNEDISON, LLC AND ITS AFFILIATES, ALL RIGHT RESERVED</p>	PROJECT DETAIL		SYSTEM DESCRIPTION			SHEET INFORMATION		
	PROJECT#: MA-15-0296	LAT/LONG: 42.355, -72.480	MODULE TYPE:	SUNEDISON R360BYC	TILT ANGLE: 15°	AZIMUTH: 180°	SITE AREA: 34 acres	DATE: 07/16/15
	PROJECT NAME: Amherst North Landfill	SITE ADDRESS: 740 Belchertown Rd, Amherst, MA	MODULE QUANTITY:	10,278	RACKING STRUCTURE: FIXED TILT BALLASTED GROUND MOUNT		DESIGNER: SWM	SHEET NO: CL-1
	CLIENT NAME: Town of Amherst		SYSTEM SIZE (DC):	3,700 kW	INVERTER: 96 x CHINT CPS 28KW US 480V STRING		SCALE: 1"=250'	
		SYSTEM SIZE (AC):	2,688 kW					

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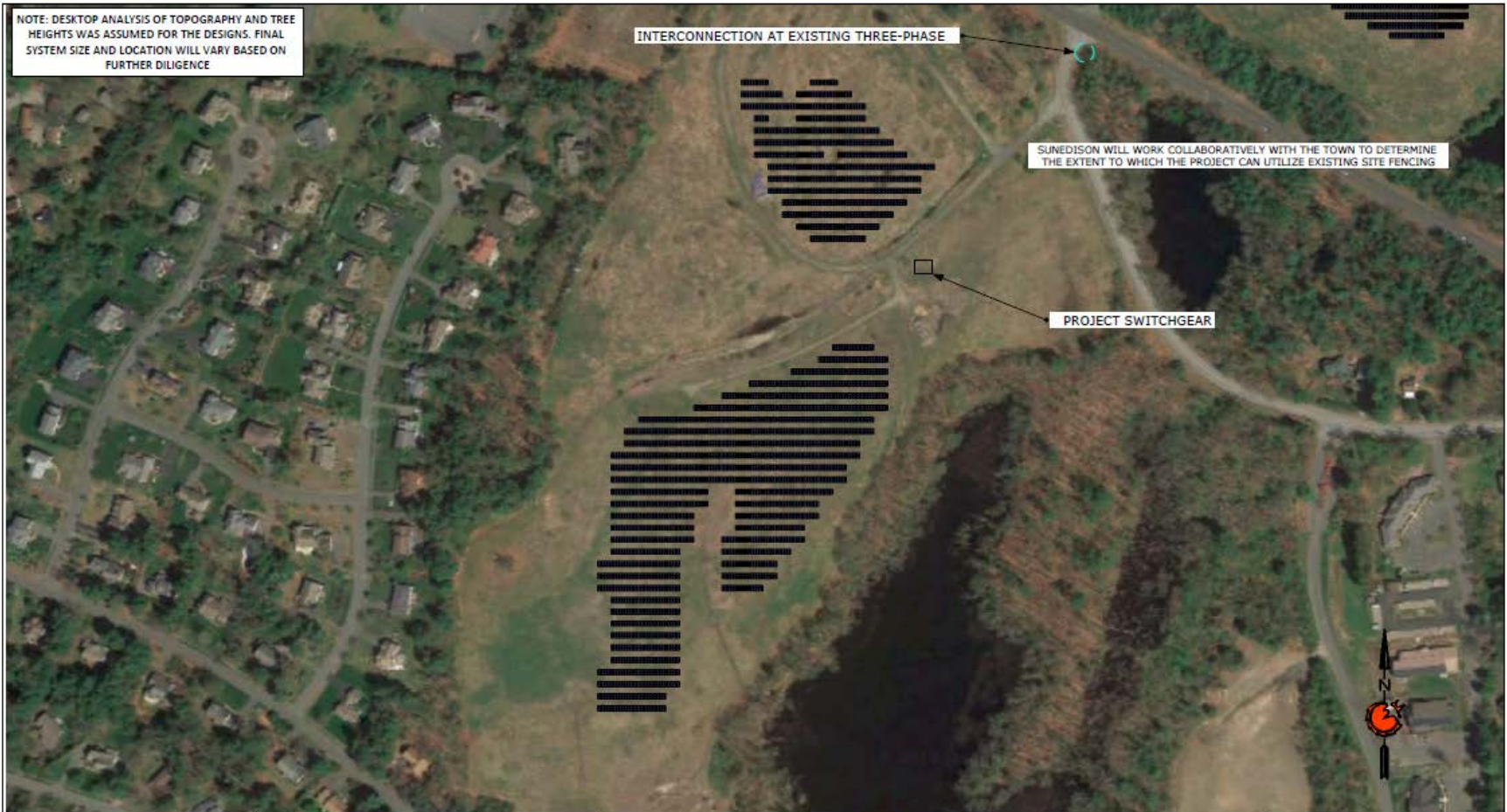
“Old” Landfill – Maximal Layout (3.3 MWdc)




