

# Carmody Park Master Plan Project Summary



| **MUNDUS BISHOP** |



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## ACKNOWLEDGMENTS

*City of Lakewood – Department of Community Resources*

*Ross Williams*

*Project Manager*

*Allison Scheck*

*Marketing and Community Relations Manager*

*Jayna Lang*

*Recreation Supervisor*

*Mundus Bishop*

*Patrick Mundus, ASLA*

*Urban Play Studio*

*Kerry White, ASLA*

*Martin/Martin, Inc.*

*Mark Thornbrough, PE, CFM*

*HydroSystems – KDI, Inc.*

*Ken DiPaolo*

*Fox Tuttle Transportation Group, LLC*

*Carlos Hernandez, AICP*

*CTL Thompson, Inc.*

*David Glater, PE, CPG*

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Figure 1.1 - Preferred Master Plan

## 1 - PROJECT OVERVIEW

The Carmody Park Master Plan was undertaken to develop a comprehensive plan for the rehabilitation of Carmody Park in Lakewood, Colorado. The master plan process was undertaken with the following goals in mind:

**Safe Access** - develop clear and safe circulation routes, both pedestrian and vehicle, and a better balance between recreation use, school use and parking facilities;

**Accessibility** – provide universal accessibility in all forms of recreation including playgrounds;

**Environmental Education** – provide education and play opportunities that are directly linked to the outdoor environment capitalizing on the available natural resources;

**Water Use** - balance irrigation water supply and delivery methods with park irrigation needs;

**Recreation** – provide increased opportunities for youth and adult outdoor recreation that complements the City of Lakewood park system and the neighborhood;

**Stormwater** – integrate the need for additional stormwater facilities within the park with the uses and character of Carmody Park.

The planning work was conducted in an open public process that included three, well-attended community meetings and a workshop with Carmody Middle School students. Master plan alternatives were developed and reviewed with the community and then revised into a preferred master plan alternative.

The preferred plan respects the existing character of the park and balances parking and circulation needs with the preservation of park green space. The plan focuses on providing a higher level of quality for all existing park uses and facilities. The basic components of the plan are as follows:

- Trails - additional trails both hard surface and soft surface will be added to provide more walking routes, and connect all park elements along a looped path.
- Play - play activities for all ages of youth will be increased with the addition of two new play areas. A fully accessible playground is located in the southwest portion of the park and a nature based play area is located in the north portion of the park. Each of these areas provides opportunities for youth play as well as providing important park gathering places.
- Nature - environmental education opportunities are increased through the addition of a nature play area and the enhancement of Carmody Pond.
- Field Sports – the central irrigated area of the park will be rehabilitated with reoriented fields and updated irrigation and water supply system.
- Park Features – new park features include restrooms, park shelters, a multi-use court, recreation and adventure nodes along the loop trail and standard park furnishings.
- Circulation - vehicle circulation is improved by the reconfiguring of parking areas and drive lanes at both the north and south ends of the parking area. New vehicle drop-offs are provided for the park, recreation center and school access.
- Parking - parking is increased to provide a better balance for competing uses and better access to future improvements (playground) at the southwest portion of the park.

## 2 - PURPOSE OF THE PLAN

The master plan was undertaken by the City of Lakewood, Department of Community Resources in the autumn of 2013 to address the rehabilitation of Carmody Park. The master plan was directed by City of Lakewood staff and was partially funded by a Great Outdoors Colorado grant.

Carmody Park is a 34-acre park located in the southern district of the City of Lakewood. The park was acquired from Foothills Park and Recreation District in 2000. At the time of the master plan the park features and infrastructure were in significant need of upgrade. The master plan was intended to address both existing uses and any compatible new uses related to the changing needs of the neighborhood and the city's park system.

The master plan's overarching mission is to create a balanced plan that serves the local community, families, middle school students and staff, recreation center users, sports groups, and families of youth with disabilities from across the park's service area. This overall goal was supported by a series of focused planning goals.

**Safe Access** - develop clear and safe circulation routes, both pedestrian and vehicle, and a better balance between recreation use, school use and parking facilities;

**Accessibility** – provide universal accessibility in all forms of recreation including playgrounds;

**Environmental Education** – provide education and play opportunities that are directly linked to the outdoor environment capitalizing on the available natural resources;

**Water Use** - balance irrigation water supply and delivery methods with park irrigation needs;

**Recreation** – provide increased opportunities for youth and adult outdoor recreation that complements the City of Lakewood park system and neighborhood;

**Stormwater** – integrate needs for additional stormwater facilities within the park with the uses and character of Carmody Park.

### 3 - PLANNING PROCESS

The planning process brought together city residents, neighbors, recreation center users, middle school students, City of Lakewood staff and design consultants to create a plan that addresses physical improvements, management issues and park rehabilitation priorities. The planning process included three basic phases:

1. Site assessment and programming phase;
2. Park master plan alternatives;
3. Preferred master plan alternative.

The master plan process was focused around 1) the participation of the community via three open community meetings; 2) community input through a web-based media platform 3) Carmody Middle School student workshop and 4) the participation of City of Lakewood staff working on the site. Each phase included a community meeting and solicited input through the city’s web based comment platform. Community meetings were held in Carmody Middle School in an open house format that allowed citizens to work directly with park planners and city staff. The meetings were well attended with over 30 citizens attending each event. Many comments were also received via email and the project web platform.



Community meeting



Carmody Middle School workshop



Community comments



Figure 4.1 - Carmody Park Area of Service

#### 4 - PARK CONTEXT

The City of Lakewood is home to approximately 145,522 residents (2010 U.S. Census) who are served by a park system of 99 parks, totaling 7,155 acres of parkland, 80 mile of trails, four recreation centers and numerous other amenities within the 44 square miles of city lands. Carmody Park is located in City Ward 5 which has an estimated 20,000 residents (Census 2010). The area of service for Carmody Park (see Figure 4.1) includes roughly 14% of the City of Lakewood population and has a high concentration (24%) of children and young adults under the age of 21 (GOCO grant application 2013).

The Carmody Recreation Center and pool, one of four City of Lakewood recreation centers, is located in the park and is used by city residents on a daily basis, as well as visitors to regional events and competitions. The recreation center contains standard recreation center features, a 50-meter indoor pool and a smaller outdoor pool.

