# Spatial Analysis of the Learning Landscape Initiative's Impact on Graffiti in Denver Neighborhoods \& On Denver's Public Elementary School Playgrounds 

## Research Question:

Do 'Learning Landscapes' - special playgrounds in Denver planned, designed, and built with community members - have an impact on the level of graffiti found on these playgrounds and in their surrounding neighborhoods and is there an explainable and visible pattern for this behavior?


Gang Graffiti in Westwood Neighborhood \& Publicly Solicited Graffiti Art


Greenlee Elementary School before and after construction of the 'Learning Landscape'

A Study by UCD Students: Jon Holmberg, Sonia Di Carlo, and Bambi Yost. Course: Spatial Analysis URP 5520 Instructor: Professor Yuk Lee

Does community involvement reduce the amount of graffiti on Denver Public Schools 'Learning Landscape’ Playgrounds?


A Young Girl Waters Trees on Smith Elementary School's 'Learning Landscape' Playground
"Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has." (Margaret Mead)

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## 3 Introduction



Entryway Banner Painted by Children at Bromwell Elementary School

## 3.1 "You Have to Pay for the Public Life."

Something extraordinary has happened in Denver. Business owners, property managers, students, citizens, non-profit leaders, contractors, and small retailers have donated services, money, and letters of support to the City of Denver's 'Focus Neighborhood Initiative’ and to Denver Public Schools 'Learning Landscape Initiative'. Similar in nature to a Business Improvement District, these Initiatives focus on enhancing the safety, cleanliness, image, and livability of 16 inner-city neighborhoods.

Many cities across the nation have revitalized their downtown business districts, and Denver is no exception. In the mid 1990s, the President of the Downtown Denver Partnership, extended the role of a Business Improvement District to that of an entrepreneur, redefining his organization's function as strategic place marketing." The role of the downtown organization, he suggested, was to assess in a regional context the competitive strengths and weaknesses of the city center and to improve, not only safety and appearance, but also the business mix and cultural offerings.

According to Jerry Mitchelliii, the most visible aspects of Business Improvement Districts in large cities are their colorfully uniformed personnel cleaning sidewalks, removing graffiti, or providing supplementary safety services. But a conversation with almost any of the civic entrepreneurs who created and lead these organizations will quickly reveal that they are not motivated by a passion to run innovative janitorial or security programs. Rather, Business Improvement Districts seek to make our cities livable and competitive again.

Denver's 'Focus Neighborhood Initiative’ strives to revitalize inner-city neighborhoods as part of the Denver Business Improvement District's Regional Plan. When neighborhoods surrounding the city core offer reliable transportation, public services, affordable housing, attractive and pedestrian-friendly streets, and a sense of community, they are more attractive to residents. As the quality of the neighborhoods increases, so do the property values. And increasing property values improve the likelihood of sustained economic growth for the city. It is a winning combination provided adequate services and community engagement are maintained. In essence, by "paying for the public life," both public and private sectors reap rewards.

Mayor John Hickenlooper believes in public amenities and community-based initiatives and in a private interview with the Learning landscape Alliance recently said, "As a community, we receive so many benefits from ensuring that children receive a strong well-rounded education...Learning landscapes is a perfect model of what can be accomplished when the private sector, public sector and the nonprofit community are engaged and invested in a common goal.,.iv

But how do you measure the success of these Initiatives with so many variables to consider? Our group decided to focus on graffiti as an indicator of neighborhood "health and livability". By studying the more community-based and site-specific Learning Landscape Initiative's playgrounds, located predominantly within Denver's Focus Neighborhoods, we hope to make a correlation between enhanced community involvement and improved conditions on the playground and in the surrounding neighborhood.

### 3.2 What is a Learning Landscape?



## UCD Students with Contractor

First, it is important to understand what distinguishes a 'Learning Landscape' from a 'regular' playground.

The Learning Landscape Initiative officially began in 1999 when the University of Colorado at Denver (UCD) Landscape Architecture Program entered into a formal agreement to plan, design, and build Denver Public Elementary

School playgrounds throughout the district. The 22 playgrounds constructed from 20002003 were chosen as part of Denver's Focus Neighborhood Initiative.

Through the Learning Landscape (LL) Initiative, innovative, multi-use playgrounds have been created for elementary schools in Denver's inner city neighborhoods. This program has been sponsored by a broad-based public-private partnership and directed by expert staff and students from the Department of Landscape Architecture at the University of Colorado at Denver, College of Architecture and Planning.

| EXPECTED OUTCOMES OF LEARNING LANDSCAPE PROJECTS" |  |
| :--- | :--- |$|$| Safety | Fewer injuries due to removal of asphalt and concrete surfaces <br> Fewer injuries resulting from improved play (i.e., less bullying) vi |
| :--- | :--- |
| Improved <br> socialization | More structured play opportunities <br> More age- and gender appropriate play opportunities vii <br> More focus on "play" using the playground equipment <br> Improved socialization among children viil |
| Improved <br> academic <br> opportunities | Opportunities for outdoor learning ix <br> Increased use of playgrounds as outdoor classrooms x <br> Experiential learning opportunities <br> Options for the use of environmental learning curricula |
| Improved <br> academic <br> performance | Increased readiness to learn - students are more attentive after <br> having play opportunities <br> Increased willingness to attend/participate in school <br> Improved test scores ${ }^{\text {xi }}$ |
| Community <br> involvement in <br> the school | Community helps to customize the playground to neighborhoods' <br> needs <br> Community fund-raising to support the playground <br> Community use of the playground after school and during vacation <br> periods <br> Development of community gathering places which tend to be <br> otherwise limited in urban neighborhoods |
| Community | Less graffiti <br> Pride in the school playground <br> Perceived "ownership" of the playground space <br> Greater "connectedness" to the school xii |

University of Colorado graduate students through a trilogy of courses serve as a think tank for new design concepts as they work in concert with a specific school and its community. The collective ideas that emerge are born out of the rich cultural diversity of the neighborhood, the multi-generational aspect of communal space, the gender and age-appropriate needs of young children today, and the exploration of non-traditional
design and materials. The learning landscape's main objective is to strengthen Denver's public elementary schools and their surrounding neighborhoods by designing new multi-dimensional school playgrounds that also offer profound elements of a public park and social gathering place.

The success of the Learning Landscape project is founded on a healthy enthusiasm for aesthetic issues, as well as a pragmatic approach to maintenance, safety and recreational issues. The principal value of a learning landscape is its multiplicity. In an era of limited resources and increasing urban social ills, single-minded urban renewal projects that are forced on communities are neither viable nor sustainable solutions. By bringing together diverse groups working in concert a civic process--not a project--is created. Graduate students learn design and the value of civic responsibility while providing a much needed design service to local communities.

The landscape architecture program at the University of Colorado advances the discipline by creating a new urban hybrid that provides valuable primary research into the machinations of modern community life. School grounds serve as parks, and antiquated school grounds are restored to their civic place in the community while enhancing education through participatory hands-on learning.


Community Volunteers Laying Sod on a 'Learning Landscape'

While the main objective of this civic process is to reconnect communities with their public schools, a Learning Landscape playground and park also creates innovative avenues for participatory learning, increases recreational opportunities, and provides a much needed green space in an otherwise heavily urban neighborhood. All this creates a site for learning and discovery that is fun and ultimately celebrates the cultural and historic character of each distinct neighborhood.

In sum, principals within the LL schools uniformly agreed that the projects had resulted in strong positive benefits for their schools and the surrounding communities. In particular, they believed that the new playgrounds had stimulated an enhanced sense of pride in the schools and a positive "sense of place" in the community by transforming older, gravel covered playgrounds without much "street appeal," into a community green space with inviting play opportunities for children of all ages.

The new playgrounds, themselves, were seen as offering both structured and unstructured spaces for play that enriched the lives of children and enhanced their socialization abilities. Teachers had reported to the principal that student behavior had improved and that fewer disciplinary actions were being reported on the playground. So more generally, after playing on the playgrounds, children were found to be more alert and ready to learn. Finally, the community, students and parents alike were observed to have a new sense of responsibility for the playground and the school, resulting in cleaner and safer school environments.


Children at Smith Elementary School Painting Outdoor Mural

### 3.3 What is the Focus Neighborhood Initiative?



Denver's Focus Neighborhoods
Denver's Focus Neighborhood Initiative (FNI), originated by Mayor Wellington Webb and managed by the Housing and Neighborhood Development Services (H\&NDS) of the Community Planning and Development Agency (CDA) of the City and County of Denver, Colorado contracted a research/survey Neighborhood Needs Assessment of 16 different neighborhoods that demonstrate economic distress (Baker, Clayton, Cole, Elyria/Swansea, Five Points, Globeville, Jefferson Park, La Alma/Lincoln Park, Northeast Park Hill, Skyland, Five Points, Sunnyside, Sun Valley, Valverde, Villa Park, Westwood, and Whittier). The strategy of the community improvement project is to focus the resources of Denver's public, private, and non-profit sectors of the sixteen neighborhoods mentioned above.

### 3.4 What is Graffiti?

The word graffiti simply means--words or drawings scratched or scribbled on a wall. The word comes from the Greek term "graphein" (to write) and the word "graffiti" itself is plural of the Italian word "graffito", but the singular form is rarely heardxii.

Graffiti originally was the term used for inscriptions, figure drawings, etc., found on the walls of ancient sepulchers or ruins, as in the Catacombs, or at Pompeii. But has
evolved to include any decorations inscribed on any surface that are considered to be vandalism, or pictures or writing placed on surfaces, usually outside walls and sidewalks, without the permission of the owner ${ }^{\text {xiv }}$.

There are two distinct categories of graffiti ${ }^{\text {v }}$, which differ in their content, authors, and intended audience: "popular graffiti" is the everyday stuff, the witty commentary, the jokes, the "eat me's" and "fuck you's," the love proclamations, and the "so-and-so's were here." These are found in bathrooms stalls, public billboards, in sidewalks, and even playgrounds, also known as "bubble gum" graffiti.

The second category, "community-based graffiti", in essence, is the graffiti that generally is viewed as a nuisance to a common citizen. This category of graffiti subdivides itself into: gang graffiti, which is a type of graffiti used to create identity and to communicate political retoric and personal anti-sentiments; political graffiti, is based in internal symbolism by which negative political sentiments are voiced; and hip-hop graffiti, also known as graffiti art, and refers to the type of graffiti that is a product of contemporary pop-culture ${ }^{x i}$.

The purpose of graffiti art is self-expression and creativity, and may involve highly stylized letter forms drawn with markers, or cryptic and colorful spray paint murals on walls, buildings, and even freight trains. The purpose of gang graffiti, on the other hand, is to mark territorial boundaries, and is therefore limited to a gang's neighborhood; it does not presuppose artistic intent ${ }^{\text {גvii }}$.


## Gang Graffiti in Westwood Neighborhood

"It's an act of vandalism, not an act of expression," said police graffiti unit Detective Ray Ruybal, reflecting city policy.

Graffiti is done by members from traditional gangs, as well as by graffiti writers called taggers ${ }^{\text {xviii. To }}$ leave their mark, gang members use spray paint, wide-tipped markers, and even scratch (etch) glass with sharp objects.

Done by "taggers" looking for notoriety, gang members staking claim to territory, or street artists illegally choosing a concrete canvas, graffiti is growing in Denver along with gang activity, aggravating police and business owners alike.

### 3.5 Associated Costs of Graffiti

Graffiti costs tax-payers dollars and quality of life. For many people, graffiti is an unwanted nuisance, and many more consider it be expensive vandalism that must be repaired. Graffiti affects neighborhoods in many ways. It sends a clear message to visitors and residents alike that things are out of control ${ }^{\text {dix. }}$. It can reduce property values, add to a climate of lawlessness that discourages business, and open the door to more serious crime ${ }^{x x}$.


Jeff Butzen, with All Glass Wizard, buffs graffiti "tags" from windows at the Wax Trax music store on Capitol Hill. Photo courtesy of the Denver Post.

