

# Hot Times, Solar in Our City

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Self+Tucker Architects

**November 7th, 2015**

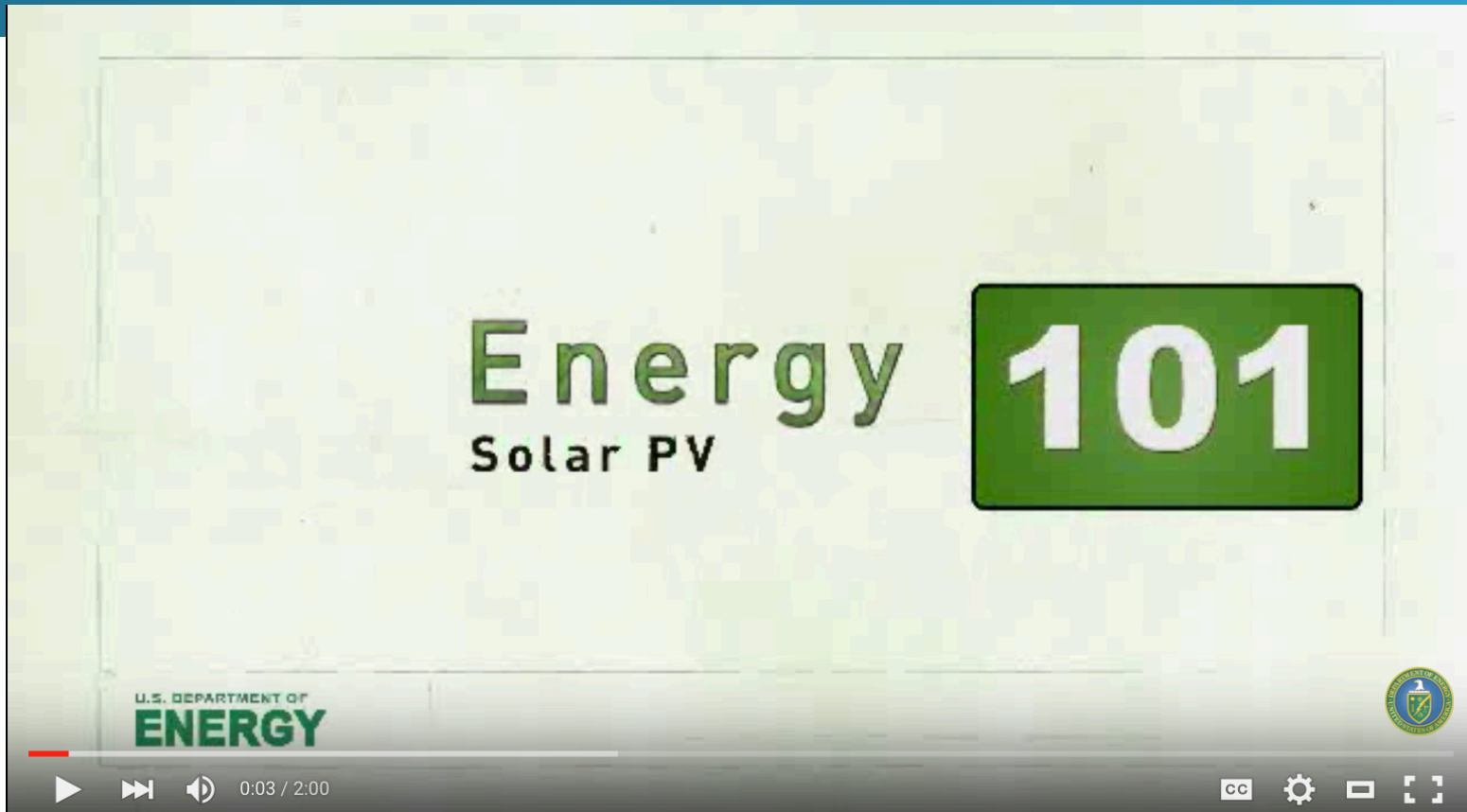


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# What is Solar?



[Department of Energy Solar 101 Video](#)



