

## **BOULDER CREEK COMMONS - SITE REVIEW WRITTEN STATEMENT**

### **CURRENT OWNERSHIP**

**BCC, LLC**  
**1526 Spruce Street, Suite 260**  
**Boulder, Colorado 80302**  
**Manager – Michael T. Boyers**

### **LEGAL DESCRIPTION**

**See Legal Description attached**

### **A. INTRODUCTION**

We are pleased to submit our proposed development plan for Site Review and consideration of the annexation of 22.17 acres into the City of Boulder with RL-2, Residential Low - 2 zoning. This vacant site, known as Boulder Creek Commons, is located at 5399 Kewanee Drive and 5697 South Boulder Road in east Boulder adjacent to the East Boulder Community Park, East Boulder Recreation Center and the Keewaydin Meadows development.

Boulder Creek Commons is envisioned as a pedestrian-friendly mixed income neighborhood that will provide a unique opportunity for Boulder to address one of its most challenging trends – the aging of its population. The new neighborhood will extend the existing patterns of the adjacent neighborhoods and establish its own unique identity with a network of pedestrian-oriented streets and open space greenways. Varying lot sizes and building types will be employed to address project goals of diversity, sustainability and compatibility with existing neighborhoods.

The heart of the project will be to provide much needed deed-restricted affordable housing for low-income seniors in a distinctive, well managed congregate care community adjacent to the East Boulder Senior Center. Locating such a project at Boulder Creek Commons takes advantage of a unique opportunity to leverage existing city infrastructure by locating senior housing next to one of the best community centers of its kind in the region. Additional, affordable home-ownership opportunities for qualified middle-income buyers will also be provided within the neighborhood.

A network of trails and open space will link together the existing neighborhood, new single family and duplex homes, the congregate care community, the East Boulder Recreation/Senior Center and the regional South Boulder Creek Open space corridor.

The site is bisected by 55<sup>th</sup> street, with the portion of the site west of 55<sup>th</sup> street well suited for development (West Parcel). That portion of the property east of 55<sup>th</sup> Street (East Parcel) is planned for environmental preservation and wetland habitat enhancement.

One of the goals of the proposed development is to significantly enhance the ecological value of the property by providing prairie and riparian enhancements on the property on both the East and West Parcels. On the East Parcel, this will be achieved by significantly increasing the area of wetlands, removing noxious weeds, creating new wetlands in upland sites, enhancing existing wetlands with trees and shrubs to increase structural diversity of the habitat. These enhancements will greatly increase the

quantity and quality of natural habitats on the East Parcel and will provide much greater aesthetic appeal for visitors to the East Boulder Community Park and Recreation Center and City of Boulder Open space along 55<sup>th</sup> Street.

On the main West Parcel, bioswales will include short grass prairie, with stringers of riparian vegetation, improving the storm water quality and functioning of these areas. Development of the property will be concentrated in areas that have minimal habitat value and have been highly degraded due to long-term intensive agricultural use.

## **SETTING**

The site, known as the Hogan-Pancost property after the families that owned it for nearly 70 years, is a 22.17 acre property located along 55<sup>th</sup> Street adjacent the East Boulder Community Park. The land was farmed and used for grazing. Gradually the city of Boulder moved eastward, eventually surrounding the property with residential and related recreational development. Several adjacent parcels belonging to the extended families have been developed, and this is one of the last remaining parcels available for development.

The site is located along 55<sup>th</sup> Street, adjoining Keewaydin Meadows neighborhood to the west, Greenbelt Meadows to the south, and the East Boulder Senior Center and Recreation Center and Manhattan Middle School to the north. The recently completed East Boulder Community Park, including soccer fields, Dog Park and paved parking lot, abuts the north lot line of the property.

In addition to its immediate proximity to schools and recreational amenities, the site connects to the city of Boulder's extensive bicycle and pedestrian network and open space trails. Multi-use paths throughout the East Boulder Community Center site, just north of Boulder Creek Commons, provide good linkages. Further, there are multiple bus routes served by RTD within a short walk of the site including the 206, Dash and 209 as well as on-demand Via (formerly Special Transit) services for seniors.

The property has excellent vehicular access from 55<sup>th</sup> Street, which arcs across the southeast corner of the site connecting to South Boulder Road, the Recreation Center, and ultimately Baseline Road. An additional access at the northwest corner was anticipated and provided for when the Keewaydin Meadows subdivision developed at Kewanee Drive. The primary entrance for Boulder Creek Commons will be accessed off of 55<sup>th</sup> Street and the secondary access will be Kewanee Drive. One residential subdivision, Greenbelt Meadows, is located to the south and is accessed from 55<sup>th</sup> Street as well.

The Keewaydin Meadows subdivision to the west was developed in the late 1960's and consists of low density single-family homes, including ranch style and split-level houses. The Greenbelt Meadows neighborhood to the south was built in the 1980's and consists of small lot single family homes placed in clusters. One estate style home exists on a county lot just south of Boulder Creek Commons.

The site has little significant vegetation due to intensive agricultural uses and cattle grazing. The natural grade slopes gradually to the northwest. There are three irrigation ditches that cross the site, including Dry Creek Ditch #2, the Howard Super-Phostical Ditch, and the CD Bodam Lateral. There are sweeping views of open space to the north and northeast and excellent views of the Flatirons and Arapahoe Peak to the west/northwest.

The 2.73 East Parcel is characterized by degraded wetlands, plains cottonwood forest, and introduced pasture grasses. In addition, the wetlands are degraded by dense populations of undesirable weeds.

## **BACKGROUND**

The site has been designated as Area IIA in the Boulder Valley Comprehensive Plan (BVCP) since the adoption of the BVCP in 1977 and has remained this designation through all of the major updates to the BVCP. The BVCP classifies the west parcel as Low Density Residential (2-6 dwelling units per acre) and the east parcel as Environmental Preservation. A portion of the east parcel also includes a natural systems overlay. Due to other development in the area, including the East Boulder Recreation/Senior Center and Community Park, all Urban Services are available to the property and no extensions are required.

A petition for annexation was submitted in December of 2006. A previous application for Concept Plan Review was made in 2007. The City Staff and nearby neighbors identified potential technical issues and impacts associated with the development of this property that warranted further exploration. Because of the complexities involved with some of the technical aspects of the potential development of the property, the City and property owners agreed in the fall of 2007 that prior to another Concept Plan submittal, the environmental and engineering factors pertaining to the site would be assessed and the findings submitted to the City for review. To accommodate this unique process, the property owners engaged specialist consultants who spent several months evaluating the identified issues in a logical and factual manner based on accepted science and engineering methodologies. This resulted in an Environmental and Engineering Assessment and Feasibility Study that detailed the results of the evaluations. After submission, the City engaged its own third party independent consultants to critically review and analyze the Environmental and Engineering Assessment and Feasibility Studies. The results of the studies and independent analysis were presented at a Public Hearing to the Planning Board on January 6, 2011. The City Staff and its third party independent consultants concluded that the environmental and engineering studies affirmed that the site could support residential development. The Planning Board determined in that meeting that the project should proceed with a Concept Plan Review application, accepting the Environmental and Engineering Assessment and Feasibility Study as the factual basis proving the technical feasibility of an appropriate level of development on the property.