The park is bordered by single family residential areas to the east and west, Carmody Middle School to the north and a mixture of residential and undeveloped land, and the Foothills Ice Arena on the south. The only vehicle access to Carmody Park is from the west side via South Kipling Street. Pedestrian and bicycle access occurs from two trails entering the park on the east side. Carmody Middle School (Jefferson County School District) located north of, and adjacent to the park has approximately 650 students. The school grounds contain two baseball fields, one full size football/soccer field and a track. These resources are managed by the Jefferson County School District.

Carmody Park was constructed in the mid-1980s by the Foothills Park and Recreation District which was established in 1950 and responsible for early development and maintenance of recreation and park facilities within Lakewood, and Jefferson County. The park was acquired by the City of Lakewood in 2000. The Carmody name originates with the Lawrence Carmody family from County Kerry, Ireland. Lawrence and his wife Mary moved to what is now Lakewood in 1919 and the area was home to the family for over 55 years.

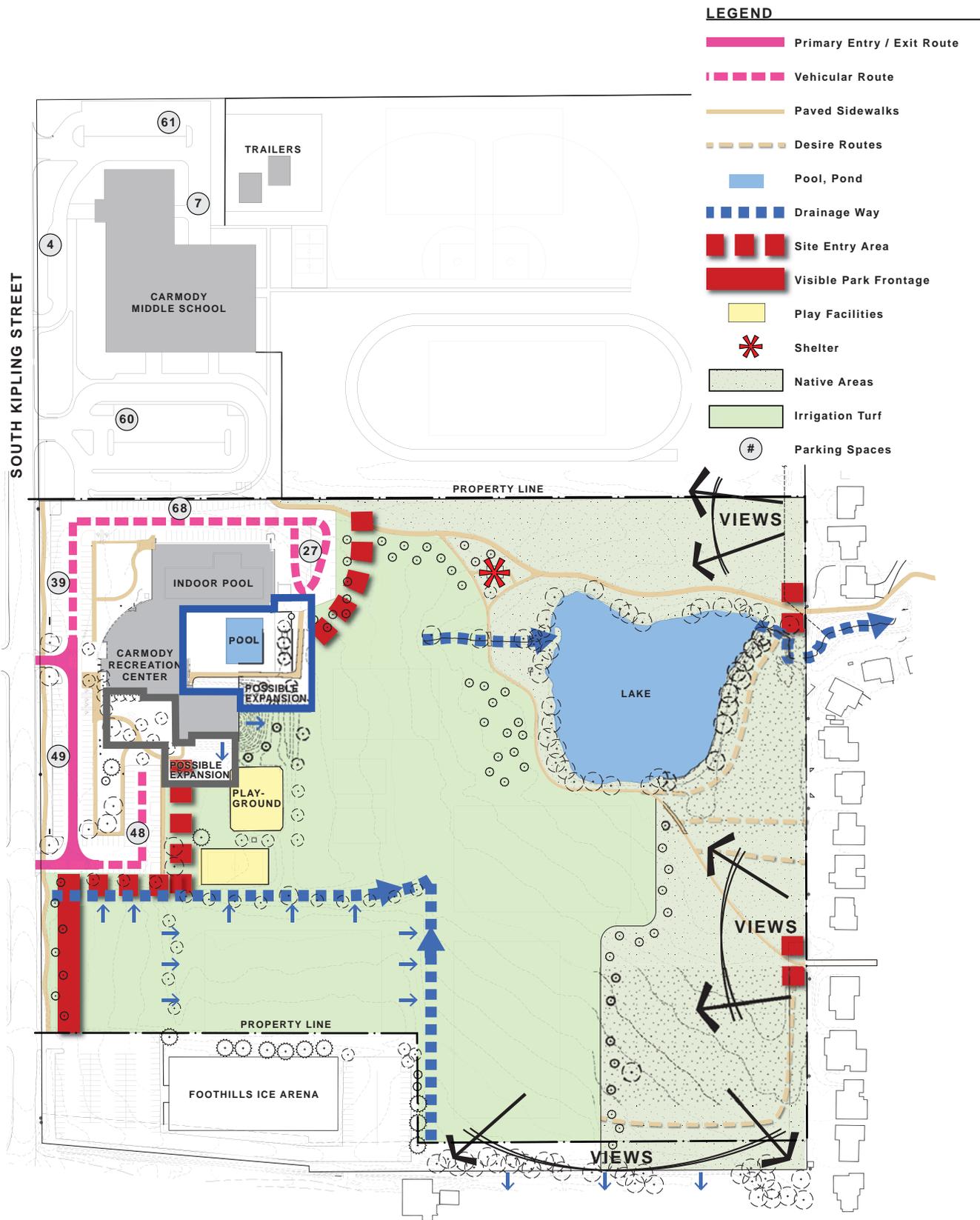


Figure 5.1 – Site Assessment Plan

## 5 - EXISTING CONDITIONS ASSESSMENT AND RECOMMENDATIONS

### SITE ASSESSMENT

An assessment of the site was done during the master planning process to determine the physical state of the grounds and how they are used by visitors and residents (site program). The assessment work was done by several methods: on-site field investigation; study of existing data (e.g. utility plans); discussion with city staff; and discussions with neighbors and residents during the public participation process and on site.

The Site Assessment Plan (Figure 5.1) depicts many of the existing conditions on the site. Following the Site Assessment Plan is a summary of the existing conditions, an assessment of the condition and general recommendations that were carried forward into the master plan alternatives. Recommendations were based on physical need for replacement or repair (e.g. deteriorated features), programmatic desires of community and city, and the planning goals to improve the quality and character of the resource.

### FIELD SPORTS

Carmody is used by multiple youth and adult sports groups for organized and permitted soccer, lacrosse, and youth football practices and games. In addition to these programmed uses the park is used on a daily basis for informal play and recreation center activities. The park play fields are currently lined for three large soccer fields (120' x60') and areas for three to five smaller (mini) fields. Two of the three large soccer field are oriented in an east-west configuration and one field is oriented north-south, the preferred orientation. The condition of the fields could be considered fair, but limited irrigation water availability in late summer and early fall make full season use impractical without significant damage to the fields.

#### Recommendations

- Provide minimum of two full size fields (north-south orientation) and area for 3 – 4 mini-fields;
- Provide higher quality fields for full season use.



