PUBLIC MEETING AGENDA

Sustainability Commission

MEETING DATE
Monday, December 14, 2020
4:30 p.m.

MEETING LOCATION
Virtual Meeting
Join Microsoft Teams Meeting
+1 480-498-8745 United States, Phoenix (Toll)
Conference ID: 596 204 660#

AGENDA ITEM	PRESENTER	ACTION or INFORMATION
1. Public Appearances The Sustainability Commission welcomes public comment for items listed on this agenda. There is a *three-minute time limit* per citizen.	Kendon Jung, Commission Chair (4:30 – 4:33 pm)	Information
2. Approval of Meeting Minutes The Commission will be asked to review and approve meeting minutes from the November 16, 2020 meeting.	Kendon Jung, Commission Chair (4:33 – 4:35 pm)	Action
3. Tempe Community Complex Masterplan Staff will provide updates.	Gregg Kent, Principal Civil Engineer (4:35 – 4:50 pm)	Action
4. Green New Deal Super Studio ASU staff will provide updates.	Paul Coseo, ASU (4:50 – 5:05 pm)	Information
5. Transportation Demand Management & Telework Transportation staff will provide updates.	Robert Yabes, Vanessa Spartan, Eric Iwersen (5:05 – 5:30 pm)	Information
6. MAG Bus Rapid Transit Update & Streetcar Extension Study Staff will provide updates.	Eric Iwersen (5:30 – 5:55 pm)	Action
7. Arizonans for Community Choice Guest will provide updates.	Shelly Gordon, (5:55 – 6:10 pm)	Information
8. Climate Action Plan 2021 Update Staff will provide updates.	Braden Kay, Sustainability Director (6:10 – 6:20 pm)	Information
9. Housekeeping Items Sustainability awards submittal deadline is February 17th Approve joint letter with TAVCO; Two meetings in January	Kendon Jung, Commission Chair (6:20 – 6:25 pm)	Action
10. Future Agenda Items Commission may request future agenda items.	Kendon Jung, Commission Chair (6:25 – 6:30 pm)	Information

According to the Arizona Open Meeting Law, the Sustainability Commission may only discuss matters listed on the agenda. The City of Tempe endeavors to make all public meetings accessible to persons with disabilities. With 48 hours advance notice, special assistance is available at public meetings for sight and/or hearing-impaired persons. Please call 350-2775 (voice) or 350-8400 (TDD) to request an accommodation to participate in a public meeting.

Minutes
City of Tempe Sustainability Commission
November 16, 2020

Minutes of the Tempe Sustainability Commission meeting held on Monday, November 16, 2020, 4:30 p.m. at a virtual meeting on MS Teams, through City Hall, 31 E. 5th Street, Tempe, Arizona.

(MEMBERS) Present:
Kendon Jung (Chair)
Ryan Mores (Vice Chair)
Barbie Burke
Sukki Jahnke
Snigdha Nautiyal
Steven Russell
Gretchen Reinhardt
Stephanie Milam-Edwards
Katja Brundiers
Anna Melis

(MEMBERS) Absent:
John Kane

City Staff Present:
Braden Kay, Sustainability Director
Grace DelMonte Kelly, Energy Management Coordinator
Ausette Anderies, Intern
Craig Hayton
Barrett Jurgermayer
Shauna Warner
Shawn Wagner
Julian Dresang
Keith Burke

Guests Present:

Vice Chair Mores called the meeting to order at 4:33 p.m.

Agenda Item 1 – Public Appearance

Vice Chair Mores asked if there were any guests and if they would introduce themselves.

Agenda Item 2 – Approval of Meeting Minutes

Vice Chair Mores introduced the minutes of the October 19, 2020 meeting. Commissioner Burke made a motion to approve the minutes. Commissioner Jahnke seconded.

Motion: Commissioner Burke
Second: Commissioner Jahnke
Decision: Approved 10-0

Voted to Approve:

Kendon Jung (Chair)
Ryan Mores (Vice Chair)
Barbie Burke
Sukki Jahnke
Gretchen Reinhardt
Steven Russell
Snigdha Nautiyal
Stephanie Milam-Edwards
Katja Brundiers
Anna Melis

Motion Passed 10-0.

3. Clark Park Aquatics Center Update

Presented by Brandon Sobiech, from DigStudio:

- Enhancement and improvements
    - Park master planning goal - function and integration with the old center
    - Community outreach
        - Listening and engaging with community members
        - How they use the park what they need and want
        - Listening to city officials and community leaders; what programs they want to offer and what resources they need to do so
    - Park Listening Sessions
        - Existing passion in the community garden - already engaged community members
    - Accessible green space (Helps improve connectivity)
    - Improving experience by enhancing amenities at the park
        - Building Restrooms
        - Expanding recreation center
            - Funding allocated to adding to and improving the existing recreation center
                - Community outreach - Recreation center was not being used because the building was not appealing, functional, or inviting
            - Baseline Park Program - framework for Clark Park Aquatics Center master plan
                - Integrating pool into the cite better
                - Creating a community hub -
                    - Central hub of activity that anchors that space (both options existing facility removed with sustainable flexible building)

- City assessments
    - The buildings are at the end of their life spans
    - Start fresh with a new building
    - Combining pool and recreation center
        - Various planning options
            - Pool goes to existing location
            - Pool replaces the garden
            - Pool moves to the opposite side of the park

- Aquatic survey - How can it be tailored to the needs of the community? - Family, destination, exercise center, K-12 ages
    - Public space needs to serve a diverse set of community members
    - Family-focused
    - Laps swimming, elderly, youth, exercise, age ranges
    - Multifunctional
        - Destination - water slides, increase ages range of children using the space - middle school/high school
        - Adding areas for exercise - walking strolling, laps, therapeutic pools
        - Health and wellness - while maintaining family atmospheres
        - Family retreat to engage 0-4 age group
        - Develop a program that includes amenities and events for all ages
        - Destination - water slides - increase ages range of children using the space - middle school/high school

- **Sustainability Strategies**
    - Using existing framework of the park
    - Flood irrigation
    - Beautiful trees, cooling aspect
    - Maintain existing green space -
        - Transition to a low-water-use desert landscape
            - oasis feel, with native plants
        - Orientation of the building
            - indoor outdoor for airflow - collecting rainwater to water plants
            - International green construction code - goal net-zero facility
    - Infrastructure for electric vehicles
    - Supporting solar aspects
    - Insulation high 'r' value
        - low heat glass - design partner to get best views, and keep building temperature stable -
        - Use of natural daylight throughout the building
    - Demolition of existing buildings - repurpose the material
    - Using sustainable building materials when possible
    - Using material with a long lifespan and ease of maintenance

- Integrating universal design - comfortable and easy use.

Question: Vice-Chair Mores- How much of this is mandatory versus ideas - what is mandated and is just ideas (of sustainable guidelines)?

Answer:

- Lots of the sustainable strategies are mandatory
    - There are funds tied to sustainable strategies
    - Goals to pursue net-zero (not mandatory)
        - Testing how far this can be taken with the budget is restraints

- Future of the project
    - Still in the master planning stage
    - Preferred plan by February
    - Going back to the community - more detailed design after this
    - More integration of sustainability strategies after this point

Question: Is the pool just to accommodate fitness, swim lessons, and youth, grade school level kids or will it also accommodate swim clubs?
Answer:

- It is not a formal competition pool

Comment/Question - Renovation at Escalate got rid of lots of plants (destroyed existing landscape); how will this project prevent plant destruction?

Answer

- The intent is to keep as many, if not all, healthy trees on-site
- Some trees near the parking lot may have to be removed (as they are not in the best condition - might need to be replaced)
- This park has large mature trees which will stay and be maintained
- New landscaping will focus on desert-adapted plants (arranged for optimal water flow)
- Preserve what's there - weaving in a new character of the landscape as well

Question: The new building will be compatible with solar, but will any solar be incorporated into the initial building process?

Answer:

- At a minimum, the building will be solar-ready
- Solar might not be realistic within the budget - but solar it an overall goal if it can be funded
    - Depends on the final budget
    - The budget is allocated to fulfill the greatest needs of current users

Question: Any roadblocks with the net-zero goal?
Answer:

- As long as we are open to the idea to prepare for future development
- Main roadblock is the budget
- But if we can get solar day one - how does that work - functionality - requirements for community needs -
- Public meeting in February they will have more estimates and goals - ask that question again at that time - they will have a clearer picture

4. Utility Partner Update - APS and SRP will discuss moving climate actions forward

Marc Campbell SRP:

- SRP 2035 Sustainability goals - Would appreciate advice on how we should be thinking about energy in Climate Action Plan (CAP) update;
- Sustainability is about all of us
- Work at SPR fits with CAP at Tempe
- Sustainability - a rising tide lifts all boats
    - Leverage everything, we can to improve communities
- SRP goals (2017) - revised in 2018-2019 made these goals more ambitious and aggressive

Five key pillars

1. Carbon footprint - from power generation plants
2. Water resilience - long term water supply - planned for not so rainy days
3. Supply chain and waste reduction - supply chain transformation to sustainable criteria
4. Customer and grid enablement

5. **Customer, Community, and Employee engagement** (Rethinking how we are reusing, reducing waste - employees thinking differently about how they dispose of things)

Goals

- Carbon emission reduction - 65% reduction by 2035 - 90% reduction by 2050
- Continuing to bring on renewable energy - focus on battery storage
- Why not 100%?
    - Simple answer - we don't see a realistic pathway
    - Realistic goals now - but %100 is the goal
    - CEO wants to be transparent and look to something we can attain
        - No access to wind, only solar and battery storage
- Customer & grid enablement
    - Making sure people are using power at the best times
    - Getting people not to charge cars during peak times - How do we send the right signal to people about when to charge?
    - Broad community partnership
    - MWh - aggregated energy savings - developing programs to communicate energy efficiency
    - 100 percent enablement of customer-side resources, solar - without technical constraints - accommodation

Opportunities to work together

- Transportation electrification
- Changing the transportation sector
- Taking meaningful action - meeting the goals to transform the industry
- Advancing transportation electrification - joint opportunities
- Lots of conversations to be had - how do we start taking this conversation in a common direction to fulfill all needs?
- Overcoming key barriers to eclectic vehicle adoption
- Urban forest mitigation
    - SRP and city partners removed lots of trees around powerlines
        - SPR must remove trees growing into power lines (two-year pruning cycle)
        - Leaves trees unhealthy
        - High cost for SRP
            - Opportunity to partner with the city
    - Wrong trees for some locations
        - Replacing trees in multiples (463 trees planted around the community)
        - The key is to focus on social justice and equity
        - Found areas that needed more canopy and heat mitigation
        - Focus on areas of our community that are at greatest risk

Question: What should the Tempe government be doing to partner with SRP for decarbonization?
Answer

- Electrification of transportation
- Municipal technical assistance program (more details in 2021)
- Working together to get more charging infrastructure to get more charging stations in the city
- Solar - battery storage opportunities
- Tree program - partnership opportunities
- Energy resilient hubs

Question: How should the city approach net-zero buildings given the pricing structure at APS and SRP?