The Board asked that the property owners follow up a few items including additional testing of neighboring lots, to understand the ground water issues in the area, further analysis of potential traffic impacts, and additional information related to wildlife mitigation strategies.

In the months that followed leading up to the submittal of the Concept Plan Review package, additional analysis and engagement with the neighborhood took place in response to the Board's request. The results of this effort were included in the Concept Plan Review submittal package.

On January 19, 2012, the Planning Board reviewed the Concept Plan Review application. At that meeting, the Planning Board reviewed the proposal in detail and offered comments on the plan. The Board concluded that it was appropriate for the project to proceed with a Site Review Application. Some of the comments included:

- Proposed land uses are appropriate
- That the mix of housing, including the Congregate Care Senior Housing is consistent with the intent of the Community Benefit policy regarding annexations
- The land plan should be revised to be a more straightforward “grid” with less emphasis on making Kewanee Drive circuitous.
- The open space should be more naturalized and in the form of corridors in lieu of the central park presented in the Concept Plan Review package
- Possibly engage an open space element to the East Boulder Community Park
- Supported the 60’ buffer on the west side of the property
- Supported the Kewanee Drive connection. Traffic calming can be achieved through keeping the streets narrow and adding bulb outs to intersections.

In the months since this meeting, these comments have been evaluated thoroughly by the property owners and discussed with City Staff. It is the applicant’s opinion that this Site Review application and revised design addresses the suggestions made by the Planning Board at the Concept Plan Review and the additional dialogue with City Staff.

### **COMMUNITY VISION**

Boulder Creek Commons will create its own sense of place and contribute to the fabric of Southeast Boulder through the application of a variety of sensitive site design principles and diversity of residents. A sense of arrival is created at 55<sup>th</sup> Street by orienting the access point to a framed view of the Flatirons and Arapahoe Peak down the Kewanee Drive connection. The senior housing building is oriented toward 55<sup>th</sup> Street, announcing to all who pass by that this is a diverse neighborhood. This location has the benefit of being in close proximity and well connected to the East Boulder Community Park, Senior Center and Recreation Center. The building itself screens its required parking from view by internalizing the parking lot.

A small park space near the East Boulder Community Park is the public heart of the neighborhood. Easily accessible on foot, it will be the home of family activities and seniors alike. The park also provides a transition space from the neighborhood to the Community Park. This will be the primary place where the diverse members of the neighborhood can interact with each other.

Kewanee Drive was designed and built by the developers of Keewaydin Meadows subdivision to allow for a connection from the Hogan-Pancost property to Manhattan Drive. This street will be extended into Boulder Creek Commons. The placement of the road in this location is a logical extension of

Kewanee Drive and was unanimously endorsed by the Planning Board at the Concept Plan Review hearing.

Cut-through traffic is discouraged and traffic calming is achieved by the narrow street sections and the inclusion of bulb outs at intersections.

There will be a total of 121 new residences in Boulder Creek Commons. Fifty (50) of these will be affordable to seniors in the 30% to 60% AMI range. An additional three (3) duplex buildings (six units) and two (2) single family homes will be deed restricted home ownership opportunities for middle-income residents. The remaining 63 market rate single family homes ranging in size from approximately 2,900 square feet to 3,300 square feet will allow for a variety of household sizes and character. Potential households include small and large families, singles and couples, empty nesters, and independent seniors. The diversity of age and income encouraged by the variety of housing choices will create a socially vibrant and interesting community. The proposed developer of the single family homes, Boulder Creek Builders, have a long history of developing high quality homes for diverse families through out Boulder County.

## **B. HOW THE PROJECT MEETS APPLICABLE CRITERIA**

### **GENERAL CRITERIA FOR ALL SITE REVIEW APPLICATIONS**

#### **I. Boulder Valley Comprehensive Plan (BVCP):**

- A. *How is the proposed site plan consistent with the purposes and policies of the Boulder Valley Comprehensive Plan?*

#### **General Land Use, Annexation and Community Benefit**

##### **1.27 Annexation**

*(d) In order to reduce the negative impacts of new development in the Boulder Valley, the city will annex Area II land with significant development or redevelopment potential only if the annexation provides a special opportunity or benefit to the city. For annexation considerations, emphasis will be given to the benefits achieved from the creation of permanently affordable housing.*

The project proposes 48 percent of the units as deed restricted permanently affordable units. Over 40 percent of the units would be permanently affordable rental units for seniors, a well documented constituency needing affordable housing in Boulder.

**1.20 Growth Requirements** also touches on the “community benefit” requirement, by stating:

*The overall effect of urban growth must add significant value to the community, improving quality of life. The city will require development and redevelopment as a whole to provide significant community benefits and to maintain or improve environmental quality as a precondition for further housing and community growth.*

In addition to providing affordable senior housing in an appropriate location near the Senior Center, the proposal includes preservation of the 2.73 acre eastern parcel significantly increasing the area of wetlands and structural diversity of the habitat. These enhancements will greatly increase the quantity and quality of natural habitats on the East Parcel and will provide much greater aesthetic appeal for visitors to the East Boulder Community Park and Recreation Center and City of Boulder Open space along 55<sup>th</sup> Street.

### **Affordable Housing**

The following excerpts are from the 2010 Summary of Key Trends for the City of Boulder, Boulder Valley Comprehensive Plan:

*“Overall, Boulder is a community of individuals and families whose values include education, nature and innovation. In 2011, a town of 103,000 people, Boulder continues to grow in population, with an anticipated increase of about 15 percent between 2011 and 2035. Boulder's median age is lower than the rest of the county, the state and the nation. However, Boulder County's population is aging faster than the nation and the population aged 60 and over is expected to more than double between 2011 and 2020. ”*

*“A community's strength is often a reflection of its diversity. When multiple generations live near each other, elderly parents are able to receive care from their adult children, while young children can build relationships with their grandparents.”*

According to the BVCP 2010 Summary of Key Trends, “While the percentage of Boulder's population 65 and older has not changed significantly over the last 20 years (growing by 0.2 percent, from 7.8 percent to 8.0 percent), the future looks much different: In 2008, 12 percent of Boulder County's residents were over the age of 60. In 2020, that age group is expected to reach 21 percent of residents.”

In a May 29, 2011 Boulder Daily Camera article on the 2010 census data released at the time is the following quote from City of Boulder Planner Chris Meschuk, “From a planning perspective, our population is going to age, and a big chunk of the population is going to become reliant on our community infrastructure in an a way that is very different from what it looks like today.”

Clearly, the senior population of Boulder County is growing at a much higher rate than any other segment of the population. Yet, the affordable units available to lower income seniors are currently 3% of the total affordable housing stock in the City.

To meet this unquestioned and growing need, Boulder Creek Commons proposes 50, affordable independent senior units specifically designed to meet the social, physical, and emotional needs of seniors. The proposed location is ideal with close proximity to the East Boulder Senior Center and the East Boulder Recreation Center. This provides an excellent opportunity for coordination of facilities in the City and ease of transportation for residents to the Senior Center. The location in a traditional residential neighborhood, where seniors prefer to locate, helps strengthen the proposed single family neighborhood by providing diversity in housing types and density.

