



REDTAIL RIDGE SUSTAINABILITY GOALS AND APPROACH

January 24th, 2021

OVERVIEW

The Redtail Ridge site, formerly the Conoco Phillips property, is a parcel of land adjacent to Route 36 that was previously graded and then left abandoned by the previous developer. From a sustainability standpoint there are several opportunities to implement best practices that support **decarbonization, improve habitat** and **water quality, improve community trail access** and **wellbeing**, and create **beneficial land use**. The following areas summarize the development’s intended efforts and exploration in the various respective impact areas.

To establish a foundation of sustainable development, all building projects over 50k SF (which represents the majority of the building area on site) will be required to achieve a minimum of **LEED BD+C Silver Certification** (using the most current version of the rating system available, currently v4.0 with v4.1 supplements) through the **Core and Shell** or **New Construction** programs, depending on the scope of the design and construction effort. To facilitate this, the master plan will pursue a campus approach to the Location and Site credits, meaning that each of the vertical developments can focus only on the areas within their scope. Within this, the program will require that each project achieve at least one construction waste management point, one outdoor water efficiency point, one indoor water efficiency point, and one optimize energy performance point. Project will further be encouraged to pursue points in the priority areas of daylight, air quality, and renewable energy.

SUMMARY

Commitment	LEED v4.0 BD+C (CS or NC) will be required for all vertical buildings
Commitment	At least one point will be required to be earned in the following credit areas: construction waste management, outdoor water efficiency, indoor water efficiency, and optimize energy performance.

TRANSPORTATION AND MOBILITY

The major impacts associated with transportation and mobility are greenhouse gas (GHG) emissions, regional air quality, land use, and health and wellbeing. To address these areas the project will pursue the following. Please see the project’s full Transportation Demand Management (TDM) plan for a more detailed list of options to reduce single occupancy vehicle use to and from the site.

- Trail access and bike lanes.** Given that the project sits on the US 36 bike corridor and Coal Creek Trail network, the site is highly accessible by bike from across the region. The site can also be used to connect to the Marshall Mesa recreational trail network to the west of US 36. To further support walking and biking, the interior street networks will include complete street design, allocating full bike lanes and sidewalks to enable walking and biking across and throughout the site.
In addition, the development will explore the possibility of providing **shared electric bikes** for use by tenants and will contract with local **food truck** vendors to provide easily accessible food options and minimize lunch trips during work hours.



- 2 **Public transit.** The site can be accessed by several RTD bus lines within a mile to a mile and a half walking distance. To support the last mile connectivity, the project will explore the possibility of using a circulator shuttle to bring passengers from the McCaslin and Flatirons stations along US 36.
- 3 **EV Charging Infrastructure.** The site will provide infrastructure to support EV charging as demanded by the tenants. This will include making all parking lots and structured parking EV-ready, as well as providing a series of Level 2 charging stations in partnership with a charging management vendor. If the site is considered able and appropriate to support Level 3 Fast Charging, the project will allocate space to enable its inclusion.
- 4 **Parking.** The project will not provide more parking than the City’s minimum requirements. Structured parking will be explored as well, but will be as function of the project density, still to be determined.

SUMMARY

Commitment	Complete street design as outlined in the City of Louisville’s planning department
Commitment	All parking areas will be constructed as EV ready. In addition, 3% of parking spaces provided will have level 2 chargers
Commitment	The project will not exceed the City’s minimum requirements for parking spaces.
Goal	Structured parking facilities for a portion of the site parking
Goal	A circulator shuttle to provide service between transit stops and the site
Goal	Shared electric bike fleet available for tenants
Goal	Food truck vendors to be coordinated to provided regular lunch service at the site

SITE DEVELOPMENT AND WATER

The overall site will be developed with the goal of preserving as many of the high value habitat and natural areas, especially on the northern edge of the property, while enhancing and creating new areas and corridors throughout the site. The landscape plan focuses on the use of native vegetation, creating pollinator pathways, and taking the beginnings of those habitat areas that have begun to develop around the previous stormwater detention ponds and embellishing those to a healthier, more biodiverse landscape. In addition, the project will implement the following measures.

- 1 Implement a **habitat management plan** for the full site (400+ acres) in partnership with the High Plains Environmental Center
- 2 Provide **conservation easements** (~40 acres) to the City of Broomfield
- 3 Limit the use of grass landscaping and instead feature **native landscaping elements** with low watering and mowing requirements. Native and water-wise landscaping elements will be prioritized with turf only being provided if deemed necessary.
- 4 If **raw water** rights are available, these will be used for the limited irrigation demands of the site.
- 5 Create a **“biophilic” design** throughout, with the intent of allowing occupants and visitors the ability to connect with nature, such as through walking paths, gardens, and natural areas.
- 6 Develop a site-wide **green infrastructure plan**, with the intent of managing and infiltrate as much stormwater (especially from roofs and surface parking) as is reasonably feasible via natural elements such as rain gardens, swales, etc.
- 7 To support **interior water efficiency**, the LEED Silver building requirement will likely drive most buildings to a 20-30% reduction in interior potable water use.



SUMMARY

Commitment	A site-wide habitat management plan will developed by a qualified habitat professional
Commitment	39.7 acres of dedicated open space will be provided to the City of Louisville
Commitment	Native and water-wise landscaping elements will be prioritized with turf only being provided if deemed necessary.
Goal	If raw water rights are available, these will be used for the limited irrigation demands of the site.
Commitment	Biophilic oriented site plan
Commitment	Development of a green infrastructure plan to manage stormwater
Commitment	Each building will be required to earn one outdoor water efficiency point and one indoor water efficiency point.