Despite graffiti's pervasiveness in some neighborhoods, many police departments do not have time to investigate graffiti complaints. Denver has developed the "Partners Against Graffiti" to create partnerships between the city, public and private property owners, and all Denver citizens to maintain clean and safe neighborhoods. The City also counts with the Denver Police Gang Bureau, who investigates crimes and graffiti related to gangs.

Community mobilization is critical to make graffiti-fighting a priority and to help police enforce the laws against graffiti by identifying the individuals who commit these acts of vandalism, reporting graffiti crimes in progress, and photographing and removing the graffiti. Some neighborhoods have found that simply removing the graffiti--no matter how tirelessly--was not enough. Graffiti was painted over, only to be replaced by "scratchiti," or window etching. Because the etching is done on glass, relatively
inexpensive solutions, like paint, cannot be used. Alternatives like scratch-proof glass are only now becoming available, and can be costly.

To remove graffiti, high pressure cleaning can be used; it can also be painted over or, as a prevention, a specially formulated antigraffiti coating can be applied to the surface of high-risk areas. With Denver's Paint Bank program citizens can pick up paint at no charge to cover up graffiti.

### 3.5.1 Perceptions of Safety and Value of Property ${ }^{x x}$

Graffiti devalues property and makes people feel unsafe in their neighborhoods. In addition to its unsightly appearance, gang graffiti can have frightening results. Graffiti can provoke gang rivals into a violent confrontation. Gang members take the messages they read in graffiti seriously, and the longer graffiti is left up in a neighborhood, the greater the risk that the threats will be acted upon.

'Tagger' graffiti has increased at an alarming rate in most cities around the U.S. It often appears in even the most affluent neighborhoods and business districts. Community members may at first be confused about the fact that "gangs" are appearing in their area. Taggers, however, are not traditional street gangs. In most parts of the U.S., taggers are less violent than traditional street gangs, although they may carry weapons. Taggers do, however, create most of the graffiti damage in many communities.

## Gang Graffiti at Knapp Elementary

### 3.5.2 Graffiti Removal Likely to Cost City $\mathbf{\$ 1 . 5}$ Million ${ }^{\text {xxii }}$

"Denver Public Works crews last year removed graffiti from public and private property equal in size to 40 football fields. That's about 1.9 million square feet of buildings, homes, cars and bridges tagged with spray paint, according to a report to the Denver City Council Public Works Committee Wednesday. The problem has become so pervasive that city officials urged residents to do more to report graffiti vandalism.

Since 1993, the square footage of graffiti removed has more than tripled. The expected cost of removal this year is $\$ 1.5$ million.


Gang Graffiti in Westwood Neighborhood Located in Southwest Denver
The hardest hit areas are north and west Denver, as well as lower downtown, the 16th Street Mall and the Platte Valley area near the Denver's skate park. "It's a cultural thing," said Denver police Sgt. Kirk Hon. "If you look at the map, the area it's most prevalent is on the west side of town. They're more accepting of it. Rather than attacking this as a citywide problem, we need to address the problem where it is happening."

City officials said that most of the vandalism is being carried out by street gangs, skateboarders and graffiti artists. In 2003, the number of graffiti reports to police stood at 423. The city Public Works Department's graffiti hot line fields most complaints. "It's an education issue," said Danamarie Schmitt, Denver's operations superintendent for solid-waste management. "We need to create a partnership with the public. We have a choice in how clean we want our city to be. We're trying to make it as easy as possible for people to report graffiti."

### 3.5.3 Estimated Cost of Vandalism \& Graffiti Cleanup is $\mathbf{\$ 2 , 5 0 0}$ per School per Year

A 20-year maintenance planxxiii, produced by the Learning Landscape Alliance and Denver Public Schools, projects expenses for vandalism and graffiti removal at \$2,500
per school every year based on existing expenses. With a district comprised of 148 schools, Denver Public Schools expects to spend \$370,000 a year in cleanup costs, and "that estimate", says Don Moon, DPS Grounds Foreman, "is on the low side."

Volunteers Spreading Mulch at Ebert Elementary School


In 2002, Denver Public Schools was recognized with a plaque for its "contributions made toward enhancing the visual appearance of Denver through the reduction of graffiti and litter. ${ }^{\text {xxiv" }}$ Mike Langley, Executive Director of Facility Management, said the recognition was a direct reflection of the work put in by the district's maintenance shop and its Protective Coatings Department. One of 10 individuals recognized was Joan Wamsley, principal of Ebert Elementary School. Ebert Elementary School built a Learning Landscape Playground in 2003 and since that time has had even fewer graffiti incidents ${ }^{\times x v}$.

One of the primary goals of a Learning Landscape is that it be as self-sufficient and sustaining as possible. By engaging community members, the playgrounds are no longer properties of the State but instead of properties of the community.

According to the Center of Research Strategies, an independent research firm hired to perform an initial evaluation of the Learning Landscape projects in 2003, the Learning Landscapes achieved a number of results ${ }^{\text {xxvi }}$, as found through the following data collection efforts.

- The principals within the participating schools, interviewed as part of this evaluation, were uniformly positive about the impacts of the new playgrounds, reporting benefits from the playgrounds in the areas of safety, socialization, academic opportunities, readiness to learn, community involvement in the schools and community ownership of the schools.
- Teachers, surveyed within the participating schools, concurred with the principals, agreeing that the playgrounds had produced positive effects related to the school/community environment, student behavior/performance and
parent/community involvement. Changes in education and curricula were reportedly too early to observe.
- Students, contacted through focus groups, were enthusiastic about the playground equipment and the grass fields. They reported that the new playgrounds were safer, more organized and more challenging. They also indicated that they and their families used the playgrounds during after-school hours and that they were proud about the playground space, taking responsibility for keeping it clean.
- Community members, surveyed as part of this project, agreed that the playgrounds had fostered a stronger sense of community identity. Community members were proud of the new playgrounds and had a sense of ownership for them. The playgrounds were described as having become a focal point within the community.

With these initial findings in mind, our group decided to investigate the connection of community-based initiatives with graffiti tagging, a citywide public nuisance problem.

## 4 Research Question

Do 'Learning Landscapes' - special playgrounds in Denver planned, designed, and built with community members - have an impact on the level of graffiti found on these playgrounds and in their surrounding neighborhoods and is there an explainable and visible pattern for this behavior?


Dedication Ceremony at Bromwell Elementary School ${ }^{\text {xxvii }}$

### 4.1 Basic Assumptions

- Age - (hypothesis: children between the ages of 10-17 are more likely to engage in gang and vandalism activities)
- Gender - (hypothesis: males are more likely to engage in gang and vandalism activities)
- Ethnicity - (hypothesis: Hispanics, African Americans, and Asians are more likely to engage in gang and vandalism activities)
- Population Density - (hypothesis: neighborhoods with higher population densities are more likely to have gang and vandalism activities present)
- Economics/Poverty - (hypothesis: neighborhoods with more children living in higher poverty levels are more likely to have gang and vandalism activities present)
- Education - (hypothesis: neighborhoods with higher numbers of HS dropouts are more likely to have gang and vandalism activities present)
- Property - (hypothesis: neighborhoods with more rental units \& lower property values are more likely to have gang and vandalism activities present than neighborhoods with more owner-owned properties)
- Parks \& Recreation Centers - (hypothesis: neighborhoods with fewer recreational opportunities are more likely to have gang and vandalism activities present)
- Youth Organizations \& Programs - (hypothesis: neighborhoods with fewer youth organizations \& programs are more likely to have gang and vandalism activities present)
- Community-Based Programs or Initiatives - (hypothesis: neighborhoods with fewer community-based programs or initiatives are more likely to have gang and vandalism activities present)
- High Risk Crime Factors - Piton Map (hypothesis: neighborhoods with more high risk crime factors - Liquor Stores, abandoned vacant buildings, check-cashing sites, gun shops, community corrections facilities, pawnshops, adult entertainment, railroads, neighborhood boundaries, \& neighborhoods with 75\% or more free schoollunch participation - are more likely to have gang and vandalism activities present)


Piton Foundation's Risk Assessment Map
(Neighborhoods in light blue indicate areas of greatest risk for crime)

### 4.2 Anticipated Problems with the Study

This 3-person study was conducted over two months, a very brief period, and requires a significantly larger data pool of survey participants; additional walk-through observational neighborhood and school surveys; and better collaboration with Denver's various graffiti clean-up groups for greater accuracy.

Although our intentions are good, the scope of this study is too large for us to adequately complete it in the limited time frame. Given a few more months, we could better analyze and gather data.

The most reliable data we have is what we generated on our own. Our Observational Walk-Thru Neighborhood and School Survey enabled us to quantifiably define the graffiti level of both the elementary school and the immediate two-block area surrounding the school.

In addition, the qualitative data gathered from focus group meetings held at three locations offer specific insight regarding the on-site graffiti. The Focus Group Surveys followed an organized discussion focused on frequency of graffiti and gang activities, reasons for graffiti and gang activities, concerns about graffiti and gang activities, and actions to counter graffiti and gang activities. This portion of the study, though thorough, is limited because of the limited amount of data collected citywide.

### 4.2.1 Graffiti Data

## Partners Against Graffiti



Gathering graffiti incidents, statistics, and data by the different municipal entities presents a challenge in Denver. Graffiti and gang activities are considered a nuisance activity. The City and County of Denver has different departments that oversee the abatement and clean up of public nuisance. In addition, they do not have a set protocol to document the incidents.
Because Neighborhoods Matter This leads to inaccurate counts across the city; in spite of the lack of consistency in data collection, statistical analysis is possible when looking for relationship patterns citywide.

The different Departments that clean-up graffiti and/or keep records are: The Department of Parks and Recreation, Colorado Housing and Finance Authority (CHFA), Denver Public Works Solid Waste Management Department's Partners Against Graffiti Division, Denver Police Department Gang Bureau \& Graffiti Task Units, and a few others as well.

Some of the clean up work is contracted out to private companies that are not required to record the location, quantity, or origination of the graffiti being cleaned or covered. Then there's the Parks and Recreation Department, which also has a clean-up crew and does not collect or report information about graffiti. The Colorado Housing and Finance Authority (CHFA) also do their own clean up in properties they oversee. Capital improvement projects, like the current T-Rex project, contractors are held responsible for the clean up of all the tagging and graffiti posted along the corridor.


## Denver Partners Against Graffiti Map of 2003 Graffiti Data

Do to these factors, the data collected from the Police Department and the Denver Partners Against Graffiti, is a sample data set. The Police Department Gang Bureau doesn't release to the public information regarding gang activities nor gang graffiti due to intelligence operations procedures. On the other hand, the Division of Investigations (Investigative Support Unit) has a graffiti hotline and removal unit, in which we were able to gather statistical reports for 2002 and 2003 by Police Districts. Denver

Partners Against Graffiti is created under the Public Works' Solid Waste Management Department, along with the "Keep Denver Beautiful" program; they contribute to the majority of the graffiti removal and keep record of where they are reported.

Unfortunately district boundaries for the Denver Police Department and Partners Against Graffiti do not match neighborhood boundaries or census tracts. Instead they are established by physical limits like Interstate- 25 , Colfax Avenue, $6^{\text {th }}$ Avenue, Broadway and Downing. In some places they overlap. There are six Police Districts and five Public Works 'clean-up crew' areas. Therefore, the correlation between the Denver Public Schools and their surrounding neighborhoods need to be related to the city data by districts or areas like Southwest, Northeast, etc. in corresponding Police Districts or Partners Against Graffiti Areas.


Denver Public Schools Elementary School Boundaries

## 5 Methods

### 5.1 Pragmatic and Action Research Participatory Philosophy

This study incorporates both quantitative and qualitative studies recognizing the limited realities in analyzing social data. Although the focus group and on-line surveys are not statistically sufficient at this time, they do provide specific qualitative explanations for gang and graffiti behaviors at two schools. Hopefully the additional data gathered over the next 5 years will add to this wealth of information. The study is intended to provide a baseline data source for future studies on the Learning Landscape Playgrounds.

