GUST ELEMENTARY SCHOOL:

A 2001 Landscape Master Plan for Elementary School Campus Improvements

Prepared For: Denver Public Schools
900 Grant St., Denver, Colorado

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Completed By: Jackie Burghardt
Graduate Student of Landscape Architecture

As part of a course: Finding Common Ground
Exploring the Urban Experience
Fall Semester 2001
University of Colorado @ Denver
College of Architecture & Planning
Campus Box 126
Denver, Colorado
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Approved
Principal, Gust Elementary, date

Approved
CDM Representative, date

Approved
P. M., DPS Facility Management, date

Approved
Grounds Supervisor, DPS Facility Management, date
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WHERE THE SIDEWALK ENDS

There is a place where the sidewalk ends
And before the street begins,
And there the grass grows soft and white,
And there the sun burns crimson bright,
And there the moon-bird rests from his flight
To cool in the peppermint wind.

Let us leave this place where the smoke blows black
And the dark street winds and bends.
Past the pits where the asphalt flowers grow
We shall walk with a walk that is measured and slow,
And watch where the chalk-white arrows go
To the place where the sidewalk ends.

Yes we'll walk with a walk that is measured and slow,
And we'll go where the chalk-white arrows go,
And for the children, they mark, and the children, they know
The place where the sidewalk ends.

--Shel Silverstein
Project Introduction

The Challenge

Studies show that a well-planned and equipped exterior play area enhances the learning environment resulting in improved learning and achievement. Such play areas provide physical and mental challenges that translate to improved health and learning attention. Furthermore, with proper design, these areas themselves become outdoor classrooms or learning landscapes. One of the principal secondary goals of all schools, including elementary, is to provide a focus for the community – a place to gather and to meet, a place to enjoy, a place that enhances the community’s appearance. A reflection of this community importance is Denver’s Mayor Wellington Webb’s statement, “As Mayor, I have long recognized that we cannot have a great city and great neighborhoods without great schools.”

Denver Public Schools (DPS) is an urban school district with many of the same challenges of other urban districts. The infrastructure is aging – the average facility age is almost 50 years. The ongoing 1998 General Obligation Bond (GOB) will increase the number of schools to 130 but contains no funding for existing elementary or any other existing school playground. Approximately 75 DPS elementary schools require moderate to extensive renovations or upgrades to meet adequate standards. These include replacing playground equipment, providing irrigation and sod (to eliminate gravel and dirt fields), providing American with Disability Act (ADA) accessibility, and providing an outdoor classroom learning environment. Approximately half of the 75 elementary schools are located within underserved neighborhoods. It is in these neighborhoods where transforming the schoolyard is most pressing. These schools have chronic disciplinary problems that are disruptive to a school’s academic environment. Playgrounds lacking appropriate choices for children become arenas to bully and tease. Recess should be a positive experience that compliments their academic development. A place where children develop their emotional, physical and social skills.

The Solution

The “Learning Landscape” program is an entrepreneurial community minded alliance of public and private interests that seek to strengthen Denver Public Schools and their surrounding neighborhoods by designing new multi-dimensional playgrounds and social gathering places. The success of this program is founded on a mutual respect of aesthetic, maintenance, safety, and recreational issues. The University of Colorado at Denver’s Landscape Architecture department offers a seminar course called FINDING COMMON GROUND—EXPLORING THE URBAN EXPERIENCE. Students of landscape architecture, architecture and other disciplines have come together with Professor Lois Brink to research current educational, sociological, and environmental thought regarding urban space in general and elementary school grounds in particular. Each student in the course selects a school from a predetermined pool and uses this knowledge to develop a vision and master plan for each school. The master plan approach will suit a multi-faceted contemporary existence—engaging a child’s educational and recreational experience with that of the community at large.
he Intent of the Master Plan

The master plan is a written report and plan that sets forth the structure for future campus improvements. The vision is further delineated into goals that identify the major goals for implementation. These goals are defined through the use of text and imagery. A programmatic list of uses is also developed. Lastly, each master plan sets forth the aesthetic ordering system or systems that will be used on the design phase to organize the programmatic uses. This plan once approved will provide a framework for fund raising and future construction.

