

Legacy Project Meeting #2
Monday, Sept. 14th 2009 5:30 p.m.

Present: James Ball, Liz Pabst-Wanless, Harrison Rankin, Tracey Marshall, Alexander Chawen, Mamadi Kante, Michael, Dave.

- Construction Schedule – Final version
 - Blitz Build in 5 days
 - Proposed to finish Nov. 13th
 - Wells Fargo is the Sponsor and their volunteers have first dibs on helping out
 - Overview of Day by Day details.
 - Landscape Architect mentioned, Broken Concrete should be done by professionals and if done by volunteers they shall be closely supervised.
- Tours
 - Green Build Conference, Sat Nov 14th is our day
 - Contemporary Desert Living tour will bring a bus of about 45 ppl arriving @ 9 a.m. on the 14th
 - Internet is the best way to distill information
 - Alex and James will go further into detail about tours
- Landscape Design
 - Irrigation
 - Pointed out the water bibs / point of connection
 - Directing water ideas were tossed around, ex. Off roof to vegetation
 - Possible rain barrels?
 - Simple Grey water system
 - Stand alone system that leads straight to a tree or shrub
 - Give the homeowner an irrigation schedule
 - Design is to prevent curb cutting
 - Garden can be a possible play area if homeowner wishes
- Plans
 - BIM model
 - Simulations, ex. Sunlight
 - Presentation for tour guides would be nice
 - Double check wall thickness
 - Ensure city has plans
 - Sq ft. has shrunk to approx. 1285, needs to be at minimum 1300
- Deadlines – 9 weeks till build start
 - Submit plans to the City – Sept 18th*
 - Slab in and crubed – Oct 14th
 - List of companies soliciting – Oct. 21st
 - Pre construction – Oct 14th
 -

- To do list
 - Need more financial assessments
 - Researching roof materials
 - Need to achieve R-30
 - Might change mechanical fresh air to Inducer to Passive
 - Address VOC's
 - Section lot off for construction
 - Place large recycling dumpster and small garbage can on lot

- Misc.
 - Model for Habitat for Humanity affiliates
 - Habitat receives donations
 - To present to other production members, we need better financial assessments and possible alternatives for those expensive donations received.
 - For this project we receive a solar hot water heater that allowed us to reduce 1kw off the P.V. system.

Legacy Project Team Meeting
Wednesday, August 26, 2009 5:30PM

Present: James Ball, Tracey Marshall, Alexander Chawen, Mamadi Kante, Harrison Rankin, Liz Pabst-Wanless

Goal of the Project: Demonstrate, document and provide helpful tools that other affordable home builders and Habitat affiliates can utilize in order to build LEED Certified, Energy Star, net zero homes affordably.

Note: Habitat for Humanity is unique in that it utilizes third party sponsors, in kind donors and volunteer labor.

Provide Education:

- On the house itself and special features
- Certification Process: What information needs to be collected for certification? Create and share the process and tools that other affordable homebuilders can utilize when seeking certification.
- Construction manual.
- Homeowner maintenance manual.

Information will be provided at:

- Habitat for Humanity Central Arizona web site.
- Booth at Greenbuild 2009 conference.

Final Product:

- Open house to: Public, homeowners, sponsors and Greenbuild 2009 conference attendees.

Would somehow like to be able to provide and document the cost, donations, and payback figures.

Open house: Write up a description of each in kind item. Tracey will help determine what information we want to get from each of them.

Tours: Alexander will organize and determine target audience and incentives for that audience to attend the tour.

Need to develop a tri fold 8 1/2 X 11 handout of the project. What it took to get to Net Zero.

8.26.09 Legacy Team Meeting Agenda

✓ Personal Introductions

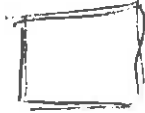
✓ Project Overview

General Project Goals

Specific Project Goals

Timeline / Tasks

Responsibilities



selling information ?

Open house

Different tours per different audiences

Financial paper is

Tours is Alexander

Brochures is

Certified Net Zero Energy is
LEED Platinum is
Energy Star is

Manual is

- AF

Mass email
schedule

8.26.09 Legacy Team Meeting Agenda

Personal Introductions

Project Overview

General Project Goals

Specific Project Goals

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Responsibilities

Overall Green Goals:

Construction

Saving our homeowners money

- Make homes more affordable through operation & maintenance costs
 - lower utility bills now and in the future with projected energy price increases
 - less maintenance costs
 - healthier home

Build a better product

- Less warranty issues
- Responsibility as builders

Tasks to reach construction goals

- redesign floor plans
- investigate cost effective green product options
- research/study home performance (quantify results)
- educate staff
- formalize changes in contract with subs

Homeowner services

Save our homeowners money

Increase homeowner confidence and understanding of their homes

Homeowner health

Long-term financial security

Tasks to reach homeowner goals

- homeowner education (post-move-in site visits with hands on instruction)
- detailed maintenance and home manual
- rebates?