The senior units will be available exclusively to low-income residents with incomes below 60% of AMI and as low as 30% of AMI, depending on factors in place when the project is built. Deed restrictions will be put in place that will provide permanent affordability for the community of Boulder and its residents.

In addition, consistent with the city of Boulder's Affordable Housing goals, the project will provide 8 units of ownership properties available to and restricted to middle-income buyers, consisting of three (3) duplex buildings (six total units) and two (2) single-family homes, distributed within the project.

This mix of housing was determined based on extensive discussion with the city Housing and Human Services staff. It should be noted that the applicant initially proposed sixty-eight (68) to seventy (70) deed restricted affordable units for seniors and no middle income affordable units. The logic for this initial proposal was that seniors housing is a growing and underserved need in Boulder, and this location near the East Boulder Seniors Center was an ideal spot to for a larger population of seniors. There are many other locations in Boulder where middle income housing can be located, so it seemed less essential that this demographic be served on this site. Some members of the Planning Board identified this as a potential topic for further exploration; however, the applicant has continued to pursue the 50 unit seniors' project and 8 affordable home ownership options as recommended by HHS staff.

### **Environmental Preservation**

The East Parcel at Boulder Creek Commons is currently a weed degraded area, once populated more extensively with wetland habitat. The wetlands were created due to flood irrigation techniques used in the agricultural past of the site. As part of the development of this project, the degraded wetlands on the East Parcel will be re-established, producing quality habitat adjacent city owned open space.

### **3.25 Support for Community Facilities.**

*The city and county recognize the importance of the health care, social service, educational and nonprofit community agencies that provide vital services to the residents of the Boulder Valley and will work collaboratively with these agencies to reasonably accommodate their facility needs.*

In addition to the linkages with the city's Open Space and trails, the presence of the East Boulder Seniors and Recreation Center is an ideal relationship with the seniors congregate care facility and the rest of the Boulder Creek Commons community.

### **4.40 Energy Efficient Land Use.**

*The city and county will encourage the conservation of energy through land use policies and regulations governing placement, orientation and clustering of development and through housing policies and regulations. The conservation of energy is served by the development of more intense land use patterns; the provision of recreation, employment and essential services in proximity to housing; the development of mass transit corridors; and efficient transportation.*

The proposed development for Boulder Creek Commons includes a variety of strategies for conservation of energy. The single family developer, Boulder Creek Builders, has a long history of embracing green building practices. The site is well connected to mass transit and trail systems.

**7.01 Local Solutions to Affordable Housing.**

*The city and county will emphasize locally developed solutions to meet the housing needs of their low and moderate income households, including those who work but may not live in Boulder County. The city and county further recognize that such needs may not be met solely through private development. To facilitate availability of housing for this segment of the population, appropriate federal, state and local programs and resources will be used both locally and in collaboration with other jurisdictions. The city's pursuit of additional affordable housing programs will include an analysis of the unmet need for such programs as well as an analysis of the financial, social, demographic and community resources and constraints.*

Provision of affordable congregate care senior housing, a growing need in the community, and eight other deed restricted units, in a compact form, in a desirable location with nearby support services, would be consistent with the above three (3) policies and an appropriate community benefit for the site.

**Community Design and Neighborhood Compatibility**

**2.06 Design of Community Edges.**

*Well defined edges for the city's boundaries are important because they support an understanding and appreciation of the city's image and create a clear sense of arrival and departure. Natural features are most effective as edges, but public open land, major roadways or heavy tree planting can also function as community edges. As new areas are the definition of a community edge will be a design priority.*

The BVCP also has an extensive section related to community design to ensure that development is high quality, compact, efficient and compatible with the surrounding context. Holistically, development of the property is logical considering that it abuts city land for over 60% of its perimeter. Further, 55th Street creates a logical boundary of city developed lands and protected lands (Planning Area III) to the east where development is not expected to occur. The basic layout of the development with the congregate care structure fronting on 55<sup>th</sup> also contributes to this sense of an edge and also is intuitively placed to give seniors convenient access to the East Boulder Recreation Center and open space.

This is also consistent with the following BVCP policy:

**2.40 Physical Design for People.**

*The city and county will take all reasonable steps to ensure that new development and redevelopment, public as well as private, be designed in a manner that is sensitive to social, physical and emotional needs. Broadly defined, this will include factors such as accessibility to those with limited mobility; provision of coordinated facilities for pedestrians, bicyclists and bus-riders; provision of functional landscaping and open space; and the appropriate scale and massing of buildings related to neighborhood context.*



**2.31 Commitment to a Walkable City.**

*The city and county will promote the development of a walkable city by designing neighborhoods and business areas to provide easy and safe access by foot to places such as neighborhood centers, community facilities, transit stops or centers, and shared public spaces and amenities.*

**2.32 Trail Corridors/Linkages.**

*In the process of considering development proposals, the city and county will encourage the development of trails and trail linkages for appropriate uses such as hiking, bicycling or horseback riding, so as to provide a variety of alternative recreation and transportation opportunities. Implementation of this goal will be achieved through the coordinated efforts of the private and public sectors.*

The proposed plan establishes new pedestrian connections from within to East Boulder Community Park consistent with Policies 2.31 and 2.32, Trail Corridor/Linkages. The site plan also integrates an internal site path system throughout the site and with the congregate care building. A loop trail around the Senior Congregate Care facility will provide daily exercise opportunities for the residents of the facility and connectivity to the East Boulder Community Park and the walk systems that connect to the East Boulder Senior and Recreation Center

**6.13 Neighborhood Streets Connectivity.**

*New neighborhood streets will be designed in a well-connected and fine grained pattern of streets and alleys to effectively disperse and distribute vehicle traffic and to promote bike and pedestrian travel.*

The site design for the Boulder Creek Commons site includes a variety of pedestrian and bicycle systems that are well connected to the local and regional network. Sidewalks along the local streets provide immediate access for residents to the broader network. Trails through the open spaces, around the seniors congregate care facility and along the Dry Creek Ditch No. 2 corridor provide off street trail alternatives to residents. The design focuses on creating strong connections to the trails and sidewalks in the East Boulder Community Park and other regional trail systems.

Bicycles will be able to safely navigate the short blocks and circuitous main street through the site due to the slow speeds that the street network will create.

In addition, there are multiple bus routes served by RTD within a short walk of the site including the 206, Dash and 209. Residents of the seniors congregate care facility will take advantage of the on-demand Via services. The RTD Table Mesa Park and Ride which provides connections to the entire RTD network is a short bike or bus ride away.

**2.13 Support for Residential Neighborhoods.**

*In its community design planning, the city will support and strengthen its residential neighborhoods. The city will seek appropriate building scale and compatible character of new development or redevelopment, desired public facilities and mixed commercial uses, and sensitively designed and sized rights-of-way.*

The character of the proposed development borrows from surrounding context with lots that are similarly sized to Greenbelt Meadows with front-loaded residences and attached sidewalks like in Keewayden Meadows. Density and massing would be similar to Greenbelt Meadows in appearance based on similar lot sizes.