Location/Background

Gust Elementary School is located on the south side of West Yale Avenue, the street dividing the two neighborhoods of Harvey Park and Harvey Park South. Its students are drawn from a portion of each neighborhood. Demographics of both neighborhoods show that they share similar populations and housing statistics.

Currently 510 students attend Gust from ECE through grade five. The school is designated a Highly Gifted Center for southwest Denver and is a Higher Education Partnership school with Metro State College of Denver. Literacy and technology are priorities supported by Library Power and a computer lab with a K-5 curriculum. Gust hosts sixty-four teachers, para-professionals, administrators and student teachers.

DPS Boundaries for Gust Elementary School (1)
CSAP results released in July, 2001 show a slight decline in 3rd grade reading scores from 48% at or above proficiency last year to 46% this year. DPS average for elementary schools is 49%. Fourth grade reading scores remained stable at 49%, above the DPS average of 37%. Fourth grade writing is at 21%, above the DPS average of 16%. Fifth graders did well in math with a score of 40%, above the DPS average of 27%. However, these results were only good enough to give the school a “low” overall performance ranking in the Colorado Schools Accountability Report for the 2000-01 School Year.

A noteworthy survey was done of the school’s grade K-2 students. Students were asked questions about their perceptions of their education, safety at the school, the school environment, their teachers and principal, homework and learning centers, and relationships between teachers and students. An overwhelming 93% liked their teachers and 92% felt they were learning a lot in school, and used computers. Ninety percent knew their teachers wanted their best at school, knew the school rules and 89% said their teachers helped them learn how to get along with others. Teachers received high marks also for caring about the students and listening to them when they needed to talk. The largest groups of dissenters were 21% who disliked physical education (yet 83% liked being on the playground), 19% who thought that most of the children in school were not nice to them and 16% who did not like eating in the lunchroom. Of the 246 children in this age group, 212 responded to the survey.

**Constituent Groups**

**Students**

The most recent statistics for the school are from the 1999-2000 school year. Gust’s overall population is 53.3% Hispanic, 35% white, 6.4% Asian, 3.1% African American and 2.3% American Indian. English language learners total 15%, comprising 10.1% whose native language is Spanish and 4.9% whose native language is other than Spanish. Attendance percentages for every group and semester last year averaged 95.21%, with 51.8% of students attending school for three consecutive years. Of its then 486 students 45 have disabilities putting them into special education; 1 is cognitively disabled. Seventy-five students belong to the gifted and talented program. Just over 59% of students qualify for free or reduced-price lunch. Overall, 53 students, or 12%, receive Temporary Aid to Needy Families (formerly AFDC).

Twelve children from kindergarten, first, third, fourth and fifth grades met to talk about and draw visions of a playground they would like to have at their school. They were asked for first, second and third choices of 19 play images that included active images playground equipment, outdoor spaces, quiet places and hands on environments. The first place winner was the colorful primary playground equipment with 6 of 12 votes, chosen equally by boys and girls in each grade. Second place was the hanging ride toy with 5 votes. Sharing third place with 3 votes were climbing rocks, swings, and tetherball. There were 8 votes for various “quiet” activities of the pond, the gazebo, log benches, a garden and a place to hide.
Pictures drawn by the students indicated a strong identity with current activities of their playground. Swings, slides, tetherball, four square, basketball, wall ball and climbing bars were favorites. The drawings added a few new ideas, such as trampolines and climbing structures, but there is a noticeable lack of grass, trees and flowers in their pictures.

Teachers and Paraprofessionals

The teachers were enthusiastic about the prospect of an improved play area outside. They all voiced a need to reduce heat in the east and west-facing classrooms that are boundaries of an asphalt play area, increase shade on the playground, and provide quiet places for relaxation as well as social interaction. Everyone favors a previous playground plan drawn in 1993 that called for an outdoor Courtyard or amphitheater that would accommodate a classroom for outdoor instruction and gatherings surrounded by trees and benches. Their wish list includes gardens (botanical, xeriscape, grasses and native wildflowers), compost pile, more tetherball courts, drinking fountains, a track around the field and more parking spaces. A “5th grade legacy” wall was suggested for an area just outside the 5th grade classrooms.