Development

Grow ability to provide simple, decent, affordable housing to families in need

- more home sponsors (approach new sector as made available through green)

- more on-going in-kind partners (lower/offset building costs)
- greater eligibility for grants

Improve company image

- commitment to holistic approach to affordability

- leader in building better homes
- influence on the greater community (educational outreach)

Tasks to reach development goals

- Redesign sponsorship packet
- New approach to dealing with in-kind donors
- Create list of possible home sponsor candidates
- Create print material for public release about projects
 - home overview with specs
 - for cities, sponsors, booths, general interest
 - results of research on homes
 - schools, other builders, in-kind partners
 - home maintenance info/green construction info
 - homeowners, volunteers
- Educate staff on "talk points"

Volunteers

- Health during construction
- Ease/safety of construction
- Education on green construction can be taken home

My Projects:

- Monitor system for Kesler homes: *Ben*
- 283 is complete, next door needs to be wired
 - Data will be retrieved once a month
 - Public release of this information? *ASU intern?*

Cost comparisons

- detailed analysis of home costs at various levels of green
 - compare to homeowner cost savings
 - determine most cost effective upgrades
 - provide hard figures for public release
- Marion
Ren S, Katie*

Energy tracking

- homeowner permission releases to monitor their electrical consumption
- contributes to cost comparison of homes/ quantifying of design changes
- create spreadsheet/analysis of data

New product research

- wire shelving
- ~~Feltex roofing underlayment~~
- ~~Start implementing cost effective green products~~
- ~~Horizon Energy Systems~~
- ~~KVAR energy controller~~

passive

Home design upgrades

- Redesign of MT-35
- Redraw and engineer plan
- Submit to Surprise and Phoenix
- Aesthetic redesign of MT-35?
- Revisit all plans?

volunteers

Energy Star certification

- verifying with Resnet appropriate sampling of Ironwood Trails
- working with Energy Inspectors to ensure certification
 - o making home upgrades/changes
- implement these requirements on future projects
- paperwork involved with certification

LEED certification

- paperwork involved with certification
- establishing new Provider relationship with Energy Inspectors
- Ironwood Trails: waiting on Energy Inspectors
- Chandler/Gilbert : testing complete
 - Final paperwork and verification need to be done
- Oro Vista: testing and verification complete
 - Final paperwork needs to be submitted
- Upcoming projects?

Legacy Project

- Make Legacy Project a true demonstration of green development
 - Green House design
 - Green Product selection
 - Green Project Management
 - Green Construction process
 - Green Commissioning
- Find and finalize in-kind relationships
- Work with Legacy Committee and industry partners
- Develop educational component
- Create media for Habitat website

SRMG build

- Assisting in corporate relations with SRMG
- Assisting with specifications for home construction
- Assisting with Green certifications
- Plan submittal and construction schedule

Solar Partnership with TUV Rheinland

- Cost assessment of needed components
- Relations with TUV Rheinland
- Solicit partners for project needs

Warrantees

Construction Website

Homeowner Manual

Homeowner Maintenance/Green Education

Recycling Program

- ~~arrange staff visit to recycling center~~
- ~~signs for sites~~

link to volunteer services

Environments for Living Certification

LEED V3

Incorporate new green building practices into construction manual

Legacy Project:

~~Home Sponsor - should we approach more companies?~~

Volunteers - How should we manage the volunteer aspect of this project until we know about the sponsor?

call back in September

In-kind donors - Team approach to in-kind partners?

Tracy

Media:

- Prime Image Media bid?
- Minimum goals for exposure?
- Press release schedule?

Construction Research / Educational Component

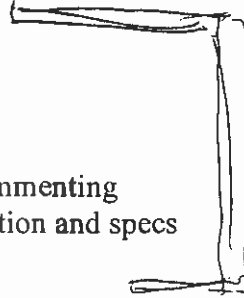
AKA Green Partnership

Design Committees

BIM modeling

Putting construction docs on the web for commenting

Creation of per item home overview/description and specs



Greenbuild event:

How will the various responsibilities be supervised and by whom?

- Construction
- Media
- Booth
- Volunteers

Projects:

Kesler Monitoring System (Ben/James)

- will schedule for after July 6th when James returns from vacation

Recycling Program for sites (James/Kurt)

- will contact SRP about getting "can boxes" donated

Material Take-Offs

- Oro Vista plans (Ron)
- Palmaire (Jamie)

Update Bids (Ron/Jamie)

Construction manual update

- Discuss task division at next construction meeting
- Needed Additions
 - o Attic Access (no wood)
 - o Truss and fascia drawings for OV models (sketch-up)
 - o Transfer vent size
 - o Caulking of air envelope
 - o Shoe removal benches . x
 - o ~~flashing on OV models~~
 - o Balloon framing
 - o Wrapping columns
 - o 2 stories
 - Banisters *wing walls*
 - MDF molding on stairs

-sealing ducts during const

▪ Bracing

Cost Comparisons (Mariam)

Home Design Improvements

- MTE-35 (James)
- Schedule meeting with volunteer leaders to review OV plans
- Find volunteer to make plan changes

Energy Tracking (James/Mariam)

Homeowner manual

- Waiting to hear what HOS wants done

Homeowner maintenance/Green Class

- Waiting to hear what HOS wants done

Input home info into Database (Yvonne)

Update Database functions (Pat)

- Print button
- Search function for subs
- Add section for Accent Colors

Lot number list (Jamie)

Prep for fall builds

- Staging plan for OV
- Prefab stairs

Trainings

- Garages (Morris July 23rd?)
- Two Stories (Todd Aug 19th?)