**2.19 Compatibility of Adjacent Land Uses.**

*In order to avoid or minimize noise and visual conflicts between adjacent land uses that vary widely in use, intensity or other characteristics, the city will use tools such as interface zones, transitional areas, site and building design and cascading gradients of density in the design of subareas and zoning districts. With redevelopment, the transitional area should be within the zone of more intense use.*

To create a greater level of compatibility, a 60-foot buffer along the west lot line of the property with Keewayden Meadows.

**6.09 Transportation Impact.**

*Traffic impacts from a proposed development that cause unacceptable community or environmental impacts or unacceptable reduction in level of service will be mitigated. All development will include strategies to reduce the vehicle miles traveled (VMT) generated by the development. New development will be designed and built to be multimodal and pedestrian-oriented. Strategies to reduce the VMT generated by new development will include all modes of travel as well as travel management programs such as the Eco Pass. The design of new development will especially focus on providing continuous modal systems through the development, on connecting these systems to those surrounding the development and on providing connections between the modes. (See Policy 3.05 Growth to Pay Fair Share of New Facility Costs.) The city will provide tools and resources to help businesses manage employee access and mobility and support public-private partnerships such as transportation management organizations to facilitate these efforts.*

The site design for the Boulder Creek Commons site includes a variety of pedestrian and bicycle systems that are well connected to the local and regional network. Sidewalks along the local streets provide immediate access for residents to the broader network. Trails through the open spaces, around the seniors congregate care facility and along the Dry Creek Ditch No. 2 corridor provide off street trail alternatives to residents. The design focuses on creating strong connections to the trails and sidewalks in the East Boulder Community Park and other regional trail systems.

Bicycles will be able to safely navigate the short blocks and circuitous main street through the site due to the slow speeds that the street network will create.

In addition, there are multiple bus routes served by RTD within a short walk of the site including the 206, Dash and 209. Residents of the seniors congregate care facility will take advantage of the on-demand Via services. The RTD Table Mesa Park and Ride which provides connections to the entire RTD network is a short bike or bus ride away.

The proposed circuitous nature of Kewanee Drive will provide the intended connection and effectively disperse traffic while discouraging the frequency of through travel. The configuration of Kewanee and whether or not it should connect is a key issue of the review.

**6.12 Neighborhood Integration.**

*The city and county will strive to protect and improve the quality of life within neighborhoods while at the same time facilitating the movement of vehicular, bike and pedestrian traffic. Improving access and safety within neighborhoods by controlling vehicle speeds will be given priority over vehicle mobility. Transportation actions will not be implemented solely to shift a problem or impact from one location to another. Neighborhood needs and goals will be balanced against the community benefit of a transportation improvement.*

**2.42 Enhanced Design for the Built Environment.**

*Through its policies and programs, the city will encourage or require quality architecture and urban design in private sector development that encourages alternative modes of transportation, provides a livable environment and addresses the elements listed below. a) The context. Projects should become a coherent part of the neighborhood in which they are placed. They should be preserved and enhanced where the surroundings have a distinctive character. Where there is a desire to improve the character of the surroundings, a new character and positive identity as established through area planning or a community involvement process should be created for the area. Special attention will be given to protecting and enhancing the quality of established residential areas that are adjacent to business areas. b) The public realm. Projects should relate positively to public streets, plazas, sidewalks and paths. Buildings and landscaped areas—not parking lots—should present a well-designed face to the public realm, should not block access to sunlight, and should be sensitive to important public view corridors. c) Human scale. Projects should provide pedestrian interest along streets, paths and public spaces. d) Permeability. Projects should provide multiple opportunities to walk from the street into projects, thus presenting a street face that is permeable. Where appropriate, they should provide opportunities for visual permeability into a site to create pedestrian interest. e) On-site open spaces. Projects should incorporate well designed functional open spaces with quality landscaping, access to sunlight and places to sit comfortably. Where public parks or open spaces are not within close proximity, shared open spaces for a variety of activities should also be provided within developments. f) Buildings. Buildings should be designed with a cohesive design that is comfortable to the pedestrian, with inviting entries that are visible from public rights of way.*

Through the Concept Review process, City Staff found that, while the site design relates to its context, the development of the site is an opportunity to improve on the character of the area consistent with the above policy. The plan includes an updated open space scheme consistent with the direction provided by the Planning Board, including: substantial broad open greenways for linkages through the site; a small outdoor gathering space adjacent the East Boulder Community Park, a 60'+ wide buffer along the west side of the site; and pedestrian-friendly streets that include detached sidewalks. The site is permeable with multiple pedestrian connections in and out of the site. The architecture for the site has been designed to be of a cohesive character. Garages are pulled back from the street and the entries to all buildings are visible and inviting to the public.

## Environmental Preservation and Impact Avoidance

### 4.09 Wetland Protection.

*Natural and human-made wetlands are valuable for their ecological and, where appropriate, recreational functions, including their ability to enhance water and air quality. Wetlands also function as important wildlife habitat, especially for rare, threatened and endangered plants and wildlife. The city and county will continue to develop programs to protect and enhance wetlands in the Boulder Valley. The city will discourage the destruction of wetlands, but in the rare cases when development is permitted and the filling of wetlands cannot be avoided, new wetlands will be created or degraded wetlands will be restored.*

The Planning Board reviewed the status of the wetlands and wildlife habitat contained in the Environmental and Engineering Feasibility Study in its January 6, 2011 public hearing. The board indicated that it was satisfied with the level of study and requested that strategies be focused on improving wetland and wildlife habitat on the East Parcel.

The wetland delineations for the Boulder Creek Commons site were updated in late August, 2011. The existing wetlands are degraded, low value wildlife habitat and are considered low-functioning wetlands. All of the wetlands on the site have evolved due to alterations of the natural hydrology and are supported by man-induced hydrology; the irrigation ditches, seepage from the irrigation ditches, flood irrigation and inefficient use of irrigation water. The report contained in the Environmental and Engineering Feasibility Study determined that without natural hydrology, these wetland areas would revert to their former upland condition when flood irrigation ceased both on and off-site and when the ditches are permanently lined or piped. To date, the wetlands on site have reduced in area and changed in location between the 2008 mapping and the recent update. The wetland areas have responded primarily to the changes in flood irrigation practices, since the delineated wetlands are not naturally occurring wetlands and were created by man-induced hydrology. Additionally, water from leaking irrigation ditches and laterals support the wetlands. If this water source is decreased or eliminated, the wetlands retract or disappear completely.

The Boulder Creek Commons project will consolidate the wetlands along the Dry Creek Ditch No.2 corridor and on the East Parcel. By consolidating the wetlands the project owners can augment and control the necessary water supply by again creating a man-induced hydrology to support high-quality wetland habitats. The East is an ideal location to provide further habitat enhancements.

The wetland mitigation strategy is to create high quality habitats on the property by enhancing some existing wetlands and to create new wetlands adjacent the existing wetlands to further enhance the existing wetlands. Where City regulated wetlands are disturbed for enhancement, the wetlands will be mitigated at a 1:1 ratio. Wetlands that are relocated on the property will be created at a 2:1 ratio.

With development of the Boulder Creek Commons, the wildlife habitat function of the property will be improved and the wetlands will be of higher quality and be supported by a controllable water source necessary to sustain the wetlands and provide an aesthetic and logical transition to city Open Space.