Community Groups

I met separately with the CDM (Collaborative Decision Making group) and the GFTA (Gust Family/Teacher Association). These were informational sessions to inform them of the master plan process, receive their input, and solicit their corporate help in backing the project through the donations of time, resources and money. Concerns focused on safety: traffic speeding in front of the school despite a stoplight; parking and drop off issues; and some particular playground equipment responsible for minor injuries. Lack of shade and need of more fun things to do on the playground rounded out the list of concerns from parents.

Master Plan

History/Future Improvements

Katherine L. Gust Elementary School was designed by architect C. Francis Pillsbury and built in 1954. The original building had just 11 classrooms, 2 kindergarten rooms, library, auditorium, gym, lunchroom and administrative unit. An additional 4 classrooms were added in 1963. Miss Gust was a classroom teacher from 1916 until her death in 1951 and was memorialized in this school because of her devotion to the education of Denver’s children.
In 1992 the principal at that time established a committee comprised of volunteers to embark on a renovation of the school playground. (See Appendix: Gust Playground 2000 Committee) Funds were raised to hire an architect and plans were drawn. Difficulties to attain further funding and approvals resulted in only a part of this project, the addition of an ECE play structure and an irrigated turf area in front of the west classrooms, being constructed in 1997. Two boards depicting drawings of this master plan are available at the school; no other plans or blueprints are known to be available.

**Inventory of On-Site Uses**

*Neighborhood Site*

The school is in the middle of a residential neighborhood two blocks long, bordered on the north by Yale Avenue and on the east by South Irving Street, with houses facing the school. The west border is Linvale Place, just a half block long. The rest of that block consists of houses that abut the school property and extend to the west to South Knox Court, the All Saints Catholic Church, Federal Ave. and Hillside St.

The western perimeter of the school. A 4’ chain link fence runs from the end of the school and beginning of the playground along the east side and across the south end of the playground continuing between the houses back to the west border of the property.

*General Surface Areas*

Following are square footages for surfaces of irrigated turf, asphalt, concrete and pea gravel:

<table>
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<th>Surface Type</th>
<th>Square Footage</th>
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<tr>
<td>Irrigated Turf</td>
<td>38,693</td>
</tr>
<tr>
<td>Asphalt</td>
<td>26,125</td>
</tr>
<tr>
<td>Concrete</td>
<td>1,282</td>
</tr>
<tr>
<td>Pea Gravel</td>
<td>105,495</td>
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The total area of the school grounds, including the building, is 227,767 square feet. These measurements are not consistent between the Autocad file and the architectural blueprint; therefore a new site survey should be done to verify all square footages.

Playgrounds
Gust has two separate areas of playground equipment bounded by chain link fences, as well as a large open asphalt area marked off for various games. Additionally, four baseball backstops border the remaining field area, all of which is surfaced with pea gravel. Three maple trees lie outside the school fence on the west end of the playground. There is a large maple tree that offers shade in a turf area on the south side of the building outside the ECE/Kindergarten classrooms. The covered porch covers the only handicap accessible door.

ECE/Primary

The ECE/Primary playground covers 4,000 square feet. It contains a large unitized activity center measuring 17’6” x 22’0” consisting of 6 platforms and 9 components which include open and parallel slides, sliding pole, chain climber, panel climb, vertical rails, rappel ramp, chin-up bar, transfer station, and 2 shade covers. There is an ADA raised platform for accessibility and an ADA pad 3’x4’. Contiguous to this play area is a 4’ high chain link fence housing older equipment: a small climbing dome; a row of 12 swings and a tall, single slide facing south. Two fiberglass benches face west for seating. This area is designated as a multi-age activity area and is used primarily by ECE through second grade.