Answer:

- Determining how those pricing structures can look like in the future (SRP starting to talk about this)
- Renewable energy goal for the state - as well as city - is needed to overcome these pricing structures

Question: Are the programs to help schools replace school maintenance vehicles with electric?

Answer:

- Beginning in 2021 there will be more detail about this

Question: Trees removed were they put in the same or new places?

Answer:

- Some went back in place (where it was possible)
- Others went to new locations
- Focusing on the need for equity in these areas (CAP) guiding principles - collective thanks for the work you are doing - the commission in committed -
- SRP is continuing to look for opportunities to collaborate
- City and utilities can be a roadblock
- SRP doing great work to engage with sustainability and the city
- Exciting to see where we are going next with APS and SRP

Renee Guillory APS

APS services Tempe and 32-thousand square miles

- Public service obligations
- Delivering energy
- Key pillars
  - Providing energy that is clean affordable and reliable - customer-centric
  - Partnering with customers in sustainability space
  - Clean energy commitment
  - 100% - carbon-free by 2050
  - Retiring coal fire generation - by 2031

The first steps to clean energy commitment

- Increasing renewable energy to customers
- Increasing battery storage - larger scale opportunities
- Many steps to go in the 10-year milestone
- Support the transition with natural gas
- Increasing electrification
- Palo Verde generation station already carbon-free, produced 50% of energy
- Emissions are lower - important clean-air energy source-

APS leading in solar power - 1.6 gigawatts of solar capacity

- Summer months - 25% of power is solar
- Larger percentages of energy from solar every year
- Battery and thermal storage help utilize solar energy

Goals

- Developing more solar power storage

- Microgrids
    - Pilot projects thermal and battery storage - gaining national recognition
- Modernize the grid - taking all kinds of new technology and integrating it carefully
- Developing more electric vehicle programs
- Take charge AZ
    - 37 sites help commercial customers develop charging stations at their facilities
    - Customers - provide for free or at a market cost
        - recoup the cost of energy
        - reduced range anxiety
    - Future EV ranges - using off-peak energy 90-cents per gallon prices
    - DC fast charging - working with customers to redesign their sites to provide quick fast charging on freeways and heavy tourist areas
    - Building electrification
    - Addressing the transportation issue of clean energy
- The City of Tempe can work with APS to continue building forward with a commitment to sustainability
    - Opportunity for collaboration
        - Fleet charging stations
        - Microgrid for energy hub

Question: What work is there regarding utility-grade solar?
Answer:

- An additional 800 MWh of storage is being placed at existing plants or paired with solar
- Plans are in the integrated research plan
    - Expanding these ideas to APS solar communities
    - Placing solar systems at commercial and government sites
    - APS is Gearing up to do additional programs

Question: APS has the opportunity to scale up? Fleet charging - expand beyond 8?
Answer :

- Yes - Statewide electrification plan
- New targets
- Opportunity to scale up EV charging AZ
- DC fast charging and other programs
- Cool rewards program
    - Smart thermostats
    - Precooling elements
    - The program has 20,000 smart thermostats already had great results
        - Low barrier to entry
        - Addresses peak demand issues (win-win all around)
        - This is currently scaling up
- Customer programs - expand and scale
- **Challenges**
    - Extreme heat in the summer

Comments - Tempe committed to helping expand these programs and rebates

5. Community Partner Update SWEEP and CHISPA will discuss moving climate actions forward.

Mesavi Perea

- CHISPA - how to educate low income and Spanish speaking communities about energy resilience (most of the work is bilingual)

- Structure of the program
    - Meeting people where they are - learn together with the community
        - Environmental justice
        - Electricity bill 101
            - Community members worried about the higher electricity bill
    - How can we teach people about environmental justice?
    - **Vision -** equitable access to resources
        - Transformation approach that meets people where they are
    - How we talk to our community
        - Explains energy companies (APS-SRP)
        - Explain their electricity bill (Many people do not read the information on the website)
        - Breaking down the bill into different sections
        - Help people understand different types of charges, etc.
- Why don't people read it?
    - They have more questions than answers after - what does it all mean?
- Made it simple
    - What is KWH?
    - How electricity is spent (different appliances, etc.)
    - Explaining delivery charges
    - On and off-peak hours - helping people understand better
    - Explain options to conserve energy
    - Line by line explanation of the bill

- After the presentation
    - Conversation with the people
    - People ask good questions
    - What questions they have - how they can get involved
- Learning more about electricity and environmental ideas
- Economics of clean/renewable energy
    - Cheaper and helps the environment

- **Avoiding whitewashing the sustainability community**

Question - Is there training around extreme heat - resilience to extreme heat?

Answer - Moving towards this
- There are ways to deal with heat and our community
    - Meeting people where they are
    - How can we fix these issues - people want to know
    - Sometimes they have answers
        - **Make them part of their solution** - **instead of someone from outside telling them what to do**
    - Distrust in the communities between municipalities and the community
    - Working groups found a lot of things they were able to fix

SWEEP Caryn Potter - Southwest Energy efficiently project

Unlocking carbon emissions decreases -
- Public interest group to advance policy and programs that stimulate greater energy efficiency
- Interconnections on energy efficiency in different sectors

Agenda

1. Energy efficiency as a climate mitigation strategy
    - Energy efficiency can cut the US energy use and Greenhouse gas emissions in half by 2050 - combined opportunities with energy efficiency and use
        - High-level benefits
        - Lower electric bills reduced water use
        - Improves utility system as a whole
        - Addresses vulnerabilities to economic, and natural disasters
        - Adds local family-wage jobs within the city
        - Bill savings directed into the community
        - Equity lens
            - Providing jobs to areas that don't have other industries
            - Do not require and university degree
            - Huge plus for equity

What is good for the economy can be good for sustainability as well

- Every dollar invested in energy efficiency returns three dollars to investors
- Lower cost options available
- **Least cost solutions**
- Energy efficiency is the least expensive resource to meet customer needs
    - Actionable policy/programs for the City of Tempe
        - Climate mitigation goals
        - Policy ideas
            - Participate in utility administered energy-efficient programs
            - City managing building energy efficiency incentives
            - Energy sensors and controls
            - Insulation improvements
                - Average building waste 30% of energy due to age or inefficiencies
        - Public transport expansion
        - Thousands of energy efficiency technologies available to cities
        - APS approved 2021 energy efficiency plan opens of opportunity for city engagement
            - rebates and services through cities

Electrification implementation

- Incentives
- Electric ready
- Electric-preferred
- Building type-specific
- Electric only - with exceptions
- Electric-only

6. NASA DEVELOP Guest will provide updates

Extreme heat data analysis through NASA - Tempe development office

- Urban Heat
- Develop solutions with applied science
    - NASA earth science and interconnections between fields

Ryan Hammock / Sydney Boogaard

- Establishing heat exposure severity indexes

- Summer daily temperatures regularly exceed 100 degrees Fahrenheit and urban development has caused the heat island effect
    - Endangers the city
    - Community concerns
- Partnered with the HUE initiative

Objectives

- Use NASA earth observations
- Create a usable geodatabase
- Creative communication tools for collaboration
    - User-friendly programs the public can interact with
- Study period from April to October
- Earth-observing satellites
- Used various data types
    - Social variables - to assess social vulnerability in the context of urban heat
    - 14 datasets (socio-economic and environmental)
    - Assessing landmarks such and schools and neighborhoods
    - Looking at different months and times to see how these changes affect heat
        - Heat priority score map - including environmental and social factors
        - Representation of sidewalks and shaded areas in different communities to determine what areas are higher risk
        - Determining where more shade can be added

Heat prioritization

- Bus stops and hot zones - certain areas have more hot zones

Future work

- Taking ground measurements
- Survey residents to see how they fee physically I
- User-friendly workflow that can be updated easily
- Update demographic analysis

Question - Where was high tree coverage?

Answer

- They did not differentiate shade types so this cannot be exactly answered
- Ten zones have been highlighted
    - Heavily shaded areas to replicate and areas that need more shade

7. Annual Report to Council Staff will provide updates

.Braden Kay, Sustainability Director said in the Annual Report is:

- Covid recovery efforts
- What's next? (Policy)
- CAP update
- Sustainability and resilience updated efforts
- Further grant implementations
- Cool kids and HUE
- Consistent communication with council (mail and other communications)

Annual report – Approved by the Commission

8. Municipal Renewable Energy Update Staff will provide updates.

Grace Kelly Delmonte

- City performance measure - Carbon neutrality goal on the municipal operation by 2050
- 9 solar cites - 3 are city-owned
    - Fire station #7 in the newest solar project
- Solar installed on 6 properties 2014-2018 power purchase agreements
- Through this work, the city reached 10% toward the 100% goal
    - Energy efficiency is an important part of reaching this goal
- City operations cost - making progress in solar energy has successfully reduced cost
- Action - Resilient energy hubs
    - A place of refuge powered by solar and battery storage
- Target milestones - working with partners to improve goals

Question - Is the municipal goal in alignment with other businesses?
Answer

- Somewhat - Example: APS and SRP carbon-free energy by 2050

9. Climate Action Plan 2021 Update Staff will provide updates - Moved to next month

10. Housekeeping Items

Letter to the council

- Comments about how the lack of culture throughout the staff in supporting sustainability commission work
- Not one person in particular - just the general culture of distance

- **Next steps**
    - Sub-goals
        - Intention for staff to take more active ownership of sustainability recommendations
        - Finding funding to enact sustainability projects
        - Sustainability won't always take the forefront - but should be somewhere
        - Creation of a council working group on sustainability to heighten information
            - Lobbying at the federal level
        - Recommended - highlight examples in the city that are taking the recommendations to heart - a positive message
        - Sky harbor 10-year plan that has not included resilience to extreme heat

11. Future Agenda Items Commission may request future agenda items

A motion was made to adjourn.

Motion: Commissioner Burke
Second: Commissioner Reinhardt
Decision: Approved 10-0

Voted to Approve:

Kendon Jung (Chair)
Ryan Mores (Vice Chair)
Barbie Burke
Sukki Jahnke
Gretchen Reinhardt
Snigdha Nautiyal
Stephanie Milam-Edwards
Katja Brundiers
Steve Russell
Anna Melis

The meeting was adjourned at 7:00 pm.