**4.21 Flood Management.**

*The city will protect the public and property from the devastating impacts of flooding in a timely and cost-effective manner while balancing community interests with public safety needs. The city will manage the potential for floods by implementing the following guiding principles: a) Preserve floodplains b) Be prepared for floods c) Help people protect themselves from flood hazards d) Prevent unwise uses and adverse impacts in the floodplain e) Seek to accommodate floods, not control them.*

Since the 2010 Environmental and Engineering Assessment and Feasibility Study, the City of Boulder’s South Boulder Creek Flood Mitigation Study has continued to progress. In reaction to and cooperation with the City’s continued analysis, an effective strategy for conveying storm and possible flood waters became clear.

A bio-swale, designed as a multi-stage vegetated open channel along the west property line will best accommodate future flood mitigation options the city is exploring as part of their on-going flood mitigation study. This bio-swale will convey both off-site storm water flows and flood flows through the Boulder Creek Commons property in an environmentally sensitive manner.

The channel will meander and bulge to provide areas for wetland restoration, mitigation, and enhancements. The low flow portion of the channel is sized for more frequent storm events, and provides continuous water quality enhancement for off-site storm water flowing through the Boulder Creek Commons site. The upper stage of the channel is sized for the 100-year local storm event.

**4.32 Groundwater.**

*The city and county will continue to evaluate aquifers, groundwater recharge and discharge areas, and sources of groundwater pollution within the Boulder Creek watersheds and formulate appropriate pollution and source protection programs. Impacts to groundwater will be considered in land use planning, development review and public land management practices.*

The 2010 “Ground Water Evaluation”, Environmental and Engineering Assessment and Feasibility Study explored how the Boulder Creek Commons property relates to the existing ground water system and identified strategies for controlling ground water recharge within the project site. The focus of this study was to determine if the development of the Boulder Creek Commons property would adversely affect adjacent wells or neighboring homes. This study concluded:

“Based on this evaluation, it is Telesto’s professional opinion that the proposed housing development will not adversely affect the basement sump pumping currently being performed by the residents.”

This study was subject to reviews by City Staff and by CH2MHill, a third party consultant with expertise in ground water monitoring and mitigation retained by the City.

In a review letter to the City of Boulder, CH2MHill concluded:

“... the modeling and procedures used to evaluate the on-site natural resources, drainage, groundwater and soil issues does meet current and acceptable engineering standards of practice and no additional information is requested at this time.”

The pertinent findings of the 2010 “Ground Water Evaluation” Study were presented to the Planning Board in a brief presentation on January 6, 2011. The presentation focused on the correlation between ground water summer recharge conditions and the seasonal fluctuations in the ground water table. Similar to the Study, this part of the presentation focused on how the proposed development of the Boulder Creek Commons property would not adversely affect adjacent wells or neighboring homes.

During the public comment period and the Planning Board question and discussion period, questions arose about the nature of the ground water table in general and concerns were voiced about the coincidence of historical activities in the area and observed changes in local ground water levels.

On 21 January 2011, the project team met with City Staff to review the Planning Board meeting notes and to determine a path forward for the project. Because ground water has become a concern on projects throughout the City, Staff felt that an informational presentation about ground water fundamentals would provide Planning Board with the tools to better evaluate projects with ground water complexities. For the project team, our course of action included:

1. Continue our neighborhood outreach with neighbors who expressed a desire to cooperate with the project team.
2. Prepare a concise summary of the 2010 “Ground Water Evaluation” Study and present findings in terms of ground water hydrology fundamentals and put the Boulder Creek Commons into context with the ground water system.
3. Research the historical activities in the area and the reported changes in local ground water levels.

The City’s introductory presentation on ground water hydrology, “Ground Water 101”, was presented to Planning Board on 05 May 2011 by Gary D. Witt of Wright Water Engineers. This presentation was non-project specific and included ground water hydrology fundamentals, terminology and general items for Planning Board members to be aware of when evaluating ground water studies.

### **2011 Neighborhood Outreach**

On 16 May 2011, City Staff, members of our project team, and three neighbors who live adjacent to the Boulder Creek Commons property met at Mr. Ron Craig’s home at 260 Cimarron Way. Mr. Craig allowed us to observe his sump pump configuration and operations. He provided a timeline of when his sump pump began operation this season and his observations of Dry Creek Ditch No. 2 flows. He consented to allowing further monitoring of his sump pump during the summer. During this meeting, we also observed the adjacent neighbor’s sump operations. As part of the meeting, the neighbors and City Staff walked the southern property line of the Boulder Creek Commons property to observe the current conditions on the property, the Bodam lateral, and Dry Creek Ditch No. 2. Even though the Boulder Creek Commons property owners ceased flood irrigating the West Parcel several years ago, the neighbor

immediately south of the property continues flood irrigation and other inefficient irrigation practices. At the time our site visit, portions of the Boulder Creek Commons property adjacent to the Bodam Lateral and Dry Creek Ditch were saturated and standing water was observed in several places.

Since the meeting with the neighbors, our project team has been measuring ground water levels on the Boulder Creek Commons property at six monitoring locations. We are in continued communication with Mr. Craig regarding his pumping cycles and pumping rates, and have measured Mr. Craig's sump pump flow rates.

### **Ground Water 201: Ground Water Hydrology and the Hogan-Pancost Property**

Included with this Concept Plan application is a letter titled "Ground Water Hydrology and the Hogan-Pancost Property" which builds on the ground water hydrology fundamentals presented in the Planning Board "Ground Water 101" presentation and puts the findings of the 2010 "Ground Water Evaluation" study and the Boulder Creek Commons into context with the overall ground water system. The letter is summarized below:

The ground water system that underlies the Boulder Creek Commons is vast. The recharge area for the ground water system extends across 132 square mile South Boulder Creek watershed. The Boulder Creek Commons property covers only 0.03% of the total water shed area.

Recharge is simply the water that flows into the ground water system. Sources of ground water recharge are precipitation, snowmelt, agricultural irrigation, lawn irrigation and seepage from ponds, streams and unlined irrigation ditches. The Boulder Creek Commons property owners can control the recharge that occurs on their property, but the property represents a very small fraction of the water shed.

The ground water system is sensitive to watershed wide recharge fluctuations. Ground water levels are lowest in the winter when the only source of recharge is typically precipitation. In the spring, ground water levels can rise quickly and dramatically as recharge across the watershed increases due to seasonally high precipitation, snow melt in the higher elevations of the watershed, the start of residential and agricultural irrigation and the filling of ponds and irrigation ditches. Ground water levels are typically at the highest during the late spring and early summer. Over the course of the summer months, recharge to the ground water begins to decrease as snow melt from the higher elevations lessens or ceases and precipitation decreases. By late summer, South Boulder Creek begins to drain the ground water table. As fall progress, ground water levels continue to decrease as agricultural and lawn irrigation ceases.

As documented in the 2010 "Ground Water Evaluation", flood irrigation is an inefficient irrigation method and can contribute enough recharge to cause a local rise in the ground water table. During an irrigation season, land that is flood irrigated receives a net water application of 36-inches (13-inches of precipitation plus 23-inches of flood irrigation). Half of this water will percolate deeply and recharge the ground water. In contrast, when the same 13-inches of precipitation fall on native ground (without supplemental irrigation), less than 2-inches will become deep percolation that recharges the ground water table.