Intermediate Playground

On the other side of the playground opposite the ECE play area is a rectangular area bordered front and back by a chain link fence housing equipment for the intermediate child. This covers an area of approximately 7,704 square feet. The equipment is aging and consists of a tall slide which faces west, 1 high turning bar, 2 climbers, 2 banks of cargo (chain link) climbers, 3 horizontal bars, 2 vertical climbers, 2 banks of swings, 1 climbing dome and 1 set of travel rings.
Asphalt Play Area
The large asphalt play area (32,800 square feet) separates the ECE/primary and intermediate play area and is marked off for play as follows: 3 tetherball poles, 2 hopscotch games, 8 four square courts, 2 ball wall courts, 2 basketball hoops and 2 sets of net posts for volleyball or badminton. Also painted onto the asphalt is a map of the United States, each state represented by a different color.

Playing Fields
The remainder of the outdoor recreation area (approximately 78,450 square feet) includes three backstops for baseball. It is divided and used for four different recreation centers and consists entirely of pea gravel. On the west side outside the chain link fence and bordering the street are three maple trees currently providing the only shade for the entire outside playground. A low spot at the east end of the playing field tends to accumulate water and ice during heavy rains and snows.

Plant Materials
The entrance to the building is on the north side, divided by two raised planter boxes. Below one raised planter is a group of pyracantha bushes. Turf runs the length of the north front of the school with several small ornamental trees near the street and various shrubs next to the building and dotting the landscape. The west side of the building also is planted with turf and evenly spaced trees, 4 maples and 3 locusts. To the south around the corner is a covered porch with turf that connects to the ECE playground in back. The last turf area lies on the west side between the back of the school and the intermediate play area. An 8’ wide concrete strip runs along the perimeter of the building adjacent to the turf. Of the original 6 maple trees planted, 4 remain, approximately 2”-3” caliper in size.
Drainage
There is a slope that runs along the west-facing wing of classrooms to the street. Problems caused by water puddling after heavy rains and during spring thaws was diminished when the grassy strip was added in 1997. DPS facilities people have said that if the field were put into turf, this problem would be largely mitigated. The current size of this large field is 78,450 square feet; the planting of water loving plants along the southern outer edge would further increase drainage and not affect the minimum turf area requirements of 31,500 square feet. Another mild slope runs from the south wing of the building back into its center over the asphalt area. Several storm drains were installed in the asphalt and seem adequate to drain away excess water from this area.

Parking and Vehicle Access
The parking lot is located on the south side of the building, separated from the main entrance to the school. One way in and one way out head-in parking consists of two handicapped spaces and 30 regular spaces. This is not enough parking for the sixty-four teachers, paraprofessionals, support staff and interns that need parking spaces each day. There are no curb cuts for dropping off children anywhere around the school.

Buses
Four buses transport children to and from the school at the beginning, middle, and end of the day. They load from the east side of the school by the playground in a designated loading area.

Lighting
The back of the school bordering the playground has lighting on each of the corners of the building and light fixtures attached to the building in between the corner lights. There is a pole light near the ECE playground. The basketball courts are used in the evening after hours and the lighting seems sufficient for this area.

Handicap Accessibility
Only one entrance from the ECE classrooms on the south side of the building allows handicap access to the playground.

Adequacy of On-Site Uses

Over the lunch period one grade at a time is released to the playground. The lowest number of children on the playground during this period is 45 ECE children; the numbers increase to the mid-80s for 4th and 5th graders. While the overall opportunities for play seem...
to be adequate for the total numbers of children, these opportunities would be enhanced by additional equipment to the ECE/primary playground and more interesting equipment for the intermediate level. The new ECE/primary playground may not be adequate for the numbers of ECE, 1st and 2nd graders, and the separation between the ECE/primary playground and intermediate playground also should be looked at from a usage standpoint, as there is overlap of primary children also on the intermediate playground. The age of the other equipment and dangerous heights of some of it present a safety hazard and potential risk for injury and almost assure failure of current safety standards. The slide should be rotated from its current west facing position if not removed.

There is no shade on the playground. Three trees border the west side of the schoolyard outside the fence and provide the only usable shade and that only for a miniscule corner of the playground. While this is helpful, it needs to be supplemented. The trees are outside the fenced area along the street, a distance away from playground monitors, and 

West facing classrooms, August 2001

next to a large opening in the fence that provides for neighborhood access.

