Miller Hull Sustainability Action Plan

100 % Regenerative Design by 2030

Target Net Positive Energy

- Achieve 2030 Commitment Targets
  - 2030 Commitment Targets
  - Create 2030 references for staff
  - MH PPA addresses 2030 Commitment with clients
- Use energy modeling to support design decisions
  - Energy modeling implemented by the end of SD phase using a software of choice to meet the project's energy goals
- Implement daylight optimization studies on every project
  - Define performance targets at outset of design
  - Written daylight strategy as part of BOD
  - Regular check-ins to optimize daylight harvesting
  - Make daylight goals part of initial client discussion
  - Utilize daylight references/rules of thumb for staff
- Implement envelope optimization studies on every project
  - Define parameters of optimized by project type
  - Regular check-in sessions to track progress against criteria

Target Net Positive Water

- Implement potable water saving strategies
  - Determine feasibility for waterless or water reuse
  - Prohibit potable water for irrigation
  - Prohibit potable water for process uses
  - Propose most stringent indoor water saving fixtures
- Manage stormwater to be a net benefit
  - Determine pre-development and current ecological conditions for site water flow and infiltration
  - Treat all stormwater on site
- Identify local barriers to water harvesting and reuse and develop case studies to address issues
  - Case study to promote positive technologies
  - Research existing knowledge
  - Provide means to self educate on new tech, code changes
  - Engage with local jurisdiction on water rights/barriers/reqs
- Incorporate water reuse strategies
  - For projects not pursuing net positive water, incorporate at least 1 water reuse strategy per project

Design for a regenerative site

- Restore ecological performance of site
  - Identify the reference habitat
  - Select 3 ecosystem functions that the project can address
  - Research existing resources/benchmarks for ecosystem services provided by the reference habitat to use as baseline
  - Constract with scientists to provide 'missing' measurements for ecosystem services targeted for inclusion

Design to achieve LBC Materials Petal

- Design projects to sequester carbon in alignement with its reference ecosystem
- Vet all specified products for the most current version of the LBC Red List compliance
- Specify wood as FSC certified or 100% salvaged/reclaimed
  - Remove 6 chemicals from standard specs in 2017
  - Additional chemical classes removed from specs yearly
  - Partner with subconsultants to remove LBC Red List items
  - Case studies demostrating 'why' and 'why its good for you'
  - Update general specs and templates to eradicate chemical classes on timeline above
- Spec products with ingredients thru Declare Label, C2C Gold, or Living Building Challenge
  - Evaluate and adopt a standard LCA methodology
  - Run LCA studies at SD and DD phases and identify opportunities to reduce embodied carbon
  - Reduce embodied carbon of each project by 10%
  - Projects unable to spec FSC wood provide pricing info on alternatives in 100% FSC
  - Projects provide final documentation of amount of FSC or salvaged wood installed by cost
- Spec products with EPD with 10% improvement of GWP over established baseline
  - Educate MH staff about approved transparency labels
  - Min of 30 products specified on projects have approved transparency designation
  - 30% of total materials cost increasing by 10% every year up to 100% in 2020
- Identify materials with recycled content and/or local sourcing for final assembly
  - Educate MH staff about EPDs
  - Min of 30 products specified on projects have an Environmental Product Declaration
  - 30% of total materials cost increasing by 10% every year up to 100% in 2020
- Projects send at least 1 advocacy letter to project manufacturer supporting healthier materials
  - Projects send a transparency advocacy letter to at least 1 manufacturer per project
- Maximize local sourcing of products and materials
  - Subconsultants send a transparency advocacy letter to at least 1 manufacturer per project
- Request GC partners implement a salvage assessment
  - Review Cradle to Cradle Certified products for projects
  - Prioritize products w/ final assembly within 500mi of proj site
  - Maximize recycled content for metal and concrete products
  - Project teams generate a local sourcing map for products/materials
  - Write requirements into specifications
  - Document cost/time implications of GC implementation