Prepared by: Ausette Anderies
Reviewed by: Grace DelMonte Kelly

Tempe

SUSTAINABLITY COMMISSION
DECEMBER 14, 2020

DWL ARCHITECTS+ Dig Studio

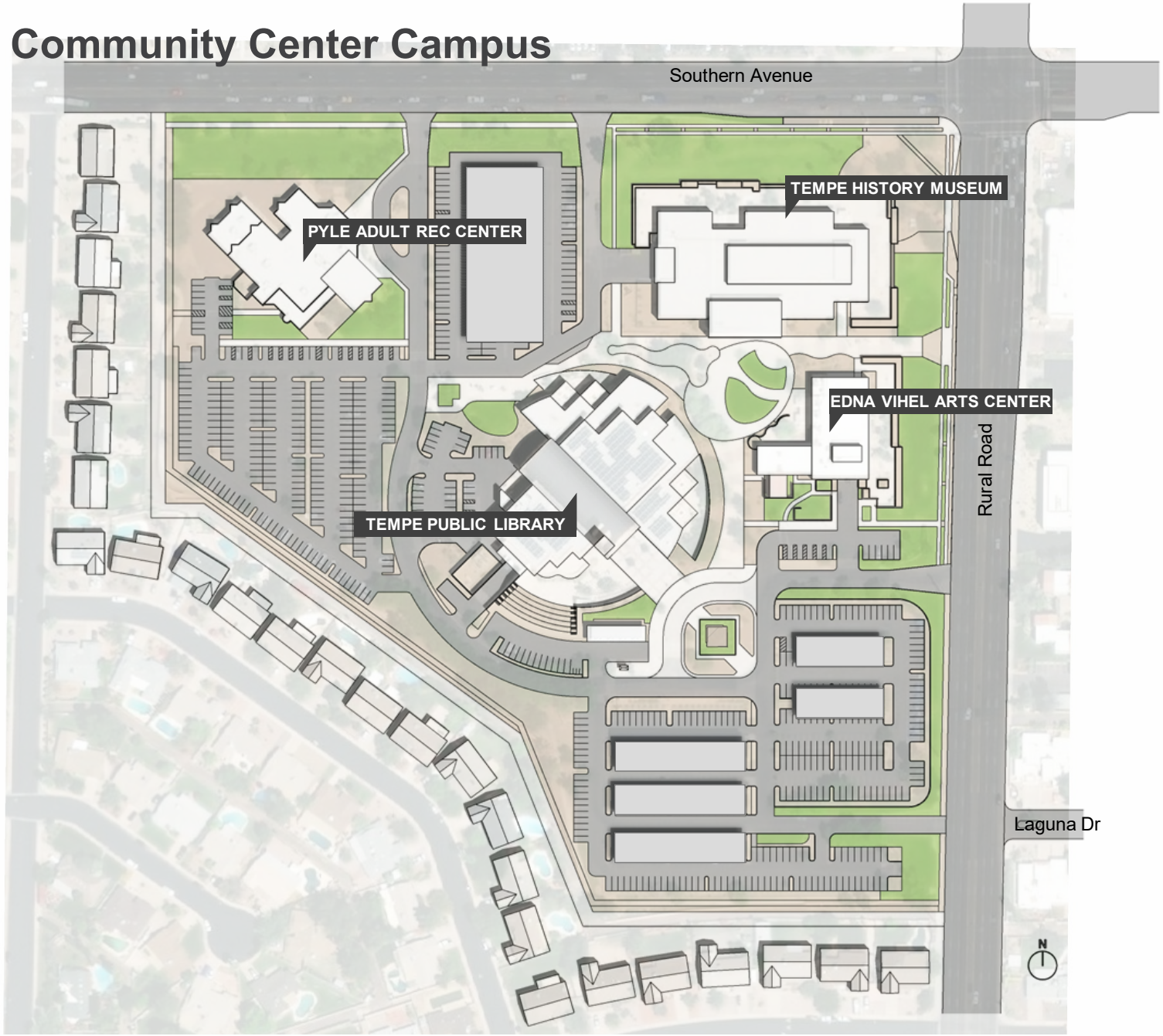
COMMUNITY CENTER CAMPUS MASTER PLAN

Project Goals

Develop a Master Plan – A Road Map for the Future

1. **Consolidate and Locate Human Services Department**
    - Increase collaboration/synergy within the department to improve services provided
    - Facilitate seamless transition of clients between Human Services programs:
        - Kid Zone, Education, Housing, Care 7, Homeless Outreach, Community Supervision, Counseling
2. **Campus Site Improvements**
    - Improved Pedestrian Experience
        - Shade, Connectivity, Accessibility, Safety, Visibility, Landscape Improvements, Signage, etc.
    - Optimize Use and Functionality of Plazas and Campus Buildings
    - Improved Traffic Flow / Access by Multiple Modes of Transportation
    - Streetscape Improvements / Enhanced Visibility
    - Sustainable Design and Environmental Improvements
3. **Anticipate Future Needs**

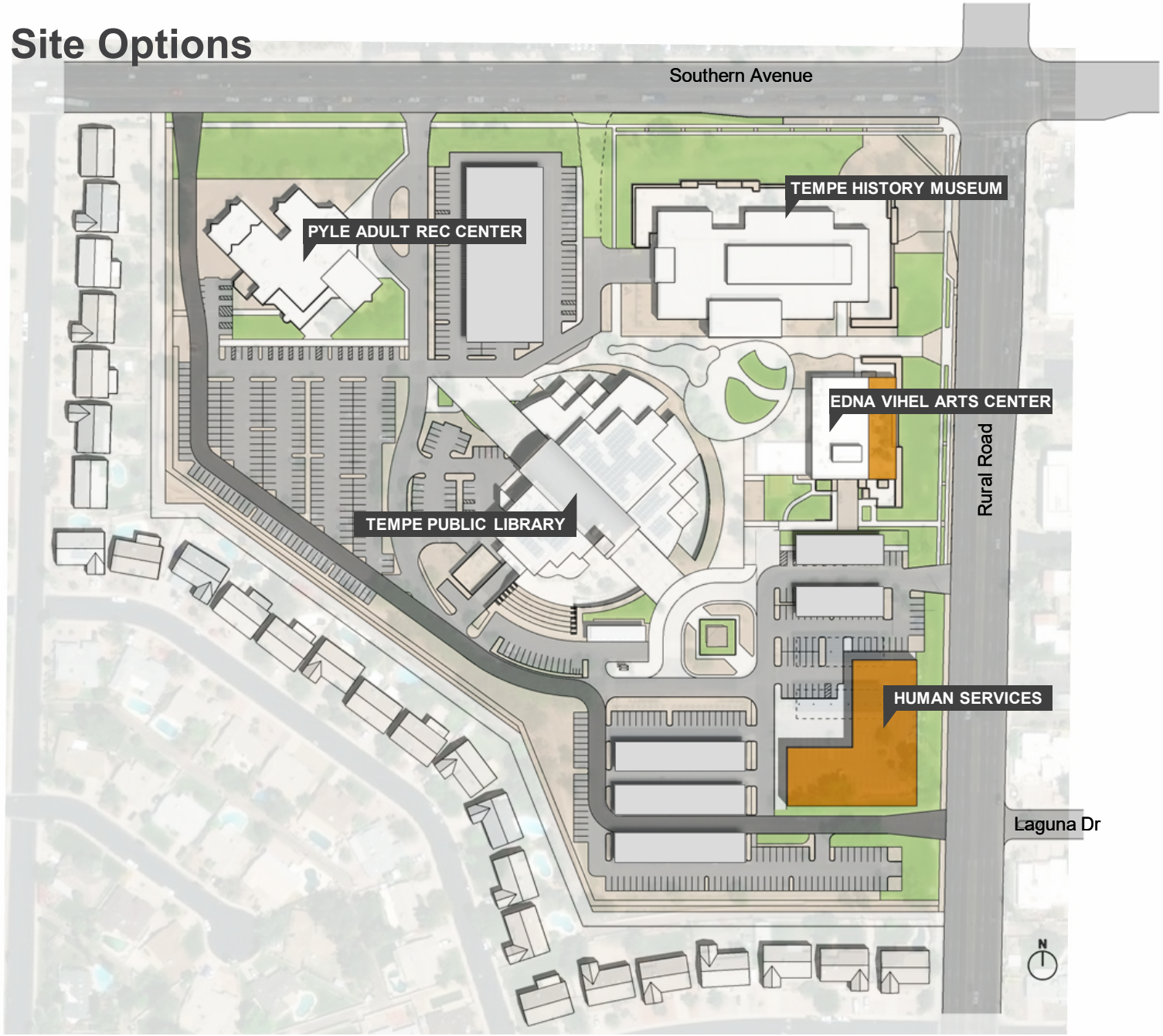
Community Center Campus



Existing Site

- Zoned PCC-1 Planned Commercial Center Neighborhood
- Southwest corner of Southern Ave & Rural Rd
- Four existing buildings on campus:
  - Tempe Public Library 120,700 SF
  - Tempe History Museum 36,500 SF
  - Pyle Recreation Center 21,500 SF
  - Edna Vihel Arts Center 14,300 SF
- Parking
  - 848 Existing parking spaces
  - 650 Parking spaces required per code