The asphalt play area runs up to and along the east side of the building. For those classrooms on that east side, the direct sun and heat is a year-around problem. Removal of a part of the asphalt area and replacement with turf and trees would help mitigate the heat

Asphalt Play Area along east facing classrooms, August 2001

problem and also provide areas to implement additional spaces for educational instruction.

Playing Fields
Without compromising the needed areas of athletic sport and games, a portion of the current field area can be absorbed by other activities. Adding turf will allow for soccer to be played and will cool the area for outdoor activities. In addition, as stated earlier, turf will ease the drainage issues now encountered at the far end of the field.
Parking and Vehicle Access

Additional spaces are needed for parking. Currently there are 30 spaces plus two designated for handicap parking. The DPS standard requires 1 space per classroom (20) plus one-half space for every ECE through third grade classroom (1/2 of 12, or 6) plus 15 support and supplemental staff plus 5 for visitors. For this school the number of parking spaces required is 46, a deficiency of 16. Also, drop off points should be defined around the school to increase safety and establish zones for children coming and going whether by bus, carpool, or walking.

Ambience

At present the playground lacks an identity, something that would invite and draw kids in to discover its elements. It can become a place for fun, physical exercise, and learning, that will satisfy the different needs of gender, level of physical activity, quietness, interests, etc. It can become a place to instill in the children a sense of ownership in their school and its grounds.

Surrounding Uses

Single family homes surround the school. A busy Yale Avenue borders the front of the school on the north side and housing abuts the school to the west. Houses also abuts the school on the south side for a half block. Residential housing sits across the street from the school on all other sides of its property. A busy and commercial Federal Boulevard is a few blocks away to the east and by contrast, to the south is a large park which borders Teikyo Loretto Heights College.
Conceptual Plan

The mission statement for this project is “to create an outdoor environment that complements the school’s academic mission of “Rising to Meet the Future.” The master plan will establish the school as a landmark and provide students and the Harvey Park community with a variety of opportunities and experiences that foster learning and encourage fun and creative play.”

To view the outdoor playground as an extension of the indoor classroom is a primary aspect of this master plan project. The design looks to the inclusion of many types of elements incorporated in a variety of activities and sizes of spaces: outdoor habitats to foster a sense of stewardship towards nature, outdoor spaces that encourage teaching and discussion; gardens that invite community involvement with the school; additional play equipment for fun and challenge; a space that recognizes the cultural mix of the school; quiet places for contemplation and rest; safe places for the arrival and departure of the children; and places of entry that establish the school as a landmark in the community.

Improvements in the outdoor site at the school will benefit not only the students, teachers and staff at the school, but also the community as it looks to the school as a source of pride and ownership in the neighborhood. Improvements will correct deficiencies expressed by school staff and parents’ groups, particularly those issues of parking and safety on the playground and in kids arriving and leaving the school.

Goals and their Program Elements

The individual program elements in many cases are attributable to more than just one of the program goals; as such, they may be outlined in greater detail for the goal for which they are most applicable, and indicated by reference under other goals to which they may also be included. The goals for this project are:

- Design outdoor places that encourage hands-on learning
- Establish the school as a neighborhood landmark
- Create new play opportunities and improve existing ones
- Improve safety and improve vehicle/pedestrian traffic functions
- Relieve impact of sun and heat in classrooms, library and playground
If the preceding quote is true, then providing quality opportunities for hands-on exploration is important to stimulate that inborn, natural motivation children have to interact with their environment. This is when learning happens. Following are spaces that satisfy that desire to know more about surroundings and spaces that encourage gathering together to share this newly acquired knowledge with each other.

**Design outdoor places that encourage hands-on learning**

*Small Classroom Gardens/Raised Garden*

Located in separate areas along the west side of the playground three gardens will be established. These gardens give children the chance to grow their own produce. From this there are several lessons to be learned: the obvious science of growing plants, a work ethic and responsibility to the environment, and a sense of teamwork as each grade shares with others their own experiences. This space is anchored at one end with the raised garden; the butterfly habitat garden is in the middle; and the cultural garden is found in the last third of this space. Surrounded by the asphalt play area, these gardens are easily accessible for wheelchairs and give handicapped students the experience of gardening and playing in the dirt.

