Memo

Date:
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To:
Leigh Sata, Vice Chancellor
Atheria Smith, Director

Bond Program Management Team

Campus: Peralta Community College District

Project Name: Short Term Sustainability Projects

From:
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Subject: District Past Sustainability Efforts and Next Steps to Develop Measure G Prioritized Sustainability Projects/Strategies

Introduction

The purpose of this memorandum is to highlight the sustainability efforts completed to date by the District and to identify next steps in order to successfully develop a list of priority sustainability projects that can be proposed and implemented in the near future.

Efforts to date:

The following summary is based on a review of several documents that were provided by the District and is organized in chronological order. Documents reviewed:

Year 2007 (District starts considering sustainability):

- **Board policies related to sustainability**
  - New buildings should exceed Title 24 by no less than 35%
  - Reduce emissions associated with “energy consumption” by 50% by 2012 and “carbon neutral” by 2017
  - Reduce water
  - Reduce waste
  - A comprehensive recycling plan
  - Compost food
  - Sustainable Landscaping
  - Commitment to alternative transportation
  - LEED Certification for all new buildings
  - Establish policies to improve indoor air quality
  - Include environmental sustainability in district contracts and purchasing
  - Procure healthy materials
  - Utilize recycled materials
  - Sustainable purchasing policy for paper, ink, and other items

Year 2015 (District is thinking about sustainability impacts and opportunities):

- **Documented total consumption**
  - Electricity
  - Natural gas
  - Waste
  - Water

- **Highlighted implemented sustainability strategies**
  - Swimming pool thermal blankets and electric winder
  - Bike racks / bike tool library
  - Community garden
  - EV charging
  - Clean Energy Jobs
  - LED lighting
  - Building Commissioning
  - Lighting Upgrades
  - LEED buildings (Silver, Gold, Platinum)
  - Educational Programs (EcoFest Sustainability Festival)

- **Developed a road map**
  - Comprehensive Sustainability Plan
  - Large Integrated audits
  - Water management
  - Swimming pool heating
  - Laney theater lighting/controls upgrade
  - Solid waste diversion (goal minimize and divert 50%)

Year 2017 (District develops an overarching Sustainability and Resiliency Master Plan):

- **Defined sustainability goal/vision**
  - The SRMP is a guide to improving on campus efficiency in the areas of water, energy, waste, food, and transportation.
  - The goal of the SRMP is to improve the district's ability to provide education now and into the future by lowering operating costs, providing a healthy environment, and educating the next generation of environmentally conscious citizens.
  - Vision Statement: The path to zero emissions: enhance the learning environment, increase efficiency, reduce waste, be resilient
  - Identified Focus Areas:
    - Water use
    - Waste generation
    - Energy use and Emissions
    - Transportation (VMT)
    - Food
    - Procurement
    - Education
    - Enhanced/Healthy Workplace

Sector	2030 Goal	2050 Vision
Transportation	20% VMT Reduction	40% VMT Reduction
Energy	40% GHG Reduction	Zero Carbon
Water	40% Potable Water Use Reduction	75% Potable Water Use Reduction
Waste	50% Reduction (per Person)	Zero Waste
Food	15% GHG Reduction	40% GHG Reduction
Education	50% "high quality" rating of facilities	90% "high quality" rating of facilities

- **Completed an emission inventory**
  - Electricity, natural gas, water, waste, commute emissions, vehicle fleet, conference/sports travel