# Types of Solar



Ground-mounted Solar Panels



Single-axis Tracking Solar Panels



Dual-axis Tracking Solar Panels

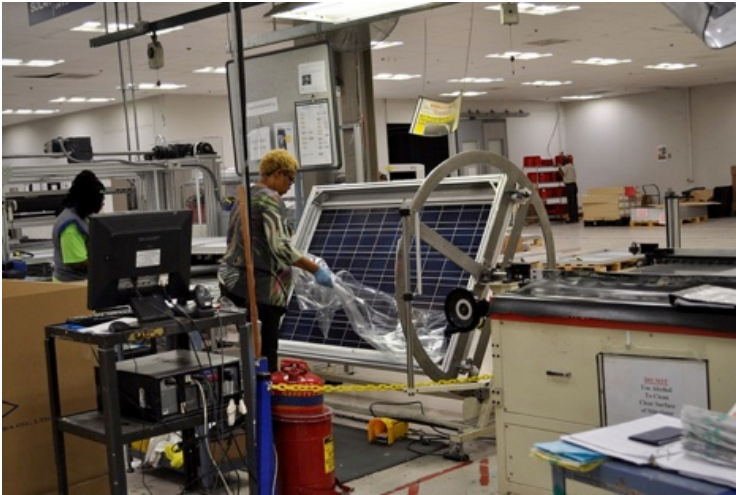


# Solar Chargers





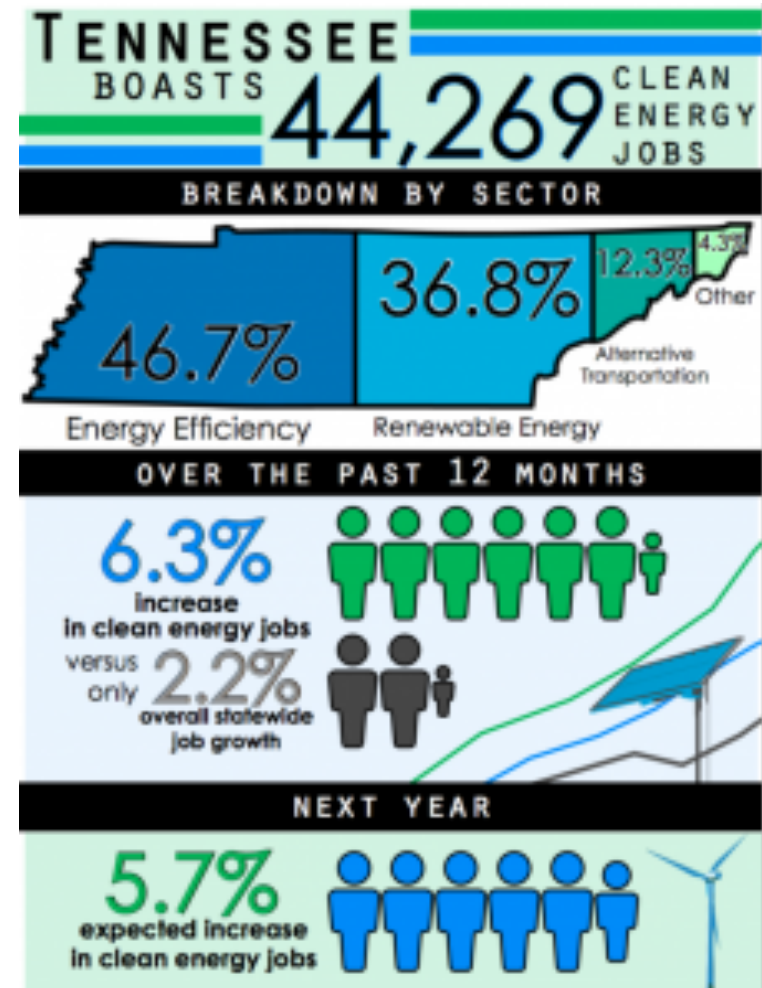
# Solar – Job Creator



## Clean Energy Tennessee Report

- 70% of renewable energy firms were solar
- 151 companies
- 2,200 employees

**In 2014, Tennessee was one of 4 states to supply 100% of new electrical capacity with solar!**

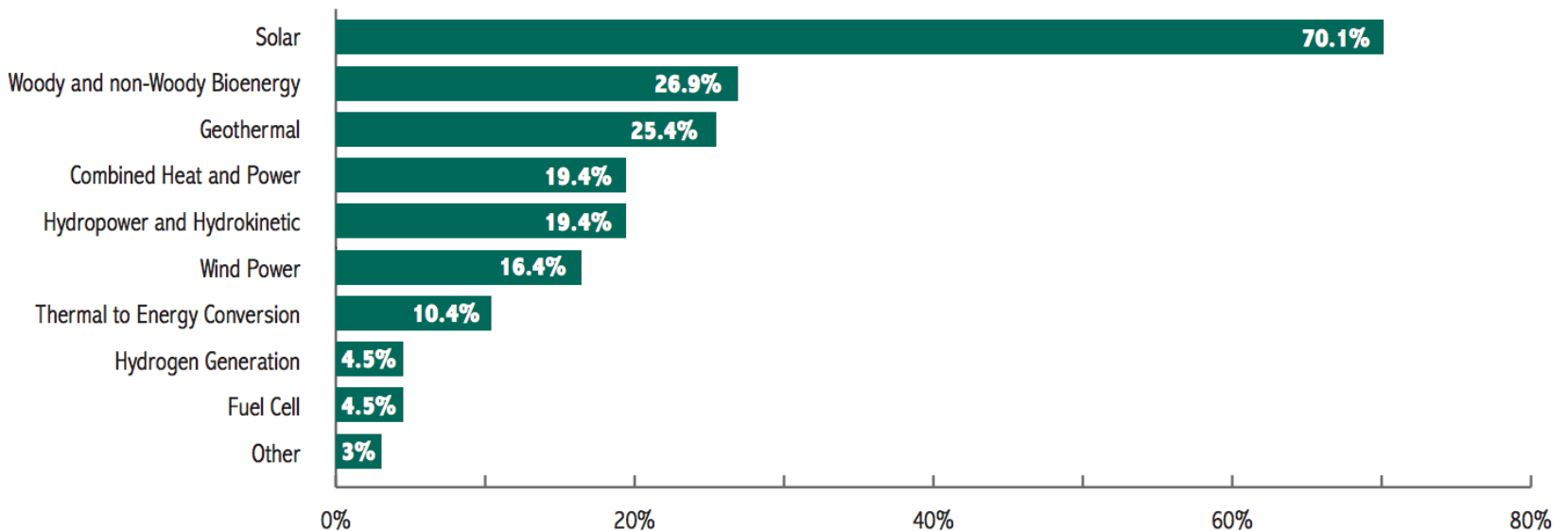


# Solar – Job Creator

## SOLAR TECHNOLOGY IS CENTRAL TO TENNESSEE'S RENEWABLE ENERGY SUBSECTOR.

About 70% of renewable technology firms indicated that solar generates significant business. Bioenergy and geothermal represent a sizeable portion of business at roughly 27% and 25%, respectively. About 19% of firms reported working with hydropower or hydrokinetic technologies (Figure 4).