Prioritize Occupant Health

- Optimize indoor air quality to reduce pollutants and CO2
  - Include lactation space in every projects irrespective of client ask
  - Develop case study material including how to address considerations like water quantity and cost
  - Engage/integrate community reps as part of design process
  - Have a community outreach policy for consultants
  - Courageous conversation as part of charrette
  - Educate staff on inherent bias and its significance
  - At least 1 open mic on equity impacts of projects yearly
  - At least 1 roundtable on equity yearly
- Incorporate lighting design to support circadian rhythm
  - Case study for why lactation rooms are essential and what minimum features they should include
  - Target at least 1 primary program area in projects that incorporates circadian rhythm lighting best practices
  - Identify consultants and resources for initial design intro to clients
  - Educate staff about circadian lighting and health benefits
  - Eliminate products with formaldehyde
  - Meet LEED IAQ reqs on materials incl. CDPH compliance
  - Implement specific project strategies targeted at reducing CO2 levels
  - Include air quality monitoring equip on projects to measure CO2, PM2.5, & TVOCs
- Design to promote physical activity
  - Gender neutral facilities
  - Lactation rooms
  - Incorporate active design strategies encouraging physical activity
  - Utilize workstations that support healthy/active work habits
- Accessibility/Universal Design
  - Provide opportunity for project teams to address bias
  - Educate staff on principles of Universal Design
  - Perform a Universal Design and Accessibility assessment on every project
- Assessment and Education
  - Use King County's Equity Impact Review Process on every project
  - Run WELL and Fitwel assessments no later than SD phase
  - More education on mental health issues
  - More education on acoustics and impacts of 'typical' interior finishes

Design Thinking ensures core values

- Address the social and environmental justice impacts of our work
  - Seek our speaking opportunities to address behavioral change within the profession
  - Make sustainability efforts transparent and publicly available
  - Perform post-occupancy evals to track occupant health, comfort and energy performance
- Drive industry change through transparency
  - Publish research, toolkits, case studies
  - Publish the SAP and implementation plan on website
  - Educate staf and leaders on value
  - Incorporate new research and tools to the process
  - Restart the current POE process
- Incorporating and sharing the outcomes from POE's into future projects
  - Investigate existing ratings systems and tools and adopt their use in our project work as proven useful
- Industry recognition for transparency efforts
  - Utilize ecosystem services report for projects west of Cascade Mountains
  - Engage Biomimicry 3.8 in varying levels of project work
  - Engage Biomimicry 3.8 to provide L&L for office
- MH approached yearly for a speaking engagement
  - Encourage staff to complete the AIA Certificate in Resilience
  - Incorporate biomimetic strategies in design and process work
- Miller Hull is known as an industry leader in equitable design
  - Design for resilience in at least 3 areas
  - Address passive survivability and shelter in place in projects
- Independent commentary from new participants about how diverse and inclusive our charrettes are
  - Think small, not just bigger
- Gender neutral restrooms are standard design
  - Ensure supportive
- MH projects set the bar for great lactation spaces
  - Have tools that address the perceived "costs" of sustainability

Envelope optimized for all criteria

- Optimized daylight harvesting strategy & visual comfort for every regularly occupied space on every project
- Energy modeling at every phase from Concept to DD
- 100% reduction by 2030

Only potable water for potable uses

- Restore each project site to pre-developmt conditions for storm water
- No local barriers prohibit projects from meeting net positive water
- All potable water is reused at least once

All specified products have 100% ingredients transparency thru approved labeling framework

- All specified products have an EPD
- Advocacy is no longer a necessary action on projects because product transparency is universal
- Every product is part of circular economy
- Every product is sourced within 300 miles
- Every project with existing structures diverts 95% or more of demo waste from landfills
- Meet RESET Air standards PM2.5 < 35 ug/m3 TVOC < 500 ug/m3 CO2 < 1000 PPM
- Every project incorporates the appropriate level of lighting to support circadian rhythm
- Every project could achieve all the features/credits from the WELL Building Standard
- Projects must safeguard access for those with physical disabilities of thru Principles of Universal Design, ADA, AIA or equiv

Installed wood is reclaimed/salvaged/FSC certified by 2030

- MH projects reduce embodied carbon footprint by at least 50% above industry standard by 2025 through climate sequestering products or by offsets
- No LBC Red List chemicals in any product spec'd by Miller Hull

Measured project performance is equivalent to measured ecosystem perform

- Every project has at least 1 biometric feature that resonates with the project performance goals, or design stakeholder interest
- Sustainability measures are not value engineered out
- MH is an industry leader for healthy design for non-healthcare prog