*Organized youth field sports*

## 5 - EXISTING CONDITIONS ASSESSMENT AND RECOMMENDATIONS

### TRAILS

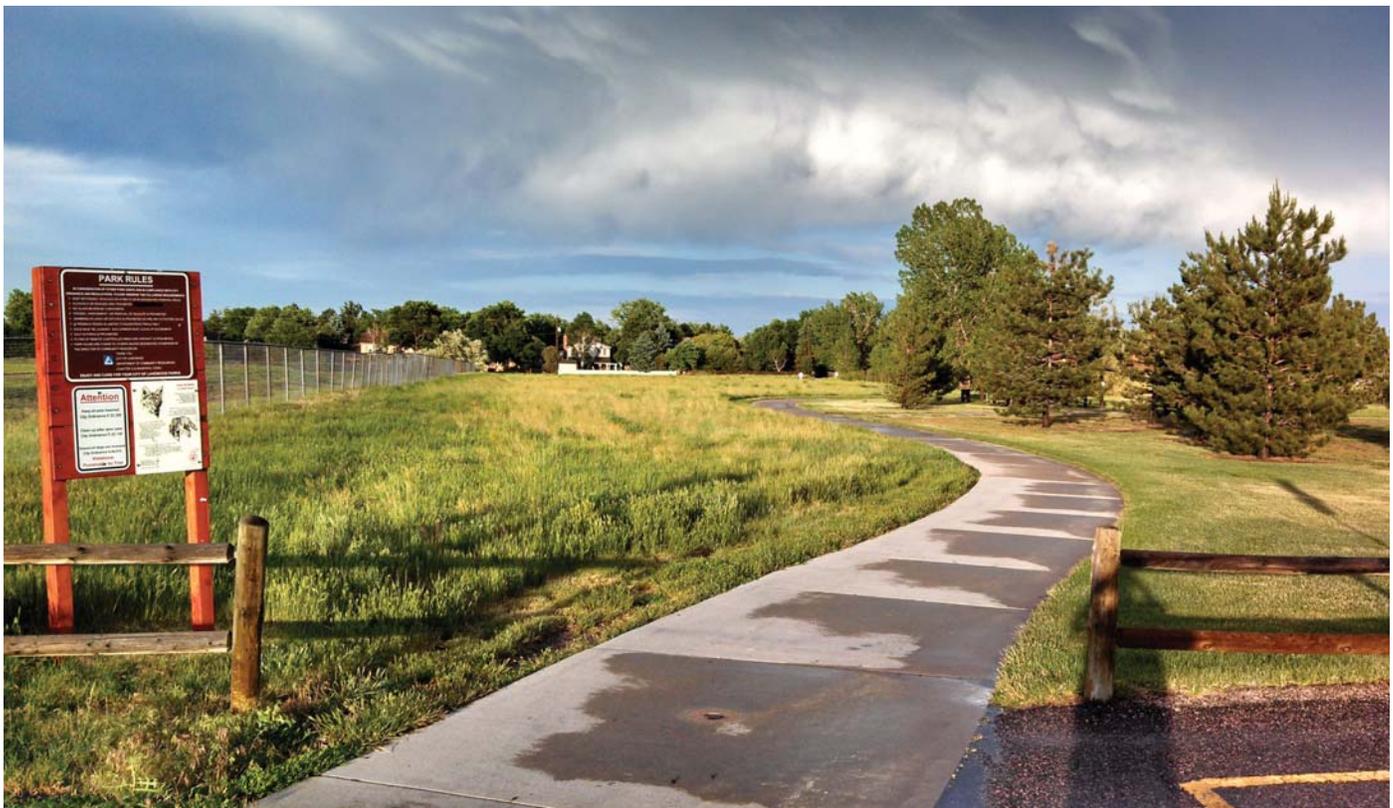
The existing trails in the park link the neighborhoods to the east to the park, recreation center and to Carmody Middle School along an 8' concrete trail. Additional narrower concrete trails are found along the south side of the pond. Social trails can be found along the south and east borders of the park through the naturalized areas. The provision of additional walking trails through the park was a desire expressed by the community during the planning process.

#### Recommendations

- Provide walking trails through the park connecting the east neighborhood to Carmody Recreation Center and Carmody Middle School;
- Provide a loop walking trail connecting park features;
- Provide alternative soft surface trails in naturalized areas.



*Existing social trail at east side of park*



*Existing walking trails*

## 5 - EXISTING CONDITIONS ASSESSMENT AND RECOMMENDATIONS

### PLAY AND PLAYGROUNDS

The park currently has one playground that is approximately 9,000 SF in size with well-aged play equipment (play structure, swings). The playground is not accessible, has low visitor use and is in need of replacement. Carmody Park is a desirable location for a new playground that is fully accessible, contemporary and conceived of a place-based design. The recreation center, middle school, organized events and access to the neighborhood give the park access to many children and adults who would use the facility both for play and as community place.

#### Recommendations

- Develop a fully accessible and place based playground to serve the neighborhood;
- Develop an area for nature-based play, taking advantage of the natural features of Carmody Pond.



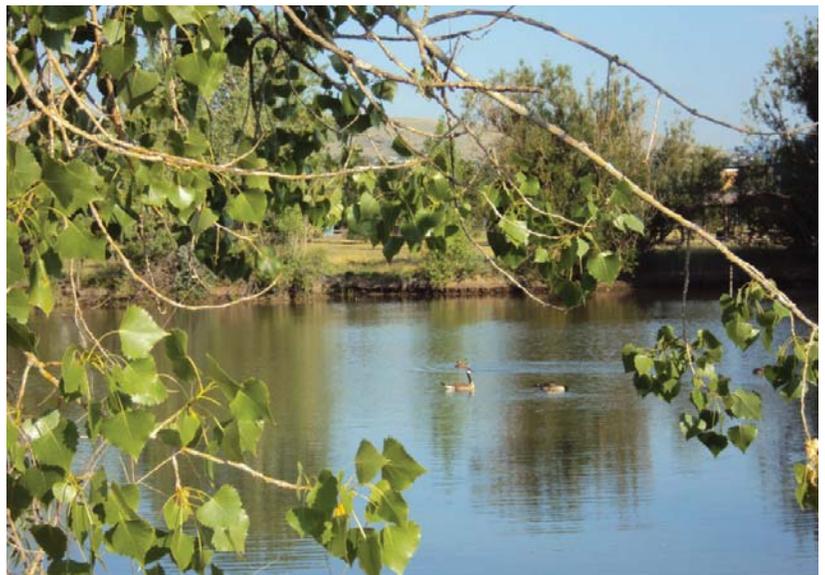
*Existing playground*

### POND AND NATURALIZED AREA

Carmody Pond is approximately 2 acres in size with an average depth of 18" - 24" depending on water availability. The maximum water storage volume is estimated at approximately 3.75 acre feet. The pond provides irrigation water storage and is a significant contributing feature of park. The cottonwoods and riparian edges present a great opportunity for enhancement as a naturalized feature, for wildlife habitat and environmental education. The potential for increased water related wildlife habitat is constrained by a lack of year round water supply (the pond is frequently dry in the autumn and winter) and its shallow depth (a limitation for fisheries).