**Figure 4. Percentage of Renewable Energy Technologies<sup>46</sup>**

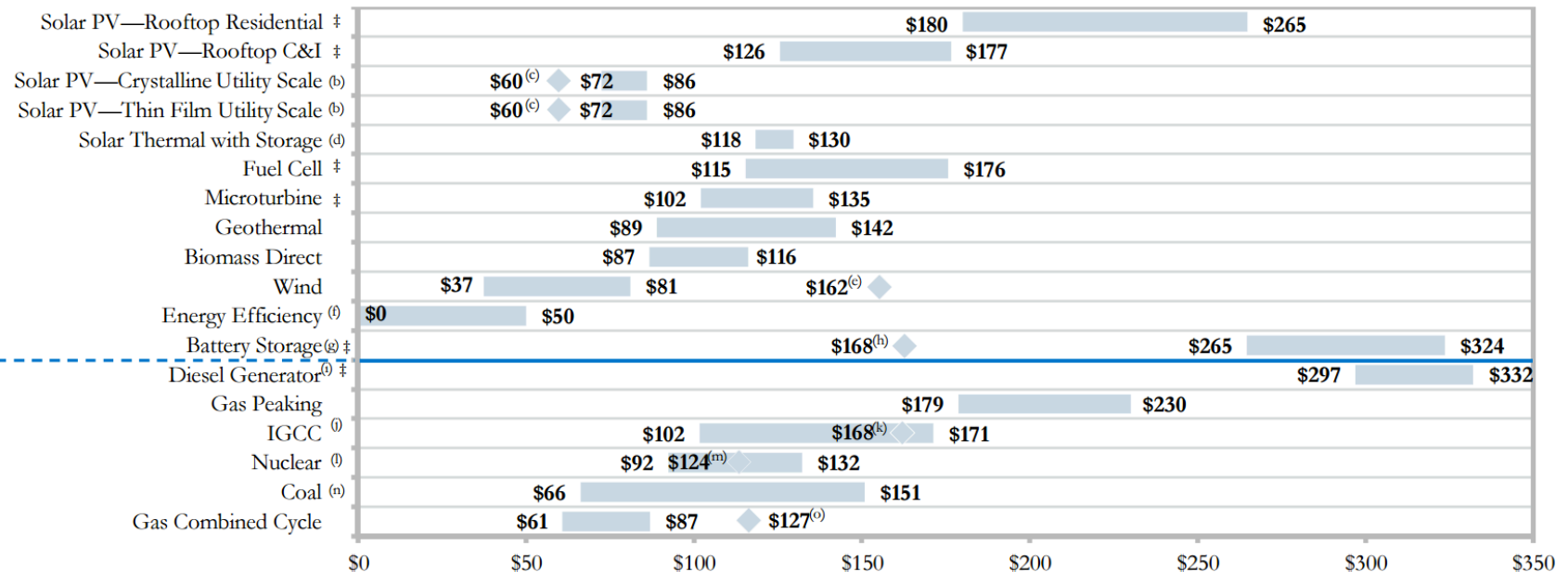


# Economics of Solar

Name:	Southern Alliance For Clean Ener
Acct Number:	[REDACTED]
Billing Date:	02/13/13
Page:	1 of 1

Bill Summary	
Previous Amount Due	\$ -971.37
Payments Received	\$ 0.00
Current Charges	\$ 123.34
<b>Credit-DO NOT PAY</b>	<b>\$ -848.03</b>



# Incentives for Solar

## Federal Investment Tax Credit

- 30% tax credit for residential and commercial solar installations
- In effect until Dec. 31, 2016
  - after 2016 the commercial incentive drops to 10% and the residential drops to zero UNLESS Congress extends benefit
- Company that installs, develops or finances project uses the credit OR residential owner applies it to his/her income taxes

## Department of Energy Incentives

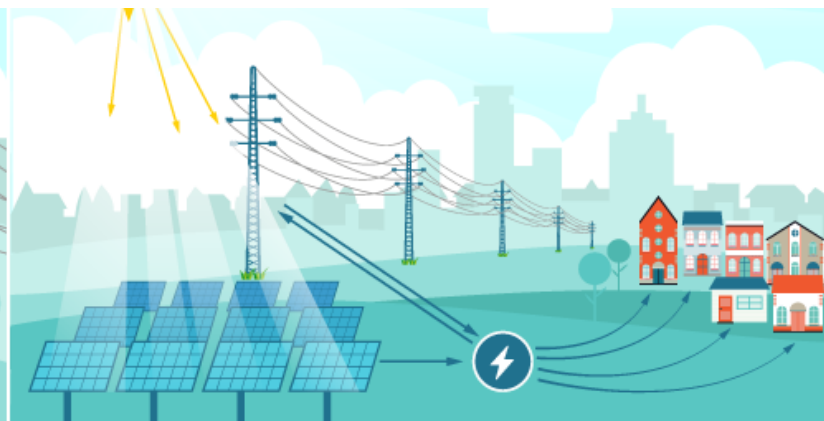
- More than \$52 million to support 22 new projects aimed at making solar more accessible and affordable across the nations
- \$50 million towards improving solar technology past the goals of the SunShot Initiative



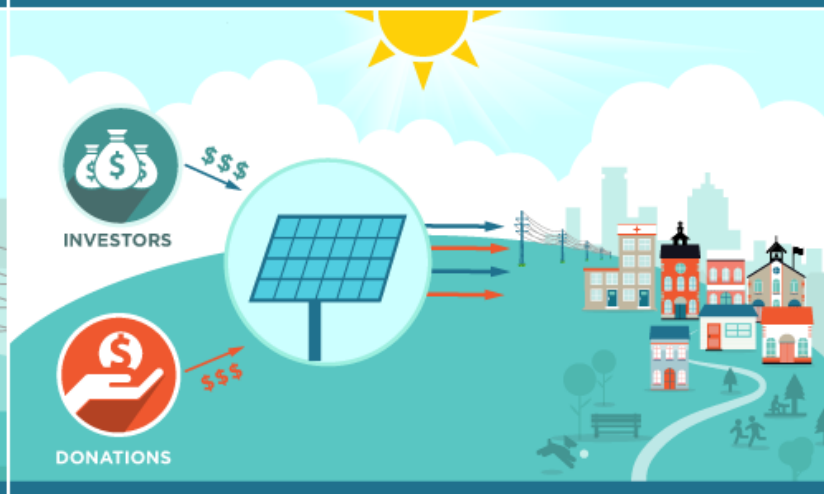
# National Community Solar Partnership



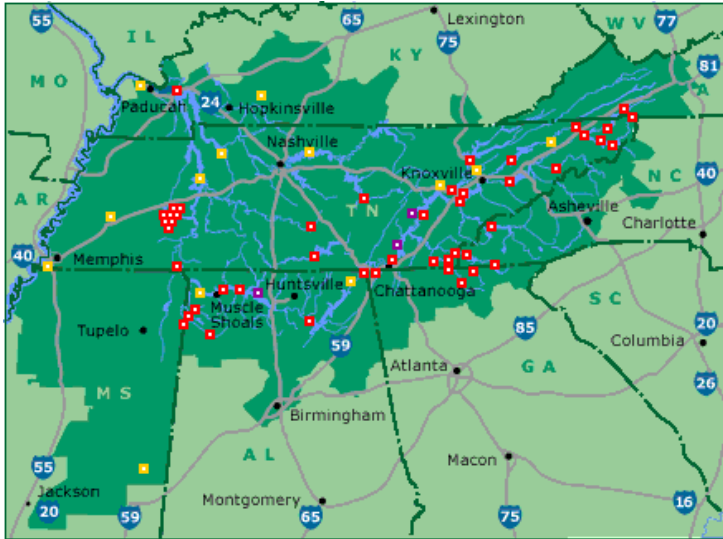
Community Group Purchasing



Offsite Shared Solar



# Where Do You Get Your Power?



**TVA Service Territory**



**TVA's Allen Coal Plant**

- The Tennessee Valley Authority is our nation's largest public power provider serving 7 states.
- TVA sells power to Local Power Providers – like Memphis Light, Gas and Water, which is TVA's largest customer!