Site Options



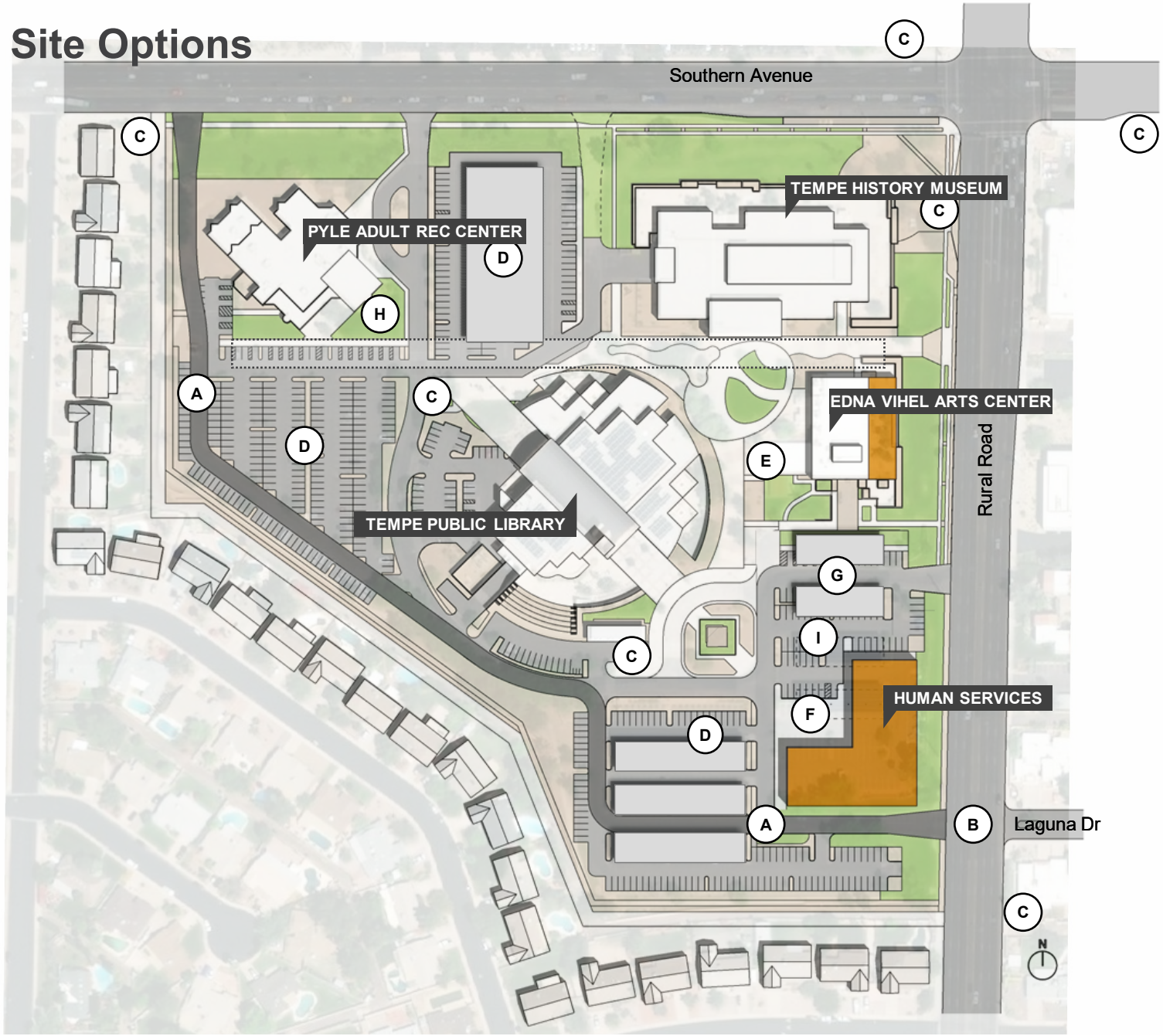
DRAFT MASTER PLAN

OPTION 1

NEW HUMAN SERVICES FACILITY

- Two-story, 50,000 square foot building
- Southeast corner of campus
- Adjacent to Rural Road & Laguna Drive
- Parking - 755 spaces

Site Options



DRAFT MASTER PLAN

OPTION 1

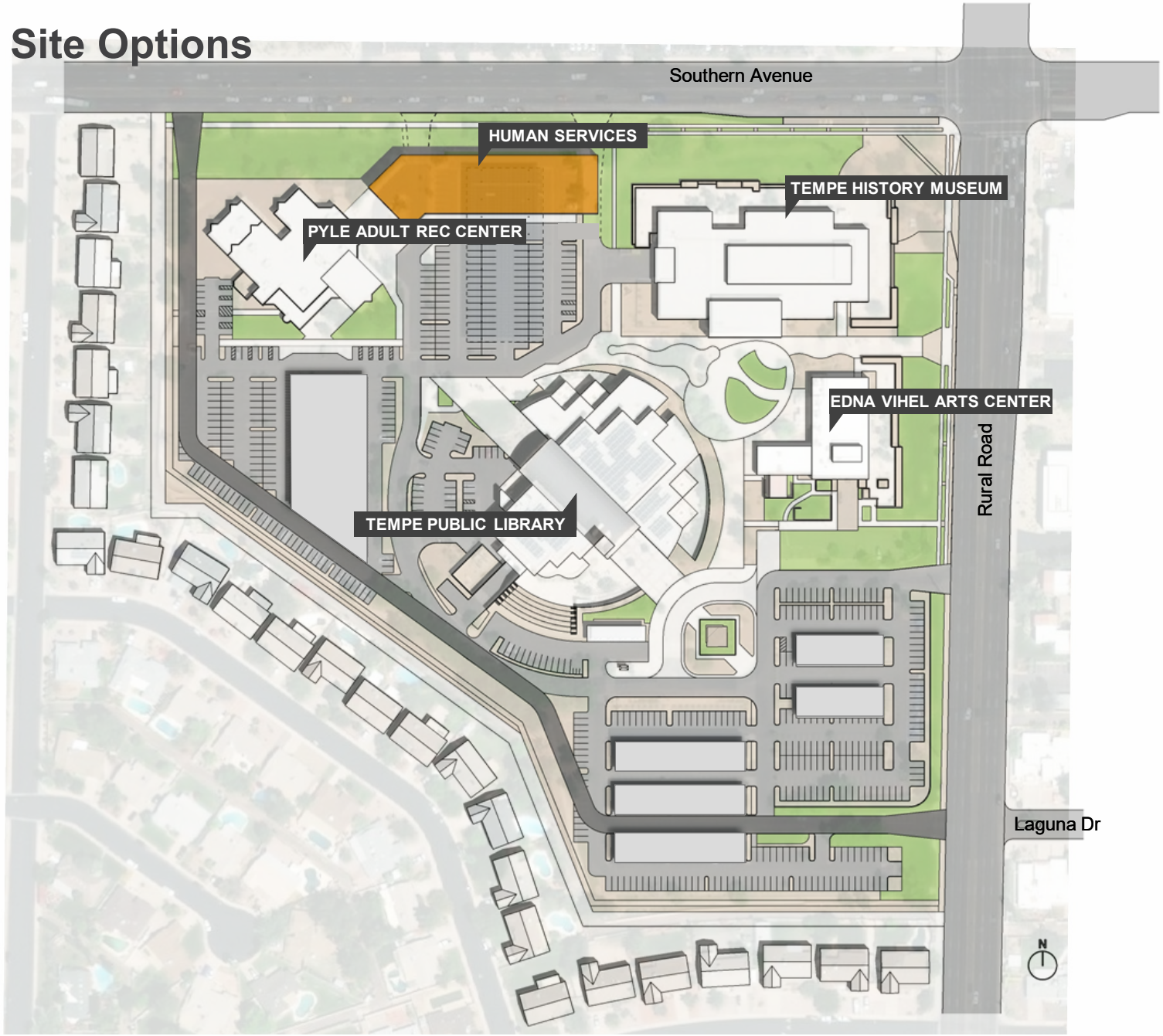
Pros:

- (A.) Primary access road along perimeter of campus
  - Brings vehicles to edge of campus / better security
  - Avoids vehicle / pedestrian conflicts
- (B.) Access point at Rural Road signalized in future
- (D.) Maintains even distribution of parking adjacent to Human Services, Pyle Center and History Museum
- (E.) Extended courtyard for larger events
- (F.) Offers privacy for Human Services clients

Cons:

- (C.) Distance to transit stops
- (I.) Reduced parking spaces near Library and Edna Arts entrances
- (G.) Solar parking canopies relocated
- (H.) Pyle Center remains isolated from Arts & Culture facilities

Site Options



DRAFT MASTER PLAN

OPTION 2

NEW HUMAN SERVICES FACILITY

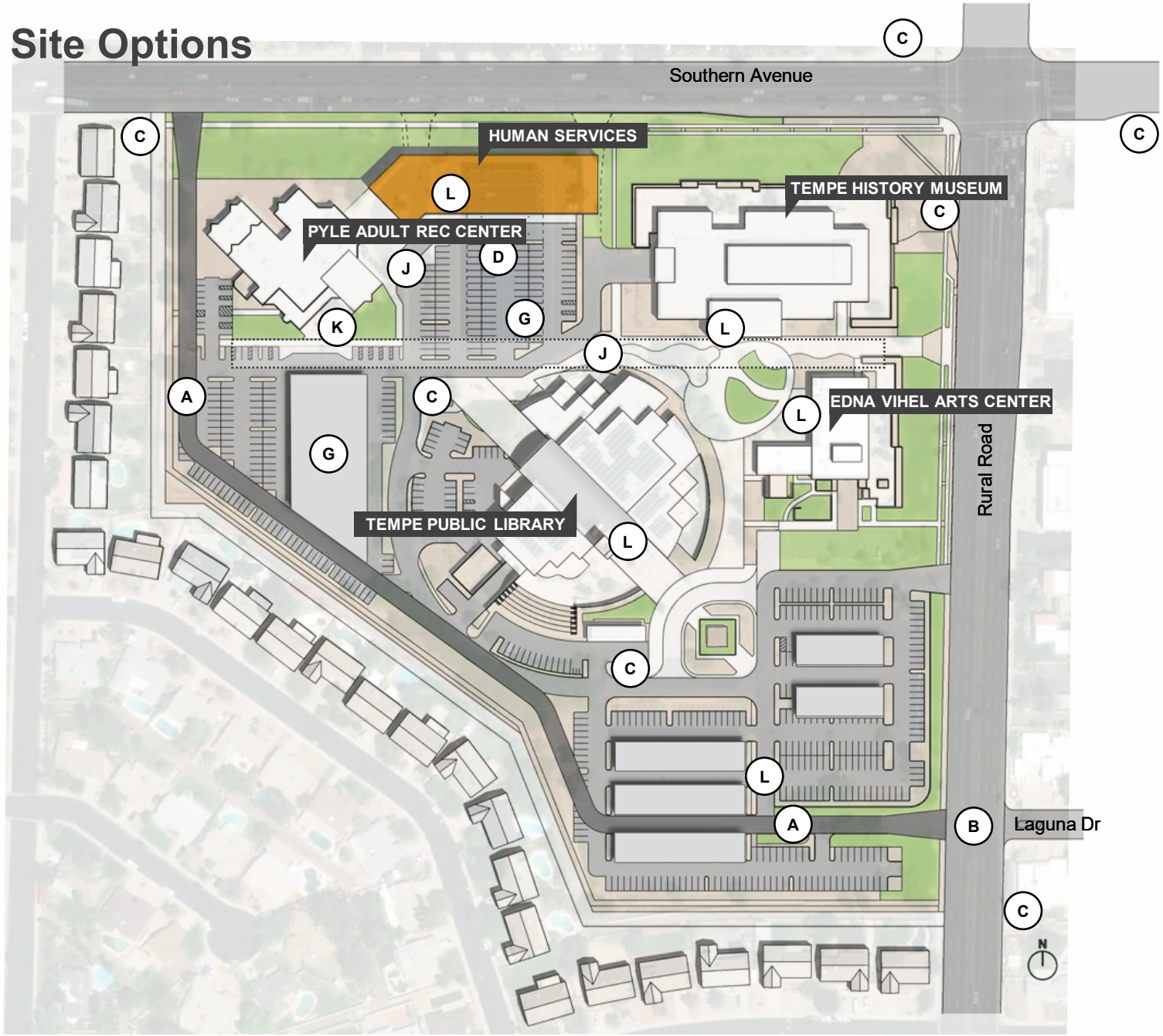
Two-story, 50,000 square foot building

North edge of campus

Adjacent to Southern Avenue

- Parking - 760 spaces

Site Options



DRAFT MASTER PLAN

OPTION 2

Pros:

A. Primary access road along perimeter of campus
- Brings vehicles to edge of campus / better security
- Avoids vehicle / pedestrian conflicts

B. Access point at Rural Road signalized in future

C. Proximity to transit stops

J. Enhanced connectivity among the facilities

K. New Pyle Center entry and drop off area for improved safety and better use of parking lot to the south

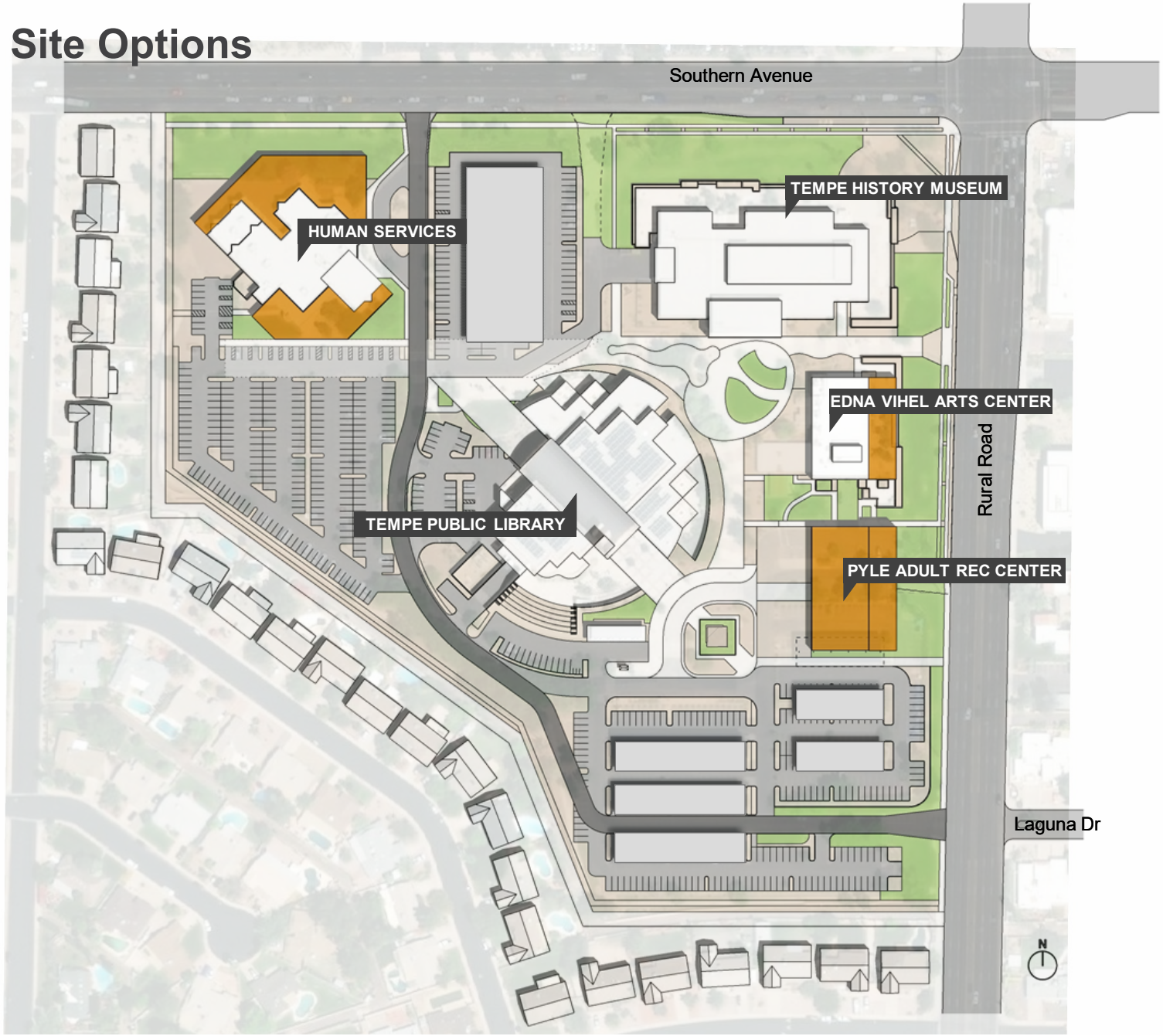
Cons:

D. Limited parking spaces near History Museum and Human Services buildings

G. Large solar parking canopy relocated / event space adjacent to the courtyard is no longer available

L. Largest parking area at southern side of campus is farthest walk from most building entrances

Site Options



DRAFT MASTER PLAN

OPTION 3

RELOCATE HUMAN SERVICES

One-story, 30,000 square foot addition to Pyle Rec Center

North edge of campus

Adjacent to Southern Avenue

NEW PYLE REC CENTER FACILITY

One-story, 24,500 square foot building

Center of campus

Adjacent to Rural Road

- Parking - 765 spaces

Site Options

DRAFT MASTER PLAN

OPTION 3

Pros:

A. Primary access road
- Least impact to campus
- Limits vehicle / pedestrian conflicts

B. Access point at Rural Road signalized in future

C. Proximity to transit stops

D. Ample parking near Human Services and History Museum buildings

E. Extended courtyard for large events

J. Increased collaboration opportunities among Arts & Culture / Parks & Recreation facilities

F. Offers privacy for Human Services clients

Cons:

A. Access Road discourages connectivity between Human Services building and remainder of campus
- Possible to incorporate perimeter access road in Option 3 as shown in previous site options

D. Reduced number of parking spaces near Library / Edna Arts entrances

G. Solar parking canopy relocated

M. Requires a phased approach, completion of Human Services building may be delayed

Campus Landscape

central plaza

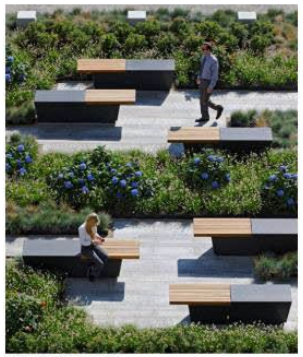
design approach:
urban forest

Program:

- Reading Rooms
- Outdoor Classroom
- Mental Breaks (Access to Nature)
- Outdoor Work
- Programmable Event Space

Design Features:

- Shaded Corridors
- Wildlife Habitat
- Biodiversity
- Water Harvesting
- Refined and Organized
- Welcoming Lighting



central plaza

design approach:
artistic expression

Program:

- Event Plaza
- Water Feature
- Social Seating
- Outdoor Games

Design Features:

- Iconic Shade
- Art Integration
- Pattern + Color
- Artistic Lighting
- Instagram Moments

south sunken court

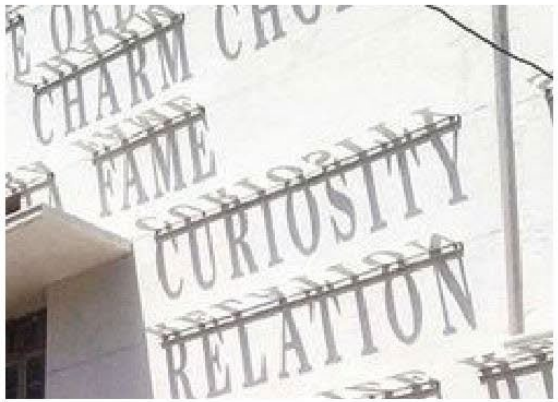
design approach:
tranquil garden

Function:

- Book Reading
- Mental Breaks (Access to Nature)
- Outdoor Work
- Lounging
- Storytime

Design Features:

- Immersive Forest
- Dense Vegetative Shade
- Integrated Art
- Movable Seating
- Lounge Seating
- Reading Tree



south sunken court

design approach:
explore-a-story garden

Function:

- Exploratory Play
- Nature Play
- Storytime
- Performance / Stage
- Destination

Design Features:

- Dense Shade - Vegetation + Structure
- Integrated Art
- Colorful
- Multi-Generational
- Visual Landscape








south sunken court concept

northern sunken court

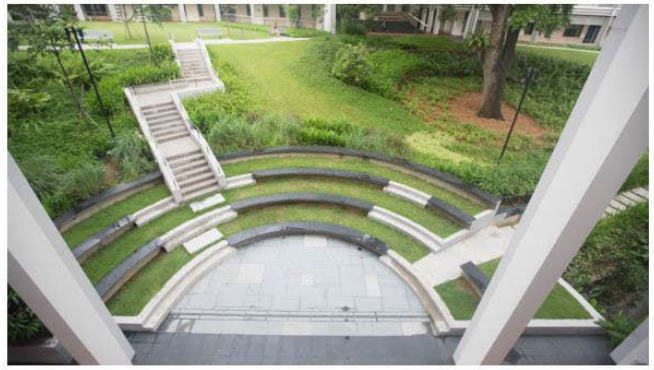
design approach:
expanded courtyard space

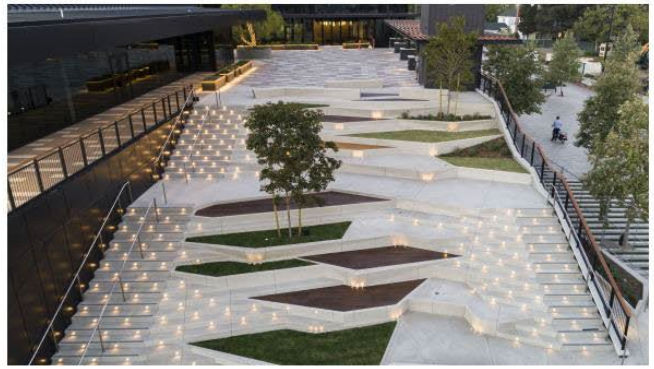
Function:

- Amphitheater / Stage
- Informal Seating
- Outdoor Work
- Programmable Space
- Library Spill-out Space