#### Recommendations

- Improve Carmody Pond as a naturalized feature for environment education, wildlife habitat and viewing and overall park character;
- Improve irrigation water storage capability.



*Wildlife on Carmody Pond*

## 5 - EXISTING CONDITIONS ASSESSMENT AND RECOMMENDATIONS

### CIRCULATION AND PARKING OVERVIEW

The existing circulation system near Carmody Park provides safe access for all modes of travel. There are approximately 220 parking spaces around the recreation center including the disabled/van accessible spaces near the major entrances. The main parking lot has two access points from Kipling and there is good sight distance at the access points for vehicles waiting to enter and leave the parking lot. An RTD bus stop on Kipling is located within 300' of the main entrance of the recreation center. RTD route #100 serves this stop and connects Carmody Park to the West Corridor Light Rail Line and neighborhoods to the north and south of the park. Kipling Avenue has a 10' detached bike path on the west side, 5' attached sidewalks on the east side, was repaved in 2011, and has a climbing lane for bicycles just north of the park. The 10' bike path connects to the citywide trail system. A pedestrian activated signal is located near the middle school between Asbury and Evans Avenue.

#### Parking Conditions During Events

During most times of the day the parking availability near the sports fields, playgrounds, and recreation center adequately meets the visitor demand. However, parking spaces adjacent to the main entrances of the recreation center and sports fields are full during scheduled events. At these times there are spaces available in the corners of the parking lot within a 1-2 minute walk of the main entrance, playing fields, and playgrounds. During these times the different events and uses around the park have competing demands for "close in" parking spaces. Coordination of these existing events and facilities does not occur and will be critical moving forward. These events include the following:

- Carmody Recreation Center
- Carmody Pool
- Carmody Middle School (pick-up/drop-off)
- Carmody Middle School (scheduled field sports)
- Carmody Park (scheduled field sports)
- Carmody Church (Sunday)
- Foothills Ice Arena

The parking spaces on the north and west side of the parking lot are near capacity during sporting events at the middle school on Saturday mornings during the fall sports season. There is also overflow parking on Asbury Avenue during these times, particularly between the end and beginning of a game when one team is finishing and another is waiting to start.

#### Middle School Drop-Off Conditions

City of Lakewood staff indicated the recreation center parking lot is also used for middle school drop-off in the morning and afternoon. This mostly occurs in the north parking lot near the gated access to the middle school just before and after school hours. Vehicles have been observed idling in the parking spaces and drive aisles in the northwest corner of the recreation center parking lot. There is no formal agreement between the school district and the City of Lakewood regarding this existing condition. The Lakewood Police Department does not have a record of any accidents or violations in this area (as of September 2013).

## 5 - EXISTING CONDITIONS ASSESSMENT AND RECOMMENDATIONS

## Parking Study Summary

Parking studies were conducted in August and September 2013. The studies inventoried and then documented parking demand for motorized vehicles in Carmody Park, including the adjacent neighborhoods. The parking studies provide an objective basis of the actual parking demand that occurs in the park and in the neighborhoods. The studies were conducted during passive times and scheduled events in the park. Members of the project team documented the number of occupied parking spaces in a database and used photo surveys to verify results. The studies were conducted on:

- Saturday – August 17, 2013 (passive use)
- Saturday – August 24, 2013 (soccer and flag football scheduled games)
- Tuesday – August 27, 2013 (passive use)
- Wednesday – August 28, 2013 (passive use)
- Wednesday – September 4, 2013 (scheduled soccer practices)

The parking spaces adjacent to Carmody Park, Carmody Recreation Center, Carmody Middle School, Asbury Avenue, Evans Avenue, and Warren Drive were observed during the studies. Members of the team conducted multiple hours of observations to document changing parking demands before and after events, such as soccer or flag football. The following parking spaces are available for park users (see Figure 5.2 Existing Parking):

- Carmody Park – 225 parking spaces (includes ADA accessible)
- Carmody Middle School – 132 parking spaces
- Neighborhood on-street parking (West of South Kipling Street)– 100 parking spaces (approximately)

The following provides a summary of the parking demand in Carmody Park and the adjacent neighborhoods. Detailed results of the parking demands, including photo documentation, are available from city staff upon request. The following is based on the data collected in August and September 2013.

## Carmody Park (during passive use times)

- The parking demand is accommodated on the property;
- Approximately 35% of the parking is occupied;
- Spaces near the recreation center entrances are well utilized;
- The ADA accessible parking demand is accommodated.