PROJECT DETAIL		SYSTEM DESCRIPTION			SHEET INFORMATION		
 <p>600 Clipper Drive Belmont, CA 94002 (888)-SUNEDISON (888)-786-3347 (c) 2014 SUNEDISON, LLC AND ITS AFFILIATES, ALL RIGHT RESERVED</p>	PROJECT#: MA-15-0296	LAT/LONG: 42.335, -72.480	MODULE TYPE: SUNEDISON F335BYC	TILT ANGLE: 15°	AZIMUTH: 180°	DATE: 10/27/15	SHEET NO:
	PROJECT NAME: Amherst South Landfill		MODULE QUANTITY: 9,846	RACKING STRUCTURE: FIXED TILT BALLASTED GROUND MOUNT		DESIGNER: SC	CL-3
	SITE ADDRESS: 740 Belchertown Rd, Amherst, MA		SYSTEM SIZE (DC): 3,298.410 kW	INVERTER: 69 x CHINT CPS 36KW US 480V STRING			
	CLIENT NAME: Town of Amherst		SYSTEM SIZE (AC): 2,484 kW				SCALE: 1"=200'

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“Old” – Community Solar Layout (2.4MWdc)

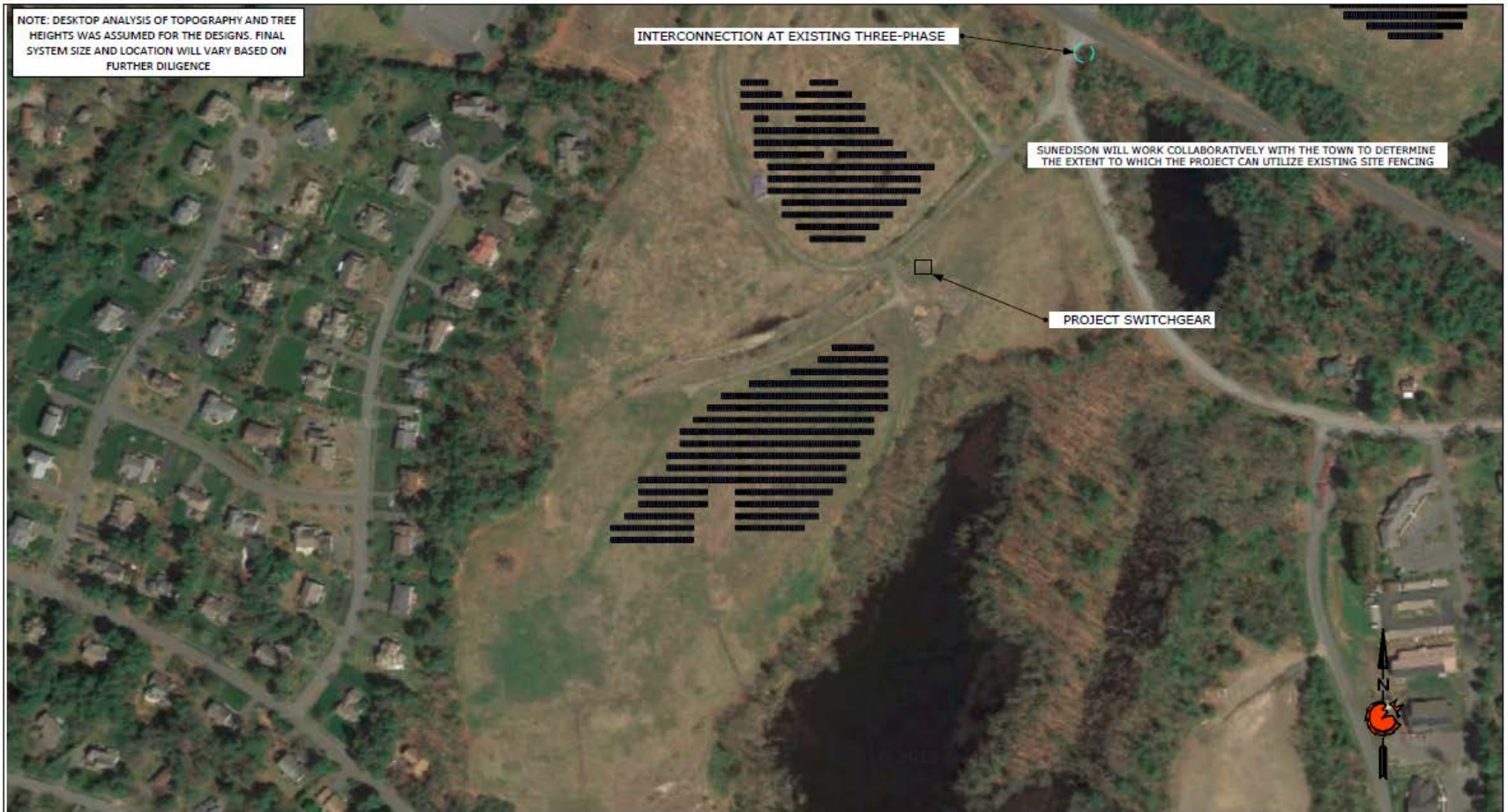



NOTE: DESKTOP ANALYSIS OF TOPOGRAPHY AND TREE HEIGHTS WAS ASSUMED FOR THE DESIGNS. FINAL SYSTEM SIZE AND LOCATION WILL VARY BASED ON FURTHER DILIGENCE

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	PROJECT#: MA-15-0296	LAT/LONG: 42.355, -72.480	MODULE TYPE: TRINA SOLAR 315W	TILT ANGLE: 25°	AZIMUTH: 180°	DATE: 10/26/15	SHEET NO:
	PROJECT NAME: Amherst South Landfill SITE ADDRESS: 740 Belchertown Rd, Amherst, MA		MODULE QUANTITY: 7,632	RACKING STRUCTURE: FIXED TILT BALLASTED GROUND MOUNT		DESIGNER: SC	CL-1
	CLIENT NAME: Town of Amherst		SYSTEM SIZE (DC): 2,404.080 kW	INVERTER: 53 x CHINT CPS 36kW US 480V STRING		SCALE: 1"=200'	
		SYSTEM SIZE (AC): 1,908 kW					

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“Old” – Minimal Layout (1.7MWdc)



PROJECT DETAIL		SYSTEM DESCRIPTION			SHEET INFORMATION		