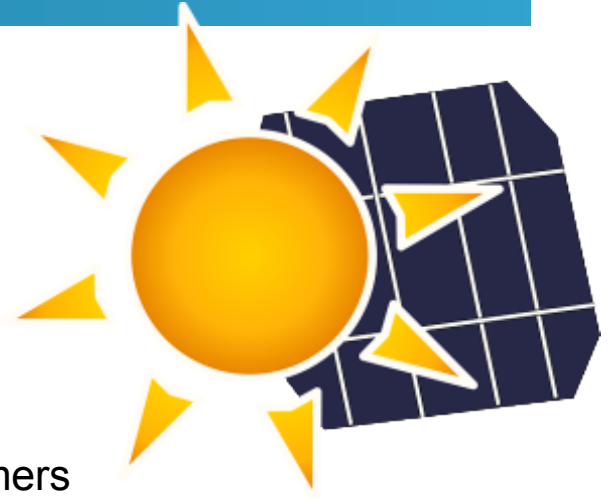
# TVA and Solar

## Green Power Switch

- Additional charge on utility bill
- \$4 per 150 kWh of clean energy added to TVA system

## Green Power Providers

- Maximum size of 50kW
- TVA purchases 100% of the energy output
- \$1,000 incentive available for eligible residential customers



## Renewable Standard Offer

- Locks in a long term contract price
- Available for systems greater than 50kW and less than 20 MW

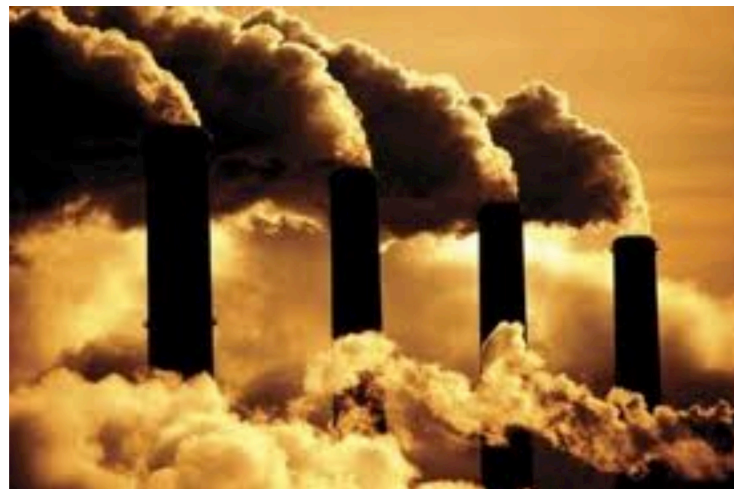
## Solar Solutions Initiative

- Incentive payments for mid-size solar projects in TVA's Renewable Standard Offer Program if the projects use local NABCEP-certified installers in the Valley region
- 20 MW total – 12 MW (200kW-1MW); 4 MW (51kW-200kW); 4 MW for LPC

# What's Next for Solar?

## Clean Power Plan

- ✧ First ever regulations to limit carbon dioxide emissions from fossil-fueled power plants
- ✧ Relies on a federal-state partnership structure to reduce carbon pollution
- ✧ Sets source specific emission standards
- ✧ Includes a Clean Energy Incentive Program (CEIP) to spur growth of renewable energy and low-income energy efficiency



- ✓ Memphis could benefit from the CEIP by creating jobs, cleaning up our air and earning marketable carbon dioxide emission credits to sell to other industries

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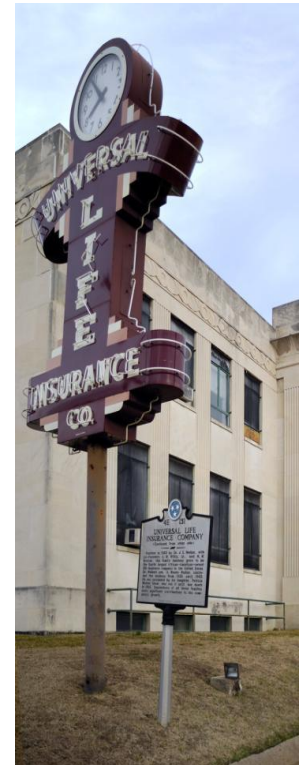
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Universal Life – A Legacy of  
Leadership



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## Walker Family – Four Generations of ULICO Management

Dr. J. E. Walker (1880-1958)

- Established Universal Life Insurance Co. in 1923



A. Maceo Walker (1909-1994)

- Grew ULICO to one of the largest African American owned business in the US

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## Patricia Walker Shaw (1939 - 1985)

- Granddaughter of Joseph Edison Walker

Became president of the company upon the retirement of her father A. Maceo Walker

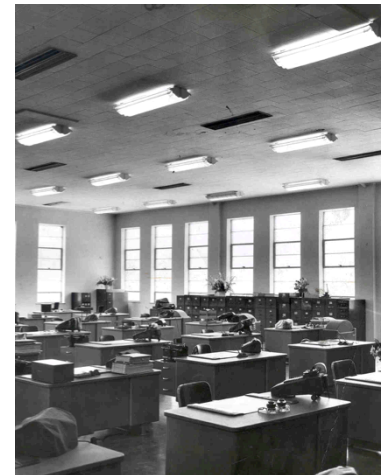
Served as President of ULICO from 1983 - 1985



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## Memphis Heritage Trail

- Our City is an important cultural and tourism destination
- Recognized throughout the world for our rich music, history and cultural heritage
- One of the most visited cities of the South
- Memphis flourishes with stories of the past which provides its authenticity
- Will continues to attract people year after year
- Trail is intended to enhance and to economically benefit the local hospitality industry