Design Features:

- Accessible from above and below
- Dense Shade
- Connects Program
- Sculptural Form
- Opens Views for Security
- Protected Space
- Integrated Lighting





northern sunken court

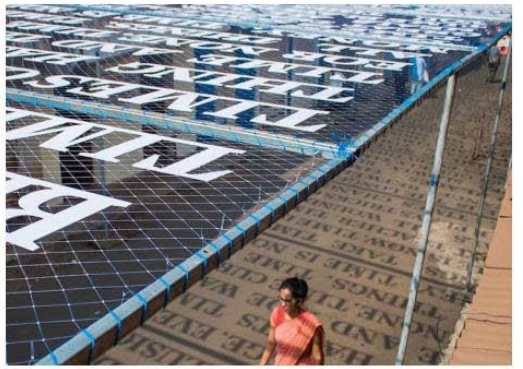
design approach:
Canyon Garden

Function:

- Children's Garden
- Exploratory Play
- Indepedent Reading
- Group Storytime
- Art Display
- Light Display

Design Features:

- Secured Entry from Above
- Integrated Shade
- Integrated Art
- Integrated Lighting
- Children's Art Display
- Integration of Nature
- Text as Art | Shade



southern & rural streetscape

design approach:
botanic 'park'way

Function:

- Mental Breaks (Access to Nature)
- Stroll / Meander
- Fitness
- Education - Flora + Fauna

Design Features:

- Botanic Garden
- Biodiversity
- Shaded Pathway
- Stormwater Collection + Filtration
- Organic Forms
- Integrated Wayfinding
- Connects Program
- Access to Trail Nodes

southern & rural streetscape

design approach:
park edge

Function:

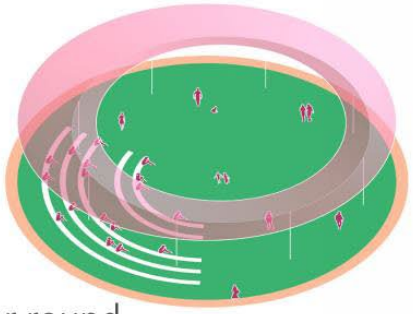
- Outdoor Work
- Programmable Space
- Event Extension
- Patio | Terrace
- Outdoor Museum

Design Features:

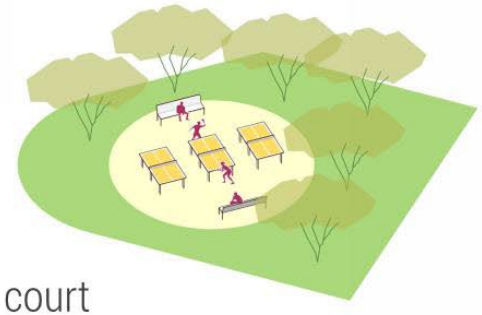
- Visual Connection to Street
- Formalized
- Integrated Water Collection
- Access to Social Nodes

campus landscape
kit-of-parts

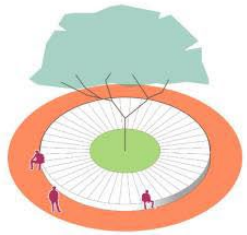
food park



gather round



game court



performance planter

group gather

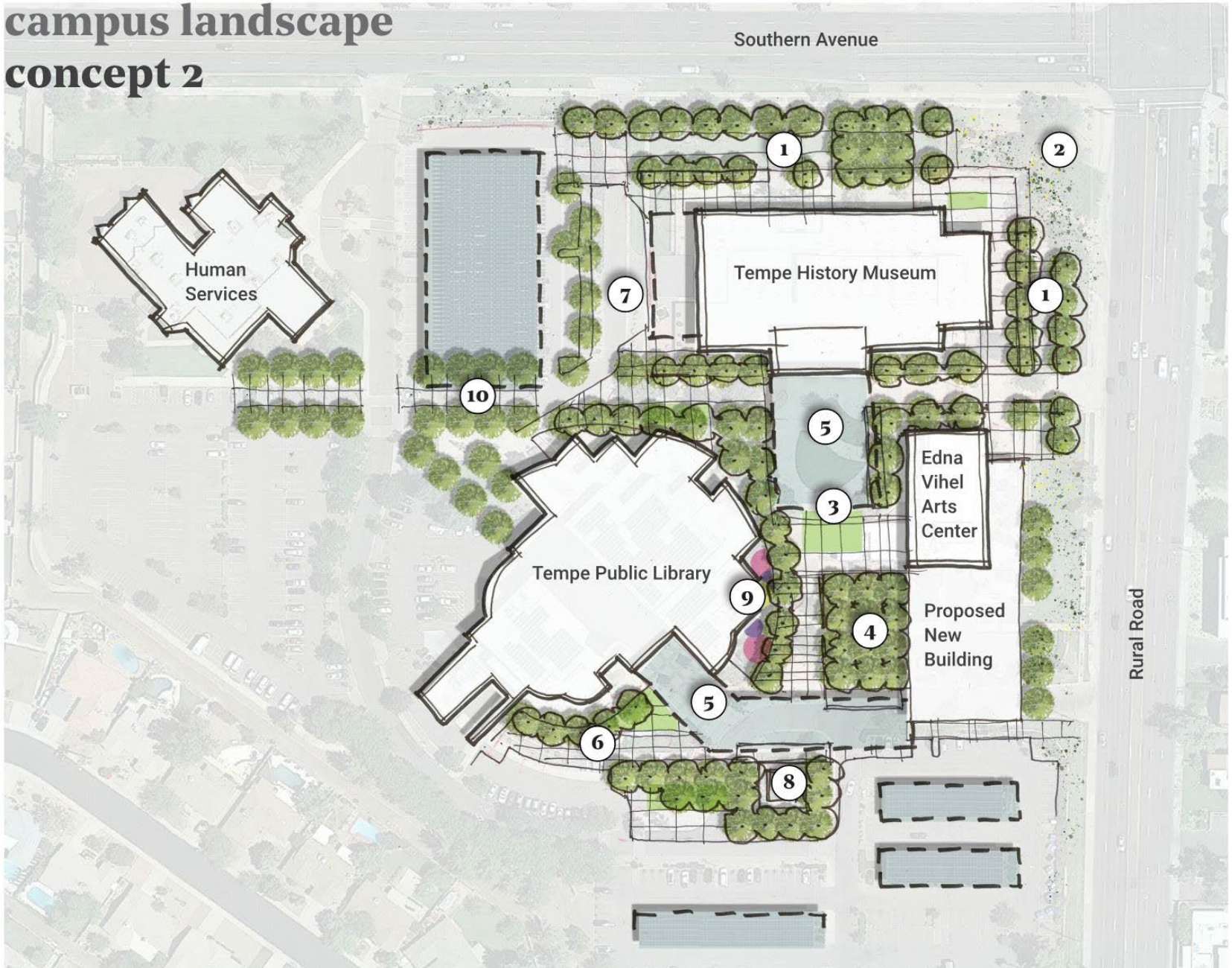
activi-tree

campus landscape concept 1

LEGEND

1. Botanic Garden Walk
2. Open Views to Museum
3. Event Green
4. Market Plaza
5. Shade Canopy (Solar)
6. Explor-a-story Garden
7. Replace road with pedestrian access
8. Art Entry Plaza
9. Sunken Children's Garden
10. Pedestrian Connection to Pyle

campus landscape concept 2



LEGEND

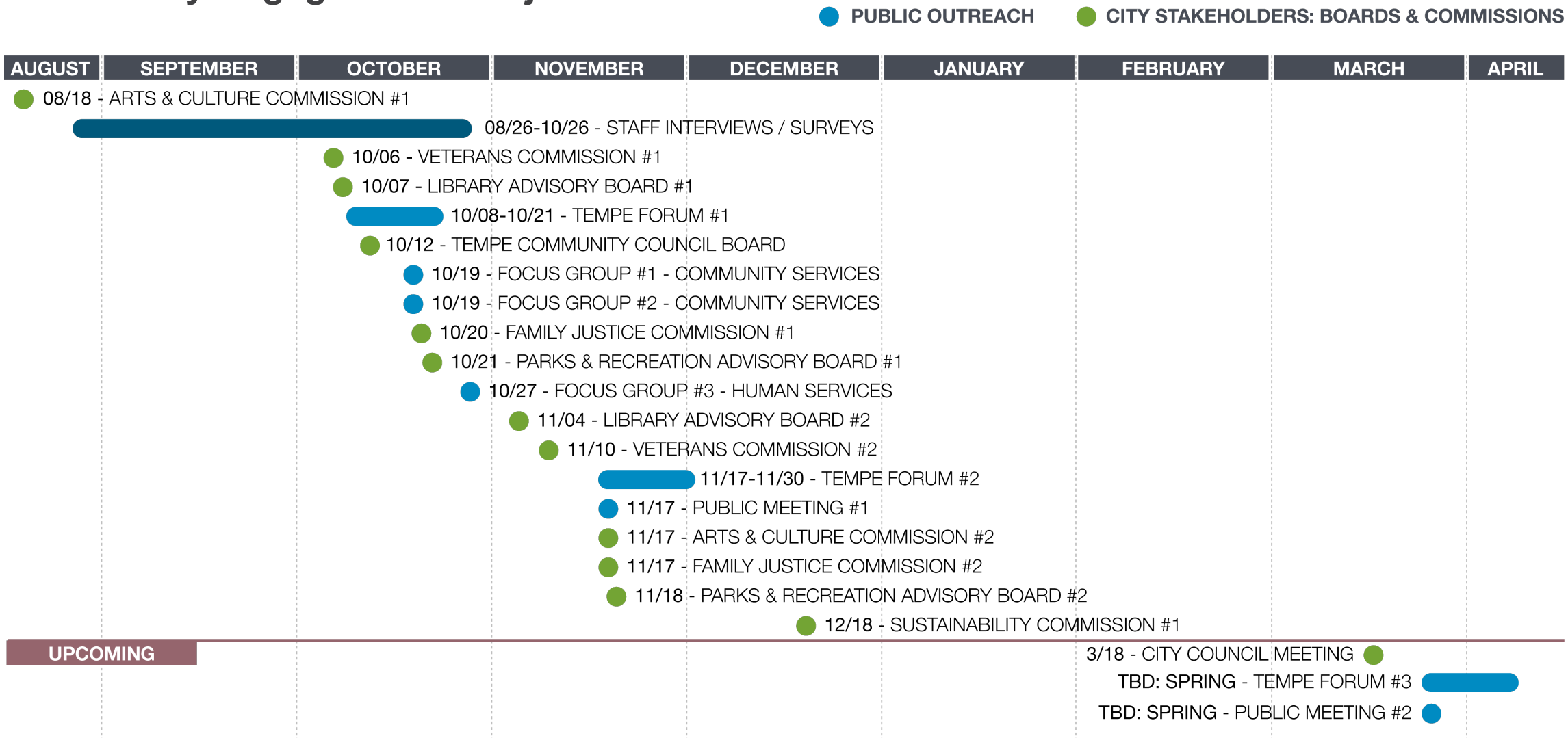
1. Linear 'Park'way
2. Open Views to Museum
3. Event Green
4. Urban Forest
5. Shade Canopy (Solar)
6. Food Truck Plaza
7. Replace road with market / festival access
8. Art Entry Plaza
9. Sunken Children's Garden
10. Pedestrian Connection to Pyle

Rough Order of Magnitude (ROM) – Edna Arts Build New vs Remodel
Eyesore or Treasure?

