# Montessori Kids Universe

**Louisville, KY**

## Natural Outdoor Play & Learning Area

~ 1.13 Acres

Plan By The Natural Playgrounds Co. © LLC 1/2025

**www.naturalplaygrounds.com**

Scale: 1/8" = 1'

contours are at 1' intervals

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Natural Playgrounds may be placed in as natural a location as available. However, because these areas are so attractive to children and teachers alike, they can get overused quickly. This is the main reason to finish the Natural Playground as soon as possible so that use can be disbursed as shown on the plan.

NOTE: This is a schematic design and should not be considered a construction drawing. Although it is a very accurate, excellent construction guide, it should be altered whenever on-site conditions suggest a better alternative. No investigation was made for subgrade conditions, bedrock, for percolation and drainage of water, below ground utilities, easements, zoning, or required setbacks. The design was prepared based on a 3D scan, but before construction, please confirm all measurements. Where applicable, the final construction MUST comply with ASTM 1487-07, CPSC, and ADA safety standards, regulations, and manufacturing guidelines. If you want the final construction to be inspected by a Certified Playground Safety Inspector (CPSI), they must be familiar with and endorse the concept of Natural Playgrounds, or the inspection will be useless.

NOTE: Design input came from the site scan, engineering and residential drawings, and the Questionnaire. Almost all of the elements requested on the questionnaires have been included, so the frame work has been put in place so that elements can/should be added as current grows. General guidelines are listed below, so there are several locations where these elements could be placed provided the original nature of the plan is followed.

NOTE: All electronic during construction should be guided by the principles of sustainability, so that whenever possible, indigenous vegetation, natural processes, local habitats, rainwater harvesting, xeriscaping, and so on, should prevail. Where possible, land should be sloped toward trees and other vegetation to promote rainwater harvesting. If deemed necessary for your climate and conditions, a means to irrigate all new plantings of trees, shrubs, and grass should also be implemented to protect your investment. Water line(s) must be brought onto the site for drinking, playing, and irrigation, although irrigation water may be augmented by rainwater stored in cisterns. Rain barrels are not recommended because they require maintenance that most schools have trouble keeping up. Algae, mosquitoes, dirt, leaves and other debris from the roof, clogging, water drainage, thorough yearly cleaning, tipping, and overflow issues are usually more hassle than they're worth. Instead, consider collecting rainwater in large cisterns.

Note: All new soil brought onto the site must be tested clean, then balanced and amended before seeding. All soil for gardens should be top quality, composted soil, balanced for garden plants.

No existing trees are to be removed! All existing trees and root systems far beyond the drip line(+) must be protected from construction damage using wood stakes and caution tape to designate protected areas.

Any new trees should be indigenous and culturally significant (if possible), and should be non poisonous (all parts), not messy (e.g. tiny leaves), fast growing (25'-35' min. ht, such as dwarf trees) to remain in scale for children, low branching, and capable of providing excellent shade. A variety of times is preferred for its educational value. New trees on new hills may require root walls with amended soil. Any new plants should be easy to maintain, resilient, should regenerate easily, resist the stresses, and tolerate wildlife, and should be connected to the seasons.

To protect your investment and prevent degradation, and to demonstrate to children the necessity to properly care for a well-used, natural environment, all vegetation (e.g. grass, shrubs, trees) should receive loving attention throughout the year (i.e., mowing, food, water). Occasionally, plenty areas may need some soil repair. It is desirable to develop curriculum guidelines involving children in the upkeep and maintenance of their natural play area so they understand how to care for natural environments.

NOTE: Signs are an important learning tool and should be used throughout the playground. No signs are shown on the plan, but they are typically placed near play elements to describe activities, locations, use guidelines, directions, and so on. Along the suggested trail system, story book stations would be very appropriate, as would nature stations with signage, and so on.

NOTE: The abundance of plant life (shrubs, flower gardens, trees) encourages wildlife. Birds, bats (for controlling insects), butterflies, and so on should be further encouraged by providing bird, bat, butterfly, and other houses.

NOTE: About site drainage: The sheet water from the hill is being handled by a long, shallow swale running east west at the approximate base of the hill. The shallow slope from the building toward that swale may not be sufficient to quickly shunt water from the downspouts to the swale, which may result in standing water and/or saturated ground near the building which, with rain, will run muddy. We strongly suggest that, if not done, shortly, the downspouts be tied into the drain installed behind the building.

NOTE: Storage for items such as chalk, guidebooks, reading books, magnifying glasses, mosses, small play items (frisbees), etc should be placed at strategic points around the playground. Only a few "storage-ettes" are shown on the plan.

NOTE: Ideally, as many curriculum opportunities as possible should be taken outside, as it is very easy to teach using principles of math, earth sciences, environmental science, and so on outside. Further, there are several locations on the plan which make it very easy to take classes outside for reading, art, music, classrooms, and so on.

NOTE About Accessibility: Because the slope behind most of the building can not be made easily accessible without considerable expense, you have not requested that the play and learning area be made accessible. As grass is not an accessible surface, accessibility on the relatively flat area behind the building will be possible only if transparent or similar is installed.

Pre Construction Notes

Dig Safe must be called before any construction work begins!

Construction Notes

- Do not use trenching, use chain, well-pronged hand jack to contour berms and mound/quasi shapes.
- Use only wood chips/mulch, sandy loam for topsoil, and balanced mix with kid safe fertilizers.
- Use only sandy loam, amended topsoil for all trees.
- Sand play areas must be effectively drained either internally, to a drain, or to daylight. Check to make sure they are filled with fine, clean washed, smooth surfaced (pea, sugar, or torpedo) sand. Do NOT use crushed rock or materials that contain crystalline silica.
- Use only self replicating or grass that can sustain tough, prolonged use, such as Buffalo, Bermuda grass, or similar.
- Wood used for structures is treated with non toxic Kiel (locally or similar, and must treated with a non toxic, water proofing, penetrating sealant (such as Thompson's Waterseal) twice yearly using a garden sprayer or similar to prevent rotting.
- All boulders used for play must be smashed and relatively smooth. Do not use blasted, sharp edged rocks.