



Focus Team: Natural & Built Sustainability #4: Sustainability Mandates for Other Focus Teams

Date and Location: Tuesday, March 1, 2022 – Community Center

Estimated Attendance: 19 including all staff, consultants, FT leads, etc.

Guiding Questions:

Looking at our list of sustainability priorities and the work plans for other focus teams...

- Where do you see the overlap?
- Where do you see the need for greater advocacy?
- Where do you see the opportunity for productive dialog?

Key Technical Information Shared:

Brown Ranch technical consultants and YVHA staff briefly presented on the work plans and key information to date from the other focus teams: Infrastructure, Housing & Non-Residential Demand, Project Economics & Stewardship, and Urban Design. Using that information as a baseline, Focus Team Leaders guided conversation using the above questions. Slides are available upon request. A recording of the meeting is also available upon request.

Public Input:

Where we see overlap:

- Infrastructure: water and electricity are limiting constraints for development at Brown Ranch. Need to design for resource conservation so we can maximize density. Need to determine demand for square footage, as that has implications for electricity needs.
- Infrastructure: Underground utilities rather than overhead.

Where we see the need for greater advocacy:

- Demand: lots of people are expressing they do not want shared walls. That’s going to be a tension point with sustainability. Need to advocate for density, which means multi-family housing typology.
- Economics: be sure to assess and prioritize long-term affordability over first time cost. “Economics of efficiency.” Model for future conditions / understand building performance for the full life cycle of the project.
- Infrastructure: When modeling for energy use in buildings & water, we need to model for future climate projections (2080). Are the teams looking at the right analysis and time horizon?
- Infrastructure: Advocate for interconnected water-based system for heating and cooling. Recognizing that adding cooling systems to buildings will significantly add to the energy load of



the community. But from a resilience perspective, thinking heating AND cooling is important because the climate is getting hotter and it's not healthy to open windows during extended periods of low air quality due to fires. So ... we need water-based heat pumps!

- Health Equity:
 - Materials: As part as the overall Sustainability Team recommendation: do we want to shoot for certain standards re R-value, efficiency standards of appliances? Mandate to use the "least harmful stuff" (don't use glues or other materials that have toxic off gasses) HERS rating? HERS is designed to address long-term affordability. Has great in-field verified quality control.
 - EPA indoor air quality as it relates to natural gas stoves. "healthy buildings considerations."

Where we see the opportunity for productive dialog:

- Urban Design: team needs guidance from Sustainability Team on what trees, relevant species, meaningful open space, irrigation needs, etc. to plan for at Brown Ranch. Tree planting will be a complicated issue that will require analysis and thoughtful conversation. Trees provide shade. But should we plant non-native species? How much water is needed? Need more assessment re what it will take to grow trees at Brown Ranch. Also, if we don't have lawns, what does landscaping and open space look like?
- Urban Design: passive solar design is a method to keep buildings cool (architectural issue). At community scale, this will have to be aligned with Urban Design Team.
- Infrastructure: Sustainability team's interest in open space will need to be part of the Infrastructure Team's conversation about onsite energy generation, which will be very land intensive and eat away at open space.
- Infrastructure and Economics: Collaborate on a cost benefit analysis of grey water system?
- Infrastructure: Provide infrastructure for handling waste in a way that is most efficient. It would be good to have centralized pick-up for recycling, compost, trash, rather than curbside. Include site for hard to recycle items.
- Infrastructure and Project Economics: Estimating \$100,000/unit infrastructure cost. Are there additional grant and funding opportunities available if we design for carbon neutrality? Carbon tax?

Other comments:

- Materials and Rating Systems:
 - Insulation is cheap and it's a one-time cost. Design homes with best insulation package possible to conserve energy.
 - Use HERS rating and incentivize lower scores. Simple, easy way to measure efficiency across homes.
 - Materials choices and design standards: give people a palate (or menu) of material choices. Not like a condo where people have to use the same colors, but a basic set of design standards related to materials/durability. Make sure the menu of material options will last longer than typical 20-year life cycle of a building.



- Consider sustainable sourcing. – especially with manufactured homes.
- When seeking development partners, seek partners that prioritize DEI, social justice issues. (high ethical standards).
- I agree with that statement- minimal petroleum-based construction materials should be prioritized.
- Could dig local adobe mud to make on-site bricks...
- Long term Stewardship:
 - YVHA is the ultimate caretaker of the landscape/ the ranch. Several rules about water, weeds, dogs etc. will have to be enforced by YVHA.
 - Cottonwoods, willows and Aspens are fire resistant if green.
- Have propane tanks been in the discussion, as a back up to heating, if the grid goes out? Or will folks have woodstoves?
- The current code makes for a very efficient building.

YVHA FOLLOW-UP FOR WEEKLY REPORT

Resources needed from/for technical consultants for next meeting

- Clarification on what density is most efficient for water conservation. Report Maddy sited says 3-8 units. What kind of efficiencies can be achieved at 12-15 units per acre?

Necessary Cross-Collaboration w/other Focus Teams:

See above!