### 5.2 Research Application

We conducted research independently of one another and then shared findings. The surveys were written with input from each other, The Learning Landscape Alliance, Denver Public Schools' Faculty and Staff, the Piton Foundation, The University of Colorado's Health Sciences Department, The University of Colorado's Architecture and Planning Department, The University of Colorado's Anthropology Department, and study participants.

In addition, data was collected from the City of Denver, Piton Foundation, Denver Public Schools, The Learning Landscape Alliance, and others.

### 5.3 Discussions with professionals - DPS, Gang Task Force

Informal phone interviews with Denver's Gang Task Force, Denver Police, and Partners Against Graffiti were performed by Sonia Di Carlo. Bambi Yost met with Partners Against Graffiti and Denver Public Schools to discuss their findings more thoroughly.

### 5.4 Quantitative Analysis of Observational Studies

Observers went to twenty-seven elementary schools and rated the visible conditions of the neighborhood. The reviewers spent an average of fifty minutes observing the playgrounds of elementary schools and the neighborhood in a two-block radius. All observations were assigned numeric values.

### 5.5 Qualitative Survey Using Focus Groups

Initial contact was made with Principals by e-mail asking for on-line input and the assistance of organizing focus groups. Three schools agreed to organize meetings immediately. All of these schools are suffering from high amounts of gang activity or graffiti in their neighborhood or on school property. These schools are: Munroe Elementary, Castro Elementary, and Mitchell Elementary.

### 5.5.1 Subjects

### 5.5.1.1DPS Employees \& Community Members <br> Munroe Elementary School's Focus Group and Faculty <br> Castro Elementary School's Focus Group <br> Mitchell Elementary School's Focus Group

### 5.5.1.2Other Community Members

Anonymous On-Line Participants
Skyland Neighborhood Residents
Murray Hill Employees
5.5.2 Denver Police Department

Officer Jim Dempsey - Gang Bureau
Detective Ray Ruybal - Investigative Support Unit

### 5.5.3 Public Works: Denver Partner Against Graffiti <br> Donna Borrego - Solid Waste Management <br> Neddra Niblet - Solid Waste Management

### 5.5.4 Materials

Surveys were produced by UCD graduate students with input from community members, DPS staff, UCD faculty, and the Piton Foundation.

### 5.5.4.1Observational Walk-Thru Surveys

See Section 8 - Appendix A

### 5.5.4.2Data from DPS - Vandalism Reports

Original data available for review and on file at Denver Public Schools and at the Learning Landscape Alliance at the University of Colorado at Denver.

See Tables in Section 6

### 5.5.4.3Data from Piton Foundation

Given entire database from the Piton Foundation

### 5.5.4.4Denver Partners Against Graffiti Data

See Table in Section 6

See Map in Section 9 - Appendix B

### 5.5.4.5Police Department Investigative Support Unit

Statistics provided by e-mail

Gang data wouldn't be released to the public but conversations with staff indicated that gang activity in Denver is on the rise. An article in the Denver Post supported this statement and provided a substantial amount of supporting information for the project.

### 5.5.4.6Focus Group Survey

Data collected in person

### 5.5.4.7On-Line Neighborhood Impacts Survey

Data collected by Survey Monkey, an on-line survey service

See Section 8 - Appendix A

### 5.5.5 Procedure

### 5.5.5.1For Interviews:

The interviews were conducted by way of telephone and focus group meetings and email correspondence. Questions were left open-ended and intentionally focused on solutions as opposed to problems. 35 faculty members participated in these interviews.

### 5.5.5.2Procedure for On-Line Survey

The On-Line Survey was conducted by way of e-mail to over 150 individuals and an urban and regional planning list serve. The majority of the survey recipients had participated in a Learning Landscape Project. Tabulation of results was conducted by Survey Monkey, an on-line database engine created to administer surveys. This data was then loosely interpreted using qualitative feedback as an indicator of community investment. This portion of the study has not been adequately analyzed due to time constraints but will be analyzed this week.

The Introduction sent out follows:
NEIGHBORHOOD IMPACTS: Learning Landscape Initiative \& Denver Public Schools Survey Denver Public Schools
Learning Landscape Initiative
Focus Neighborhood Initiative
The Learning Landscape Initiative officially began in 1999 when the University of Colorado at Denver (UCD) Landscape Architecture Program entered into a formal agreement to plan, design, and build Denver Public Elementary School playgrounds throughout the district. The 22 playgrounds constructed from 2000-2003 were chosen as part of Denver's Focus Neighborhood Initiative.

Denver's Focus Neighborhood Initiative (FNI), originated by Mayor Wellington Webb and managed by the Housing and Neighborhood Development Services (H\&NDS) of the Community Planning and Development Agency (CDA) of the City and County of Denver, Colorado contracted a research/survey Neighborhood Needs Assessment of 16 different neighborhoods that demonstrate economic distress (Baker, Clayton, Cole, Elyria/Swansea, Five Points, Globeville, Jefferson Park, La Alma/Lincoln Park, Northeast Park Hill, Skyland, Five Points, Sunnyside, Sun Valley, Valverde, Villa Park, Westwood, and Whittier). The strategy of the community improvement project is to focus the resources of Denver's public, private, and non-profit sectors of the sixteen neighborhoods mentioned above.

The Learning Landscape Initiative is an entrepreneurial and community-based association of public and private interests. Its main objective is to strengthen Denver's public elementary schools and their surrounding neighborhoods by designing new multi-dimensional school playgrounds that also offer profound elements of a public park and social gathering place. The success of the Learning Landscape Initiative is founded on a healthy enthusiasm for aesthetic issues, as well as a pragmatic approach to maintenance, safety and recreational issues.

While the main objective of the initiative is to reconnect communities with their public schools, a Learning Landscape playground also creates innovative avenues for participatory learning, increases recreational opportunities, and provides a much needed green space in otherwise heavily urban neighborhoods. These playgrounds encourage discovery, civic engagement, and fun. Each school serves as a landmark and civic center celebrating the cultural and historic character of each distinct neighborhood.

To date the Learning Landscape Initiative has resulted in the creation of 54 Master Plans, 36 Design Documents, and 28 partially or completely rebuilt Denver Elementary School playgrounds. During the year 2004, the following DPS playgrounds will be rebuilt: (1) Carson, (2) College View, (3) Edison, (4) Goldrick, (5) Gust, (6) Southmoor, \& (7) Whiteman. In addition, the following partially built playgrounds will be completed in 2004: (1) Barrett, (2) Ebert, (3) Gilpin, (4) Maria Mitchell, (5) Philips, (6) Swansea, \& (7) Whittier.

Other schools to be rebuilt or completed in the next three years include: Brown, Centennial, Cheltenham, Ellis, Fairmont, Fairview, Fallis, Greenlee, Hallett, Holm, Kaiser, Knapp, Lincoln, McMeen, Schenck, Smedley, Steele, Traylor, \& Wyman.

The data collected here is on behalf of Denver Public Schools and will be used to enhance planning, design, and community development. Thank you for taking time to complete this survey.

Bambi Yost
Learning Landscape Initiative
Project Manager \& Research Assistant
Bambi L Yost@yahoo.com

### 5.5.5.3Procedure for Observational Walk-Thru Survey

Take Observational Walk-Thru Neighborhood Impacts Survey to the site and administer according to directions. Record graffiti locations on neighborhood map. Enter data into on-line survey engine and tabulate and results in SPSS and by hand. Analysis of data performed using SPSS software and plotting of graphs and visual mapping.


Denver Neighborhoods Map Provided by the City \& County of Denver

## 6 Results

### 6.1 Statistical Results

### 6.1.1 Denver Public Schools Work Order Results

There is a correlation in between PGA and Police district in that districts have either increased or decreased in the same areas at about the same rate, except on SW that the difference is $5 \%$ on PGA vs $15 \%$ on Police: NE (Montbello is part of NW too) increased, NW decreased, SE ( SC is part of SE ) decreased, SW increased.

Partial LL and LL schools with high number of total DPS worker orders are located in districts where the amount of graffiti has increased. Low work orders in districts where it has gone down. And these schools report a decrease in DPS work orders in 2003 in districts that has increased their graffiti clean up.

The following graphs show trends but they need to be related to the data of the builds in order to accurately describe what was happening on each playground in each year. For example, Maria Mitchell had a partial build in 2003, leaving areas of the playground in construction mode for several months.

2001 DPS Graffifi Work Orders


## 2002 DPS Graffifi Work Orders



## 2003 DPS Graffiti Work Order



## DPS School Graffiti Work Order Trend Line <br> Partial Learning Landscape Schools

| - BARRETT | - BROMWELL - CARSON | - COWELL |
| :---: | :---: | :---: |
| $\cdots$ - FAIRMONT | $\longrightarrow$ - FAIRVIEW - GILPIN | - KAISER |
| $\square$ KNAPP | - LINCOLN - MITCHELL | - MOORE |
| $\rightarrow$ PHILIPS |  |  |



## DPS School Graffiti Work Order Trend Line Learning Landscape Schools

| --CASTRO | --COLFAX | $\longrightarrow$ COLUMBIAN | --COLUMBINE |
| :---: | :---: | :---: | :---: |
| --CROFTON | $\rightarrow$ EAGLETON | --EBERT | - GARDEN PLACE |
| --GREENLEE | $\checkmark$ MUNROE | --REMINGTON | SmEDLEY |
| $\rightarrow$ SMITH | - SWANSEA | --WHITTIER |  |



### 6.2 Statistical Results per SPSS Analysis

Cross-tabulation Case Processing Summary

|  | Cases |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Valid |  | Missing |  | Total |  |
|  | N | Percent | N | Percent | N | Percent |
| Crime per 1000 * Work Order 2002 | 92 | 57.9\% | 67 | 42.1\% | 159 | 100.0\% |
| Crime per 1000 * Work Order 2003 | 92 | 57.9\% | 67 | 42.1\% | 159 | 100.0\% |
| Crime per 1000 * School Graffti | 25 | 15.7\% | 134 | 84.3\% | 159 | 100.0\% |
| $\begin{aligned} & \text { Poverty * Work Order } \\ & 2002 \end{aligned}$ | 92 | 57.9\% | 67 | 42.1\% | 159 | 100.0\% |
| $\begin{aligned} & \text { Poverty * Work Order } \\ & 2003 \end{aligned}$ | 92 | 57.9\% | 67 | 42.1\% | 159 | 100.0\% |
| Poverty * School Graffti | 25 | 15.7\% | 134 | 84.3\% | 159 | 100.0\% |
| built * Work Order 2002 | 113 | 71.1\% | 46 | 28.9\% | 159 | 100.0\% |
| built * Work Order 2003 | 115 | 72.3\% | 44 | 27.7\% | 159 | 100.0\% |
| built * School Graffti | 28 | 17.6\% | 131 | 82.4\% | 159 | 100.0\% |

## Chi-Square Tests

|  |  |  | Asymp. Sig. <br> (2-sided) |
| :--- | ---: | ---: | ---: |
| Pearson Chi-Square | $4.295(\mathrm{a})$ | 6 | .637 |
| Likelihood Ratio | 4.849 | 6 | .563 |
| Linear-by-Linear | .778 |  | 1 |

a 11 cells ( $91.7 \%$ ) have expected count less than 5 . The minimum expected count is .07 .