 <p>600 Clipper Drive Belmont, CA 94002 (888)-SUNEDISON (888)-786-3347</p> <p>(c) 2014 SUNEDISON, LLC AND ITS AFFILIATES. ALL RIGHT RESERVED</p>	PROJECT#: MA-15-0296	LAT/LONG: 42.355, -72.480	MODULE TYPE: TRINA SOLAR 315W	TILT ANGLE: 25°	AZIMUTH: 180°	DATE: 10/26/15	SHEET NO:
	PROJECT NAME: Amherst South Landfill SITE ADDRESS: 740 Belchertown Rd, Amherst, MA		MODULE QUANTITY: 5,382	RACKING STRUCTURE: FIXED TILT BALLASTED GROUND MOUNT		DESIGNER: SC	CL-2
	CLIENT NAME: Town of Amherst		SYSTEM SIZE (DC): 1,695.330 kW	INVERTER: 38 x CHINT CPS 36kW US 480V STRING			
			SYSTEM SIZE (AC): 1,368 kW				SCALE: 1"=200'

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Permitting Steps / Processes

- Phase I ESA
 - LSP document review and walkthrough – would pick up historic or current reportable environmental conditions such as leaching or contamination of groundwater or soil.
- Major Post-Closure Use Permit (with DEP, 5-6 month process)
 - Ensures that we don't do work on cap until DEP is 100% sure that nothing will happen with that cap – primarily settlement and drainage.
 - Pre-application meeting with regional DEP – will go holistically through all known contamination, condition of cap, concerns over leakage.
 - Review documented and occasionally non-documented information on site history and condition.
 - Pull together full PCUP technical report detailing:
 - Background information
 - Full Site/Capping/Use Plan
 - Settlement/stability analysis
 - Stormwater drainage/run-off/erosion control plan
 - Environmental Monitoring
 - Health & Environmental Risk Assessment
- Site Plan review (with Town, 2-3 month process)
 - Will be filed locally after majority of PCUP work has been compiled. Allows for local-level input on design, maintenance plan, and financial security.