*Butterfly Habitat*

Located in between the raised and cultural classroom gardens on the west facing side of the building, this space affords learning the life cycle of butterflies through the particular host plants that attract the butterflies to lay eggs and the food plants that feed the caterpillars who then emerge as butterflies to feed on the nectar plants and begin the cycle again. Identifying signs of the butterflies and moths, the plants, and charts of the metamorphosis progress are some of the educational goals of this space.

*Outdoor Classroom*

This space is unique in that it is for gathering, sharing, teaching, and listening by all of its users—teachers and students alike. Approximately 30-35 students are accommodated by this space, large enough for any class at the school. It is protected by a large wall of the school building and lends itself to quietness and privacy yet remaining open to the adjacent larger play and learning spaces.

An alpine garden of aspens and evergreens will give shade to the space, and provide an aesthetic all year look. The brick wall of the school is a natural backdrop for creativity in the form of sculpture, art, banners or any number of ideas.
ECE Gathering Place

Located just outside the west porch of the ECE/Kindergarten classrooms, this place is an informal “mini-outdoor classroom” for small children. It can be used to teach, relax, snack and picnic. Simplicity is key here: elements to promote these activities can take many forms from small built structures or two benches to simple blankets.

Also contributing to this goal are the following elements: Covered Amphitheater and Rock Boulder Field/Rock Garden/Sandbox.

Outside ECE/Kindergarten classrooms, a shady spot; August 2001

Establish the School as a Neighborhood Landmark

Gateways and Entry to School

Three entries to the school will be emphasized: the main entrance at the front of the building on Yale Avenue and two entries on the east and south sides of the playground.

At the main entrance to the school removal of older, overgrown plants in the brick planter boxes and replacement with grasses and small evergreens will give a soft and fresh look to this space, with a minimum of maintenance and a maximum of year around interest.

The east entry to the playground is highlighted by a covered structure that establishes this location as an entrance point. Brick pavers surrounding the entry structure set this entrance apart both visually and practically. (These can be sold as a fundraiser for the playground.) Additional trees will provide shade. Adjacent and along the outside of the fence a curb cutout makes a natural stopping place for buses and invites parents to drop off their children at this safe place.
The entrance on the south side of the playground is used also as the delivery access and will need to maintain width sufficient to allow the entrance of delivery trucks over the asphalt area to the door at the inside corner of the school.

Covered Amphitheater

Children love to use their imagination and make up games for play and this is a perfect space designed to showcase that activity. This space is covered, slightly elevated by two alternating steps and ramps, is flat and open and can incorporate into its surface elements of science, art, geography, and math. Located at the center of the playground, the amphitheater becomes a focal point from which to view all aspects of the playground and a point to which all other features point back.

Art Wall/5th Grade Legacy Wall

A wall is planned for 5th graders to create a legacy to the school during their last year. On its opposite side, all students can make contributions to the school that reflect the many aspects of the children’s ages, gender, ethnicity, creativity, and preferences. This wall can be incorporated into the entry structure planned for the east entrance or incorporated into a wall which might surround the outside classroom or amphitheater.

A contributing element to this goal is the Grass Field and Outdoor Classroom.

Create new play opportunities and improve existing ones

Play Equipment

New ECE equipment was installed in 1997 (see Appendix 7h). A boulder field or small rock garden/sandbox (see paragraph under program goal Design outdoor places that encourage hand-on learning, ECE Gathering Place) could be added to this area to provide more play opportunities for this age group. One piece of additional primary equipment can be added to the play area. The large slide will be removed and the swings will be replaced with 2 new bays.

The intermediate playground will be expanded along its current length across to the fence. This additional area will allow for an additional piece of play equipment here. The slide, although antiquated, remains and should either be rotated away from facing west, or removed altogether. The old cargo climbing nets will be removed and the existing and swing bays will be replaced. All play equipment surfaces will have the pea gravel removed and wood fiber installed in its place.