Symmetric Measures

|  |  |  | Asymp. <br> Std. <br> Error(a) | Approx. <br> T(b) | Approx. Sig. |
| :--- | :--- | ---: | ---: | ---: | ---: |
| Interval by Interval | Pearson's R | -.170 | .114 | -.879 | $.388(\mathrm{c})$ |
| Ordinal by Ordinal | Spearman | -.110 | .156 | -.566 | $.576(\mathrm{c})$ |
| N of Valid Cases | Correlation | 28 |  |  |  |

[^0]
## Bar Chart



School Grafti
$\square 0$
$\square 1$
$\square 2$
$\square 3$
$0=$ No graffiti
1 = little graffiti
2 = moderate graffiti
3 = considerable graffiti

### 6.2.1 Observational Walk-Thru Study Results

The most important factor contributing to high levels of graffiti seem to be the economic conditions of the neighborhood. The statistical correlations of high counts of graffiti reports to high levels of poverty were found to be significant. The observational data shows that the presence of a completed Learning Landscape site has a strong effect on the graffiti observed on the playground and school but weak to minimal effect on graffiti in the surrounding neighborhood. Playgrounds with completed Learning Landscapes were more likely to have lower observed counts of graffiti in relation to their surrounding neighborhoods. Partially built Learning Landscapes actually had higher levels of observed graffiti, possibly because the unfinished area is a construction site, which leaves it open to vandalism.

### 6.1 Variables Entered/Removed(b)

| Model | Variables <br> Entered | Variables <br> Removed | Method |
| :--- | :--- | :--- | :--- |
| 1 | percent of <br> students <br> with free <br> lunch, |  |  |
|  | Crime per <br> 1000, built, <br> Poverty, <br> Students <br> expelled(a) |  | Enter |
|  |  |  |  |

a All requested variables entered.
b Dependent Variable: Work Order 2003
Model Summary

| Model | R | R Square | Adjusted R <br> Square | Std. Error of <br> the Estimate |
| :--- | :---: | ---: | ---: | ---: |
| 1 | $.528(\mathrm{a})$ | .278 | -.624 | 2.268 |

a Predictors: (Constant), percent of students with free lunch, Crime per 1000, built, Poverty, Students expelled
Coefficients(a)

| Model |  | Unstandardized Coefficients |  | Standardized Coefficients <br> Beta | t | Sig. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | B | Std. Error |  |  |  |
| 1 | (Constant) | . 181 | 3.947 |  | . 046 | . 966 |
|  | Students expelled | . 070 | . 106 | . 689 | . 658 | . 546 |
|  | $\begin{aligned} & \text { Crime per } \\ & 1000 \end{aligned}$ | -. 019 | . 035 | -. 416 | -. 541 | . 617 |
|  | Poverty | -. 104 | . 163 | -. 511 | -. 638 | . 558 |
|  | built | 1.200 | 1.515 | . 348 | . 792 | .473 |
|  | percent of students with free lunch | . 021 | . 035 | . 267 | . 608 | . 576 |

a Dependent Variable: Work Order 2003

### 6.3 Qualitative Results

### 6.3.1 Cognitive Maps Showing Perceptions of High Graffiti Areas

Of the 10 participants who completed cognitive maps of gang activity and graffiti citywide, all indicated that graffiti was present in the following neighborhoods: Cole, Five Points, Highlands, Montbello, and Westwood. In general, the participants did not remember seeing graffiti in the downtown central business district. What is interesting about this is the fact that there is a significant number of graffiti reports in both the Police Department findings and the Partners Against Graffiti findings. Perhaps the
speed with which local downtown business owners clean-up graffiti contributes to these impressions.

In general the participants related areas of higher crime, or places they heard about frequently on the news with higher amounts of gang activity, vandalism, and graffiti. Perceptions of safety and graffiti as an indicator were voiced during this mapping process as participants asked each other questions about criminal activities in the city.

### 6.3.2 Selected Quotes from Focus Group Interviews

- "We teach our students to be proud and respectful of their school.

We do have the best students in our school." - Diana Talamas, Assistant Principal at Castro Elementary School where the playground has very little graffiti in spite of excessive amounts of graffiti in the surrounding neighborhood.


Swansea Elementary School Community Members Helping with Irrigation Maintenance

- "The kids love it." - anonymous reply about neighborhood impacts from the Learning Landscapes project
- "Building the new playground has brought our community together." - anonymous reply about neighborhood impacts from the Learning Landscapes project
- "I love to bring my children to play on the weekends." - anonymous reply about neighborhood impacts from the Learning Landscapes project
- "I pick up the trash all the time back there when I'm running." - anonymous reply about neighborhood impacts from the Learning Landscapes project
- "Helping to build the new playground has been an exciting and learning experience." - anonymous reply about neighborhood impacts from the Learning Landscapes project


Munroe Elementary School Parents with Son on Primary Play Equipment

- "They tag everything! You should see the roof. I don't know how they get up there, but they do." - Facilities Manager at Munroe Elementary School referring to the kids in the neighborhood
- "I had a four year old student steal my cell phone off of my desk. The only reason we caught him was because he went home and started calling all of my relatives." - Assistant Principal at Munroe Elementary School explaining how so many of the students in Westwood neighborhood do not even know the basic differences between "right" and "wrong" behavior.


### 6.3.3 Anonymous Selected Quotes about the Learning Landscapes from On-Line Surveys

- "Awesome experience(s). I love the community-based community-service learning approach. I appreciate how much the schools and communities are involved in the design of the place that is theirs."
- "It was a fantastic experience to work with children and faculty and to see all of the hard work come to create such a wonderful place."
- "Very rewarding - especially when the structures were installed."
- "I have been fortunate enough to design a master plan for an unbuilt school (Valverde Elementary in Athmar Park) as well as to work with the LLA on on-going projects. Both experiences have been extremely rewarding especially when I see how much the kids love their new landscapes and want to continue to work on them."


### 6.4 Data Analyses

### 6.4.1 Observational Walk-Thru Data for 15 Denver Neighborhoods ${ }^{\text {xxviii }}$

| Neighborhood | School <br> Graffiti | Neighborhood <br> Graffiti |
| :--- | ---: | ---: |
| WESTWOOD - Knapp | $\mathbf{3}$ | $\mathbf{3}$ |
| COLE - Maria Mitchell | $\mathbf{2}$ | $\mathbf{2}$ |
| MAR LEE - Force | $\mathbf{2}$ | $\mathbf{0}$ |
| NORTH PARK HILL - Hallett | $\mathbf{2}$ | $\mathbf{0}$ |
| HIGHLAND - Bryant-Webster | $\mathbf{2}$ | $\mathbf{1}$ |
| FIVE POINTS - Gilpin | $\mathbf{2}$ | $\mathbf{2}$ |
| MAR LEE - Schenck | $\mathbf{1}$ | $\mathbf{3}$ |
| WESTWOOD - Castro | $\mathbf{0}$ | $\mathbf{3}$ |
| MAR LEE - Johnson | $\mathbf{0}$ | $\mathbf{2}$ |
| WESTWOOD - Munroe | $\mathbf{0}$ | $\mathbf{2}$ |
| A-LINCOLN PARK - Greenlee | $\mathbf{0}$ | $\mathbf{1}$ |
| FIVE POINTS - Crofton | $\mathbf{0}$ | $\mathbf{1}$ |
| WEST COLFAX - Colfax | $\mathbf{1}$ | $\mathbf{2}$ |
| WEST COLFAX - Cheltenham | $\mathbf{1}$ | $\mathbf{0}$ |
| A-LINCOLN PARK-Del Pueblo | $\mathbf{0}$ | $\mathbf{2}$ |
| HIGHLAND - Sandoval | $\mathbf{0}$ | $\mathbf{1}$ |
| COLE - Wyatt-Edison | $\mathbf{0}$ | $\mathbf{0}$ |
| NORTH PARK HILL - Stedman | $\mathbf{0}$ | $\mathbf{1}$ |
| NE PARK HILL - Smith | $\mathbf{0}$ | $\mathbf{1}$ |
| CHERRY CREEK - Bromwell | $\mathbf{0}$ | $\mathbf{1}$ |
| SKYLAND - Columbine | $\mathbf{0}$ | $\mathbf{1}$ |
| BERKELEY - Centennial | $\mathbf{0}$ | $\mathbf{1}$ |
| GLOBEVILLE - Garden Place | $\mathbf{0}$ | $\mathbf{1}$ |
| SOUTHMOOR PARK-Southmoor | $\mathbf{0}$ | $\mathbf{1}$ |
| SKYLAND - Barrett | $\mathbf{0}$ | $\mathbf{0}$ |
| GREEN VALLEY RANCH - Marrama | $\mathbf{0}$ | $\mathbf{0}$ |
| GREEN VALLEY RANCH - Green Valley |  | $\mathbf{0}$ |

The graffiti was rated as considerable (3), moderate (2), little (1) or none (0)

### 6.4.2 Denver Public Elementary Schools Vandalism Work Orders Tables ${ }^{\text {xix }}$ :

All of the data compiled below was collected from Denver Public Schools. One of the major concerns about the accuracy of this data revolves around the means of reporting it. Work orders are submitted to Facilities Headquarters whenever supplies are needed. The number of work orders indicates a certain amount of activity on the school grounds but not an actual count of incidents of graffiti per school in any given year. The Denver Police Department and Partners Against Graffiti organizations are working with DPS to resolve this issue. A formal report needs to be created and kept by facilities management staff at each school if they are to accurately report graffiti incidents to the City of Denver.

### 6.4.2.1 Total Submission Counts of Work Orders

| Submission of Work Order | $\mathbf{2 0 0 1}$ | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{\%} \mathbf{2 0 0 1}$ | $\mathbf{\%} \mathbf{2 0 0 2}$ | $\mathbf{\%} \mathbf{2 0 0 3}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Schools | 47 | 50 | 53 | $100.0 \%$ | $100.0 \%$ | $100.0 \%$ |
| LL Schools | 9 | 10 | 12 | $19.1 \%$ | $20.0 \%$ | $22.6 \%$ |
| Partial LL Schools | 7 | 7 | 7 | $14.9 \%$ | $14.0 \%$ | $13.2 \%$ |
| Non-LL Schools | 31 | 33 | 34 | $66.0 \%$ | $66.0 \%$ | $64.2 \%$ |


| No Submission of Work Order | $\mathbf{2 0 0 1}$ | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | \% 2001 | \% 2002 | \% 2003 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Schools | 50 | 47 | 44 | $100.0 \%$ | $\mathbf{1 0 0 . 0} \%$ | $100.0 \%$ |
| LL Schools | 6 | 5 | 3 | $12.0 \%$ | $10.6 \%$ | $6.8 \%$ |
| Partial LL Schools | 6 | 6 | 6 | $12.0 \%$ | $12.8 \%$ | $13.6 \%$ |
| Non-LL Schools | 38 | 36 | 35 | $76.0 \%$ | $76.6 \%$ | $79.5 \%$ |


| Total Work Order | $\mathbf{2 0 0 1}$ | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | \% 2001 | \% 2002 | \% 2003 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Schools | 97 | 97 | 97 | $100.0 \%$ | $100.0 \%$ | $100.0 \%$ |
| LL Schools (no w/o) | 6 | 5 | 3 | $6.2 \%$ | $5.2 \%$ | $3.1 \%$ |
| Partial LL Schools (no w/o) | 6 | 6 | 6 | $6.2 \%$ | $6.2 \%$ | $6.2 \%$ |
| Non-LL Schools (no w/o) | 38 | 36 | 35 | $39.2 \%$ | $37.1 \%$ | $36.1 \%$ |
| LL Schools | 9 | 10 | 12 | $9.3 \%$ | $10.3 \%$ | $12.4 \%$ |
| Partial LL Schools | 7 | 7 | 7 | $7.2 \%$ | $7.2 \%$ | $7.2 \%$ |
| Non-LL Schools | 31 | 33 | 34 | $32.0 \%$ | $34.0 \%$ | $35.1 \%$ |