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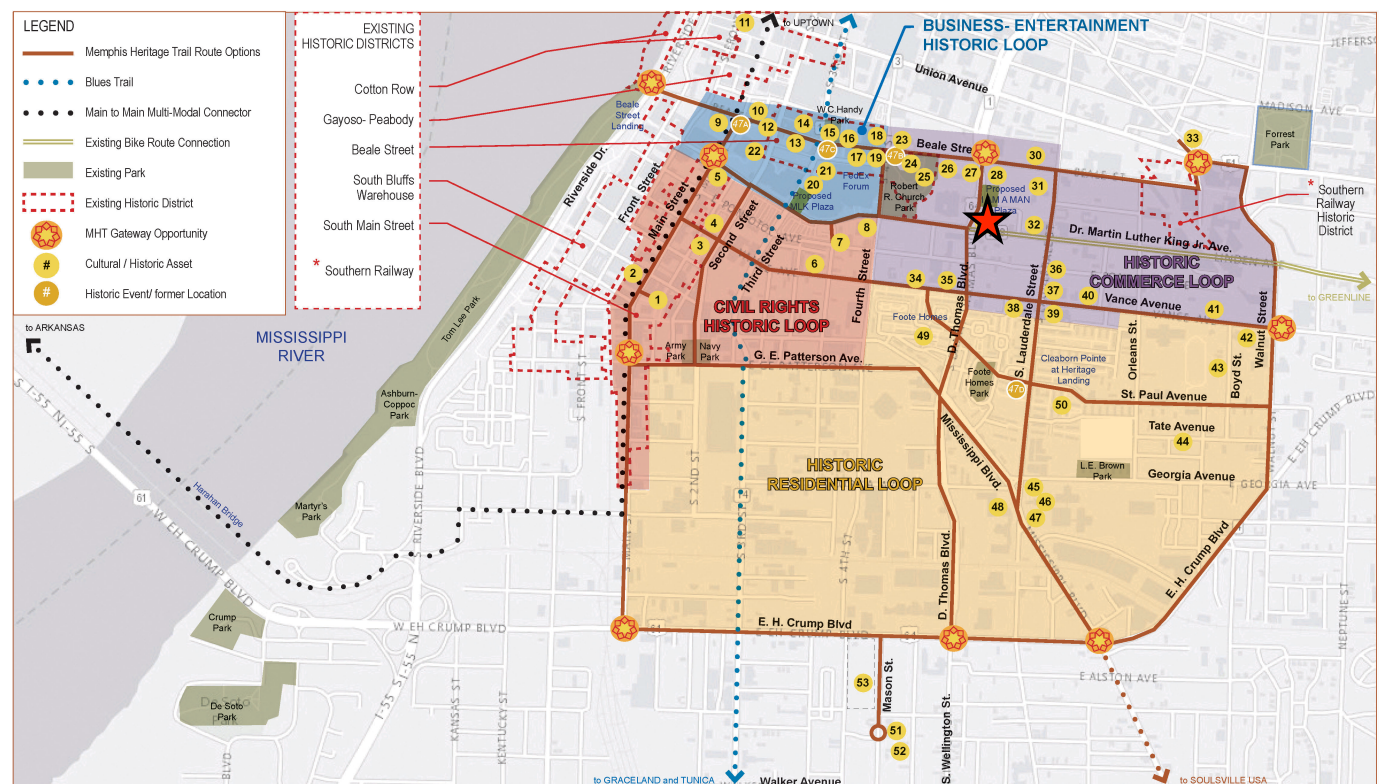


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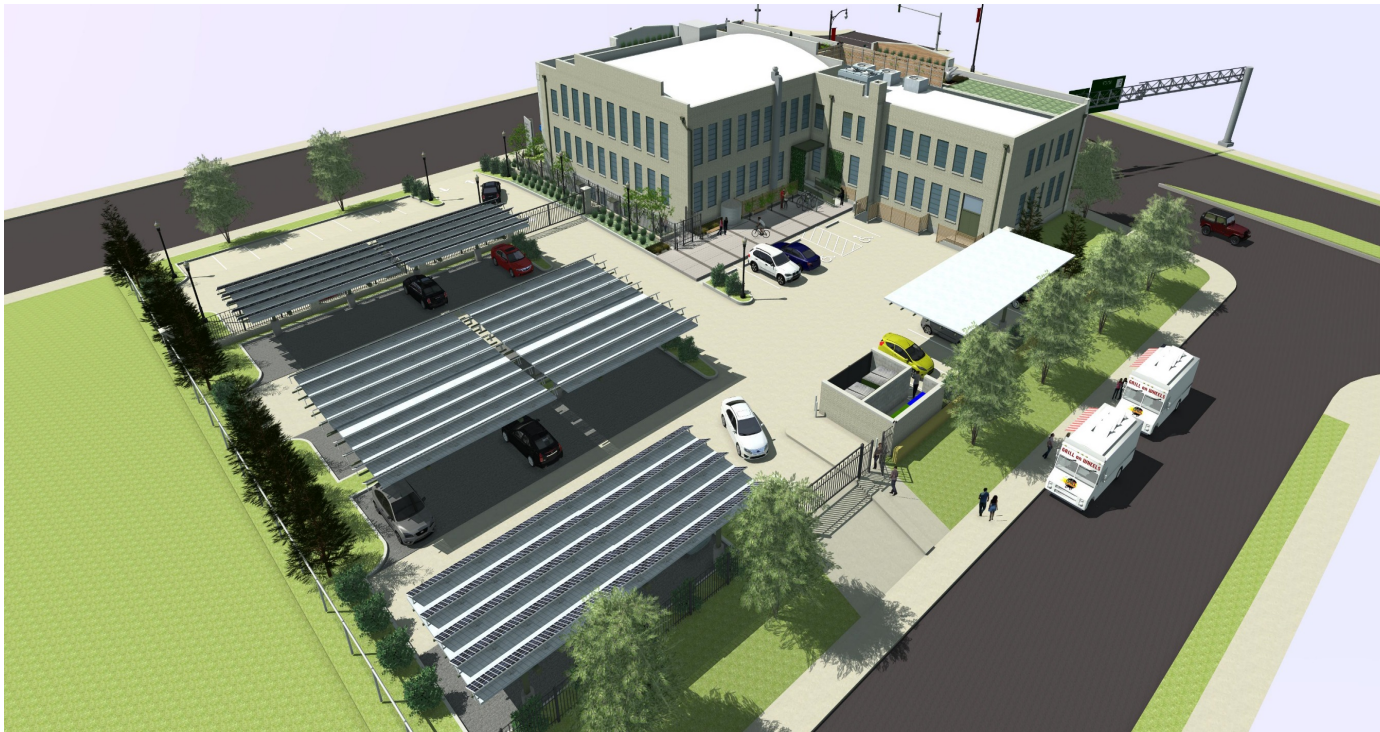


