

## Brooke Outdoor Leadership and Nature Therapy School Alternate Proposal – November 2019

### Brooke Elementary – Outdoor Leadership and Nature Therapy School Background

Brooke Elementary is a National Wildlife Federation Green Flag Eco ESTEAM school in Central East Austin with academic distinctions in math and science, and robust after school programs including fine arts, 4H and robotics. It is an urban school in close proximity to community resources like a grocery store, the Cepeda Library, the #300 bus route, and two major bike lanes along East 5<sup>th</sup> and Tillery. It provides a 21<sup>st</sup> Century learning equitable environment with classrooms full of natural light, a well-established and used Green School Park/Outdoor classroom, and a focus on providing support for each student's unique needs.

The inclusive and nurturing environment created for its high percentage of special education students benefits everyone on the campus. The Special Education Life Skills class do tasks like mulch the 85 beautiful trees on campus and harvest hyper local eggs from the Brooke flock of chickens and ducks. Students who are autistic, have experienced trauma or are under stress benefit from nature therapy. Time in nature helps children release adrenaline<sup>12</sup> and regain impulse control<sup>3</sup>, so faculty has an opportunity to identify the root cause of the issue and address it.

### Brooke Outdoor Leadership and Nature Therapy School

Brooke Elementary will become a district-wide model campus for urban outdoor leadership and nature-based therapy. The program will build off the robust green school grounds that have been created over two decades and the existing innovative multi-disciplinary E STEAM curriculum. By actively sharing the knowledge and lessons learned with other campuses, Brooke can facilitate other schools in pursuing the Green Flag status.



*A student holds a duck for other students to pet during Fall Fest 2019. Students care for the school's ducks and chickens. The Life Skills class gathers the flock's eggs to sell at events like a pop-up Farmer's Market during the East Austin Studio Tour.*

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<sup>1</sup> Hartin et al. (2014). Nature and health. *Annu Rev Pub Health*, 35, 207-208.

<sup>2</sup> Christian et al. (2015). The influence of the neighborhood physical environment on early child health and development: A review and call for research. *Health Place* 33, 25-36.

<sup>3</sup> Faber Taylor et al. (2002). Views of nature and self-discipline: Evidence from inner-city children. *Journal of Environmental Psychology*, 22, 49-63.

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Students in the urban core will continue to learn in beautiful outdoor spaces while embarking on a leadership pathway as they help mentor other campuses like Martin Middle School and the first three Mayor's Initiative Cities Connecting Children to Nature pilot sites: Barrington, Wooldridge, and Sanchez Elementary Schools.

The campus will be used as a facility for expanded AISD faculty development with events and classes on topics including the AISD Mindfulness Retreat, Garden to Café, and using outdoor learning space for education and behavioral therapy.

### **Strengthen Eastside Memorial Vertical Team**

- Brooke Elementary was the second East Austin school to achieve the distinguished National Wildlife Federation Green Flag status in the District, following in the vertical step pathway of Eastside Memorial. In addition to the social, emotional, and academic benefits this nature focus has provided it also created positive media opportunities.
- Martin Middle School is the Eastside Memorial Vertical Team's middle school option. Its Innovation Academy has the goal of providing a diverse and rigorous learning environment, with an emphasis in Science, Technology, Engineering, Arts, and Mathematics (STEAM) careers, ensuring every student will be able to design, create, and communicate solutions to real world challenges. Principal Monica de la Garza-Conness is enthusiastic about developing a plan with Brooke's Principal Vargas and Eastside Memorial's Principal Garcia to gain Green Flag Eco School status, too.
- Eastside Memorial Early College High School was the first National Wildlife Federation Green Flag school in the District. Its campus curriculum and culture integrate green pathways and promote sustainable practices. This culture will be an integral part of the school's new location and can dovetail with programming at Austin Community College.



The creation of the first Vertical Team in the District with a National Wildlife Federation Green Flag Status will strengthen the ESTEM pathway for Brooke Elementary students and prepare East Austin students for careers in green jobs. It will also serve as a unifying theme for the vertical team, which can garner community pride, as well as, media attention.