	Demolish / New	Remodel
Assessments	Facilities Master Plan by Makers in April 2019	Library Complex – Edna Vihel Community Center Facilities Condition Assessment by fm Solutions in March 2018
Cost	$350 per square foot	$225 per square foot
Footprint	Smaller – potentially two stories	Larger – one story
Environmental Impact	Less sustainable	“The greenest building is one that is already built*” because of the embodied energy of materials
Carbon Footprints	Crossover may be at 37-39 years**	
Function	Built to suit	Accessibility challenges at the stage area Limited new opening on the east wall without high costs.
Construction Duration	12 – 18 months	8 – 12 months Potentially phased to be occupied during construction
Design Duration	10 – 12 months	8 – 10 months

*** Carl Elefante, Director of Sustainable Design Qunin Evans Architects**
**** The Greenest Building: Quantifying the Environmental Value of Building Reuse by Preservation Green Lab**

Community Engagement / Project Schedule



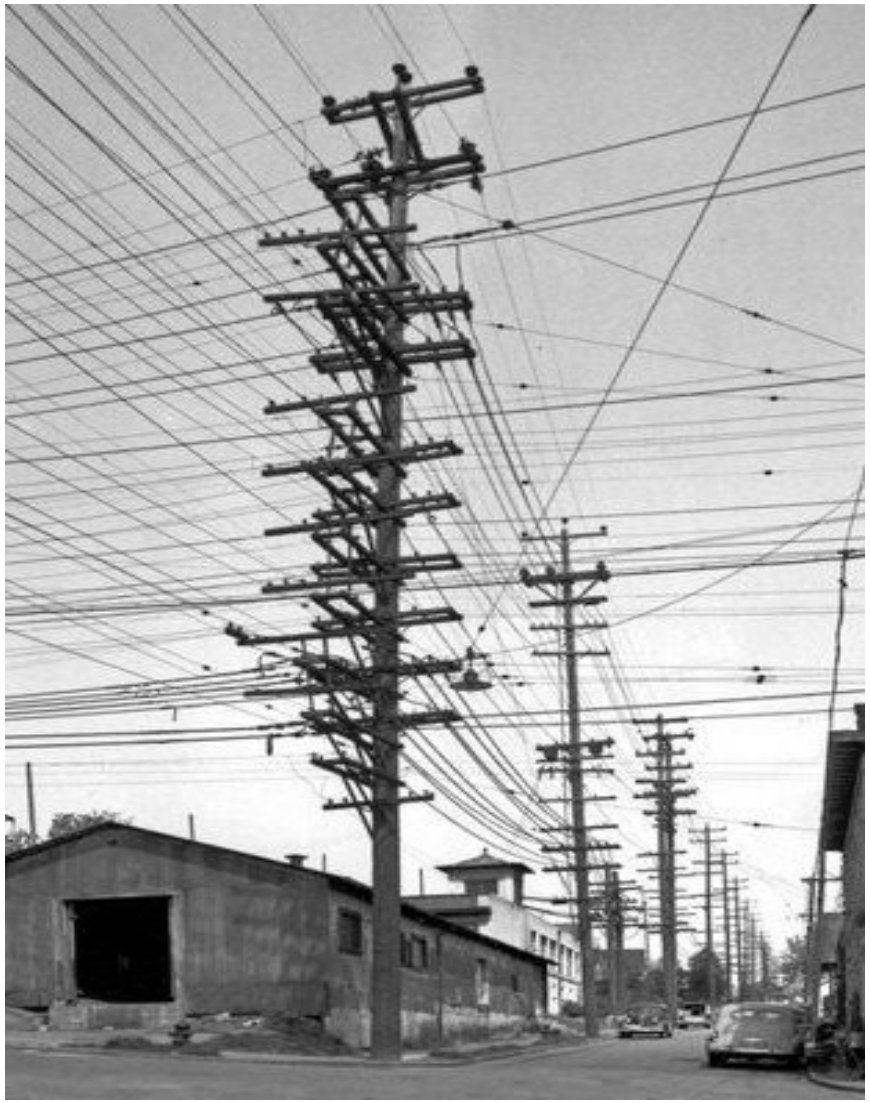

Tempe
DWL ARCHITECTS+
Dig
Studio
THANK YOU

Community Choice Energy in AZ

How CCE Brings Clean Electric Choice to Arizona Cities & Towns
Local Control, Competitive Rates

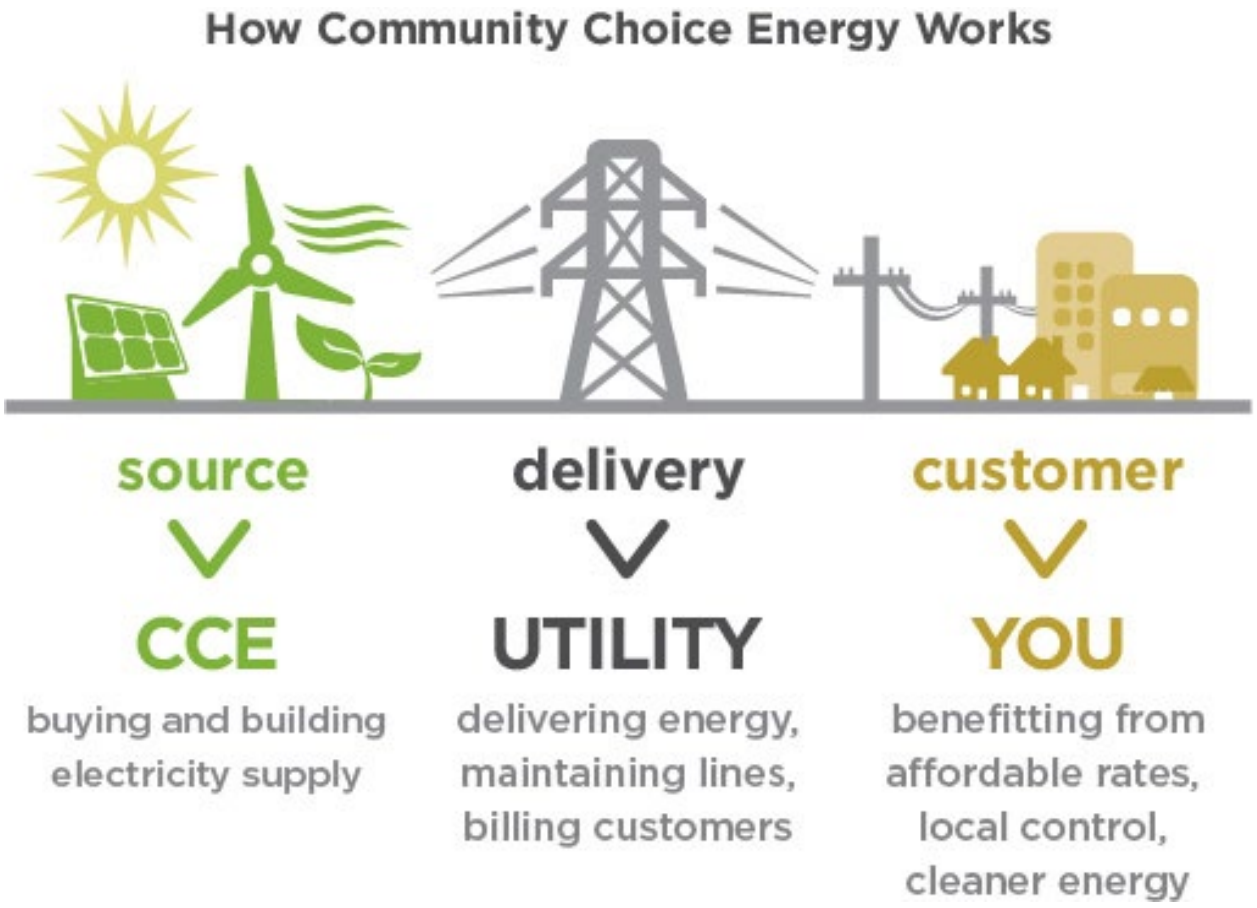
The Evolution of the Grid

- The vertically-integrated, monopoly utility of 100 years ago made sense
- One-size-fits-all: safe, reliable and affordable energy for everyone
- Mission accomplished - But times are changing
- Technology is enabling distributed energy resources and other energy innovations
- People and communities want a choice!



What is Community Choice Energy*

- CCE creates a **functional partnership** between communities and their investor-owned utility.
- CCE allows **cities and counties** to aggregate their electric load and buy renewable energy on the wholesale market.
- CCE serves **all electric accounts** – residential, municipal and commercial.
- CCE is an **opt-out** service. Customers **always have the choice** to remain with bundled utility service, or (potentially) move to another third-party supplier.
- The **investor-owned utility** continues to bill for and deliver power, manages the distribution system, and is compensated for departing load through an established cost recovery/exit fee.