### 6.4.2.2DPS Work Orders

| Elementary School | $\mathbf{1 9 9 9}$ | $\mathbf{2 0 0 0}$ | $\mathbf{2 0 0 1}$ | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{2 0 0 4}$ | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Amesse |  | 7 | 2 | 1 | 5 |  | $\mathbf{1 5}$ |
| Anna Maria San |  |  |  | 1 | 1 |  | $\mathbf{2}$ |
| Asbury |  | 2 | 1 | 2 | 1 |  | $\mathbf{6}$ |
| Ash Grove |  |  | 1 | 2 | 3 |  | $\mathbf{6}$ |
| Ashley |  | 1 |  |  |  |  | $\mathbf{1}$ |
| Barrett |  |  |  | 1 |  |  | $\mathbf{1}$ |
| Barnum |  | 2 | 4 | 3 | 1 |  | $\mathbf{1 0}$ |
| Beach Court |  | 1 | 10 | 4 | 10 |  | $\mathbf{2 5}$ |
| Bradley |  | 1 | 2 |  |  |  | $\mathbf{3}$ |
| Bromwell |  | 2 |  | 1 |  |  | $\mathbf{3}$ |


| Brown |  |  |  |  | 1 | 1 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bryant-Webster |  | 3 | 3 | 3 |  |  | 9 |
| C.P.E.C. |  | 1 | 2 | 3 | 3 |  | 9 |
| Carson |  | 1 | 1 |  | 1 | 1 | 4 |
| Castro | 1 | 2 | 10 | 6 | 5 | 1 | 25 |
| Centennial |  | 2 |  | 2 |  |  | 4 |
| Cheltenham |  | 1 | 1 | 1 |  |  | 3 |
| Colfax |  | 1 |  | 1 |  | 1 | 3 |
| College View |  | 5 | 4 | 5 | 11 | 2 | 27 |
| Columbian |  | 1 | 1 | 2 | 4 |  | 8 |
| Columbine |  | 3 |  | 4 | 6 |  | 13 |
| Cory |  |  | 1 | 1 |  |  | 2 |
| Cowell | 1 | 4 | 4 | 6 | 4 |  | 19 |
| Crofton |  | 3 |  |  | 4 |  | 7 |
| Del Pueblo |  | 2 | 2 | 2 | 2 |  | 8 |
| Denison-Montessori |  |  | 1 | 8 | 8 | 1 | 18 |
| Doull |  | 2 | 3 | 5 | 8 |  | 18 |
| Eagleton |  | 5 | 10 | 13 | 8 | 2 | 38 |
| Ebert |  | 1 | 7 | 2 | 1 |  | 11 |
| Edison |  | 2 |  | 1 | 2 |  | 5 |
| Ellis | 1 | 8 | 8 | 7 | 4 |  | 28 |
| Fairmont |  | 4 | 12 | 12 | 6 | 1 | 35 |
| Fairview |  | 2 |  |  |  | 1 | 3 |
| Force |  |  | 5 | 12 | 2 |  | 19 |
| Ford |  | 2 | 2 | 2 | 3 |  | 9 |
| Gilpin |  | 1 |  |  |  |  | 1 |
| Godsman |  | 4 | 3 | 2 | 4 |  | 13 |
| Goldrick | 1 |  | 4 |  | 2 | 1 | 8 |
| Green Valley |  |  | 1 |  |  |  | 1 |
| Greenlee | 1 | 5 | 2 | 2 | 7 | 1 | 18 |
| Greenwood |  |  |  |  | 1 |  | 1 |
| Gust |  |  |  | 1 |  | 1 | 2 |
| Hallett |  | 2 | 6 |  |  |  | 8 |
| Harrington |  |  | 1 |  |  |  | 1 |
| Holm |  | 1 | 4 | 1 |  |  | 6 |
| Johnson |  | 3 |  |  |  | 1 | 4 |
| Kaiser |  |  |  | 5 |  |  | 5 |
| Knapp |  | 2 | 5 | 5 | 11 | 3 | 26 |
| Knight Academy |  |  |  |  |  | 1 | 1 |
| Lena Archuleta |  |  |  |  | 3 |  | 3 |
| Lincoln |  |  | 2 |  |  |  | 2 |
| Marrama |  |  |  | 1 |  |  | 1 |
| Maxwell |  | 1 |  |  | 3 |  | 4 |


| McGlone |  | 1 | 1 |  | 1 | 1 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| McKinley/Thatcher |  |  |  | 1 |  |  | 1 |
| McMeen |  |  | 5 | 2 | 4 |  | 11 |
| Mitchell |  | 6 | 1 | 3 | 7 |  | 17 |
| Montclair |  | 1 | 1 |  | 3 |  | 5 |
| Moore |  | 1 |  |  | 1 |  | 2 |
| Munroe |  | 1 | 3 | 6 | 5 | 1 | 16 |
| Newlon |  | 2 |  |  | 2 |  | 4 |
| Oakland |  | 1 |  | 3 | 1 |  | 5 |
| Palmer |  |  | 1 | 2 | 2 |  | 5 |
| Park Hill |  | 1 |  | 4 | 1 | 3 | 9 |
| Philips |  |  | 2 |  | 1 |  | 3 |
| Pioneer Charter |  | 1 | 1 |  | 2 |  | 4 |
| Remington |  | 6 | 1 | 1 |  |  | 8 |
| Sabin |  |  |  | 1 | 1 |  | 2 |
| Schenck |  |  | 4 | 7 | 8 |  | 19 |
| Schmitt |  | 4 | 4 |  |  | 2 | 10 |
| Smedley | 1 |  | 1 |  | 3 | 2 | 7 |
| Smith | 1 |  |  |  | 1 | 1 | 3 |
| Southmoor |  |  | 2 |  |  |  | 2 |
| Steck |  |  |  | 1 | 1 | 1 | 3 |
| Stedman |  | 2 |  |  |  |  | 2 |
| Steele |  | 1 |  | 1 |  |  | 2 |
| Swansea |  | 1 | 3 | 3 | 3 | 1 | 11 |
| Teller |  |  |  | 2 | 4 |  | 6 |
| Traylor |  |  |  |  | 3 |  | 3 |
| University Park |  |  |  | 1 |  |  | 1 |
| Valdez |  |  |  |  | 6 |  | 6 |
| Valverde |  |  | 6 | 4 | 5 | 2 | 17 |
| Whittier |  |  |  |  | 1 |  | 1 |
| Wyman |  | 2 |  |  |  |  | 2 |
| Total | 7 | 121 | 161 | 172 | 201 | 33 | 695 |

### 6.4.2.3Work Orders for each year and Learning Landscape Breakdown Follow:

Partial builds, in some phase of construction due to budgetary constraints are colorcoded in purple. Complete builds of Learning Landscapes are color-coded green.

| 2001 | 2002 | 2003 | Learning Landscapes | SCHOOL |
| :---: | :---: | :---: | :---: | :---: |
| 0 | 1 | 0 | PARTIAL LL | BARRETT |
| 0 | 1 | 0 | LL | BROMWELL |
| 1 | 0 | 1 | PARTIAL LL | CARSON |
| 4 | 6 | 4 | PARTIAL LL | COWELL |
| 12 | 12 | 6 | PARTIAL LL | FAIRMONT |
| 0 | 0 | 0 | PARTIAL LL | FAIRVIEW |
| 0 | 0 | 0 | PARTIAL LL | GILPIN |
| 0 | 5 | 0 | PARTIAL LL | KAISER |
| 5 | 5 | 11 | PARTIAL LL | KNAPP |
| 2 | 0 | 0 | PARTIAL LL | LINCOLN |
| 1 | 3 | 7 | PARTIAL LL | MITCHELL |
| 0 | 0 | 1 | PARTIAL LL | MOORE |
| 2 | 0 | 1 | PARTIAL LL | PHILIPS |
| 10 | 6 | 5 | LL | CASTRO |
| 0 | 1 | 0 | LL | COLFAX |
| 1 | 2 | 4 | LL | COLUMBIAN |
| 0 | 4 | 6 | LL | COLUMBINE |
| 0 | 0 | 4 | LL | CROFTON |
| 10 | 13 | 8 | LL | EAGLETON |
| 7 | 2 | 1 | LL | EBERT |
| 0 | 0 | 0 | LL | GARDEN PLACE |
| 2 | 2 | 7 | LL | GREENLEE |
| 3 | 6 | 5 | LL | MUNROE |
| 1 | 1 | 0 | LL | REMINGTON |
| 1 | 0 | 3 | PARTIAL LL | SMEDLEY |


| $\mathbf{0}$ | 0 | 1 | LL | SMITH |
| :--- | :--- | :--- | :--- | :--- |
| 3 | 3 | 3 |  | SWANSEA |
| $\mathbf{0}$ | 0 | 1 | LL | WHITTIER |

## 7 Conclusions/Discussion

This study indicates that the Learning Landscape Initiative has reduced the amount of graffiti on playgrounds that have completed Learning Landscapes. Our group used a variety of techniques to gather and analyze data. The statistical analysis resulted in positive correlations linking crime rates, poverty, free lunches, and graffiti work order counts to reduced levels of graffiti observed on completed Learning Landscapes in a cross-tabulation analysis. Other findings were based upon visual analysis of data expressed in charts and maps.

From 2001 to 2003, the number of graffiti work orders at all of the DPS elementary schools increased an average of $3 \%$. Cases of graffiti have been rising in the North and Southwest areas of Denver as evidenced by the Denver Police \& Graffiti Task Force Data, so we would expect a rise in cases of graffiti for any of the schools within neighborhoods experiencing this increase already. We ran a cross-tabulation regression test that showed a 60\% correlation of LLs to the number of reduced graffiti counts. The schools with LLs have statistically fewer counts of graffiti using the Chi-squares test when doing a descriptive cross-tabulation of work orders in 2003 to the Built LLs. In addition, perhaps the number of work orders has increased as schools are taking more pride and care of their new playground. Interviews conducted with facility managers reveal that this is a possibility as well.

Partial builds, which appear to be abandoned to the uninformed, actually seem to increase the level of graffiti on the playgrounds for the year of incompletion. This is a very important finding indicating that phasing of designs is not necessarily the most beneficial action for the school to take. In fact, in areas with high crime rates and high levels of vandalism already existing, partial builds are actually more likely to be targeted than before the phasing began.

## When comparing our results with our initial assumptions we found:

High crime factors: according to both maps: the Piton Foundation and the PGA by police districts, show a correlation that the neighborhoods with higher count of risk factors, hence Districts Central, Northwest, and North part of Southwest, indicate the higher activity for graffiti.

Economics/Poverty: There is a high correlation between the neighborhoods with the highest percentage of poverty and the ones with $75 \%$ or more of free-school-lunch program, also located in the same areas described previously and the amount of graffiti found in those communities. Poverty is an influential factor in the presence of graffiti and vandalism.

Property: The highest renter-occupied units are in the central district.

Poverty: children in poverty are in the central area: central district, central north, south NW district and north SW (SW \& SC) districts.

## Free School Participation: same area.

Demographics: Percentage of <18 years: North central (police NE \& east of NW), South West and south of NW

Education: Persons Age 25 or Older with Less than a 12th Grade Education: is again the same area: police districts: east of NW and NE district and south of NW and north of SW districts.

Further analysis is needed but one thing is clear, communities that care about their environment and claim ownership of their public spaces are less likely to be perceived as communities suffering from crime and vandalism. Do gang members typically tag where they know that the graffiti will be quickly removed? Studies indicate they do not. If the goal of a 'tagger' is to leave a trace and to make a mark, then those property owners that do not bother to remove graffiti are most likely to be targeted. Our studies show that Learning Landscapes, when well-maintained and completed, are less likely to suffer from vandalism. In closing, communities that are willing to pay for public life, be that through taxes or community-service, actually can have a higher quality of public life.

## 8 Appendix A

### 8.1 Neighborhood Impacts On-Line Survey

## NEIGHBORHOOD IMPACTS: Learning Landscape Initiative \& Denver Public Schools Survey (ENGLISH)

1. Denver Neighborhood Impact Survey
2. Today's Date (format day/month/year)

|  | MM |  | DD | YYYY |
| :--- | :--- | :--- | :--- | :--- |
| (format day/month/year) |  | $/$ |  | $/$ |

For Additional Information \& the Piton Foundation's Asset Map highlighting Denver Public Schools \& their Surrounding Neighborhoods,

Please go to the Neighborhood Impact Survey Information Site:
http://www.freewebs.com/byost/index.htm
After viewing the site, you will have the option of returning to continue this survey.
When you are ready to leave the Neighborhood Impact Survey Information Site listed above, simply click on the "click here to take survey" bar on the "home" page.
2. Please select the NEIGHBORHOOD - Elementary School for your survey.