The Brooke Lions will commit to mentoring the Martin Eagles through their Green Flag journey.

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Additionally, the City of Austin has begun talks with Austin Community College about offering the nationally recognized Green Infrastructure Certification program. Students who move through the Green Flag vertical team will be well positioned to receive the certification before they even graduate high school.

### Preparing Our Kids to Succeed By

- Continuing to increase time outdoors, which leads to multiple positive improvements in [health](#) and well-being, [cognitive and academic abilities](#), and mental, physical and emotional states.
- Celebrating and promoting the Brooke inclusive campus culture, which benefits all but especially the special education population.
- Providing opportunities for students to participate in outdoor discovery and leadership curriculum.
- Serving as an outdoor learning model that can be replicated at any campus in the District, infusing nature onto campuses instead of viewing it as something removed from daily life.
- Continuing to engage students in multidisciplinary projects in green spaces.
- Raising students who are [Earth stewards](#), regardless of their ultimate career selection.
- Connecting children with behavioral, cognitive and physical therapy needs to nature.
- Provide access to support that families need with our “sharing shelf” of food and clothing donated by other parents, and access to a washer and dryer to clean clothes which studies have shown can increase attendance and thus academic success.

### Campuses in this Scenario

- Vertical Team: Brooke Elementary School, Martin Middle School, Eastside Memorial High School
- Additional mentees include:
  - The Mayor’s Cities Connecting Children to Nature Initiative pilot sites
    - Barrington Elementary
    - Wooldridge Elementary
    - Sanchez Elementary
  - East Austin Schools that express interest in a mentorship. Maplewood Elementary has reached out already, and we anticipate more interest once we publicize this offering. Brooke has capacity to mentor two to four schools per year.



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### Create an Official Green School Park

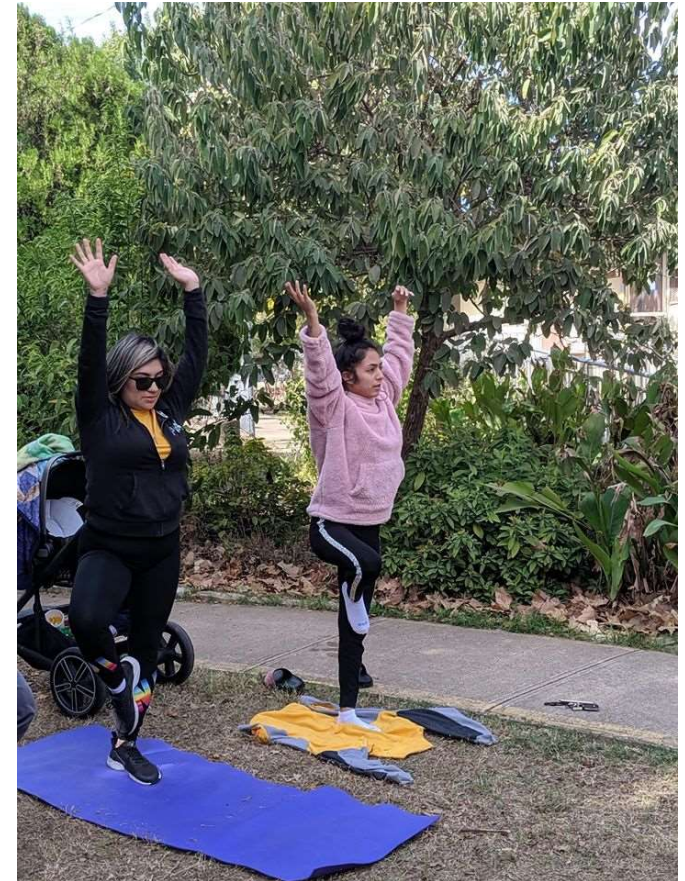
Brooke Elementary proposes development of a Joint Use Agreement with the City of Austin Parks and Recreation Department (PARC), so Brooke could remain open to the community as a Green School Park during non-school hours. The campus does not currently provide access to the grounds for neighbors.