ENERGY AND CARBON

The clean energy landscape has evolved considerably over the past several years to address the importance of mitigating climate change. Notably, Xcel Energy (which will serve the site) has committed to an 80% reduction in GHG emissions by 2035 and a 100% reduction target by 2050. This project will endeavor to implement several best practices to move towards eventual building decarbonization, including the following areas and measures. We will also work closely with Xcel to take advantage of all relevant programs to support the project goals, including exploring the possibility of participating in their [Partners in Energy Program](#).

- 1 Energy Efficiency.** The current City of Louisville code requires that all projects meet IECC 2018, and it will update to IECC 2021 sometime in the near future. This will require all development to achieve a significant amount of energy efficiency simply by meeting the code baseline. In addition, given that buildings will be required to pursue LEED certification at the Silver level or higher, this will drive additional energy efficiency. In addition, all tenants will be separately sub-metered and charged for electricity consumption, even if Xcel meters for the project at the building level.
- 2 Building Electrification.** From a GHG reduction perspective, one of the most important measures will be to convert all combustion based HVAC equipment to electricity. The project will require all design teams to evaluate all-electric building systems and implement these if reasonable life-cycle cost parameters are met.
- 3 Solar PV.** Given the availability of roof area, this will be one of the biggest single opportunities for carbon reduction at the site. Both rooftop and parking canopy solar PV will be evaluated. The use of a third party solar developer will be explored as an option to facilitate installation across multiple buildings. In addition, all buildings will be required to be solar ready, meaning they will allocate at least 50% of their roof area for solar, include the required structural load for ballasted solar arrays, and include conduit to support future installation.
The timing of the actual installation may depend on how Xcel evolves their commercial solar programs. With an anticipated revamp in 2022, there may be an improved context under which to evaluate project financials and viability.
- 4** Depending on the level of onsite renewable energy development that can be achieved, the project may also seek to subscribe to **offsite renewable energy projects** such as local community solar garden (CSG) developments.
- 5** Low embodied carbon materials, including those that are locally manufactured and use recycled content will be prioritized.
- 6 Net Zero Energy:** But implementing all of the strategies above (efficiency, electrification, onsite solar, offsite renewable procurement), the project would be eligible to be designated as Net Zero Energy (NZE). Therefore, the project will coordinate with the USGBC and [International Living Future Institute](#) (ILFI) to better understand how each organization’s definition of NZE could be applied to this project.



SUMMARY

Commitment	All buildings will meet IECC 2021
Commitment	All tenants will be separately sub-metered and charged for electricity consumption
Commitment	All buildings will be solar ready
Goal	All buildings will install solar on >50% of their roof area
Goal	Procure the balance of the electricity demand from a CO-based community solar garden.
Goal	Target net zero energy for one or more buildings.
Goal	Recycled and locally produced concrete and other materials to be specified
Goal	Participate in Xcel programs to support efficiency and renewable energy, such as Energy Design Assistance, Solar Rewards, and Partners in Energy.

HEALTH

One of the primary goals of the site is to create a healthy commercial workplace for local residents. The landscape plan and bike and walking aspects of the mobility plan are some of the primary means to allow people to be active and to connect with nature in and around the site. With regard to the vertical development of the buildings, the following will be implemented as part of the project’s design:

- 1 **Walkable stairs.** At least one staircase in all buildings will be designed to encourage walking to all floors throughout the building.
- 2 **Exercise facilities.** The site will consist of at least one exercise facility as an amenity for tenants.
- 3 The project will conduct periodic indoor air quality (IAQ) monitoring and testing to proactively identify any issues that may arise with ventilation systems or chemicals introduced to building air flow.
- 4 All buildings will be encouraged to pursue the LEED **daylight** credit instituting a minimum level of spatial daylight autonomy (sDA).
- 5 All buildings will be required to include some amount of **operable windows** to enable air flow within selected portions of each building.
- 6 Included in the landscape plan will be a series of **shaded, outdoor spaces** with seating for each sub block of the master plan.
- 7 **Pandemic design best practices.** The project design team will review the lessons learned and recently developed standards to enable buildings to be safer places in the event of a future pandemic.

SUMMARY

Goal	All buildings to have on active design stairway
Goal	At least one exercise facility will be included for the site
Goal	Annual indoor air quality testing to be provided
Goal	All buildings to pursue the LEED daylight credit
Goal	All buildings will have operable windows
Goal	Shared, outdoor landscape areas with seating to be included
Goal	Pandemic design best practices to be included in HVAC design



OPERATIONS

Ensuring the ongoing performance of the buildings and implementation of the various strategies that define sustainability for the site is a critical element of ensuring long term project success. Each of the areas above will have a corresponding operations and maintenance program, whether landscaping, transportation demand, energy, or indoor air quality, and specific plans will be developed for each in turn as the site design and program evolves. The following are aspects not otherwise addressed above that the development is committed to instituting for the project:

- 1 Site-wide waste management.** The development will evaluate existing services to provide composting and recycling (including e-waste) for all of the buildings and tenants. This will effectively enable any tenant to pursue their own zero waste goals.
- 2 Tenant sustainability program.** The development will facilitate a sustainability business program among tenants, outlining various measures that are high priorities for office and manufacturing tenants, including procurement, waste diversion and e-waste management, transportation incentives, etc.
- 3 Education.** The development will facilitate various educational opportunities for tenants, and will explore partnering with the adjacent middle and high school to explore opportunities for student environmental education and engagement on the site.

SUMMARY

Commitment	Composting and recycling service provided to all buildings
Goal	Tenants will participate in the County's Partners for a Clean Environment program
Commitment	Sustainability education about the site features to be provided