Project Approach/Timeline

Contracts

1-2 Mos.

- Market standard contact terms
- Town and SunEdison execution
- Key long-lead time development items kicked off (e.g. IC application)

Permitting

6-7 Mos.

- All permitting completed by SunEdison and best-in class contractors
- Strong experience navigating PCUP process
- Interconnection application process run in parallel

Design & Eng.

1-2 Mos.

- Experienced in-house design team
- Third-party verification and stamps
- Construction engineering completed in-house with best-in class products, design standards

Construction

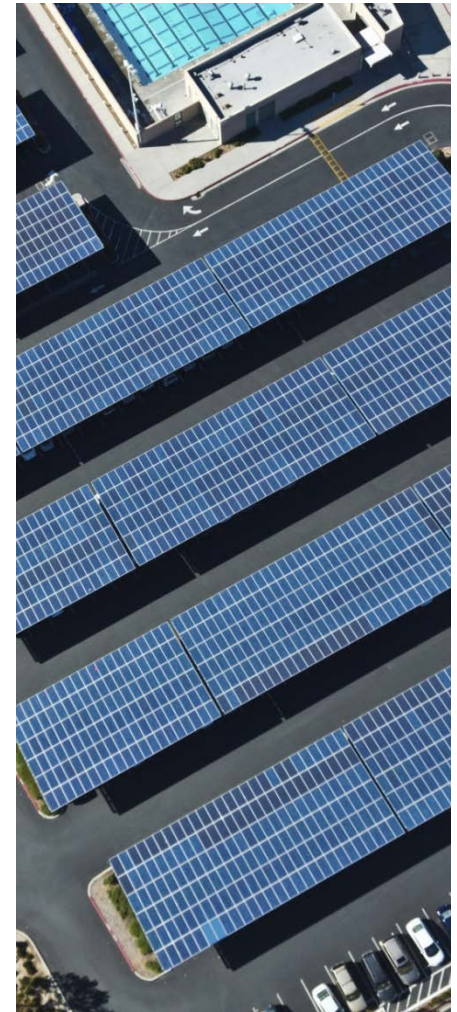
3-4 Mos.

- Experienced Project Managers
- Close coordination with Town

Operations

Life of Project

- 3rd Party commissioning
- SEEDs monitoring solutions and SunEdison Connect portal
- Local operations and maintenance resources



Appendix

Including slides from previous meeting

Company Highlights

Largest Renewable Energy Company in the World

- Wind and solar energy
- Over 1,300 solar power plants online
- 3.5 GW of renewable electricity deployed
- Active in residential, commercial scale projects

Leader in Solar Innovation

- Involved in all aspects of project development
- In-house financing reduces financing risk
- On forefront of brownfield development and community solar development
- In-house O&M teams monitor all operations centers



We develop, build, finance, and operate renewable energy plants to provide our customers electricity at predictable prices below grid rates.

PowerOptions / SunEdison Partnership

- SunEdison is PowerOptions' solar energy partner
 - Competitive RFP Procurement Process resulted in selection of SunEdison as Preferred Solar Partner
- Procurement performed through M.G.L. Ch.164, S.137
 - Members avoid cost/time of solicitation and contract negotiation
 - Pre-negotiated, best-in-industry contract terms
 - At this point in Solar Industry, reduces risk of projects falling out of current incentive program
- PPA provides valuable long-term energy price hedge and portfolio diversification benefits.
- SunEdison manages all project design, financing, construction, project monitoring and future Operation & Maintenance obligations.

Amherst Site Evaluation Performed

- **School Rooftops**
 - Crocker Farm Elementary – roof age a major concern and system size small for financing
 - Fort River Elementary – roof age/condition prohibitive of development
 - Wildwood Elementary – roof age a major concern and system size small for financing
 - Regional High School – separate legal entity from town; solar potential feasible, but small; canopies overly expensive for significant value
- **Water Department Sites**
 - Wastewater treatment plant – Master plans for site prohibitive of on-site solar
 - Baby Carriage Rd. Pump – Surrounding area largely wetland prohibiting solar development
- **Old and New Landfill**
 - Both viable sites for largescale ground-mounted arrays

Old and New Landfills determined solar-viable sites in Town