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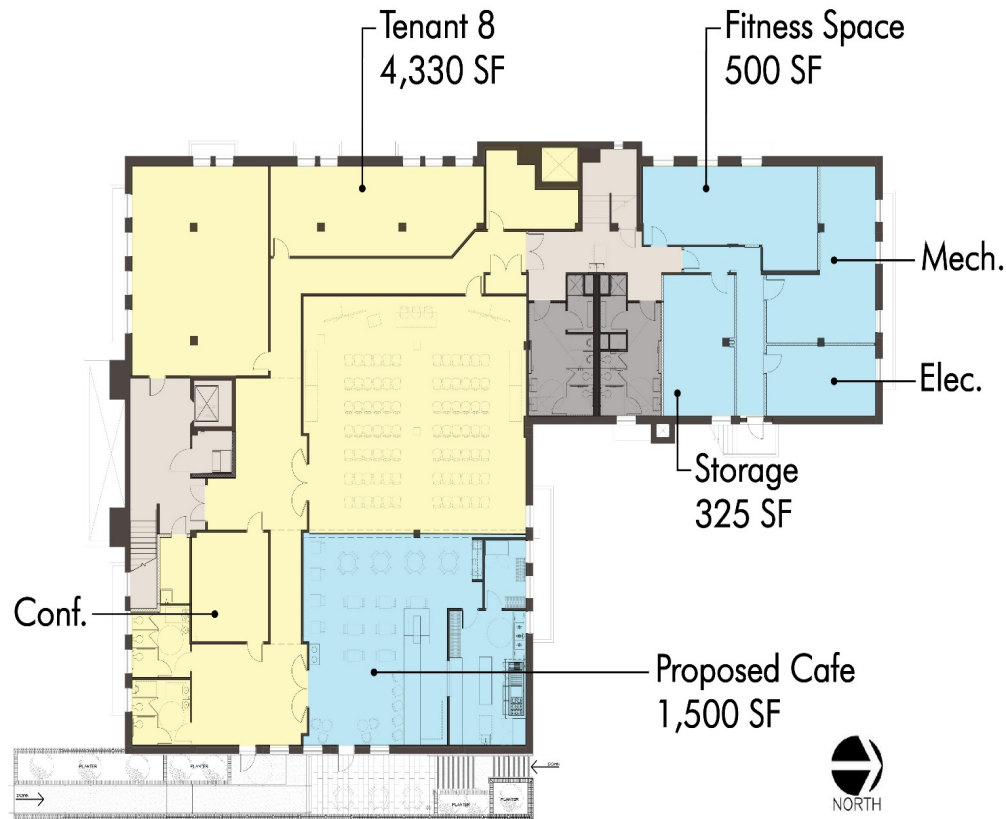
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LOWER LEVEL PLAN

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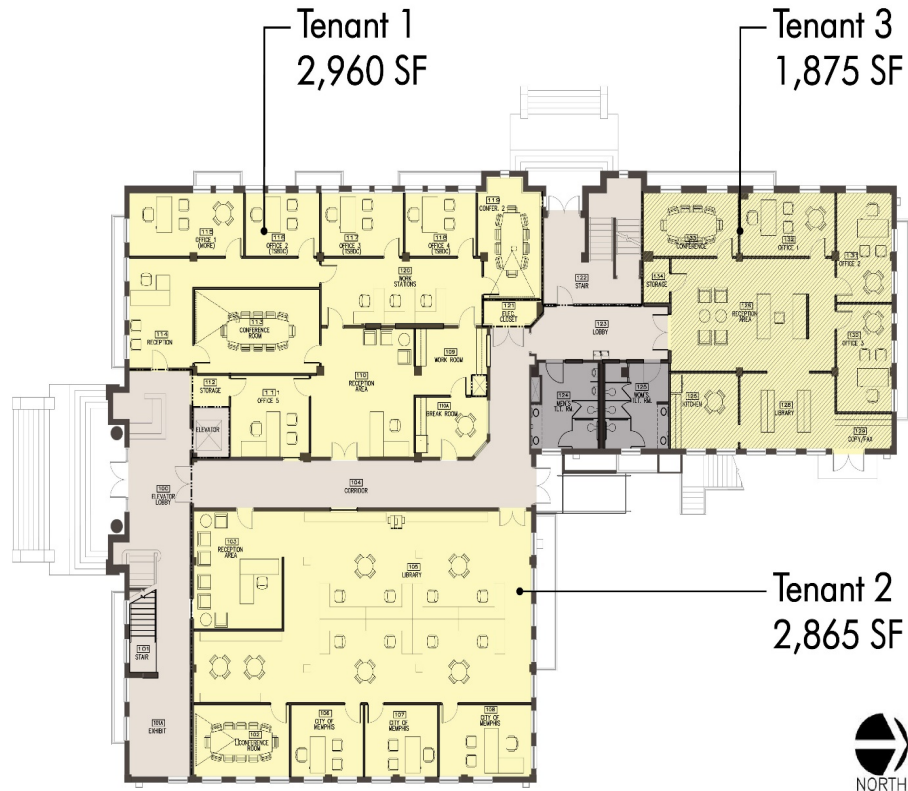
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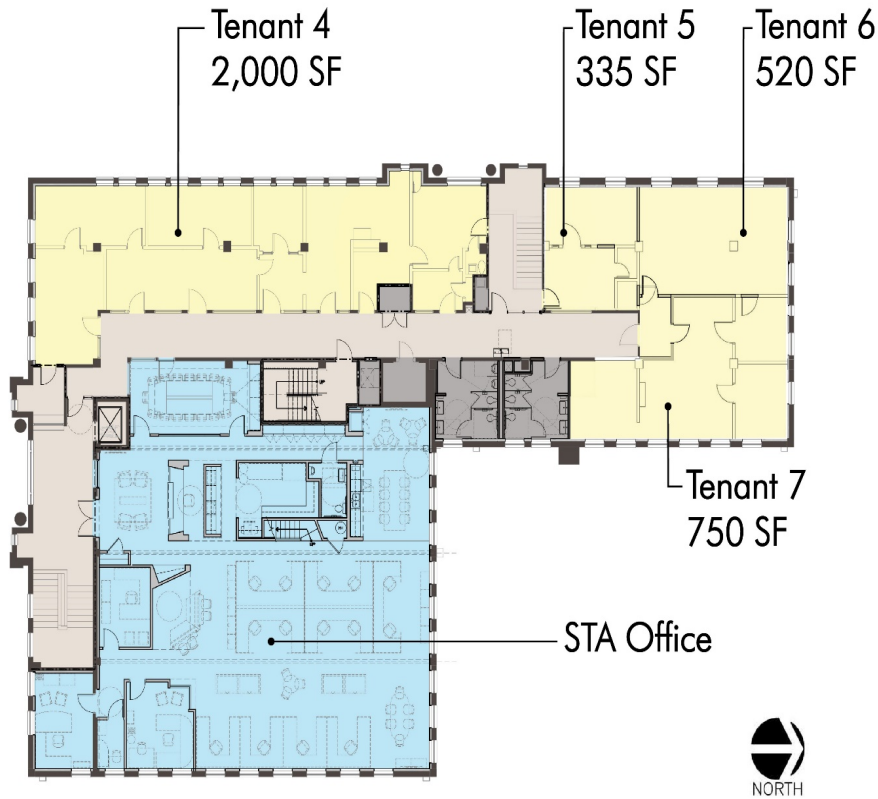
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FIRST FLOOR PLAN