The property owners have already voluntarily ceased flood irrigating the property. However, flood irrigation by the neighbor located to the immediate south will continue to contribute to a seasonal local rise in ground water levels.

The Boulder Creek Commons property owners can only control the sources of ground water recharge that occur within their property. With the proposed development of the Boulder Creek Commons property flood irrigation will be permanently ceased. Dry Creek Ditch No. 2 will be piped to reduce or eliminate recharge currently caused by the leaking ditch. The property owners are working cooperatively with the neighbor to the south to allow for his historic use of the Bodam lateral and to reduce or eliminate the recharge associated with the lateral by piping or permanently lining the lateral. The Boulder Creek Commons property owners will mimic the current hydrological conditions as best they can by controlling recharge sources and rates.

### **Responses to Specific Questions Raised by Adjacent Neighbors**

Included with the Concept Plan application was a letter titled “Hogan-Pancost Property: Neighborhood Event Timeline and Response to Specific Questions Raised by Adjacent Neighbors” which provides a clear timeline of neighborhood historical events and includes detailed responses to specific questions raised by adjacent neighbors regarding changes in ground water levels.

As discussed above, ground water levels in the vicinity of the site can rise quickly and dramatically as recharge across the 132-square mile watershed increases. The neighborhood events were compared to precipitation and South Boulder Creek stream flows. The Keewaydin Meadows homes adjacent to the Boulder Creek Commons property were built with basements and without sump pumps during sustained period of below average precipitation. From 1978 to 1990 there was a trend of increasing precipitation with 8 of 13 years having higher than average precipitation.

Also, from the time the homes were constructed in 1966 through the 1980’s, a significant amount of development occurred in Boulder south of Baseline Rd. By 1990, development in south Boulder covered approximately 3.7 square miles. With the change in land use, lawn irrigation increased and the amount of recharge to ground water also increased.

The combination of increased recharge from precipitation, and increased recharge from lawn watering caused ground water levels to rise. In 1990, the ground water level rise was enough to require basement sumps and pumping. Construction of the East Boulder Community Park soccer fields coincided with, but is not related to, the ground water rise observed in July of 1990.

Adjacent neighbor sump pumping rates may increase or decrease quickly and significantly in response to natural changes in recharge and the ground water level of the 132 square mile water shed.

- B. The proposed development shall not exceed the maximum density associated with the Boulder Valley Comprehensive Plan residential land use designation. Additionally, if the density of existing residential development within a 300 foot area surrounding the site is at or exceeds the density permitted in the Boulder Valley Comprehensive Plan, then the maximum density permitted on the*



*site shall not exceed the lesser of: (i) the density permitted in the Boulder Valley Comprehensive Plan, or, (ii) the maximum number of units that could be placed on the site without waiving or varying any of the requirements of Chapter 9-7, "Bulk and Density Standards," B.R.C. 1981. How is the proposed site plan consistent with the above density criteria?*

The density of Boulder Creek commons does not exceed the maximum density associated with the Boulder Valley Comprehensive Plan land use designation and is less than the maximum number of units that could be placed on the site.

**II. Site Design:**

*Projects should preserve and enhance the community's unique sense of place through creative design that respects historic character, relationship to the natural environment, and its physical setting. Projects should utilize site design techniques which enhance the quality of the project. In determining whether this subsection is met, the approving agency will consider the following factors:*

- A. *Open space, including without limitation, parks, recreation areas, and playgrounds:*
1. *How is useable open space arranged to be accessible and functional?*

Open space is organized consistent with the direction received from the Planning Board at the Concept Plan Review meeting; including broad greenways connecting north to south and a small gathering space for the neighborhood is created adjacent the East Boulder Community Park, and maintaining the 60' buffer on the west side of the site.

2. *How is private open space provided for each detached residential unit?*

Each detached residence has a private patio and yard on the rear of each unit. Additionally, a small front porch is incorporated into each home, providing a private transition space from the public realm.

3. *How does the project provide for the preservation of natural features, including, without limitation, healthy long-lived trees, terrain, significant plant communities, threatened and endangered species and habitat, ground and surface water, wetlands, riparian areas, and drainage areas?*

Existing wetlands on the site are in a degraded state, and the project will consolidate and enhance the wetlands in the east parcel and selected locations along west side of the west parcel in a manner consistent with City policy. No trees of significance exist on the west parcel, and those on the east parcel will be preserved. As born out through extensive study, no endangered species or habitat exist on the site. Extensive study of other environmental questions found no barriers to development.

4. *How does the open space provide a relief to the density, both within the project and from surrounding development?; and*

A 60' buffer is planned along the west boundary providing a distinct separation between the existing neighborhood and Boulder Creek Commons. The broad greenways through the site and

the open spaces engaged to the East Boulder Community Park provide distinct relief internal to the site.

5. *How does the open space provide a buffer to protect sensitive environmental features and natural areas?; and*

The open space on the west side provides enhancement to the existing degraded wetlands and the extensive open space on the east parcel provides an opportunity to enhance the wetlands and act as a buffer to the open lands to the east.

6. *If possible, how is open space linked to an area- or a city-wide system?*

The open space system is effectively linked to the East Boulder Community Park to the north. The east parcel open space creates a transition to open lands to the east.

- B. *Open Space in Mixed Use Developments: Developments that contain a mix of residential and non-residential uses:*

Not applicable.

- C. *Landscaping:*

1. *How does the project provide for aesthetic enhancement and a variety of plant and hard surface materials, and how does the selection of materials provide for a variety of colors and contrast and how does it incorporate the preservation or use of local native vegetation here appropriate?*

The existing landscape on the site is in a distinctly degraded condition. The proposed landscape plan creates an urban street scene through the use of street trees in tree lawns and a small outdoor gathering space adjacent East Boulder Community Park. Additionally, a naturalized landscape in the open space network is planned in the greenways and the west corridor and east parcel. Enhanced wetlands and riparian areas will utilize local native vegetation and create new habitat.

2. *How does the landscape and design attempt to avoid, minimize, or mitigate impacts to important native species, plant communities of special concern, threatened and endangered species and habitat by integrating the existing natural environment into the project?*

No important native species or habitat has been found to exist on the site. The existing man-induced and degraded wetlands will be enhanced through appropriate mitigation measures.

3. *How does the project provide significant amounts of plant material sized in excess of the landscaping requirements of Sections 9-9-12 and 9-9-13, "Landscaping and Screening Requirements," and "Streetscape Design Standards," B.R.C. 1981; and*

The landscape plan incorporates quantities of landscape in excess of City requirements by approximately 20%.

4. *How are the setbacks, yards, and useable open space along public rights-of-way landscaped to provide attractive streetscapes, to enhance architectural features, and to contribute to the development of an attractive site plan?*

Streetscapes include street trees consistent with City standards, located to frame the architecture of the site..

- D. *Circulation, including, without limitation, the transportation system that serves the property, whether public or private and whether constructed by the developer or not:*

1. *How are high speeds discouraged or a physical separation between streets and the project provided?*

The site plan provides multiple site design elements which aid in limiting speeds within the right-of-way and provide separation between the streets and development. The streets are separated from development with landscaping buffer zones and detached sidewalks. The interior streets have on-street parking, are not straight continuous roads and are relatively short in length. Cut-through traffic is discouraged by the circuitous street pattern within the neighborhood that requires stopping and making turns at a variety of locations. Additionally, corner bulb-outs have been incorporated into the street system to further discourage high speeds and promote pedestrian safety.