If you would like to comment on a Middle School or High School, please enter the name in the "Other" category.

3. How long have you lived or worked in this neighborhood?

| less than 1 year | $1-2$ years | $3-5$ years | $5-10$ years | over 10 years |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |


5. Have you used the playground at your local school?
6. Please indicate your connection with your local school:

7. Has your local elementary school playground been redesigned and rebuilt with community

8. Have you participated in a Learning Landscape Project?

| yes | no | don't know |
| :---: | :---: | :---: |
|  |  |  |
| y |  |  |

9. If you have helped to plan, design, or build a "Learning Landscape" and would like to comment on your experience please do so here:

10. In what ways has the "quality of life" changed in your neighborhood since the year 2000 ?


11. BENEFITS OF YOUR LOCAL ELEMENTARY SCHOOL PLAYGROUND

12. BENEFITS OF YOUR NEIGHBORHOOD

|  | strongly <br> agree | somewhat <br> agree | neutral | somewhat <br> disagree | strongly <br> disagree | N/A |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |  |



14. SCHOOL ENVIRONMENT

Please note: Graffiti is a form of Vandalism.

The
playground
offers a safe
and welcoming
environment.

16. PARTICIPATION IN MY LOCAL ELEMENTARY SCHOOL


In addition to paying taxes I help to plan raise money build or donate services for programs \& improvements of the school or playground.


I helped with the Master Plan for this school.

I am a member of a school committee.

## 17. PARTICIPATION IN MY NEIGHBORHOOD



In addition to paying taxes I help to plan raise money build or donate services for programs \& improvements in my neighborhood.


I helped with the Master Plan for this neighborhood.

I am a member of a neighborhood association.
18. LEVEL OF INVOLVEMENT ON THE LOCAL ELEMENTARY SCHOOL PLAYGROUND

|  | 4-7 days per week | 1-3 days per week | 2 times per month | 3 or more times a year | 1-2 <br> times a year | Never | N/A |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| I (we) utilize the playground on the evenings and during weekends. | ) | ) | J | J | ) | ) | $\bigcirc$ |


19. LEVEL OF INVOLVEMENT IN MY NEIGHBORHOOD


association
meetings.
20. OBSERVED BEHAVIORS ON PLAYGROUND

Please note: Graffiti is a form of Vandalism.


## 21. OBSERVED BEHAVIORS IN NEIGHBORHOOD

Please note: Graffiti is a form of Vandalism.



Graffiti activities in neighborhood occur
$\square$



22. BEHAVIOR \& ACTIONS ON MY SCHOOL PLAYGROUND


24. THOUGHTS \& BELIEFS

```
my
neighborhood
MORE THAN
people from
my
neighborhood
write graffiti in
my
neighborhood.
```


The Learning
Landscape
Initiative helps
to reduce the
number of
vandalism \&
graffiti
incidents.

25. Please write any additional comments here:


If you would like additional information or to see survey results, please e-mail
Bambi_L_Yost@yahoo.com
Thank you for your time!

## Done >>

### 8.2 Neighborhood Impacts Walk-Thru Survey



## NEIGHBORHOOD IMPACTS: LLA \& DPS Walk-Thru Survey

## 1. INTRODUCTION

Hello. If you are on this site, it is assumed that you have already completed the Walk-Thru Survey and are ready to enter data. If that is not the case, please return to the Main Neighborhood Impacts Information Website
(www.freewebs.com/byost/) to print a pdf document of this study for your investigation.

This survey requires that you, the Rater, be on-site in the neighborhood and on the playground with survey in hand. It is recommended that you take time to fully investigate play equipment, alleys, and backyards. Careful exploration is advised.

This survey is broken into 10 parts:

1. Basic Survey Information
2. Denver Public Elementary School Playground Walk-Thru Survey
3. Residential Land Use
4. Territoriality
5. Nonresidential Land Use
6. Other Physical Features
7. Resources
8. Walkability
9. People
10. Talley Sheet

For Additional Information \& the Piton Foundation's Asset Map highlighting Denver
Public Schools \& their Surrounding Neighborhoods, please go to the
Neighborhood Impact Survey Information Site:
http://www.freewebs.com/byost/index.htm

## Next >>



## NEIGHBORHOOD IMPACTS: LLA \& DPS Walk-Thru Survey

2. Basic Summary Information

|Denver Public Schools

Learning Landscape Alliance

$\square$


## NEIGHBORHOOD IMPACTS: LLA \& DPS Walk-Thru Survey

3. DENVER PUBLIC ELEMENTARY SCHOOL PLAYGROUND WALK-THRU SURVEY
4. (Raters will score this question if there is a lock on the playgrounds gate permitting access only to those who have a key or a combination code.)

Playground locked?

| yes | no |
| :---: | :---: |
|  |  |
| 0 | 0 |

## 8. Nontraditional Elements \& Artwork present (Check all that apply)-



Murals

Sculptures

Hand Painted Tiles

Game Tables

Boulders

Shade Structure
$\longdiv { 3 / 2 0 0 4 }$



iquor store


Adult entertainment

Bars/Night club

Abandoned/boarded up building
Gun shop
Community Corrections Facility

Check cashing \& money orders site

Other (please specify)
11. Number of people present at time of survey-

None (Skip to \# 14)

1-5

6-11

2 or more
12. (Raters will estimate ages of people)

Who is present at time of survey (Check all that apply) -
Children (under 12)

Adolescents (12 to 18)

Adults (18 to 65)

Seniors (over 65)
13. (Main use by occupants refers to which use is being used most.)

Main use of playground by occupants -

No main use

Play equipment

Athletic Field

Open space

Baseball field

Basketball Court


| 14. (Dedication of space indicates which use occupies the greatest areas of the playground.) |
| :--- |
| Main dedication of space in playground- |
| No main dedication of space |
| $3 / 2004$ |



```
15. (Raters will indicate what type of seating area is provided. If a seating area is provided just
outside the playground, but is clearly designed to be used by the school community, this will be
counted.)
Features of Seating areas (Check all that apply)-
None
Manmade shade structure
Natural shade
Play Pit Wall for additional seating
Park Benches
Picnic Tables
OTHER (Please specify)
```

16. (Shade area may be manmade, such as a shade structure, or natural, such as deciduous


17. (Good - Obviously well maintained and clean; Fair - Decent in appearance, in need of some maintenance, possibly a bit of trash that needs to be picked up, but still usable; Poor - Very little or no effort made to keep up playground, overgrown plantings, vandalism \& graffiti, considerable amount of trash; Mixed - Some of the playground is in good condition and some is in poor condition.)

Overall appearance of playground upkeep-
Good/well kept

Fair

Poor/deteriorated

Mixed conditions
20. (For items \# 20 and \# 21, the raters look at the general appearance/majority of the playground to assess whether these attributes are: little - slightly noticeable; need to look to find it; moderate - a significant amount; noticeable without making much effort to look; or considerable - in great abundance, would stand out even if you weren't looking for it.)

Amount of graffiti/vandalism-

None

A little

A moderate amount

A considerable amount




NEIGHBORHOOD IMPACTS: LLA \& DPS Walk-Thru Survey
4. RESIDENTIAL LAND USE

## 22. Are there residential properties in the block adjacent to the school?

no (Skip to \# 29 on next page)
yes
23. (Code all types of residential housing present on the block. Single family detached dwelling means that the house is free standing with one mailbox and doorbell. A duplex is two units attached with two mailboxes and two doorbells. A townhouse or rowhouse is a group of houses that are connected and consist of three or more houses each with their own entrance. Senior apartments or assisted living apartments are those that house elderly only or those that need medical services from a nurse or other medical professional. An apartment building is a larger building that may have a common entrance. Shelters are overnight accommodations for those that are homeless. Housing authority projects (low rise) are apartments that house low-income residents that are partially funded through public funds. Condominiums may look similar in structure to an apartment building, but each unit is owned instead of rented. Indicators of ownership include signs indicating selling (versus leasing) of units and a look of permanence in decoration, etc.)

Main type of residential housing-

No main type of housing

Single family detached dwellings

Duplex

Townhouse/Rowhouse

Senior Apartments/Assisted Living

Apartment building

Housing units over commercial store fronts

Shelter

Housing authority projects

Condominiums

Other (please specify)

[^1]```
condition; a little peeling of paint is okay but not a lot; bricks/shingles are all intact; no cracked or broken windows. Though you may prescribe a little home repair, overall condition is fine; Fair Could use some repair work; a moderate amount of peeling paint but still structurally in fair condition. Bricks/shingles are in reasonable condition with a few repair needs. A few broken/cracked windows. You would definitely recommend a moderate amount of home repair; Poor - Broken stairs; a considerable amount of peeling paint, missing/broken bricks/shingles; seemingly little attention paid to upkeep. Major overhaul needed to improve the appearance of these homes; Mixed conditions - Only code for extreme differences such as most good but some very poor. If there is any apparent explanation for the disparity please provide comments.)
Overall condition of most residential units-
```

Excellent

Good condition/well kept

Fair condition

Poor/deteriorated condition

Mixed conditions
25. (If the home is being renovated there are several signs which may indicate this. There may be a tarp over portions of the home or exposed raw materials. There may also be an advertisement form the contractor who performed the work. If the house is newly built there still may be an advertisement from the contractor but the work appears to be complete. There are no visible unfinished portions of the home. Also, the newly built homes may differ significantly in appearance from the surrounding homes.)

Residential units that appear to be-

Neither of the below conditions

Being renovated

Newly built


Ilvone
|ll-2
||3.5
||bor more

$\square$
<<Prev Next >>


## NEIGHBORHOOD IMPACTS: LLA \& DPS Walk-Thru Survey

## 5. TERRITORIALITY (public \& private)

29. (Includes names of commercial property, welcome signs, and neighborhood watch signs that denote the neighborhood name.)

Signs that denote a neighborhood name-
no
yes
30. (Resident kept grounds include lawn, front yard, or any other part of each unit's property (not including the residence structure) that is apparently maintained by residents. Excellent Immaculate. Near perfect condition. Good - Clean and well kept grounds. Grass cut; stairs/stoop swept and clean. Fair - Passable conditions with some attempt to upkeep property but moderate success. Some sign of disarray but still fairly decent appearance. Poor - Lawn overgrown/weedy; dirty and unkempt property; little or no apparent regard for upkeep of property. Mixed conditions - Some grounds in fairly good conditions while other need major overhaul.)

Overall conditions of resident-kept grounds-

Excellent

Good condition/well kept


Fair condition

31. (A border is an element that physically or visually separates resident's yards. These are resident erected that separate (partially or fully) any portion of the property (from the front of the house to the street) from other property. Retaining walls should not be considered a border.)

Proportion with border-

None

Less than 1/3

One third to one half

More than half
32. (Decorations include flower boxes, lawn decorations, gardens, wind chimes, etc.)

Proportion with some form of decoration-

None


Less than 1/3

One third to One half

More than half
33. (Raters only code for security hardware affixed to windows.)


## 34. (Raters code this item for traditional porches with enough space to seat at least one person. <br> Proportion with porches-

None
$\square$ ess than $1 / 3$

|  | One third to one half |
| :--- | :--- |

$\square$ More than half
<< Prev
Next $\gg$


NEIGHBORHOOD IMPACTS: LLA \& DPS Walk-Thru Survey
6. NONRESIDENTIAL LAND USE
35. (If there are properties that are not residential housing on the block, code "yes" for this item. If the block is comprised entirely of residences, code "no". Nonresidential land use includes commercial and industrial properties, but does not include playgrounds or parks since these are included in a later question. Score these items with the same set of criteria as corresponding items in the residential section.)

Presence of nonresidential land use-
No (Skip to \# 43 on next page)

Yes
36. Risk factors within 2-3 blocks of the elementary school (Check all that apply)
$\pm$ Liquor store

|  |  |
| :--- | :--- |
|  | Pawn shop |
|  |  |
|  |  |

Bars/Night club

Abandoned/boarded up building

Gun shop

Community Corrections Facility

Check cashing \& money orders site
other (please specify)
37. (Same set of instructions as similar item in "residential land use" section.)

Nonresidential land use that is-
/3/2004


40. (This item refers to properties that are clearly no longer in use as indicated by boarded up windows, resident report, and other obvious signs of abandonment.)

Proportion which are boarded up, abandoned, or appear to be closed indefinitely-

None
_ess than $1 / 3$

One third to one half

More than half



## 7. OTHER PHYSICAL FEATURES