- Plan Reading (Todd Sept 10th?)

Volunteer Kick-off

- August 29th
- Pass out house plans

Meeting Notes 6/4/09
Habitat for Humanity Legacy Project
Stakeholder Charrette Meeting

Purpose is to demonstrate sustainable homes can be built inexpensively.

- Will need to prove cost of materials regardless of whether it was donated or not.
- Net zero home
 - o Will need to perform HERS test/ energy modeling to determine the required solar panel.
 - o Paul does not expect more than a 5 kW panel.
- 1. Orientation of the house
 - a. After demolition, the home will be built with the long axis running east-west.
 - b. Discussed moving the house to the north or south.
 - i. Determined the house should be moved more south.
 - ii. Families have the need for kitchen windows to watch after kids playing in the yard.
- 2. Floor Plan
 - a. Need a solar heat gain coefficient between 0.23 – 0.3.
 - i. Will allow for HVAC vents supply vents to be moved away from windows.
 - b. No need to add additional windows, already enough daylighting.
 - c. Water heater
 - i. Look into obtaining the new GE heat pump water heater in October. Cost \$1,200, 4,000 Btu in the winter, 40 – 50 gallon tank.
 - ii. Tankless water heater is not worth the investment.
 - iii. Recharge time not an issue since water heater centrally located.
 - d. Material reuse not possible because tested hot for asbestos
- 3. Envelope Plan
 - a. Will use steel-stud Styrofoam envelope.
 - b. Slab
 - i. Not enough heat gain to be worth insulating outside or inside.
 - ii. Will model in RemRate for proof
 - c. Roof Deck
 - i. Softit or Pillowed insulation
 - 1. Icyene is expensive and not needed, no difference between cellulose.
 - 2. Can use a moisture barrier.
 - a. UDL titanium an option.
 - 3. Go with a pillowed, avg R-22 insulation
 - a. Code treats it as a sloped wall, not a ceiling.
 - b. R-22 will be sufficient insulation.
 - ii. Radiant barrier to roof.
 - 1. Determined not worth the cost if a sloped roof.

- 2. Better used on a flat roof.
 - d. Must seal off the garage from home with insulation.
- 4. Energy Plan
 - a. Exterior lighting.
 - b. Possibly mandate pin-based fluorescent bulbs in kitchen. Pin-based outlets will be in the garage as well.
 - i. CRE and CRI best quality.
 - ii. Use coffer to cover the bulbs.
 - c. Energy Star exhaust fans
 - i. EER more important than SEER ratings
 - d. Possibly add exhaust to and from the drier.
 - i. Justification is that the family will use it often.
- 5. HVAC
 - a. Use attic as a return vent, put grill on ceiling.
 - b. Move supply ducts and use passive vents.
 - c. Do not use stamped-faced, use bar.
 - d. Use scoop.
 - e. Fancyclear.com, any Honeywell mixer good for mechanical solutions.
 - f. 6" manual damper (low voltage).
 - g. Need to perform Manual J calculations to have required airflow and how many vents needed.
 - h. Lennox used a 1/ yr filter.
 - i. Better than 1" filter on suction side.
 - ii. MERV 12 rating
 - iii. \$20
 - iv. Air handler replaces filter on ceiling.
- 6. Water
 - a. Gray water
 - i. Sink-to-toilet line not worth it.
 - ii. Need extra equipment, \$300 system.
 - iii. Sink to irrigation better alternative.
 - 1. Graywater will just be extra water for landscaping, no need to change water supply.
 - b. Tax Credits
 - i. Can obtain Arizona tax credits.
 - ii. Need to verify with the City of Phoenix.
- 7. Materials
 - a. Particle boards are the main issue.
 - b. Paint
 - i. Valspar is not good, uses 1300 scrub test.
 - ii. Need at least a 3,000 – 4,000 scrub test with Green Seal.
 - c. Carpet
 - i. Can be any major brand with Green Label for carpet cushions and Green Label Plus for carpets.

Habitat for Humanity Central Arizona
2009 Greenbuild PR meeting
Wednesday, August 7, 2009 – 2:30pm

Agenda:

Introductions

Update on internal Habitat promotion and sponsor outreach

Article for newsletter

Web update

E-Newsletter

Press release

Media tours