2. *How are potential conflicts with vehicles minimized?*

As stated above, landscaping buffer zones, detached sidewalks and a network of trail paths are provided for pedestrian move out throughout the site and to adjacent connections. Bicycles will be able to safely navigate the short blocks and circuitous main street through the site due to the slow speeds that the street network will create.

The site plan provides convenient access for residents, yet discourages “cut through” traffic. Two residential street types are proposed. The primary street through the site that connects 55<sup>th</sup> Street to Kewanee Drive is a 60’ Right of Way Residential Street. This street follows a circuitous route through the site, which discourages high speeds. The fine-grained street pattern of the site utilizes a street design proposed by the City staff that is intended as a slow moving street that serves a relatively low number of lots.

3. *How are safe and convenient connections accessible to the public within the project and between the project and existing and proposed transportation systems provided, including without limitation streets, bikeways, pedestrian ways and trails?*

The site design for the Boulder Creek Commons site includes a variety of pedestrian and bicycle systems that are well connected to the local and regional network. Sidewalks along the local streets provide immediate access for residents to the broader network. Trails through the broad greenways, around the seniors congregate care facility and along the Dry Creek Ditch No. 2 corridor provide off street trail alternatives to residents. The design focuses on creating strong connections to the trails and sidewalks in the East Boulder Community Park and other regional trail systems.

Bicycles will be able to safely navigate the short blocks and circuitous main street through the site due to the slow speeds that the street network will create.

The property has excellent vehicular access from 55<sup>th</sup> Street, which arcs across the southeast corner of the site connecting to South Boulder Road, the Recreation Center, and ultimately Baseline Road. An additional access at the northwest corner was anticipated and provided for when the Keewaydin Meadows subdivision developed at Kewanee Drive. The primary entrance for Boulder Creek Commons will be accessed off of 55<sup>th</sup> Street and the secondary access will be Kewanee Drive. Only one residential subdivision, Greenbelt Meadows, located to the south is accessed from 55<sup>th</sup> Street as well.

4. *How are alternatives to the automobile promoted by incorporating site design techniques, land use patterns, and supporting infrastructure that supports and encourages walking, biking, and other alternatives to the single occupant vehicle?*

In addition to its immediate proximity to schools and recreational amenities, the site connects to the city of Boulder's extensive bicycle and pedestrian network and open space trails. Multi-use paths throughout the East Boulder Community Center site, just north of Boulder Creek Commons, provide good linkages. Further, there are multiple bus routes served by RTD within a short walk of the site including the 206, Dash, and 209 as well as on-demand Via services for seniors.

5. *Where practical and beneficial, how is a significant shift away from single- occupant vehicle use to alternate modes promoted through the use of travel demand management techniques?*

The site is well-positioned to make good use of the existing transit and bicycle/pedestrian network in the area. In addition, a Travel Demand Management Plan has been created for Boulder Creek Commons and is included in the Site Review Submittal application.

6. *What on-site facilities for external linkage with other modes of transportation are provided where applicable?*

Boulder Creek Commons will have a high level of pedestrian and vehicular connectivity both internally and to the community at large. Internal streets, walks, and trails connect to surrounding areas effectively and in a pedestrian friendly manner.

7. *How is the amount of land devoted to the street system minimized?*

Through collaboration with City Staff, an efficient network of streets has been developed, including the use of a unique street design that minimizes the amount of land established for the right of way.

8. *How is the project designed for the types of traffic expected, including, without limitation, automobiles, bicycles, and pedestrians, and how does it provide safety, separation from*

*living areas, and control of noise and exhaust?; and How will city construction standards be met, and how will emergency vehicle use be facilitated?*

The capacity of the streets is more than adequate for the vehicular traffic expected as indicated in the transportation reports provided. Setbacks to all uses are appropriate to the streets and traffic anticipated. Detached sidewalks and off street trails are utilized for pedestrians and bicyclists. All City construction standards will be met. The street network is in conformance with standards for emergency vehicle use.

*E. Parking:*

- 1. How does the project incorporate into the design of parking areas, measures to provide safety, convenience, and separation of pedestrian movements from vehicular movements?*

For the single family neighborhood, off street parking is accommodated in garages and driveways. On street parallel parking is allowed. Bulb-outs at corners provide a safe location for pedestrians to cross streets. For the congregate care facility, a single entrance is provided to a compact and well landscaped parking lot.

- 2. How does the design of parking areas make efficient use of the land and use the minimum amount of land necessary to meet the parking needs of the project?*

The parking lot for the congregate care facility is a simple loop, with central parking lot island. The parking lot size meets the expected demand for parking on site.

- 3. How are parking areas and lighting designed to reduce the visual impact on the project, adjacent properties, and adjacent streets?; and*

All parking lot lighting will meet City standards and will utilize full cut off fixtures.

- 4. How do parking areas utilize landscaping materials to provide shade in excess of the requirements in Section 9-9-14, "Parking Lot Landscaping Standards," B.R.C. 1981?*

The trees in island and around the parking lot are positioned to optimize the shade opportunities. The number of trees exceeds the requirements by approximately 20%

*F. Building Design, Livability, and Relationship to the Existing or Proposed Surrounding Area:*

- 1. How are the building height, mass, scale, orientation, and configuration compatible with the existing character of the area or the character established by an adopted plan for the area?*

The scale and mass of the single family homes is similar to the adjacent Greenbelt Meadows neighborhood. The congregate care facility is located on the east side of the site, as close to the existing East Boulder Recreation and Senior Center as possible, a building of larger scale in the neighborhood.

2. *How is the height of buildings in general proportion to the height of existing buildings and the proposed or projected heights of approved buildings or approved plans for the immediate area?*

The single family homes are of similar height to other homes in the area. The congregate care facility is of similar height as well.

3. *How does the orientation of buildings minimize shadows on and blocking of views from adjacent properties?*

The shadow analysis in compliance with the Solar Access Area II indicates no shadows impacting existing or proposed buildings. Additionally, a 60-foot buffer along the west lot line of the property provides additional separation from the existing Keewaydin Meadows neighborhood.

4. *If the character of the area is identifiable, how is the project made compatible by the appropriate use of color, materials, landscaping, signs, and lighting?*

Boulder Creek Commons will create its own sense of place and contribute to the fabric of Southeast Boulder through the application of a variety of sensitive site design principles and diversity of residents. A sense of arrival is created at 55<sup>th</sup> Street by orienting the access point to a framed view of the Flatirons and Arapahoe Peak down the street and across the central park. The senior housing building is oriented toward 55<sup>th</sup> Street, announcing to all who pass by that this is a diverse neighborhood. This location has the benefit of being in close proximity and well connected to the East Boulder Community Park, Seniors Center and Recreation Center. The building itself screens its required parking from view by internalizing the parking lot.