* Also called Community Choice Aggregation (CCA)

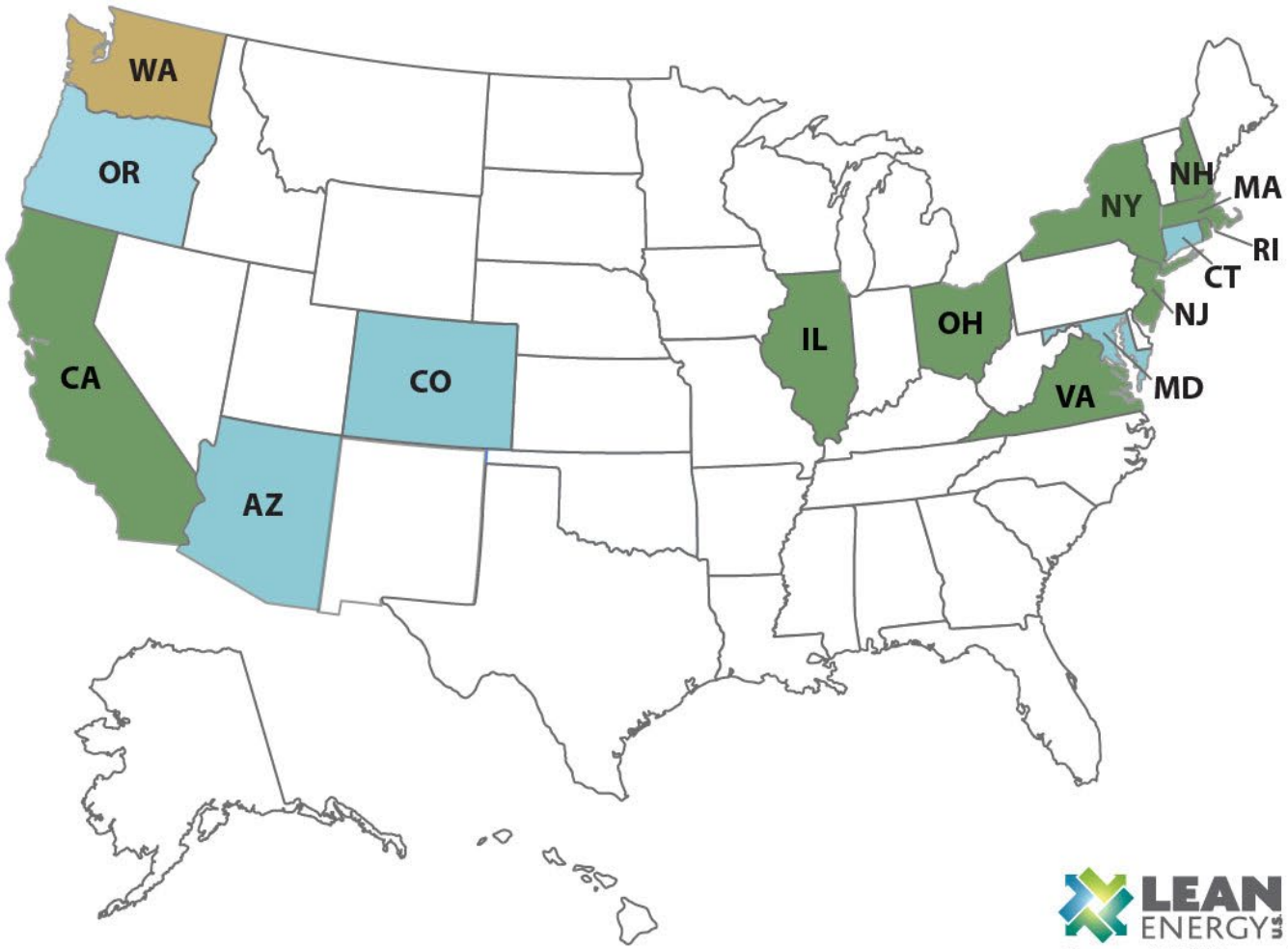
CCE Across the Country

Authorized in 9 States:
- California
- Illinois
- Massachusetts
- New Hampshire
- New Jersey
- New York
- Ohio
- Rhode Island
- Virginia*

Investigating:
- Arizona
- Colorado
- Connecticut
- Maryland
- Oregon

Watch List/Potential:
- Washington

* Not yet implemented



LEAN ENERGY US

Source: LEAN Energy U.S.
Sept. 2019

Community Choice Benefits

Energy Choice with Consumer Protections

- Customers can choose between different rate plans, depending on how much renewable energy they want in their mix
- Contracts negotiated by local governments result in better consumer protections, and better pricing and terms than retail contracts.

Affordable Electric Bills

- 3% to 10% average savings per customer, around the country
- Local rate setting authority

Accelerated Carbon Reduction

- Faster achievement of climate goals
- CCEs offer energy efficiency and other clean energy programs
- Many communities are already 100% carbon free through CCE

Economic Development

- Customer rate savings remain in the community
- Profits go back into the CCE, not IOU shareholder pockets or supersized salaries
- Local energy production and advanced energy programs (PCE EV rebate program, electric charging stations, rooftop solar/battery storage for low income families)

Basic Steps and Provisions

1. The **Arizona Corporation Commission (ACC)** must first issue a rule in support of CCE.
2. Local governments can then form a CCE and enroll customers.
3. As an **opt-out program**, the CCE becomes the default electricity provider and customers automatically enrolled. [Nationwide, customer opt-out rates avg. 10% or below]
4. Customers **have a choice** to opt out and either return to bundled utility service or select a different electric service provider – and sometimes return to the CCE.
5. CCEs are **governed locally**, similar to other municipal services such as public service, garbage and water.

AZ Retail Competition and CCE

1) ACC is considering electric choice competition. Docket: RE -00000A-18-0405

2) ACC has hosted 2 workshops (Summer of 2019 and February 2020)
   - CCE has been a presentation topic at both workshops

3) Two draft rules have been offered for consideration:

Draft A (Olson) – TX retail model; third-party electric suppliers provide customer energy options and all customers are obligated to participate in the open market; usually short term contracts; regulated utilities do not compete for generation.

Draft B (Burns) – Modified from Option A to include both retail electric suppliers and regulated utilities. Includes a version of CCE whereby customers with monthly demand of at least 100kw could aggregate up to a threshold of 400kw.

AZ Retail Competition and CCE

The Highlights:

- ✓ Great that the docket and discussion of electric choice is occurring
- ✓ CCE is included in both options (as part of retail model options)
- ✓ Cost recovery standards in both drafts are strong and should be retained
- ✓ Competitive code of conduct in both drafts is absolutely necessary
- ✓ Neither Draft A or B adequately addresses CCE as an option for AZ electric choice; AZ4CC and others are requesting that Commissioners consider a “Draft C” – outcome TBD
- ✓ Commissioners are engaged and have asked for further information at future workshops

Example: Peninsula Clean Energy

- Formed in 2016 as Joint Powers Authority made up of San Mateo County Board of Supervisors, representative from each City Council in the 20 cities that make up the County.
- PCE saved $18M across all customer accounts, and 105,00 metric tons of CO2 -- the equivalent of 22,000 plus cars taken off the road in 1 year.
- Nearly half of San Mateo County population enrolled in PCE, with cleaner, greener, and more sustainable energy product with rate schedules that are competitive or better than PG&E.
  - ECO100
  - ECO Plus
- Governing board holds monthly meetings on PCE operations and rates, public is invited to attend and comment. These are unpaid positions.
- Customers with rooftop solar can sell excess power back to PCE, which provides higher net metering rates than PG&E
- With profits PCE is building 300 MW of new solar projects in Disadvantaged Communities (DACs). Roughly 750 jobs created through new PCE project developments.
- PCE build a 200 MW Solar Park, Merced Co. created 350 jobs in 2018 & 2019
- PCE is partnering with Sunrun to build distributed energy infrastructure through solar and battery storage that puts solar panels on rooftops of buildings occupied by low income families, with backup power for power outages and rolling blackouts

Progress and Next Steps

Progress:

- Formed CCE advocacy organization, *Arizonans for Community Choice*
- Completed Commissioner Briefings with Cmrs. Olson, Kennedy, and Dunn, and their policy advisors
- Presented CCE to AZ Corporation Commissioners 2 different times
- Completed 2 CCE webinars with 50+ people representing a variety of energy industry stakeholders, environmental organizations, local governments, elected officials.
- Worked with AZ state chapter of Sierra Club to pass a CCE resolution
- Briefed Anna Tovar as candidate on CCE

Next Steps:

- Get buy-in from Tempe City Council by approving CCE Resolution
- Continue to educate about CCE and offer Commission support/collaboration through a draft Option C
- Determine that wholesale and retail electric supply can co-exist
- Pursue CCE pilot through cities with climate action plans

MEMORANDUM

TO: Tempe Mayor and City Council

FROM: Tempe Aviation Commission & Tempe Sustainability Commission

DATE: December 15, 2020

SUBJECT: PHX Comprehensive Asset Management Plan & Urban Heat Effects

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Dear Mayor and City Councilmembers,

The Tempe Aviation Commission (TAVCO) is concerned about the development projects proposed in the Comprehensive Asset Management Plan (CAMP) for the Phoenix Sky Harbor International Airport There is potential for increasing the urban heat island effect at the airport, which would in turn affect Tempe. TAVCO is also concerned about the plan to consolidate and expand the air cargo facilities at the airport which will increase freighter traffic over Tempe during the overnight hours. The CAMP was presented to the Mayor and Council of the City of Phoenix in June 2019 and includes several large concrete paving projects (see attached images), specifically the addition of new terminal areas, aircraft staging areas, taxiways and paved additions to road access points for a 10 to 20 years planning period.

This summer we experienced 50 days at or above 110 degrees, which broke the previous record of 33 days from 2011. The airport is already a source for accumulation of heat on summer days. Tempe is located directly east of the airport and hot air accumulated on hot days and stagnant weather conditions is transported towards Tempe during the afternoon hours with the diurnal shifts in the east and west air flow. Although an ongoing analysis of the Environmental Assessment (EA) of the CAMP is taking place, an analysis of the heat island effects of airport developments is not a required part of it. The draft EA for the CAMP is expected to be available in March or April 2021.

TAVCO will continue to monitor the EA process for the CAMP and work with the Sustainability Commission on this important issue. We are aware that there are a number of technical requirements for pavement material and restrictions on tall vegetation at airports – both of which are potential heat mitigation strategies - but considering the challenges both cities face with the increasing number of summer days with excessive heat, we recommend that the City of Tempe work in partnership with the City of Phoenix to influence the construction plans for developments proposed in the CAMP to include heat island mitigation.

Sincerely,

Lane Carraway,

TAVCO Chair

Kendon Jung

Sustainability Commission Chair

Attached: Excerpts from PHX CAMP Summary

CAMP Project Renderings

West Terminal with North and South Concourse Piers (looking west)

Proposed within 10 to 15 years, additional terminal expansions, including aprons and taxiways between Terminals 3 and 4 and on both sides of Terminal 3 with improvements and new alignments of Sky Harbor Blvd.

CAMP Project Renderings

North Cargo, Rail Trench, and General Aviation Layout (looking south)

Proposed within 10 to 15 years, air cargo, airline support, aero business and industrial at Honeywell south of E. Jefferson St.

CAMP Project Renderings

North Cargo, Rail Trench, and General Aviation Layout (looking east)

Proposed within 20 years or more, new air cargo consolidated facility north of the Union Pacific Railroad.