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SECOND FLOOR PLAN

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# KQ Campus Expansion



green leaf  
learning farm  
A Knowledge Quest Program





# Green Leaf Learning Farm



green leaf  
learning farm  
A Knowledge Quest Program





# Existing Farm



# Existing Farm





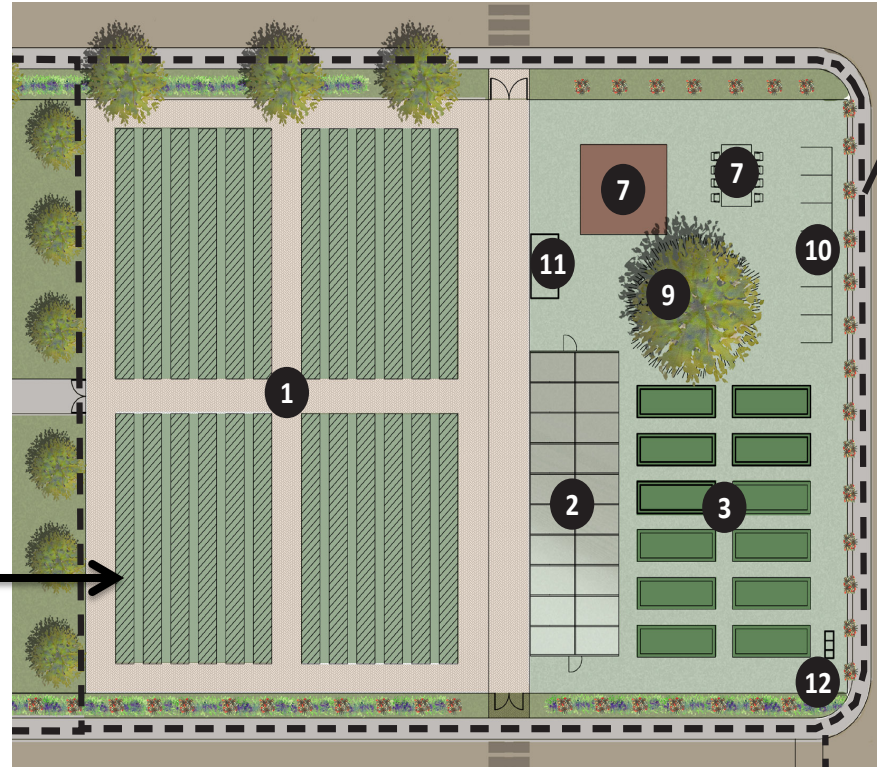
# Expansion Master Plan



# Expansion Master Plan



## Proposed Raised Beds



## Proposed Permanent Path





# Expansion Master Plan

## Proposed Market Stand



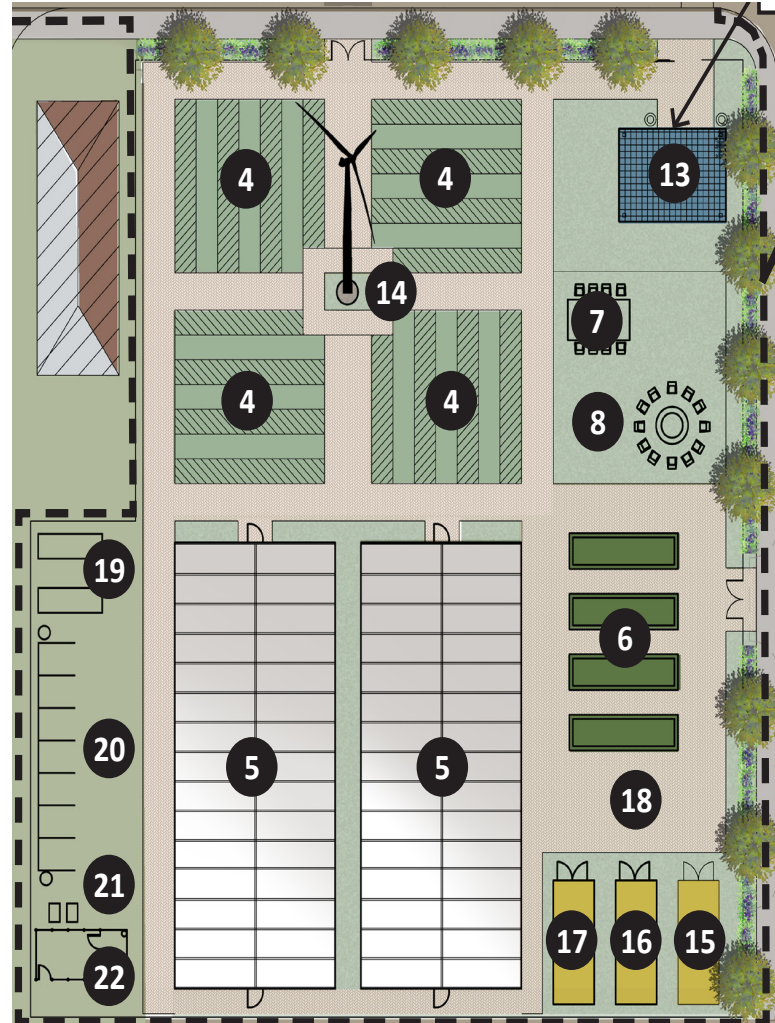
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## Worm Bins