#### - **Benefits to the Surrounding Community**

- Fulfill the Govalle-Johnston Terrace Combined Neighborhood Association need, as stated in their Combined Neighborhood Plan and Future Use Land Map, for walkable park access.
- Help the City of Austin meet its 10 Minute Walk goal, in which everyone – existing neighbors and those anticipated with increased density - in the urban core has safe, easy access to a park within a quarter mile.
- Support the City of Austin and AISD in realizing their pledges and resolutions as stated in the [Children's Outdoor Bill of Rights](#).
- **Additional options to explore with PARC include:**
  - Renting the facilities like the stage and gym in non-school hours
  - Running after school rec center programming out of the school
  - Keeping the goats used for Integrated Pest Management at Brooke for the 4-H to help take care of
  - Coordinating Brooke use of PARC centralized materials library with items like bouncy houses and carnival games

#### - **Benefits to Brooke Elementary and AISD**

- Community members who visit the school grounds on a regular basis become invested in the success of the school. They could be more likely to become mentors, make donations, participate in events like It's My Park Day, and report any issues that might arise in non-school hours.
- Community members who form a relationship with a green school park will be more likely to consider that school as an option when they have children, they want to enroll in school themselves or they are asked for school recommendations.



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### Marketing

Brooke serves as an example of a school that can be a strong competitor against charter schools and draw Hispanic, African American, Special Education, and low socioeconomic students back to the District.

### Target Audiences

- Parents of young children getting ready to enter preK3 & preK4
- Charter school attendees' families
- Real estate agents

### Points of Pride to Highlight

- ½ day PreK3 & full day PreK4 are offered at no cost (if certain qualifications are met) and on a fee-for-service basis
- Academic Distinctions in math and science
- ESTEAM
- National Wildlife Federation Green Flag School
- Students learn responsibility and compassion by caring for chickens, ducks, bunnies and bees
- Free after school programming including: robotics club, 4-H, ballet folklórico, yoga, soccer, bicycle club, arts and crafts, and storytelling. After school programs reinforce the school's ESTEAM culture
- Free breakfast, lunch and after school snack
- School uniform: minimizes social stigmas associated with clothing choices; a relaxed policy so nobody is penalized for not wearing one
- Family support services: Parent Support Specialist classes and connections to community resources, a "sharing shelf" with food and clothes, complimentary access to a washer and dryer
- Serves multiple generations. We have families where grandparents and parents are proud alumni.



*Our kindergarten teachers are knowledgeable about the latest innovative education techniques and incorporate play into their literacy, engineering and other lessons. Learning can be fun!*



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**Methods for Marketing**

- Existing
  - Yard signs
  - Banner
  - Tabling at events
  - Call outs on Spanish language radio
- Additions
  - Social media marketing using AISD branded hashtags
  - Maintain high quality timely content on [www.twitter.com/brookelions](https://www.twitter.com/brookelions) and [www.facebook.com/brookeelementarypta](https://www.facebook.com/brookeelementarypta)
  - Post school events that are open to the public on NextDoor
  - Open the school grounds during non-school hours as a Green School Park
  - Banners hung on the East 5<sup>th</sup> St fence
  - Flyers to all daycares between IH-35 (W), Airport (E), the Colorado River/Lady Bird Lake (S) and East 12<sup>th</sup> (N) + emails to those organizations to share with their families about community events open to the public
  - Requests sent quarterly to all service providers at the school to share a message promoting Brooke Elementary on social media and in newsletters
  - Media releases submitted to tv, radio, and print news stations for community events at Brooke and when awards are received
  - Invitations for dignitaries to participate in special events



*Raasin McIntosh, Olympian and Executive Director of Raasin in the Sun, presented Principal Vargas with a City of Austin proclamation declaring November 2, 2019 as, "Brooke Academic Distinction Day."*

**Appendix A - [www.childrenandnature.org/wp-content/uploads/2017/07/CNN\\_NatureImprove\\_16-10-27\\_O\\_newlogo.pdf](http://www.childrenandnature.org/wp-content/uploads/2017/07/CNN_NatureImprove_16-10-27_O_newlogo.pdf)**

Spending time in nature provides children with a wide range of health benefits.



#### SUPPORTING RESEARCH

[illegible]

CNN recognizes that not all studies support causal statements.