Hard Surface (Asphalt)

The games played on the asphalt surface will remain substantially the same. The net posts are not used for anything now and will be removed. An additional tetherball pole will be added and the hopscotch will be removed. The edge contiguous to the grassy field will be squared off to make a straight line to the street along the edge of the field. The asphalt area will be resurfaced where it is not removed and relined for the various hard surface games that are played here. The painting of the United States map, although not a part of this master plan, should be considered for repainting.
Parking
The existing parking lot contains 30 parking spaces plus two designated handicapped. The DPS standard for this school of 20 classrooms is 46 parking spaces, as discussed earlier. On the west side of the building along Knox Court additional spaces will be added by way of a head-in parking lot to fulfill this requirement and rectify the parking shortfall. The seven maple and locust trees will need to be spaded and moved into the remaining grassy area to make space for the parking and to retain a portion of the green space to give much-needed shade to this side of the building.

This element can fulfill many needs. A small, low rock outcropping is at once an invitation to explore, climb, conquer. It also invites one to sit and contemplate. Combined with sand, it provides tactile play and also invites inquiry into the sciences.

Grass Field/Running Track
The addition of grass to the playing field accomplishes several things: it provides a true surface on which to play soccer; it is a softer surface for playing softball and baseball, it reduces the heat factor on the playground, and it is a more forgiving surface for falling onto. The grass, along with trees to be planted at the north edge of the field, will help improve drainage during times of heavy rain and snow melt. A cinder running track around the perimeter of the grass play area affords a good surface for running and can be divided into multiple use zones of activities.

Also included in this design goal is the Covered Amphitheater, Shade Areas, and Small Classroom Gardens/Raised Garden, and the Butterfly Habitat.
Drop Off Areas
Currently parents drop off their children on each of the streets surrounding the school, relying on monitors to help them cross the street on Yale Avenue. A curb cut by the east entry to the playground will designate this entrance as a drop off area where parents can drive through and safely deposit their children.

Other elements that contribute to this goal are Shade Areas.

Relieve impact of sun and heat in classrooms, library and playground

Shade Areas
Overall, three primary areas will provide shade for the classrooms, library, and playground. Incorporated within the playground areas as mentioned above are classroom gardens, a butterfly habitat, a covered amphitheater, and an outdoor classroom. Interspersed within these spaces will be trees, built structures, and elements that encourage quiet conversation, contemplation, a chance to learn about nature, or just to daydream. A third area of shade will be on the west side of the building by the additional parking lot. Trees presently in this space will be spaded and moved and continue to provide shade for the library, classrooms, and the new parking spaces slated for this area.

Other shade areas on the playground can be found in Covered Amphitheater, Gateways and Entry to School, and the Outdoor Classroom.
**Implementation**

**Construction Estimate**

Estimated cost for construction of this project, including construction fees, is $515,628.60. Attached is a cost estimate for the entire project as well as individual cost estimates for each of three proposed phases.

**Project Phasing**

So that disruption of school activities and functions can be kept to a minimum, three phases are suggested for implementing this plan.

Phase One: Encompasses the east half of the playground containing the playing field, the intermediate playground, adjoining grassy area (including the addition of trees, tables, and the 5th grade legacy wall), the east entry to the playground, and the street curb cut. This allows access via the south entry to the playground and access to the ECE/primary playground and the asphalt game area, which will remain intact during this first phase of the construction. ($363,788.17)

Phase Two: Completes the remainder of work on the playground that includes a new covered amphitheater, outdoor classroom, habitat and cultural gardens, additional primary equipment, rock garden and benches for the ECE outdoor gathering area and sealcoat and repainting of the asphalt play area. This phase will completely limit access to the school from the playground; however, the new turf playing field and intermediate play area will be accessible through the east playground entry during this second phase. ($133,512.20)

Phase Three: This project culminates with the addition of a new parking area on the west side of the building on Knox Court. The existing trees in this turf area will be spaded and moved to the smaller turf area left remaining after the excavation of the parking lot. ($18,328.23)