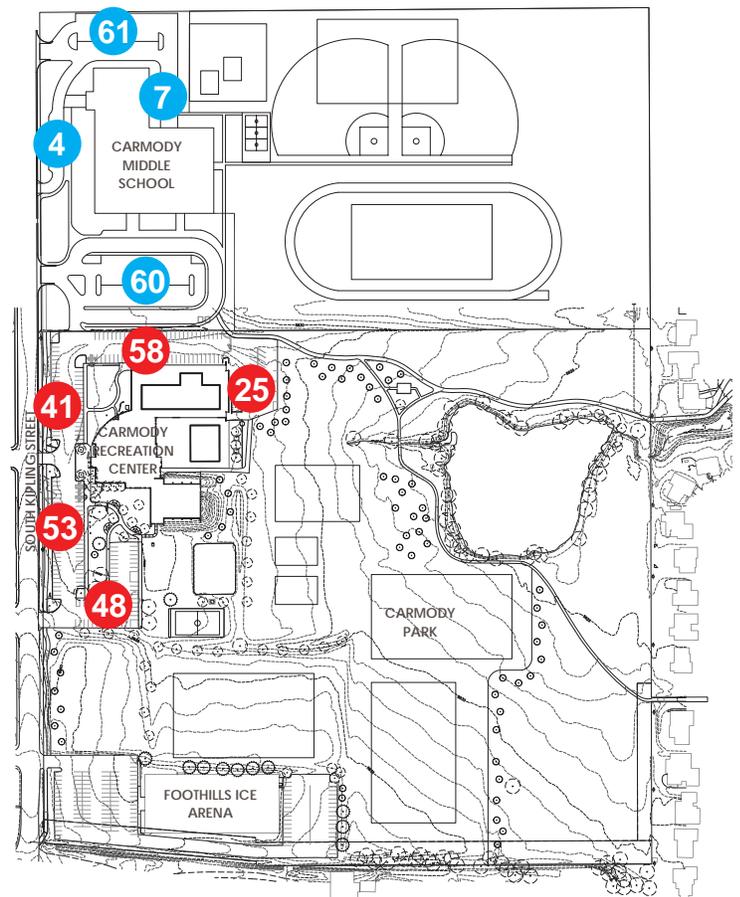


Figure 5.2 - Existing Parking

## 5 - EXISTING CONDITIONS ASSESSMENT AND RECOMMENDATIONS

### Carmody Park (during scheduled weekend field sports games - at Carmody Middle School)

- The scheduled games on the Carmody Middle School fields generate parking demands that occupy all of the available parking spaces at Carmody Middle School.
- The parking demand in the Carmody Middle School parking lots is 132% occupied. Vehicles are parking in "no parking" and "fire zone" lanes.
- The parking demand for scheduled games at Carmody Middle School also overflows into Carmody Recreation Center and Asbury Avenue for approximately 3 hours.
- The parking overflow into the Carmody Recreation Center occurs mostly in the parking lots on the north and east end of the building near the indoor pool. However, this overflow only results in 62% of the parking spaces on the north and east end of the building being occupied.
- The parking overflow on Asbury Avenue is approximately 12 vehicles. The overflow typically occurs between games where there is overlapping parking demand. There were no observed parking violations in the neighborhood as a result of the overflow demand.

### Carmody Park (during scheduled weekday practices)

- Soccer practices occur on the Carmody Park field in the late afternoon
- The parking demand is accommodated on the property
- The parking areas at the south end of the park are 100% utilized
- The parking on the west and north sides are only 40% utilized

### Recommendations

- Improve circulation within the existing parking lots to better accommodate drop-off for recreation center events, Carmody Middle School and park events.
- Increase parking capacity for park areas while reducing loss of green space from park;
- Develop a plan to manage and coordinate events at Carmody Park, Carmody Middle School and Carmody Recreation Center.



*Existing parking use*

## 5 - EXISTING CONDITIONS ASSESSMENT AND RECOMMENDATIONS

## IRRIGATION AND WATER SUPPLY

Irrigation water is currently delivered to Carmody Pond where it is stored and then pumped out of the pond to the irrigated portions of the park, the majority of which is irrigated. The water currently available to be delivered to the pond is generally inadequate for proper, full season irrigation of the park. Areas around the recreation center are irrigated from a water tap associated with the building. Limitations to the existing system include the amount of water (or water rights) available, the storage capacity of the pond and the existing water delivery system to the pond. All three of these elements are interconnected and were studied during the Site Assessment phase of the work.

The delivery system currently brings water from Cottonwood Lake (northwest of Park) to Carmody Pond through a series of water delivery pipes and storm sewer pipes and discharges in the park to an open channel that flows into Carmody Pond. Additional local storm water also enters the pond at this point.

## Recommendations

- Provide increased water supply to Carmody Pond for park irrigation



Figure 5.3 - Existing Irrigation Water Delivery System

## 5 - EXISTING CONDITIONS ASSESSMENT AND RECOMMENDATIONS

### EXISTING STORM WATER DRAINAGE

Drainage within the park directs the majority of storm water run-off to Carmody Pond which provides detention and water quality for the park and other adjacent areas connected by the storm sewer system. Carmody Pond has been identified by the Urban Drainage and Flood Control District (UDFCD) as a site to provide increased flood control for the Sanderson Gulch Drainage basin and could potentially be used as a regional detention facility. This proposal suggests reconfiguring the pond capacity to detain storm water flowing through the basin, thus protecting downstream properties and reducing the volume of storm water Sanderson Gulch has to convey during large storm events. The master plan process looked at the feasibility of providing this increased protection with a park-like character. It should be noted that the UDFCD project is a separate and distinct project from the park master planning process.

### UTILITIES

Standard utilities (water, sanitary sewer, storm sewer, gas and electric) are present on the west portion of the site and are primarily associated with the recreation center.

#### Recommendations

- Extend existing sanitary sewer line south of the recreation center for use with new restrooms;
- Re-align storm sewer outlets to maximize park use of open channels.

### TREES AND PLANTINGS

Carmody Park contains a mixture of deciduous trees and evergreen trees, most of which appear to have been planted since Lakewood acquired the park in 2000. The exceptions to this is the large Plains Cottonwood in the southeast part of the park and the Narrowleaf Cottonwoods growing around Carmody Pond. While the tree plantings present no exceptional specimens, healthy trees should be maintained where possible.

#### Recommendations

- Preserve existing healthy trees where feasible;
- Provide new plantings to reinforce the park design;
- Limit tree plantings on the eastern portion of the park that may impede view to the west.



*Plains cottonwood in southern portion of the park*

## 5 - EXISTING CONDITIONS ASSESSMENT AND RECOMMENDATIONS

### VIEWS AND VISTAS

Views from the eastern, naturalized portion of the park to the western foothills (Mt. Morrison) are cherished by the neighborhood and park users. Many citizens expressed the need to maintain these views as an important park feature. In addition to the western views a view to the south towards Pikes Peak can also be found in the southern portion of the park.

#### Recommendations

- Protect view to the west and south from the eastern portion of the park;
- Consider desirable views when siting park features.



*View to Mt. Morrison*



*View to southwest*

### PARK AMENITIES

Other existing park amenities include a multi-use basketball court, park shelters, san-o-lets, and benches.

#### Recommendations

- Upgrade all park amenities to current City of Lakewood standards.



Figure 6.1- Preferred Master Plan

## 6 - MASTER PLAN SUMMARY

The master plan was developed to incorporate the recommendations stated in the Existing Conditions and Assessment section. The following is a description of the master plan and its program components.

The master plan process spent a significant effort testing a variety of park uses or park programs with the community and with city staff. Several alternatives were developed that examined a number of new and existing park uses. The preferred master plan includes an expanded park program that accommodates additional park uses while protecting the existing qualities of the park. Table 6.1 summarizes the existing park use program and the proposed park program.

