Affordable Housing Modular Factory – Questions & Answers
UPDATED Jul. 31, 2023

1. **What is a Modular Housing Factory?**
   A Modular Factory produces modular homes that are prefabricated buildings fully built and finished in a factory and then delivered to the intended site. The modules can be either a single unit or placed side-by-side, end-to-end, or stacked, allowing for a variety of configurations and styles.

2. **Where did the idea come from?**
   The genesis of this project was the city's purchase of the Ponderosa Mobile Home Park in 2018. The Park has experienced infrastructure failure, and the existing manufactured homes are old and in need of replacement. The new modular homes produced through this partnership would be healthy, allow residents to build wealth, are energy efficient (i.e., net zero), and will be permanently affordable to extremely low-, low-, moderate- and middle-income households. The facility would be dedicated to the construction of up to 73 new homes for Ponderosa residents for the first years. While the factory design has the capacity to build up to 50 homes each year to help achieve the city's and region's housing goals, the partnership will rely primarily on volunteer labor, as done at traditional Habitat construction sites, and therefore project building 12 – 14 homes per year with the option to increase capacity as possible.

3. **Why build this facility at the BVSD campus?**
   The city explored numerous locations around the city and every site presented challenges. The BVSD campus posed the fewest challenges and created an opportunity to better integrate students in the Technical Education Center (TEC) into the facility. Additionally, Flatirons Habitat has worked with the school district over the past several years to help build a strong construction program through their CTE (Community and Technical Education) program on site. Being located directly on campus, this factory will significantly increase the time students are able to build in a real-world project and help more fully customize their building experience to their instructional plan.

4. **What is inside the Modular Factory?**
   The Modular Factory will be a simple, metal building with 31,375 square feet (250 long by 125 feet wide by 36 feet tall) with a 1/12 pitched roof to accommodate rooftop solar. The inside of the building will consist of an assembly line with 9 stations: (1. floor framing, 2. wall setting, 3. roof setting, 4. electrical, 5. plumbing, 6. mud-tape/texture/paint/sheathing, 7. base trim/door hang/roofing/siding, 8. trim/cabinets/facia, and 9. appliances/finish/ clean). All construction materials will be stored along the interior periphery of the building and rolling scaffolding will be placed strategically to provide ease of worker access. The necessary equipment will be similar to a traditional build (e.g., forklift, air compressors, etc.) with the addition of special casters to move the units between stations, tables to construct roof and walls horizontally, and overhead chain hoists to assemble walls and roof.

5. **How much activity will happen at the Factory?**

   Operating Hours: 5 days a week – Tuesday through Saturday to accommodate volunteer schedules, between the hours of 8am – 4pm. Quiet hours will be observed in consideration of neighbors in accordance with city/county regulations.

   Delivery Schedule: Building materials will be delivered with a large truck 1-2 times each month and by small truck 1-2 each week on average. Trucks will enter through 65th Avenue and park near the Factory. A forklift will be used to unload the large trucks to minimize the amount of backing up and small trucks will pull around the Factory also to avoid backing up.

   Module Delivery: The completed modular units will be stored on the north side of the building and transported to the site once every 8-12 weeks. Each module will be placed on a trailer and exit the site via 65th Avenue.

   Factory Volunteers, Students and Workers: The Factory will have between 15-20 people working inside each day. They will all park in the existing lot to the north of the building.

6. **What noise levels are expected and the impact on the wetlands and neighbors?**

   The Factory will be constructed to meet the city's high standards for energy efficiency. That means it will be fully insulated and the doors will remain closed (when not actively receiving a delivery or a modular unit is exiting). The partners will work to ensure that noise is minimized to greatest extent possible. In addition, an Intergovernmental Agreement between BVSD and City will memorialize the following related to noise:

   - The city hired an acoustical engineer to measure the potential noise impact of Factory operations on the surrounding neighborhood and open space. The engineer's analysis found that noise generated inside of this building will NOT be in violation of the Boulder Municipal Code and will not be audible at the nearest residential property line.
   - The city will ensure that the Factory is operated according to the following conditions:
     - Factory Operating Hours: The Factory will operate 5 days a week – Tuesday through Saturday to accommodate volunteer schedules and between the hours of 8am – 4pm. The Factory will be closed for most Federal holidays. All Factory deliveries of materials will be limited to these hours.
     - Factory Construction Hours: Work will be done to construct the Factory up to 5 days a week (Monday through Friday) between the hours of 7am - 6pm.
     - Quiet Hours: quiet hours and noise levels will be observed at the Factory in consideration of neighbors and nearby open space in accordance with city/county regulations.
     - Back Up Alarms: Forklifts operated in and around the Factory will not be equipped with back up alarms. Truck deliveries and the pickup of modules will be routed around the Factory to avoid the use of back up alarms.
     - Trash and Recycling: Trash and recycling pickup will only occur during Factory Operating Hours.

7. **What provisions have been made to bring the entire BVSD campus into Dark Sky compliance?**
   BVSD has agreed to meet the city's outdoor lighting regulations as a condition of annexation for the entire campus. The city's regulations are compliant with the Dark Sky initiative.

8. **Will the City and BVSD consider planting trees along the property line to screen the Factory, BVSD operations and Eco-Cycle?**
   The Sombrero Marsh is a designated grassland and the planting of trees is not appropriate in a grassland. BVSD is open to planting trees on district property where it does not interfere with operations. The City and BVSD will continue to explore options.

9. **Was an National Environmental Policy Act Review Process (EIS) required since the project is using of federal funds?**
   An Environmental Assessment (EA) is required and determines whether or not a federal action has the potential to cause significant environmental effects. An EA was completed for the project and resulted in a finding of no significant impact and that the project will not result in any significant impact on the quality of human environment, so the full EIS was not required. The EA is posted on the project website.

   An Environmental Impact Statement (EIS) is only required if a proposed major federal action is determined to significantly affect the quality of the human environment.

10. **Was air quality from construction analyzed?**
    An air quality expert was hired to analyze the impact of construction activity as required by the Environmental Assessment. The expert estimated levels created by temporary Factory construction for both nitrogen oxides (NOx) and volatile organic compounds (VOC) since both compounds are precursors for Ozone (O_3) for which the county currently exceeds the federally accepted levels. Construction includes activity at the development site and all vehicles traveling on roadways to and from development site. The conclusion was that the amount generated does not exceed de minimis or threshold emissions levels of nonattainment or maintenance level pollutants.

11. **What are the anticipated dates?**
    Factory Construction Begins: Summer 2023
    Construction Complete: Spring 2024
    Start Production of Affordable Homes: Summer 2024

For more information visit the project website:
https://bouldercolorado.gov/projects/affordable-housing-modular-factory

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