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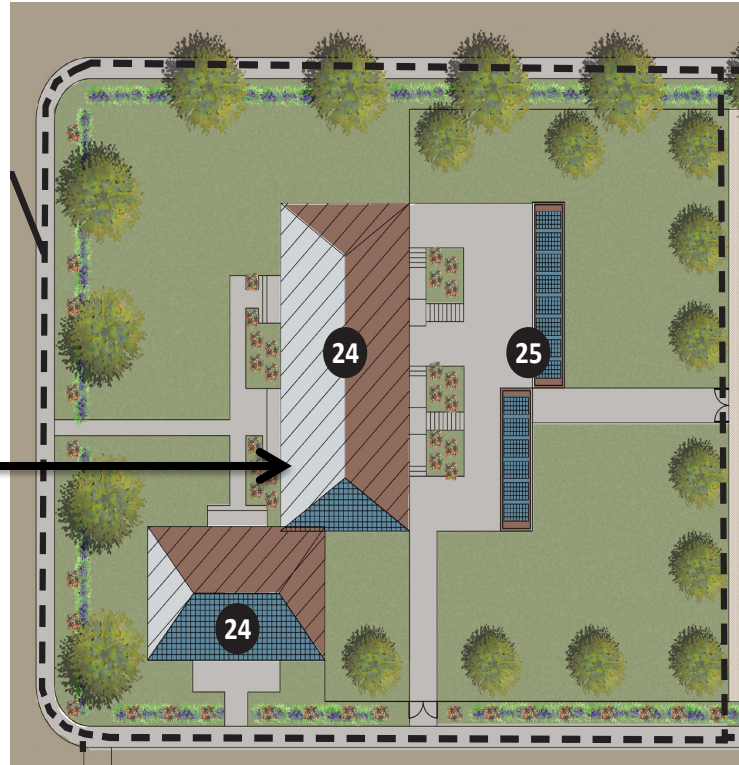




# Expansion Master Plan

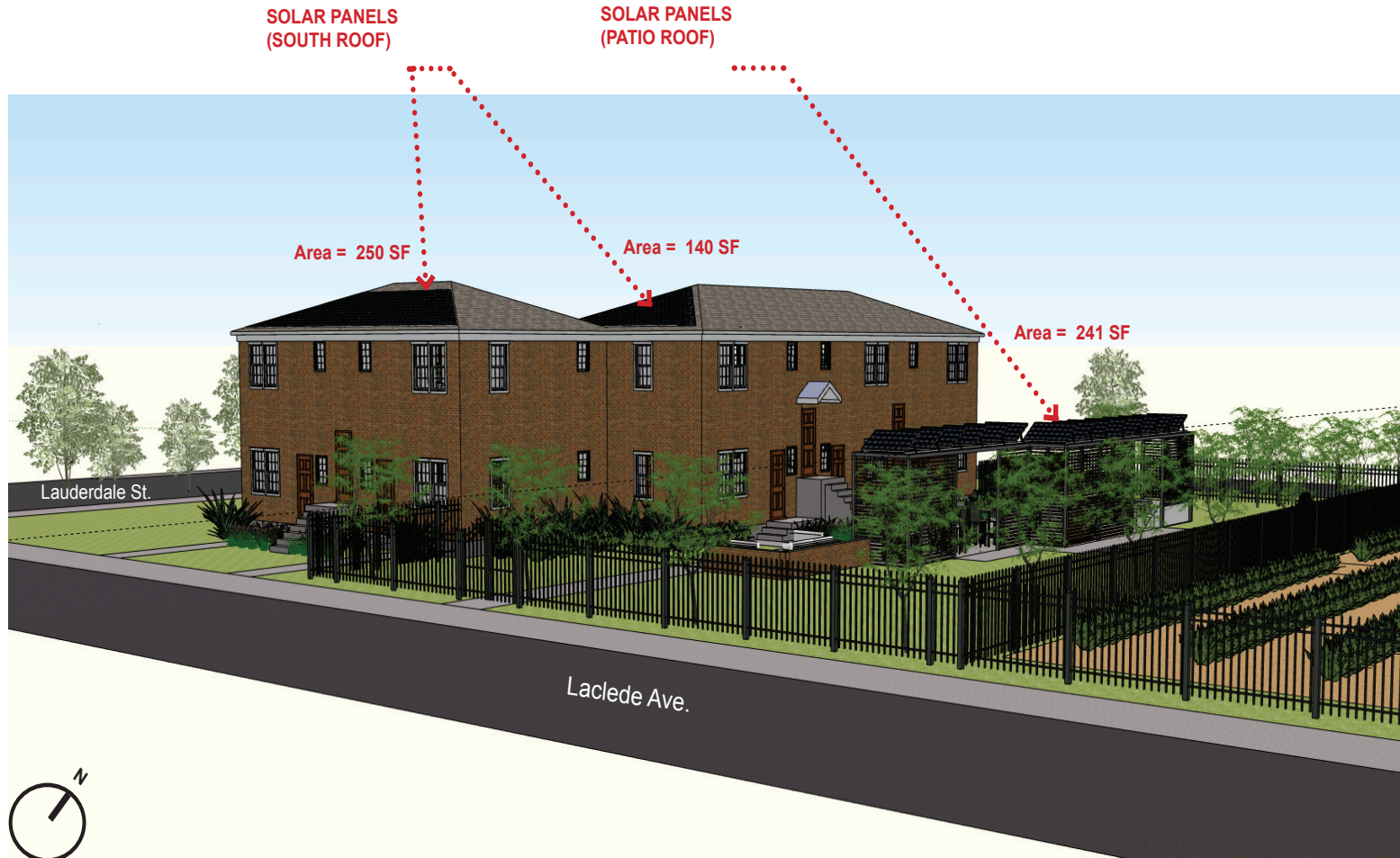


## Future Residences of Green Leaf



25

# Expansion Master Plan





# Expansion Master Plan