- **Completed sustainability survey (key notes from PPT)**
  - **Laney:**
    - Potential to harvest heat from data center to support water heating
    - Make the campus more walkable-connect it to the city and Lake Merritt
    - Involve students in sustainability efforts
    - Educate the students, engage the students, have conversations, actionable items
    - Develop Sustainability Scorecard or App with Realtime monitoring
    - Create a visual reminder and model of sustainability on campus
  - **Merritt**
    - Difficult to access except by personal vehicle
    - Merritt is currently 'over-built' for population it serves, but also has large expanse of under-utilized space
    - Opportunity to lease un-used buildings (as permitted)
    - Opportunity to build other facilities such as student housing, theater facility, etc.
    - Potentially interested in an independent power system (e.g. electricity storage, backup generator).
    - Resiliency: Merritt is the safety zone/ shelter space for the surrounding residential in the event of an emergency.
    - L-Building has state-of-the art sophisticated and energy efficient lighting system but no one knows how to program it.
  - **Alameda**
    - 79% drive along to campus.
    - Need to promote, advertise and increase alternative transportation (Estuary Shuttle from Lake Merritt Bart to CoA; AC Transit Bus from Fruitvale Station to CoA and 12th St Station—are these being used to full potential?)
    - Sustainably landscape lawn area with goal to reduce irrigation
    - Needs to be more inviting/ engaging to the community
    - City of Alameda is creating a linear park along the edge of campus with all native plants (no irrigation). Campus landscape could mirror this design and integrate with this alternative transportation mode.
    - Potential for Solar Power (space and sun, but Public Utility)
    - Would like EV charging stations
    - No AC and the buildings are very hot during heat waves.
    - Opportunity to design cooler buildings
  - **Berkeley**
    - Need more space! (Office space, student space, classroom space,
    - green space, BCC has the capacity to grow considering their enrollment numbers, but no space to do it).
    - >40% use public transit because very convenient.
    - Would like to incentivize public transit (BCC currently reimburses/subsidizes parking, but it is much more difficult to get subsidy for public transit use)
    - Adopt Car Share Program (e.g. City Car Share) for staff/faculty to get to other campuses as needed without a personal vehicle
    - Want more water-bottle filling stations and food options
    - Need green space – perhaps green roofs!
  - **Overall Themes:**
    - Agreement that Sustainability is important
    - Less understanding about the elements and needs to achieve sustainability
    - Skepticism about the ability of District to implement
    - Need to increase awareness, education and communications for everyone
    - Be as transparent as possible with plan measures and goals
    - Connect sustainability with critical needs such as infrastructure and building improvements

        - Create an implementable plan – phased and cost effective
        - Need to balance needs and politics between District and Campuses
        - Ensure Plan has “teeth” so it can be implemented regardless of changes in administration
        - Incorporate concepts about sustainability from physical spaces, to
        - operations, to curriculum and beyond
        - Build advocates at each campus and district
        - Need to create strong messaging that resonates with the unique needs of each campus/audience
    - **Opportunities**
        - Create District-wide Goals and Policies with Campus specific implementation
        - Make bulk and central purchasing at District as sustainable as possible and it will flow to rest of Campuses
        - Establish Facility Maintenance leaders at each campus to manage and operate complex equipment
        - Create incentives for Campus sustainability with cost and revenue sharing around sustainable practices
        - Integrate resiliency and sustainability as a routine practice– culture change
        - Leverage knowledgeable staff to education, teach and support sustainability
        - Build District’s reputation if it can achieve goals
        - Access additional State and utility funding
    - **Challenges/Major Issues**
        - Lack of engagement
        - Lack of trust
        - Unclear about the Value of Sustainability
        - Sustainability is a priority in word, but not in action
        - Upfront costs, training and resources required to achieve goals – connected to perceived lack of value of activity
        - Lack of understanding of benefits and needs
        - Energy costs
        - Garbage and trash
        - Transportation and lack of transit at two campuses
        - Landscape Culture – Grass Everywhere!
        - Facility conditions, esp. at Laney

Overview of all identified sustainability measures (documented from 2007-2017, *not including survey suggestions*):

- **General**
    - All new buildings LEED Gold
    - Establish a Sustainability Department
    - Sustainability Revolving Fund (student sustainability fee each semester)
    - Student audits (learning experience)
    - Sustainability Committee
    - Identify funding sources
- **Water use**
    - Reduced irrigation
    - Leaks repair
    - Awareness signage
    - Explore well drilling
    - Rainwater harvesting

- **Energy use and Emissions**
  - Install 200kw of new solar district wide by 2020
  - Audit three largest energy consuming buildings at each campus
  - Commission three largest natural gas consuming buildings on each campus by 2020
  - Install Solar Hot Water heater for Laney Pool.
- **Transportation (VMT)**
  - Install 10 bike racks throughout campus
  - Establish inter-campus shuttle service
  - Establish program to provide free/reduced cost BART passes
  - Reduce parking/decouple parking costs
- **Education**
  - Integration of sustainability into current classes
  - Associate Degree of Sustainability Studies
  - Career Technical Education
- **Waste generation** (none provided)
- **Food** (none provided)
- **Procurement** (none provided)
- **Enhanced/Healthy Workplace** (none provided)

Year 2020 – Measure G Projects (District adds dedicated funding for sustainability implementation)

- Budget line item added to include for $40 million to implement sustainability within Measure G projects.