Park Use	Existing	Master Plan	Notes
Play Fields	3 full, small +	2 full, 1 small	Master plan field orientation north to south
Irrigated Play Field Area	5.8 acres	4 acres	
Naturalized Area (inc. pond) (acres)	10.5+	12+	
Irrigated Area	11 acres	10.2 acres	
Parking Spaces (on site)	225	257	
Nature Based Play	NA	Provided	
Multi-Purpose Court	1	1	
Outdoor Classroom	NA	Provided	
Playground - Accessible Play	NA	Provided	
Pond Improvement (irrigation)	NA	Provided	
Pond Overlook/Boardwalk	NA	Provided	
Pool Expansion (Lawn Space)	NA	Provided	
Restrooms	TEMP	2	
Park Shelters	1	3	
Playground Shelters	1	2	
Skills/Fitness Equipment Circuit	NA	Provided	
Trails - Paved	Minimal	Increased	
Trails - Soft	NA	Increased	

Table 6.1- Park Program

## 6 - MASTER PLAN SUMMARY

### PREFERRED MASTER PLAN ALTERNATIVE

The preferred master plan alternative provides a plan for rehabilitating existing park features and integrating new park features into a cohesive and holistic plan. New park elements have been carefully located in the park for visitor access, park aesthetics, and for their adjacency to existing features (e.g. Carmody Pond). The connecting framework of the park will be the new park trails. These trails allow visitors of all ages and abilities to easily move into and through the park to enjoy its entirety. All paved trails (8' width) will be fully accessible and suitable for walking, low-speed biking and children's wheeled vehicles. Trails will connect the primary features to each other – these features are:

- Accessible playground;
- Nature play and outdoor classroom area;
- Carmody Pond;
- Playing fields and park shelters;
- Naturalized area.

Trail connections allow visitors to easily enter the park from the southwest (Carmody Lane), the west via the recreation center and Warren Avenue; the east side via the existing trail connections, and the north from Carmody Middle School. The primary park entrance (front door) will be from the parking lot directly east of West Warren Drive.



*Paved park trails allow for multiple recreation opportunities*

## 6 - MASTER PLAN SUMMARY

## ACCESSIBLE PLAYGROUND

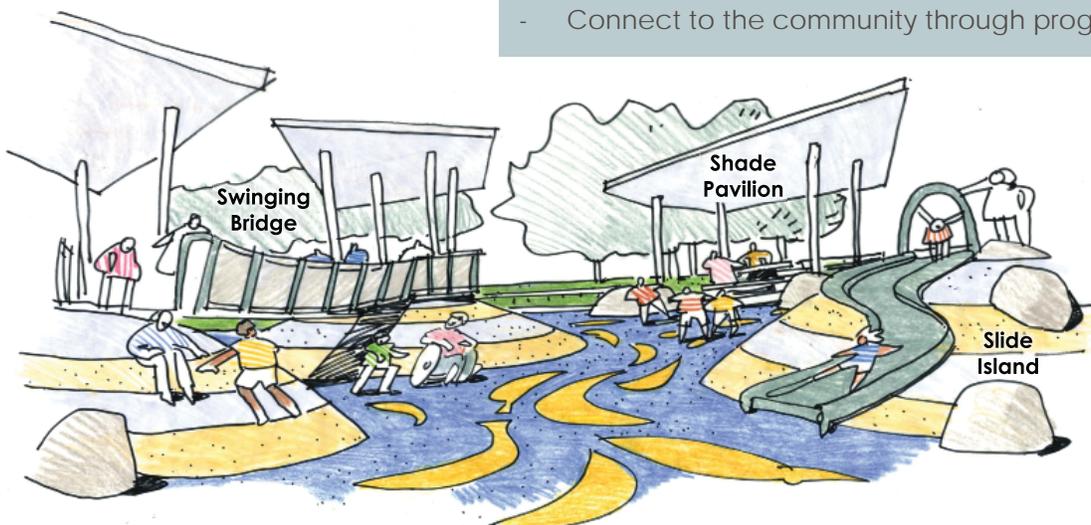
The new Carmody Park playground is intended to be a character defining feature for the park. The playground will feature accessible play equipment in a setting that is welcoming to both children and adults. Anchoring the southwest portion of the park and located near parking and circulation routes, the playground will be an imaginative place that stimulates creative play and healthy physical activity. Playground features such as mounds, ramps and both raised and ground level events will ensure that children of all ages and abilities will play side by side and engage with each other in play. Equally as important will be the playground's role as providing community space where neighbors can meet and enjoy community spirit – a place that brings people together.

The master plan suggests that the playground be developed around the idea of an adventure play "pond", to compliment and connect to the real Carmody Pond within the park. Custom features suggesting aquatic elements, islands and flora and fauna of Colorado wetland regions will create playful settings and play experiences in the space. Climbing sculptures will include amphibians, dragonflies and water bird species. Play mounds or "islands" will be accessible by ramps and provide children with unique play elements such as a giant landslide, rock climbing scrambles, and net features.

As equally important to the playground as the actual play features is the overall layout and circulation patterns of the space. The playground will be divided into two developmentally age-appropriate play areas separated by a shady seating area for the comfort of parents and caregivers. To increase play value, multiple "play routes" will be planned throughout the playground area with perimeter looped paths, interior functionally linked play elements, and patterning on the ground plane.

## PLAY PRINCIPLES - Playgrounds should:

- Be developmentally appropriate for all ages and all abilities
- Nurture the whole child
- Connect to the natural environment
- Provide positive play experiences in a variety of settings
- Flexible, maintainable, durable and safe
- Celebrate the site's inherent qualities
- Connect to the community through programming