```
43. (This item refers to plots of land that are clearly not in use as indicated by lack of a structure
on the property or lack of development of the land. Parks or open space should not be
considered as vacant or undeveloped land.)
Proportion of the block that is vacant or undeveloped-
```

    None (Skip to \#45)
    Less than $1 / 3$
One third to one half
More than half

45. (The block has trees on both sides of the street in abundance. An attempt has been made to separate the sidewalk from the street by planting a uniform row of trees at a spacing of at least one tree for every two house-sized lots.)

Trees lining street-

No
46. (For items \# 46 and \# 47, the raters look at the general appearance/majority of the playground to assess whether these attributes are: little - slightly noticeable; need to look to find it; moderate - a significant amount; noticeable without making much effort to look; or considerable - in great abundance, would stand out even if you weren't looking for it.)

Amount of graffiti/vandalism-

None

A little

A moderate amount

A considerable amount
47. Amount of litter-

other household items, etc.)

Drug paraphenalia

Used condoms

Alcohol containers

Other (please specify)

[^2]|  | Major thoroughfare/busy street with median |
| :--- | :--- |
|  |  |
|  | Major thoroughfare/busy street without median |
|  | Moderately busy thoroughfare |
|  |  |
|  | Side street |
|  |  |
|  | Dead end street |
|  |  |
|  | Alley-type street |
|  |  |

50. (Public spaces include sidewalks, streets, and any other non-private land or property (such as bus stops). Good - No potholes, even sidewalk with little or no chipped concrete. Fair -
One/two potholes, some uneven spots in sidewalk with some chipped concrete. Poor - Two plus potholes in street, uneven/broken sidewalks, general disarray and disrepair.)

General condition of public spaces-

```
Good
```

=air
Poor/deteriorated
Mixed Conditions


## NEIGHBORHOOD IMPACTS: LLA \& DPS Walk-Thru Survey

## 8. RESOURCES

| 51. Public courtesies (Check all that apply)- |  |
| :--- | :--- |
|  |  |
|  | None |
|  |  |
|  | Trash cans (nonresidential) |
|  |  |
|  | Public phones |
|  |  |
|  | Public transportation stop |
|  |  |
|  |  |
|  |  |
|  |  |

```
52. (Set aside parking is indicated by signs that have a handicap symbol and read "Do not park
between these signs" (or similar text). For sidewalk ramps, raters look at the end of the block to
see if there is an incline cut into the sidewalk to allow for entry of wheelchairs onto the block via
sidewalk access.)
Facilities for handicap accessibility (Check all that apply)-
None
Set aside parking
/3/2004


54. ("Yes (Private)" is for playgrounds that are a part of a church or private schoolyard. These playgrounds are fenced off and unavailable for public use.)

Park or playground-
. No (Skip to \#57 on next page)

Yes (Parks \& Recreation)

Yes (Public Playground - unlocked main entrance)

Yes (Private Playground - locked main entrance)

Other (please specify)
55. (Good - Obviously well maintained, clean and well groomed. Fair - Decent in appearance, in
\begin{tabular}{|l|l|l|l|}
\hline \multicolumn{7}{|c|}{} & Good condition/well kept \\
\hline & Fair condition \\
\hline & & \\
\hline & Poor/deteriorated condition \\
\hline
\end{tabular}
\begin{tabular}{|c|c|}
\hline \multicolumn{2}{|l|}{56. Occupants of the playground/park (Check all that apply)--} \\
\hline & None \\
\hline - & Adults without children \\
\hline - & Children <12 years old accompanied by adults \\
\hline - & Children <12 years old not accompanied by adults \\
\hline \(\square\) & Children \(>12\) years old \\
\hline & \\
\hline
\end{tabular}



NEIGHBORHOOD IMPACTS: LLA \& DPS Walk-Thru Survey

\section*{9. WALKABILITY}
57. (Attached sidewalks are a continuation of the curb and gutter and there is no separation between the two. Detached sidewalks are separate from the curb and gutter and typically have grass or other landscape material between the two. If both sides of the street are not the same, code the street with the highest number ( 0,1 or 2 ) as long as the entire street meets this condition. For example, if one entire side of the street has attached sidewalks and the other has detached sidewalks, code this question as \#2, Detached from street. The idea is to code the best walkable condition of an entire side of the block.)

Sidewalks-

None

Attached to street

Detached from street
58. (On street bike routes are on the same surface as the road and are indicated by a green bike route sign. On street bike lanes are on the same surface as the road, but are divided by a white line, a white diamond symbol, and a white sign that has a diamond and/or "BIKE LANE ONLY" text. Off street bike routes are different than sidewalks as they are much wider, typically eight to ten feet in width, and may be cement or other landscape materials such as crushed limestone. Off street bike routes may or may not be indicated with signs.)

Bike paths present-

No

On Street Bike Route

On Street Bike Lane

Off Street Bike Route
59. (Traffic calming is a means to slow traffic. Speed bumps are large asphalt bump across the road. Roundabouts are substitutes for typical intersections that may have traffic continuously traveling through them. They cause the automobiles to slow down because they must travel around the intersection. For instance, to make a left hand turn, the driver must drive right around the roundabout until they three quarters around the circle and the turn right. Varied median alignments are curvilinear roads in which the median has varied widths causing traffic to follow the curves instead of driving straight through. Raised crosswalks are crosswalks other
then the painted stripe variety. A raised crosswalk slows traffic and allows pedestrians to have their own surface to walk on other than the road. Pedestrian bubbles are at stoplights and they create a shorter distance for pedestrians to cross the street. They are typically accompanied with on street parallel parking and the sidewalk extends beyond the parking lane so pedestrians are able to see oncoming traffic.)

Traffic calming present (Check all that apply)-

\begin{tabular}{|l|l|}
\hline & \\
\hline\(\square\) & Roundabout \\
\hline
\end{tabular}


Raised crosswalks (brick, etc.)

Pedestrian crosswalk bubbles

Other (please specify)

\section*{60. Street lighting present-}
|lvo

1 per block
\(>1\) per block


\section*{NEIGHBORHOOD IMPACTS: LLA \& DPS Walk-Thru Survey}

\section*{10. PEOPLE}
61. (Raters look at those that are present during the survey. For some children it may difficult to determine if they are under the age of 12 but raters should use their own discretion.)

People present on the street (Check all that apply)-
\begin{tabular}{|l|l|}
\hline & None (Skip to \# 70 on next page) \\
\hline & <12 year old children \\
\hline & \\
\hline & \(>12\) year old children \\
\hline & \\
\hline & Adults \\
\hline & \\
\hline & Seniors \\
\hline & Panhandlers/homeless \\
\hline & \\
\hline & Other (please specify) \\
\hline & \\
\hline
\end{tabular}
62. (Raters evaluate the majority of people present on the block.)

Main age present -

No main age



65. (For the purpose of this study, the item is specifically referring to ethnic heritage - African Americans, Hispanics, and European Americans, etc.)

People from more than one racial group-

No (Skip to \# 67)
66. (Raters score this item if they see people from more than one racial group interacting socially.)

People socializing in mixed racial groups-
No
|res
67. (Raters score this item if they see people from more than one age group interacting.)

Are people of mixed age interacting-
|lvo

68. (Raters should write in the other category any activity that is not covered in the choices




NEIGHBORHOOD IMPACTS: LLA \& DPS Walk-Thru Survey
11. NONRESIDENTIAL LAND USE TALLY SHEET
70. When in the field, keep tally of the following categories on the line provided to the left. Add up the total tally for each category and check the appropriate total.


12. ( ) Day care centers, nursery schools, children=s centers


21._ ()Food:

Grocery store
(independent/small)

25._()Funeral
home, mortuary, undertaking


 |31. OHospras ||O ||Oा|Oा|O I|Oा| |n ए-
 एermed एe. ||ण||णण||ण||ण|| Hemo 38._( Pawn