CHILD CHALLENGE &amp; MATURE METWONE

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Appendix B – [www.childrenandnature.org/wp-content/uploads/2017/07/CNN\\_AcademicOutcomes\\_16-10-27\\_O\\_newlogo.pdf](http://www.childrenandnature.org/wp-content/uploads/2017/07/CNN_AcademicOutcomes_16-10-27_O_newlogo.pdf)

## NATURE CAN IMPROVE ACADEMIC OUTCOMES

Spending time in nature enhances educational outcomes by improving children's academic performance, focus, behavior and love of learning.



### SUPPORTING RESEARCH

Underman & Hoody (1995). Closing the achievement gap: Using the environment as an integrating context for learning. Results of a Nationwide Study. San Diego: SEER. <sup>1</sup> Chou (2016). Benefits of nature contact for children. *J Plan Lit.* 30(4), 435-452. <sup>2</sup> Benvenuti et al. (2018). School gardens enhance academic performance and dietary outcomes in children. *J School Health* 88(8), 508-518. <sup>3</sup> Williams & Dixon (2012). Impact of garden-based learning on academic outcomes in schools: Synthesis of research between 1990 and 2010. *Ann Educ Res* 42(5), 2142-225. <sup>4</sup> Wang et al. (2015). The effects of school gardens on children's science knowledge: A randomized controlled trial of low-income elementary schools. *Int J Sci Educ* 37(1), 385-400. <sup>5</sup> Li & Sullivan (2016). Impact of views to school landscapes on recovery from stress and mental fatigue. *Landscape Urban Plan* 148, 49-58. <sup>6</sup> Wu et al. (2014). Linking student performance in Massachusetts elementary schools with the "greenness" of school surroundings using remote sensing. *PLoS ONE* 9(10): e107648. <sup>7</sup> Matsuzaki, R. H. (2010). Student performance and high school landscapes. *Landscape and Urban Planning* 97 (4), 275-289. <sup>8</sup> Moore & Wang (1997). *Natural Learning: Rediscovering Nature's Way of Teaching*. Berkeley, CA: MGO Communications. <sup>9</sup> Faber Taylor et al. (2005). Views of nature and self-discipline: Evidence from inner-city children. *J Environ Plan* 32, 49-53. <sup>10</sup> Mårtensson et al. (2009). Outdoor environmental assessment of attention-promoting settings for preschool children. *Health Place* 15(4), 114-122. <sup>11</sup> Wang (2000). At home with nature: Effects of "greenness" on children's cognitive functioning. *Environ Behav* 32(6), 779-795. <sup>12</sup> Barth et al. (2016). How does psychological restoration work in children? An exploratory study. *J Child Adolesc Behav* 3(2). <sup>13</sup> Faber Taylor et al. (2001). Coping with ADHD: The surprising connection to green play settings. *Environ Behav* 33(1), 54-75. <sup>14</sup> Amaly et al. (2014). Green and blue spaces and behavioral development in Barcelona schoolchildren: The BREATHE Project. *Environ Health Perspect* 122(13):1354-1358. <sup>15</sup> Bker (2009) The child in the garden: An evaluative review of the benefits of school gardening. *J Environ Educ* 40(5), 16-18. <sup>16</sup> Riss & Brower (2014). Outdoor education and science achievement. *Appl Environ Educ Commun* 13(4), 124-140. <sup>17</sup> Bull & Symont (2006). Grounds for health: The intersection of green school grounds and learning-promoting schools. *Environ Educ Res* 14(1), 77-90. <sup>18</sup> Hedrick & Montague (2003). Cahn, active and focused: Children's responses to an organic outdoor learning environment. *Learn Environ Res* 10(2), 28-35. <sup>19</sup> Ruiz-Gallardo & Villalón (2013). Garden-based learning: An experience with "at risk" secondary education students. *J Environ Educ* 44(4), 259-270.



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Appendix C - [www.childrenandnature.org/wp-content/uploads/NaturePlayInfographic.pdf](http://www.childrenandnature.org/wp-content/uploads/NaturePlayInfographic.pdf)

NATURE PLAY CAN ENCOURAGE CARE FOR THE EARTH

THE ISSUE

Childhood has moved indoors, leaving kids disconnected from the natural world.