Next Steps:

DGS will invite District wide volunteers to form a committee to help develop our Sustainability efforts and future plans. The items below will be the committees starting point.

1. **Confirm sustainability goal/vision statement is still relevant**

   Statement: "The goal of the SRMP is to improve the district's ability to provide education now and into the future by lowering operating costs, providing a healthy environment, and educating the next generation of environmentally conscious citizens"

   AECOM thoughts: The existing vision statement is comprehensive and covers the triple bottom line (planet, people, profit), but could be expanded to include conservation (reduce, reuse, recycle), which would support the identified focus areas as well. Recommend adding "resilience" to highlight the ability to bounce back and address a changing climate. Also, could consider "community/engagement" if that is an important element to the District.

2. **Confirm sustainability focus areas are still relevant**

   Current focus areas:
   1. Water use
   2. Energy
   3. Transportation (VMT)
   4. Waste generation
   5. Food
   6. Procurement
   7. Education
   8. Enhanced/Healthy Workplace

AECOM thoughts: The current topics are standard and go beyond the basic water, energy, site, and materials. It is great to build upon previous efforts rather than start a new list. Here are some suggestions:

- *Recently "climate resilience" has become a hot topic and could be added.*
- *"Enhanced/Healthy workplace" could be broadened to be "health and wellbeing", which would encompass the student-body as well.*
- *Consider adding "Governance", which would include sustainability policies, planning efforts, O&M programs, and could include procurement, which is already a focus area.*
- *Example: UC System topic areas include: climate protection, clean energy, green building, transportation, sustainable operations, waste reduction and recycling, sustainable procurement, sustainable food service, and sustainable water systems.*

3. Identify which sustainability measures could be short-term projects

Reference: section above: "Overview of all identified sustainability measures"

AECOM thoughts: although the District has already identified some possible sustainability measures, they are not necessarily quick hit projects or make a lasting visual impression. However, there are several great easy project ideas that came out of the sustainability survey that was completed in 2017 (hydration stations, EV parking, branding of public transit options, etc.), which should be considered. By pulling from the survey, the District would be addressing some of the concerns highlighted that are "skepticism about the ability of District to implement" and "be as transparent as possible with plan measures and goals".

In addition, it is worth exploring/considering best management practices (5-10 per topic area) that other universities have implemented such as valet bike parking, building energy consumption competition displays, healthy food vendors, signage to encourage using stairs instead of elevators, etc.).

After a comprehensive list of sustainability measures (based on District, survey, and best management practices) has been identified, it is recommended to develop criteria to rank the measures to create a list of priority projects. Note that the measures should strike a balance between lofty goals and investment/available funding. Example criteria could include:

- *Visibility (Y/N)*
- *Time to implement (3/6 months)*
- *Coordination efforts with stakeholders (internal, external, DSA)*
- *CM procurement effort (L/H)*
- *Cost (L/M/H)*
- *Funding rebate available (Y/N)*
- *Integration with Facilities Master Plan or other long-range plans (e.g. Energy Master Plan) (Y/N)*

4. Consider ways to main-stream sustainability implementation

AECOM thoughts: In addition to the short-term projects, there are ways to embed sustainability considerations in all planning/construction projects. Some ideas include:

- *Create a form (one-page) that is completed for each project, small and large that highlights the District's sustainability goals and records sustainability considerations and implementation.*
- *Develop pre-populated LEED scorecards with targeted credits that support the District's sustainability vision/priorities.*
- *Include a sustainability overlay in District Standard Design guidelines. This could help guide the small project type trends: bathroom upgrades, elevator replacements, door replacement, HVAC upgrades, ADA compliance, landscape, new buildings:*
  - *list of pre-approved low-flow water fixtures that comply with CALGreen to reduce water use*

- *list of pre-approved elevator vendors that have re-generative drives to reduce energy use*
- *weather-stripping doors to improve thermal comfort and integrated pest management.*
- *low toxic fertilizers and pesticides*
- *HVAC upgrade opportunities to reduce energy use*
- *Universal design (Fitwel standard) to improve accessibility beyond ADA code requirement*

Documents reviewed (attached at end of document):

- Measure G Project list
- Maintenance Project list
- Sustainability Presentation to Board of Trustees (2015)
- Sustainability and Resiliency Master Plan PPT (2017)
- District Wide 2017 Facilities Technology Master Plan (not included, insignificant for this effort)