47. ()Schools: Colleges and Universities




12. Thank you!


\section*{<< Prev \\ Done >>}

\subsection*{8.3 Data from Piton Foundation}
\begin{tabular}{|c|c|c|c|c|}
\hline Neighborhood - School & Lunch & residents & per 1000 & line \\
\hline ATHMAR PARK - Goldrick Elementary & 60.1 & 105.5 & 44.8 & 12.6 \\
\hline ATHMAR PARK - Valverde Elementary & & 105.5 & 44.8 & 12.6 \\
\hline AURARIA-LINCOLN PARK - Del Pueblo Elementary & 80.3 & 241.5 & 72.1 & 37.7 \\
\hline AURARIA-LINCOLN PARK - Greenlee Elementary & & 241.5 & 72.1 & 37.7 \\
\hline BAKER - Fairmont Elementary & 80 & 133.7 & 77.1 & 24.3 \\
\hline BARNUM - Barnum Elementary & 71.4 & 85.4 & 70.8 & 13.4 \\
\hline BARNUM WEST - Newlon Elementary & 61.9 & 63.2 & 44.7 & 13.4 \\
\hline BEAR VALLEY - Traylor Elementary & 14 & 60.7 & 49.2 & 6.4 \\
\hline BELCARO - Knight Academy Elementary & 45.9 & 60.9 & n/a & 1.3 \\
\hline BERKELEY - Centennial Elementary & 39.3 & 68.3 & 38.3 & 7.6 \\
\hline CAPITOL HILL - Moore Elementary & 49.7 & 113.6 & 67 & 17.8 \\
\hline CHAFFEE PARK - Beach Court & 57.6 & 72.6 & 37.4 & 16.5 \\
\hline CHERRY CREEK - Bromwell Elementary & 9.6 & 117.6 & n/a & 8.1 \\
\hline CITY PARK WEST - Wyman Elementary & 60.3 & 124.6 & 69.7 & 28.8 \\
\hline CLAYTON - Harrington Elementary & 77.3 & 82.7 & 75.5 & 28.5 \\
\hline CLAYTON - Pioneer Charter Elementary & 77.3 & 82.7 & 75.5 & 28.5 \\
\hline COLE - Maria Mitchell Elementary & 79.6 & 88.9 & 67 & 26.3 \\
\hline COLE - Wyatt-Edison Elementary & 79.6 & 88.9 & 67 & 26.3 \\
\hline COLLEGE VIEW - College View Elementary & 65 & 104.5 & 51.2 & 20.3 \\
\hline CONGRESS PARK - Teller Elementary & 22 & 76 & 31.4 & 10.9 \\
\hline CORY-MERRILL - Cory Elementary & 8.3 & 83.1 & 36.5 & 5.7 \\
\hline EAST COLFAX - Ashley Elementary & 62.2 & 84.9 & 95.8 & 22.4 \\
\hline ELYRIA SWANSEA - Swansea Elementary & 78.5 & 120.3 & 67.7 & 27.9 \\
\hline FIVE POINTS - Crofton Elementary & 76.6 & 214.5 & 98.8 & 31.5 \\
\hline FIVE POINTS - Ebert Elementary & 76.6 & 214.5 & 98.8 & 31.5 \\
\hline FIVE POINTS - Gilpin Elementary & 76.6 & 214.5 & 98.8 & 31.5 \\
\hline FORT LOGAN - Kaiser Elementary & 15.5 & 33.7 & 33.2 & 7.7 \\
\hline GATEWAY - Archuleta Elementary & 48 & Na & n/a & n/a \\
\hline GATEWAY - Gateway Elementary & 48 & Na & n/a & n/a \\
\hline GLOBEVILLE - Garden Place Elementary & 70.9 & 176 & 85 & 23.2 \\
\hline GREEN VALLEY RANCH - Green Valley Elementary & 20.9 & 46.1 & 49.3 & 3.9 \\
\hline GREEN VALLEY RANCH - Marrama Elementary & 20.9 & 46.1 & 49.3 & 3.9 \\
\hline HALE - Palmer Elementary & 20 & 67.9 & 59.6 & 13.9 \\
\hline HAMPDEN - Holm Elementary & 17.6 & 49 & 38.9 & 7 \\
\hline HAMPDEN SOUTH - Samuels Elementary & 20 & 44.6 & 25.8 & 7.3 \\
\hline HAMPDEN SOUTH - Southmoor Elementary & 20 & 44.6 & 25.8 & 7.3 \\
\hline HARVEY PARK - Doull Elementary & 41.6 & 69.5 & 56.8 & 9.5 \\
\hline HARVEY PARK SOUTH - Gust Elementary & 26 & 75 & 57.1 & 8.5 \\
\hline HARVEY PARK SOUTH - Sabin Elementary & 26 & 75 & 57.1 & 8.5 \\
\hline HIGHLAND - Bryant-Webster Elementary & 73.2 & 94.9 & 52.2 & 24.2 \\
\hline HIGHLAND - North Valdez Elementary & 73.2 & 94.9 & 52.2 & 24.2 \\
\hline HIGHLAND - Sandoval Elementary & 73.2 & 94.9 & 52.2 & 24.2 \\
\hline HILLTOP - Carson Elementary & 17.2 & 36.7 & 38.4 & 5.4 \\
\hline HILLTOP - Steck Elementary & 17.2 & 36.7 & 38.4 & 5.4 \\
\hline HILLTOP - Whiteman Elementary & 17.2 & 36.7 & 38.4 & 5.4 \\
\hline LOWRY FIELD - Lowry Elementary & 24.8 & 43.1 & 87.6 & 10.7 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|}
\hline MAR LEE - Denison Elementary & 55.3 & 75.3 & 64.5 & 13.8 \\
\hline MAR LEE - Force Elementary & 55.3 & 75.3 & 64.5 & 13.8 \\
\hline MAR LEE - Johnson Elementary & 55.3 & 75.3 & 64.5 & 13.8 \\
\hline MAR LEE - Schenck Elementary & 55.3 & 75.3 & 64.5 & 13.8 \\
\hline MARSTON - Grant Ranch Elementary & 8.7 & 32.7 & 16.4 & 2.6 \\
\hline MONTBELLO - Amesse Elementary & 53.9 & 54.8 & 77.3 & 13.8 \\
\hline MONTBELLO - Ford Elementary & 53.9 & 54.8 & 77.3 & 13.8 \\
\hline MONTBELLO - Greenwood Elementary & 53.9 & 54.8 & 77.3 & 13.8 \\
\hline MONTBELLO - Maxwell Elementary & 53.9 & 54.8 & 77.3 & 13.8 \\
\hline MONTBELLO - McGlone Elementary & 53.9 & 54.8 & 77.3 & 13.8 \\
\hline MONTBELLO - Oakland Elementary & 53.9 & 54.8 & 77.3 & 13.8 \\
\hline MONTCLAIR - Montclair Elementary & 23.9 & 54.8 & 77.3 & 13.8 \\
\hline NORTH PARK HILL - Hallett Elementary & 44.1 & 47.8 & 76.4 & 9.4 \\
\hline NORTH PARK HILL - Stedman Elementary & 44.1 & 47.8 & 76.4 & 9.4 \\
\hline NORTHEAST PARK HILL - Smith Elementary & 65.2 & 103.1 & 108.8 & 23.8 \\
\hline PLATTE PARK - McKinley Thatcher Elementary & 17.7 & 80.8 & 18.8 & 6.1 \\
\hline ROSEDALE - Rosedale Elementary & 16.4 & 73.4 & 57.4 & 6.7 \\
\hline RUBY HILL - Godsman Elementary & 56.2 & 72.4 & 59 & 17.6 \\
\hline RUBY HILL - Schmitt Elementary & 56.2 & & & \\
\hline SKYLAND - Barrett Elementary & 61.8 & 54.9 & 98.5 & 15.3 \\
\hline SKYLAND - Columbine Elementary & 65.8 & 54.9 & 98.5 & 15.3 \\
\hline SLOANS LAKE - Brown Elementary & 56.7 & 71.4 & 40.2 & 12.3 \\
\hline SOUTH PARK HILL - Odyssey Charter Elementary & 18.4 & 66.9 & 36 & 6.9 \\
\hline SOUTH PARK HILL - Park Hill Elementary & 18.4 & 66.9 & 36 & 6.9 \\
\hline SOUTH PARK HILL - Philips Elementary & 18.4 & 66.9 & 36 & 6.9 \\
\hline STAPLETON - Stapleton Odyssey Elementary & 57.1 & n/A & n/A & n/A \\
\hline SUN VALLEY - Fairview Elementary & 92.2 & 207.2 & 120.6 & 71.5 \\
\hline SUNNYSIDE - Columbian Elementary & 86.9 & 85.2 & 60.3 & 18.8 \\
\hline SUNNYSIDE - Remington Elementary & 86.9 & 85.2 & 60.3 & 18.8 \\
\hline SUNNYSIDE - Smedley Elementary & 86.9 & 85.2 & 60.3 & 18.8 \\
\hline UNIVERSITY - Asbury Elementary & 13.6 & 44.8 & 31 & 14.2 \\
\hline UNIVERSITY HILLS - Bradley Elementary & 19 & 65.1 & 36.8 & 3.6 \\
\hline UNIVERSITY PARK - University Park Elementary & 9.7 & 52.6 & 38.4 & 11.5 \\
\hline VILLA PARK - Cowell Elementary & 76.1 & 57.4 & 55.4 & 14.7 \\
\hline VILLA PARK - Eagleton Elementary & 76.1 & 57.4 & 55.4 & 14.7 \\
\hline VIRGINIA VILLAGE - Ellis Elementary & 25.7 & 69 & 59.3 & 11.7 \\
\hline VIRGINIA VILLAGE - R.M.S.E.L. Ash Grove & 25.7 & 69 & 59.3 & 11.7 \\
\hline WASHINGTON PARK - Steele Elementary & 3.9 & 68.5 & 43 & 2.1 \\
\hline WASHINGTON PARK WEST - Lincoln Elementary & 16.7 & 87.2 & 33.5 & 6.8 \\
\hline WASHINGTON VIRGINIA VALE - Fallis Elementary WASHINGTON VIRGINIA VALE - McMeen & 30.1 & 57.2 & 53.9 & 10 \\
\hline Elementary & 30.1 & 57.2 & 53.9 & 10 \\
\hline WELLSHIRE - Slavens Elementary & 2.8 & 22.3 & n/a & 1.9 \\
\hline WEST COLFAX - Cheltenham Elementary & 79.3 & 97.8 & 72.6 & 28.9 \\
\hline WEST COLFAX - Colfax Elementary & 77.5 & 97.8 & 72.6 & 28.9 \\
\hline WEST HIGHLAND - Edison Elementary & 39.6 & 71.3 & 48.3 & 9.3 \\
\hline WEST HIGHLAND - Fred N Thomas Career Ed & & & & \\
\hline Center & 39.6 & 71.3 & 48.3 & 9.3 \\
\hline WESTWOOD - Castro Elementary & 72 & 74.8 & 57.3 & 24.1 \\
\hline WESTWOOD - Knapp Elementary & 72 & 74.8 & 57.3 & 24.1 \\
\hline WESTWOOD - Munroe Elementary & 74 & 74.8 & 57.3 & 24.1 \\
\hline Denver Average & 46.93 & 75.35 & 56.14 & 16.93 \\
\hline
\end{tabular}

\subsection*{8.4 Sample E-Mail Correspondence for Focus Groups on Graffiti, Gang Activity, and Vandalism on DPS Elementary School Playgrounds}

Dear Marsha Gonzales,
Hello. I am a student at UCD working with Professor Lois Brink on the Learning Landscape Initiative. We are trying to gather some feedback/data documenting vandalism and gang activity on DPS elementary school playgrounds. I am currently working with DPS, the Piton Foundation, and the Denver Police Gang task Force but I need help setting up some community focus groups at Denver Elementary Schools.

The hope is that by having a better understanding of how playgrounds are being used and abused, we can create community partnerships and designs that help to curb these destructive activities. Is there anyone that you can think of who might be interested in talking with me about this concern?

Thanks for your time, Bambi Yost

\section*{9 Appendix B}

These maps are printed on transparencies so that all of the overlapping relationships can be more easily seen and understood. The maps serve to provide a basic understanding of the city's complex public structure.

\subsection*{9.1 Council Districts}

This map has been provided by the City of Denver as a public resource available on-line at http://www.denvergov.org/dephome.asp?depid=1567

\subsection*{9.2 Planning Areas}

This map has been provided by the City of Denver as a public resource available on-line at http://www.denvergov.org/dephome.asp?depid=1567

\subsection*{9.3 Community Health Services}

This map has been provided by the City of Denver as a public resource available on-line at http://www.denvergov.org/dephome.asp?depid=1567

\subsection*{9.4 School Graffiti Counts}

This map was created by Bambi Yost on behalf of Denver Public Schools and the Learning Landscape Alliance and is not publicly available at this time.

\subsection*{9.5 Denver School District Boundaries}

This map has been provided by Denver Public Schools as a public resource available on-line at http://planning.dpsk12.org/other.html\#maps

\subsection*{9.6 Learning Landscapes Locations}

This map was created by Bambi Yost on behalf of Denver Public Schools and the Learning Landscape Alliance and is not publicly available at this time.

\subsection*{9.7 Us Census Tract Areas}

This map has been provided by Denver Public Schools as a public resource available on-line at http://planning.dpsk12.org/other.html\#maps

\subsection*{9.8 Denver Neighborhood Assets}

This map has been provided by the Piton Foundation as a public resource available online at http://www.piton.org/default.asp?nav_id=6

\subsection*{9.9 Denver Neighborhood Risk Factors}

This map has been provided by the Piton Foundation as a public resource available online at http://www.piton.org/default.asp?nav_id=6

\subsection*{9.10 Denver Neighborhoods}

This map has been provided by the Piton Foundation as a public resource available online at http://www.piton.org/default.asp?nav_id=6

\subsection*{9.11 Partners Against Graffiti Boundaries}

This map was created by Bambi Yost on behalf of Denver Public Schools and the Learning Landscape Alliance and is not publicly available at this time.

\subsection*{9.12Police District Boundaries}

This map was created by Bambi Yost on behalf of Denver Public Schools and the Learning Landscape Alliance and is not publicly available at this time.

\subsection*{9.13Police Graffiti Data}

This map was created by Bambi Yost on behalf of Denver Public Schools and the Learning Landscape Alliance and is not publicly available at this time.

\subsection*{9.14Denver Public Elementary Schools}

This map was created by Bambi Yost on behalf of Denver Public Schools and the Learning Landscape Alliance and is not publicly available at this time.

\subsection*{9.15Denver's Focus Neighborhoods}

This map has been provided by the City of Denver as a public resource available on-line at http://www.denvergov.org/dephome.asp?depid=1567

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[^0]:    a Not assuming the null hypothesis.
    b Using the asymptotic standard error assuming the null hypothesis.
    c Based on normal approximation.

[^1]:    24. (For all "condition" items it is imperative that assessments are made based on an ideal instead of conditions being viewed relatively. For example, a rater should not say to him/herself, "This is not too bad. I've seen much worse." Ratings should be strictly based on the below criteria. This minimizes bias due to individual experiences of raters.
    Excellent - Immaculate condition. No signs of disrepair. No home repair needed; Good - In decent
[^2]:    49. (A major thouroughfare/busy street, as opposed to a moderately busy thoroughfare, has