MEANINGFUL OUTDOOR EXPERIENCES BENEFIT CHILDREN AND INSPIRE THEM TO LOVE AND CARE FOR NATURE.

Children who are connected to nature have better health, higher satisfaction with life, and pro-environment behaviors.<sup>2,13</sup>



SUPPORTING RESEARCH

Studies cited here are from the report *How to Connect with Nature: Help Us Care for Ourselves and the Earth* (Charles, C. et al. 2018, Children & Nature Network) and its summary *Connecting with Nature to Care for Ourselves and the Earth: Recommendations for Decision Makers* (2018). Both documents are downloadable from [childrenandnature.org](http://childrenandnature.org) and [natureforall.org.uk](http://natureforall.org.uk).  
1. Orla, S., & Francis, P. (2015). Nature-based environmental education of children: Environmental knowledge and connections to nature, together, are related to ecological behavior. *Global Environmental Change*, 41, 88-94.  
2. Richardson, M., Sheffield, D., Henry, C., & Peacock, D. (2016). *A Report for the Royal Society for the Protection of Birds (RSPB): The Impact of Children's Connection to Nature*. Derby: College of Life and Natural Sciences, University of Derby.  
3. Zubeck, H., J. Knight, A.T., Gale, K.J., & Le Grange, L.L. (2014). *Connections as a core conservation concern: An interdisciplinary review of theory and a call for practice*. *Springer Science Reviews*, 9(5), 19-45.  
4. Chanda, L., & Owen, V. (2010). The development of conservation behavior in childhood and youth. In Clayton, C. (Ed). *The Oxford Handbook of Environmental and Conservation Psychology*. 5 Chanda, L., & Corling, D.F. (2007). Education for strategic environmental behavior. *Environmental Education Research*, 15(4), 437-451.  
5. Richardson, M., & Sheffield, D. (2015). Three good things in nature: Making nearby nature bring sustained increases in connection with nature. *Psychology*, 8(1), 1-10.  
6. Richardson, M., Haller, J., & Larkin, R. (2015). One thousand good things in nature: The aspects of nature that lead to increased nature connections. *Environmental Values*, 24(1), 103-118.  
7. Orla, S., & Francis, P. (2015). Many children in the woods: Applying principles of community-based social marketing to a family nature club. *Ecopsychology*, 26, 9-16.  
8. Gould, A. (2016). A framework to assess where and how children connect to nature. *Frontiers in Psychology*, 8 (January). <http://dx.doi.org/10.3389/fpsyg.2017.01001>  
9. Kuo, M., Barnes, M., & Jordan, C. (2016). Do experiences with nature promote learning? Converging evidence of a cause-and-effect relationship. *Frontiers in Psychology*, 7(2016), doi:10.3389/fpsyg.2016.02016.  
10. Williams & Davis (2015). Impact of garden-based learning on academic outcomes in schools: Synthesis of research between 1990 and 2010. *Rev Educ Res*, 85(5), 21-50.  
11. O'Keefe, C. (2015). Family nature clubs: Creating the conditions for mental and environmental connection and care. *Presented at* 13 Richardson, M., Sheffield, D., & McGowan, K. (2018). The relationship between nature connections and subjective well-being: A meta-analysis. *Journal of Happiness Studies*, 1-10.

CBNN recognizes that not all studies support causal statements.

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Appendix D - [www.austintexas.gov/sites/default/files/files/COBOR\\_Resolution.pdf](http://www.austintexas.gov/sites/default/files/files/COBOR_Resolution.pdf)

AUSTIN CHILDREN'S  
**OUTDOOR  
BILL *of* RIGHTS**

**WHEREAS:** Studies show that children who learn and play in nature are healthier, happier and perform better in school.

**WHEREAS:** Children who have safe access to parks, zoos, nature centers, lakes and rivers, and other public outdoor spaces are more resilient, have higher self-esteem, are more confident, are better problem solvers and are more creative.

**WHEREAS:** All children should feel welcome at all of Austin's parks, pools, trails, waterways and open spaces.

**WHEREAS:** Communities in disadvantaged areas with access to nature benefit from greater health equity with lower rates of mortality and disease.