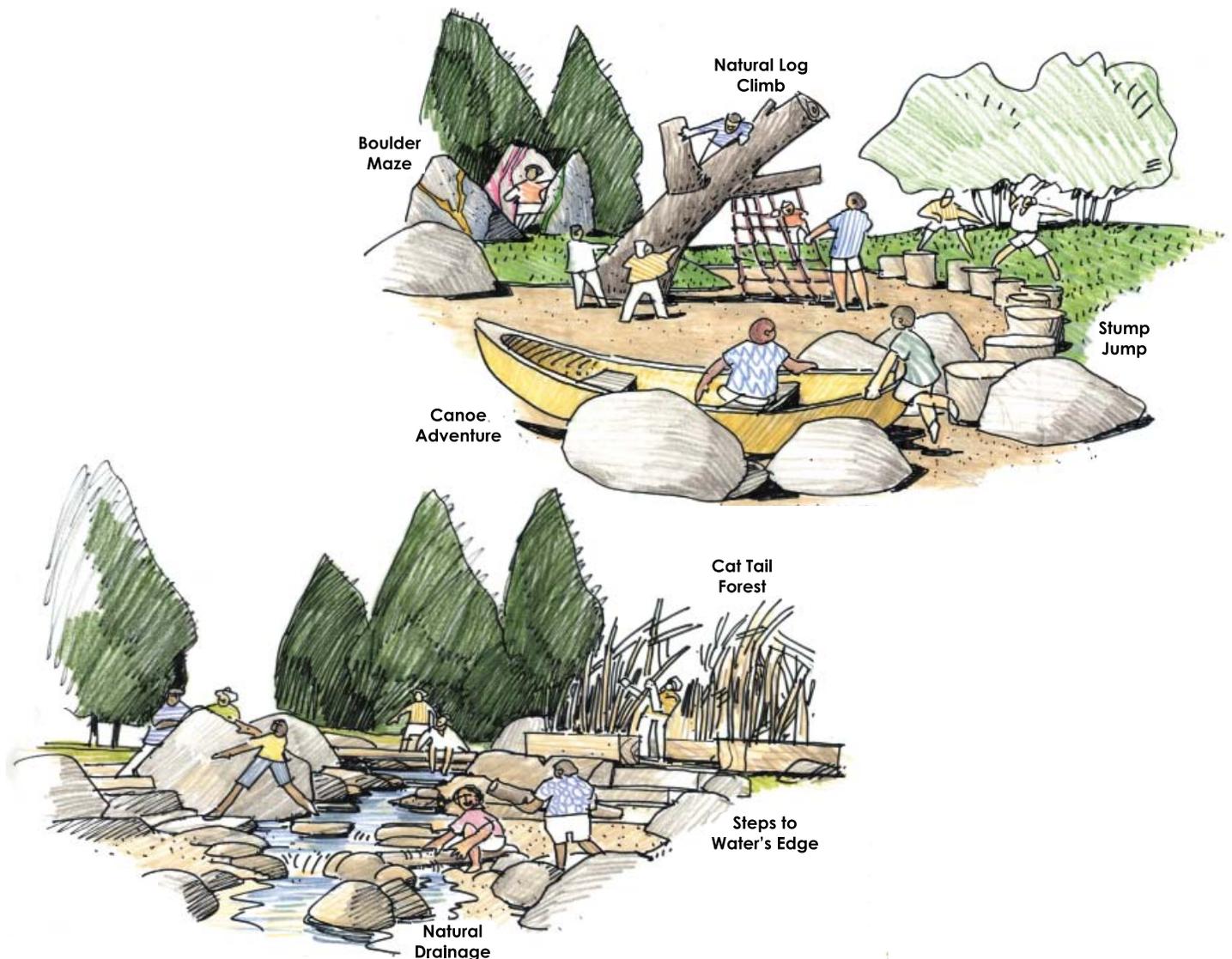
*Playground concept*

## 6 - MASTER PLAN SUMMARY

### NATURE PLAY AREA

An area developed for nature-based play is planned for the north portion of the park between the pond and recreation center. The nature play area is to be developed under the basic belief that time in the outdoors in nature is essential to children's physical health and general well-being. This area is intended to be a place of un-programmed, imaginative play and activities in an environment created from natural materials especially logs, stumps, boulders, and even vegetation such as trees and tall grasses.

This area will feature a series of small, connected spaces with features built around the existing grove of evergreen trees and a small open water channel. Climbing, balance and motor play skills, sand play, and imaginative play will be the focus. The existing open water channel that leads to the pond from the west will be reconfigured to flow through this area allowing access to flowing water, ripples, riparian vegetation and informal water play. Access to this shallow water source with paths, stone bridges and stepping stones will be a popular and important play feature in that it allows children to manipulate the water and surrounding natural materials to create their own play experience.



*Nature play area concept*

## 6 - MASTER PLAN SUMMARY

## CARMODY POND

Carmody Pond is the heart of the park bringing a touch of nature and open water to the park. The master plan proposes to enhance the pond as both a natural feature and as an irrigation water source. Securing additional water for the park will not only help to irrigate the park in a more efficient and reliable manner but will help to increase the value of pond to wildlife and increase the diversity of the ecosystem at the water's edge.

The edges of the pond will balance wildlife habitat and visitor access. The park side of the pond will be reconfigured to provide a more varied habitat and allow park users to access the water in selected locations via boardwalks or informal trails to the water's edge. The east side of the pond will have a soft surface trail leading to the northeast park entry. The north side of the pond will have a large buffer between the trail and pond edge to provide wildlife habitat.

## MULTI-USE COURT

Just to the west of the new playground tucked into the corner of the park an elliptical shaped multi-use court is located near the parking lot. The paved court is roughly the size of one full basketball court with additional edge space for seating and recreation. The court is intended to be used for any court activities and for all ages. A trail connects the court to the playground restroom to the west.



*Boardwalk concept*

## 6 - MASTER PLAN SUMMARY

### PARK GREEN (IRRIGATED PLAYING FIELDS)

The central area of the park will be reconfigured and regraded into an area that accommodates two full size soccer fields in a north-south configuration and a smaller area along the west side for youth soccer mini-fields. This configuration results in a reduction of irrigated area but a field configuration that is more useful for league games and practices. Three park shelters are located at the edges of the fields. These shelters are suitable for small to medium group use, each accommodating 4-5 picnic tables.

### ADVENTURE SKILL NODES

Park users will find special recreation nodes along the park's main loop walking path. These nodes will provide an important play and recreational element to especially engage the older kids in the park. The nodes – consisting of simple elements of rocks, ropes and balance platforms – will provide activities focused towards and accessible to Carmody Middle School students and teens visiting the recreation center and park. Though usable by any age group, young and old, they will appeal to youth as social gathering spaces and as areas to test their physical strength and skill.

An important feature of the adventure skill nodes is that they will also be designed for team building activities that would be facilitated by trained recreation center or middle school staff. The nodes are intended to be physically challenging, mentally stimulating, socially exciting, and morally inspiring developing important skills such as problem solving, leadership and communication skills, trust, responsibility and creativity.

### EAST SIDE NATURALIZED AREA

The east side of the park is to remain primarily a naturalized area with limited activities and improvements. Existing naturalized grasses will remain in place in undisturbed areas and new native grasses will be planted in areas of new construction. The large cottonwood in the southeast portion of the park will remain in place as its health allows as will the smaller evergreen trees. Narrow, soft-surface trails (4' width) allow visitors to walk through the naturalized area and explore the pond edge without significant impacts to wildlife or vegetation.