5. *How do buildings present an attractive streetscape, incorporate architectural and site design elements appropriate to a pedestrian scale, and provide for the safety and convenience of pedestrians?*

Detached sidewalks and trails provide a safe and convenient environment for pedestrians. The garages on the single family homes are pulled back several feet behind the architecture of the home so that the non-garage portion of the home dominates the street scene. Front porches are a welcoming element at each front door.

6. *To the extent practical, how does the project provide public amenities and planned public facilities?*

The extensive open space network and outdoor gathering space adjacent East Boulder Community Park provides significant public amenity spaces for all. The wetlands enhancement will provide new and improved habitat for wildlife, and a small overlook is planned at the wetland in the south west corner of the site.

7. *For residential projects, how does the project assist the community in producing a variety of housing types, such as multifamily, townhouses, and detached single family units as well as mixed lot sizes, number of bedrooms, and sizes of units?*

There will be a total of 121 new residences in Boulder Creek Commons. Fifty (50) of these will be affordable to seniors in the 30% to 60% AMI range. An additional three (3) duplex buildings (six units) and two (2) single family homes will be deed restricted home ownership opportunities for middle-income residents. The remaining 63 market rate single family homes ranging in size from approximately 2,900 square feet to 3,300 square feet will allow for a variety of household sizes and character. Potential households include small and large families, singles and couples, empty nesters, and independent seniors. The diversity of age and income encouraged by the variety of housing choices will create a socially vibrant and interesting community.

8. *For residential projects, how is noise minimized between units, between buildings, and from either on-site or off-site external sources through spacing, landscaping, and building materials?*

Mitigation of excessive noise beyond slow speed residential traffic within the development and surrounding streets is not anticipated. Exterior cement plaster, siding, wood framing and insulation will provide code required exterior to interior noise reduction. Industry standard STC rating of residential windows will provide code required noise reduction. Noise between residential unit walls and floors will meet code required STC ratings. In addition, trees between the street and buildings should also provide some sound buffer to residential units.

9. *If a lighting plan is provided, how does it augment security, energy conservation, safety, and aesthetics?*

A lighting plan will be provided at the Technical document submittal. Any site lighting will meet city requirements.

10. *How does the project incorporate the natural environment into the design and avoid, minimize, or mitigate impacts to natural systems?*

A bio-swale, designed as a multi-stage vegetated open channel along the west property line will best accommodate future flood mitigation options the city is exploring as part of their on-going flood mitigation study. This bio-swale will convey both off-site storm water flows and flood flows through the Boulder Creek Commons property in an environmentally sensitive manner.

The channel will meander and bulge to provide areas for wetland restoration, mitigation, and enhancements. The low flow portion of the channel is sized for more frequent storm events, and provides continuous water quality enhancement for off-site storm water flowing through the Boulder Creek Commons site. The upper stage of the channel is sized for the 100-year local storm event.

Except for the rear yards of homes that will back onto this feature, this bio-swale will only convey off-site flows through the Boulder Creek Commons. On site developed storm flows will be routed through the greenways behind the homes. Using low impact design strategies, a grass swale and buffers will provide water quality treatment. Detention ponds will provide detention storage for the 10-year and 100-year design storms. Storm water will be released at or below historic rates.

11. *How are cut and fill minimized on the site, and how does the design of buildings conform to the natural contours of the land, and how does the site design minimize erosion, slope instability, landslide, mudflow or subsidence, and minimize the potential threat to property caused by geological hazards?*

The roadway layout and interior open spaces are oriented to take advantage of the natural slope of the existing property and to lessen the need for imported fill for development. The property slopes from south to north at less than 1.0% slope. Best grading practices require a minimum of 2.0% slopes across landscape areas and yards to facilitate drainage away from homes and other structures. Similar to the adjacent Keewaydin Meadows subdivision, the residential lots are elevated above the natural topography to provide positive drainage to the roadways and open space areas. The residential lots that back to the existing Keewaydin Meadows homes are at similar elevations to the adjacent existing lot elevations.

The senior housing building is oriented to allow developed storm drainage to follow the natural drainage routes. The senior housing building elevation was set at the flood protection elevation as recommended in the City's proposed flood plain ordinance revisions for critical facilities in the 500-year flood plain. Even with raising the building a minimum of 1-ft above the natural topography at the building's southeast corner, the building finished floor elevation is lower than the adjacent existing 55<sup>th</sup> Street.

To minimize potential slope instability, the proposed grading limits the maximum allowable slope to 4:1 in public right-of-ways and public utility and drainage easements. The maximum allowable slope on private property is limited 3:1 with 4:1 maximum preferred. Soil erosion will be minimized by employing water quality Best Management Practices (BMPs) during construction and by quickly establishing vegetative cover post- construction.

- G. *Solar Siting and Construction: For the purpose of insuring the maximum potential for utilization of solar energy in the city, all applicants for residential site reviews shall place streets, lots, open spaces, and buildings so as to maximize the potential for the use of solar energy in accordance with the following solar siting criteria:*

1. *Placement of Open Space and Streets. Open space areas are located wherever practical to protect buildings from shading by other buildings within the development or from buildings on adjacent properties. Topography and other natural features and constraints may justify deviations from this criterion. How is this criterion met?*

As the solar analysis shows, no buildings shade its neighbor in compliance with the City standards



2. *Lot Layout and Building Siting. Lots are oriented and buildings are sited in a way which maximizes the solar potential of each principal building. Lots are designed to facilitate siting a structure which is unshaded by other nearby structures. Wherever practical, buildings are sited close to the north lot line to increase yard space to the south for better owner control of shading. How is this criterion met?*

As the solar analysis shows, no buildings shade its neighbor in compliance with the City standards

3. *Building Form. The shapes of buildings are designed to maximize utilization of solar energy. Buildings shall meet the solar access protection and solar siting requirements of Chapter 9-9-17, "Solar Access," B.R.C. 1981. How is this criterion met?*

As the solar analysis shows, no buildings shade its neighbor in compliance with the City standards

4. *Landscaping. The shading effects of proposed landscaping on adjacent buildings are minimized. How is this criterion met?*

No proposed landscape is situated in a manner that will create shading issues for an adjacent building.

- H. *Additional Criteria for Poles Above the Permitted Height. No site review application for a pole above the permitted height will be approved unless the approving agency finds all of the following:*

1. *The light pole is required for nighttime recreation activities, which are compatible with the surrounding neighborhood, or the light or traffic signal pole is required for safety, or the electrical utility pole is required to serve the needs of the city?; and*
2. *The pole is at the minimum height appropriate to accomplish the purposes for which the pole was erected and is designed and constructed so as to minimize light and electromagnetic pollution. If applicable, how are these criteria met?*

No poles will exceed the permitted height.

## Boulder Creek Commons

Boulder, Colorado

### DEVELOPMENT SCHEDULE

It is anticipated by the Project Owner that the City Entitlement Process (i.e. Site Review, Technical Documents, and Annexation/Initial Zoning) will be completed by March, 2013.

Site Development (installation of roads, sewer lines, water lines, and other infrastructure will start April 1, 2013 and will be completed by July 1, 2013.

Construction of the actual buildings will begin immediately thereafter (July, 2013), and will cover the following period until completion of ALL Buildings on site:

Start of First Buildings:	July, 2013
Completion of Last Buildings	June, 2017