**WHEREAS:** Children who develop a positive relationship with nature are more likely to become tomorrow's stewards of our natural heritage.

**WHEREAS:** Through its parks, trails, waterways, open spaces, and other natural spaces, Austin provides a wide variety of quality outdoor opportunities.

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**THEREFORE:** We support this Children's Outdoor Bill of Rights  
in which every child has the right to:

Climb a tree • Catch a fish • Picnic in a park • Hike a trail • Ride a bike  
Splash in the creek or river • Discover plants and wildlife  
Play in the sand and mud • Gaze at the night sky • Chase a firefly  
Plant a seed and watch it grow • Harvest and eat a fruit or vegetable



Children in Nature  
Collaborative of Austin

Learn more at [www.austintexas.gov/ccn](http://www.austintexas.gov/ccn)

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**Appendix E - Programs at Brooke**

We have marketed the school as an Entrepreneurial Science Technology Engineering Arts & Math School (CAC and PTA have helped with changing STEM to STEAM to ESTEAM).

CAMPUS Programs (during school)

- Creative Learning Initiative Campus
- Social Emotional Learning Campus/No Place for Hate
- Kindness Campaign (2nd year-National Program)
- Zachary Scott partnered with STEM program with 4th
- Zachary Scott partnered with Story Wranglers with 3rd
- Zachary Scott partnered with 2nd grade for Arts Across the Curriculum
- Paramount Pictures partnered with 4th & 5th
- Ed Exchange in partnership with Thinkery is partnered with 2nd Grade
- Computer Literacy and Coding (PreK through 5th) during library time
- MakerSpace (PreK through 5th) during library time
- Schlitterbahn Waves of Pages Reading Challenge
- Six Flags Read to Succeed Reading Challenge
- Bluebonnet Award Reading Club
- Texas 2X2 Reading Club for Primary grade students
- Texas Farm Bureau Education Workshop -Agri Farm
- Partnered with PEAS Garden
- Texas General Attorney Office Drug and Drinking Prevention Program
- Texas Capital Red Ribbon Rally
- Girls Outdoor Program for 3rd through 5th with West Cave Outdoor Discovery Center
- Athletes for Hope
- Participants in International Dot Day
- Participants in National Punctuation Day
- Austin Jazz Workshop
- Marathon Kids
- National Wildlife Federation -Silver Eco School (Silver & Bronze Awards seeking Green Flag Award) Applied for Green Ribbon Award from Federal Department of Education



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- PreK 4 program

Prime Time (After School Programs)

- Robotics/Engineering is Elementary
- Arts & Crafts
- Acoustic Guitar Class
- Coding after school
- Ballet Folklorico
- Boy Scouts
- Karate
- Texas Nutrition Cooking Class with Kids
- Choir
- Zumba for Children
- MakerSpace
- Destination Imagination
- Ballet
- Homework Lab/Tutoring
- Math Pentathlon
- 4H Travis County
- PALS
- Latinitas
- Theatre
- Baseball
- Butterfly Club
- Film Kids
- Bee Wranglers Club
- Forklift Dance – Creative Movement Class

We partner with Zaragoza Recreation Center and Metz Recreation Center for after care.

Community Partners (help with funds or donate materials)

- PALS – Literacy Coalition Center

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- Austin Partners in Education
- Seedling Foundation
- ACE
- Capital Metro
- Meals on Wheels
- Toys for Tots
- Sendero Health Plan
- Water Tank Storage
- EcoRise
- Buzzmill
- Camp Gladiator
- Luster Pearl
- East Austin Environment Initiative Committee – City of Austin
- Environmental Sustainability Association Committee (ESAC)
- HEB
- Rivera Welding Auto Mechanic
- Dohnvan Millworks
- Fiesta Tortilla Factory
- Hop Daddy Burger Bar
- Juan in a Million
- Sams Club (annual donation)
- Walmart
- Antic Screening
- Viva 313 Pizza
- Flitch Coffee
- Harvest Lumber
- Southside Flying Pizza
- Smokey Denmark Sausage Company