*Adventure Skill Node*

## 6 - MASTER PLAN SUMMARY

## PARKING AND CIRCULATION RECOMMENDATIONS

The following recommendations augment the park master plan to ensure safe and adequate multimodal circulation. The recommendations are consistent with citywide transportation, economic, and sustainability goals.

## Immediate Actions

- Ask recreation center employees to park in the north and east parking lots;
- Ask recreation center employees to park in the south lots on the weekend;
- Open the gate between the school parking lot and the north recreation center parking lots on the weekends when there are scheduled games;
- Request a school district security officer enforce parking restrictions at the Carmody Middle School property during scheduled games;
- Actively work with residents to monitor neighborhood streets for any parking violations near driveways.

## Planning Considerations

- Improve circulation within the existing parking lots to better accommodate drop-off for recreation center events, Carmody Middle School and park events;
- Increase 'park' parking in southwest corner of site;
- Provide driveway loop for new Recreation Center entrance on south side;
- Create a driveway 'loop' for the indoor pool and Carmody Middle School at the northwest corner of the site;
- Balance the need for "close in" parking spaces near new destinations in the park, with the reduction of green space that results from additional parking;
- Increase the total, type, and distribution of bicycle parking on the property;
- Maximize the utilization of the available parking supplies by managing employee areas and sharing demand between the school and park property;
- Schedule events with consideration of the available parking and minimize the total number of days parking demand would legally overflow into the adjacent neighborhoods.



Figure 6.2- Northwest Parking Circulation



Figure 6.3- Parking Expansion

## 6 - MASTER PLAN SUMMARY

### IRRIGATION WATER SUPPLY

During the master planning process Martin/Martin civil engineers studied the various options available to provide a more reliable water supply to Carmody Pond for use in irrigating the park. This work included looking at two basic elements 1) a source of water and water rights and 2) a potential delivery system to get water to the park.

Water rights information was primarily derived from a review of the 2002 Water Supply Analysis Report, by Leonard Rice Engineers, Inc., July 3, 2002. The following bullets represent key elements of the report and 2013 investigations as they impact the ongoing master planning effort.

- Irrigation water supply from Ward Canal, Hindry Ditch and Cottonwood Lake may be adequate for irrigating Carmody Park with the exception of dry/drought years. The City of Lakewood has found that inadequate irrigation for park fields occurs on more frequent basis than estimated in the report and thus prevents use of the fields in the late summer and fall seasons.
- City of Lakewood owns 11/12 of the water rights to Kendrick Reservoir, approximately 304.5 Ac-Ft.
- During dry/drought years the Ward Canal and Hindry Ditch water rights are not in priority to Carmody Park, and thus, supplemental water is needed for irrigation of the park. Bear Creek users have a higher priority for these water rights, during dry/drought years thus typically making them unavailable for Carmody.
- As part of the master planning process, water use budgets for existing and proposed park conditions were assessed. It was estimated that an optimum water use budget for the approximately 11 acres of irrigated turf fields (2013 condition) is approximately 53 acre feet/year.
- There are several areas along Ward Canal that experience large losses of ditch water that should be repaired, however, the amount of water acquired from the repairs would not be enough to provide full irrigation of Carmody Park in dry/drought years.

Several methods for increasing and stabilizing the irrigation water supply to the park were examined. These are listed in order of preference for a permanent solution without regard to cost.

1. Transferring water from Kendrick Reservoir by conveying it to Carmody Park via a pipe, would relieve the irrigation water shortage during dry/drought years. This could be done with a pump station at Kendrick Reservoir and permanent pipeline to Carmody Pond.
2. Purchase 3" tap from Bancroft/Clover Water and Sanitation District to irrigate Carmody Park.
3. Transfer additional water from Kendrick Reservoir to Cottonwood Pond, via temporary or permanent pumping system, and route to Carmody Pond via current pipeline/storm water system.
4. Truck water from a city source to Carmody Park.

## 6 - MASTER PLAN SUMMARY

### IRRIGATION WATER USE AND DELIVERY

The master plan studied irrigation water use with the goal of providing and applying irrigation water to the park in a logical and efficient manner.

Recommendations for the park irrigation system include full replacement of the park irrigation system with a contemporary system that meets City of Lakewood design standards. Included in this would be replacement of the existing pump and intake structure with a new system. The intake structure should be located at a deeper depth in the pond (4'-6') rather than the existing 18" depth.

Increasing the volume of the pond may improve irrigation in the park if additional water can be brought to the pond. This may be particularly helpful if additional water is available early in the season for storage and use later in the irrigation season. Altering the pond for irrigation water storage must be coordinated with 1) water supply and 2) possible, future regional flood control work. It should be noted that re-shaping Carmody Pond could potentially increase its value as wildlife habitat, increase water quality and provide fish habitat.

The master plan provides a reduction in overall park irrigation of approximately 10%, roughly one acre of irrigated turf. This helps to reduce the overall water use requirement for the park.



Figure 7.1- Implementation Plan

## 7 - MASTER PLAN PROJECT IMPLEMENTATION

In order to prioritize and budget for future projects a basic project plan and associated construction budget estimates were prepared. The project areas were developed through discussion with city staff that included 1) the need for particular park elements; 2) logical construction sequencing of the work; and 3) potential for future funding. This budget plan is for discussion purposes and to develop planning level cost estimating for project development.

Project No. 1 – Accessible Playground, Multi-use Court, Parking and Circulation Improvements  
Estimated Project Budget = \$ 2,030,000

Project No. 2 – Park Green (central park area)  
Estimated Project Budget = \$ 1,943,000

Project No. 3 – Nature Play Area  
Estimated Project Budget = \$ 457,450

Project No. 4 – East Side Naturalized Area (non-irrigated area)  
Estimated Project Budget = \$ 233,250

Project No. 5 – Northwest Circulation Improvements  
Estimated Project Budget = \$ 128,970

Project No. 6 – Water Supply Delivery Work (off-site and on-site work to deliver water to Carmody Pond)  
Estimated Project Budget = \$ 938,750

Project No. 7 – Site Utilities (storm sewer realignment)  
Estimated Project Budget = \$ 50,000

Project No. 8 - Irrigation Delivery and Storage (pump, intake and pond depth/liner)  
Estimated Project Budget = \$ 745,000

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