Appendix B

Vision

(No Appendices for this Chapter)

Appendix C

Existing Conditions

Appendix C.1: Existing Conditions Report (Full Report)

Introduction

On July 19, 2005, the Department of Defense Base Realignment and Closure Commission voted to close the Denver Center of the Defense Finance and Accounting Services (DFAS), move the Air Reserve Personnel Center (ARPC) to Buckley Air Force Base (AFB), and close the last remaining parcel of land held by the Department of Defense at the old Lowry AFB. This 70-acre parcel of land was transferred from Peterson AFB to the Buckley AFB on December 17, 2001. Buckley AFB will control the site until the official closure of the parcel.

The site, now known as the Buckley Annex, is located in the southwest corner of the intersection of 1st Avenue and Quebec Street, specifically the Southeast ¼ of Section 8, Township 4 South, Range 67 West of the 6th Principal Meridian in the City and County of Denver (CCD). The site is comprised of a 600,000-square-foot building (Building 444) with 30,000 square feet of ancillary buildings (Buildings 407, 409, and 446) on a 70-acre site. Buildings 444, 407, and 409 serve as office, storage, and maintenance for the ARPC and DFAS, while Building 446 is an abandoned wastewater pump house. The topography of the site is fairly flat, as it was a portion of a runway during the days of the Lowry AFB. The runway has long been abandoned and now serves as parking for Building 444. The only access to the site is from Quebec Street at Lowry Boulevard. Landscaped berms, with mature trees buffer the adjacent community from the site on the west and north. A security fence surrounds the site.

The intent of this report is to discuss the existing site conditions and determine the potential for building and infrastructure reuse, independent of the reuse plan. The infrastructure for the site, including the existing utilities and transportation network, were analyzed. The condition of the land within the property was reviewed; and the grading and drainage, flora and fauna, and environmental conditions were also analyzed. A review of the land use for adjacent properties was conducted to aid in land planning for the redevelopment plan. As part of this report, existing on-site buildings and existing personal property that will not be retained by the Air Force post closure will be discussed.

Figure CC-1


1ST AVE.
409
407
LOWRY BLVD.
QUEBEC STREET
MONACO PKWY.
444
445
446
BAYAUD AVE.
N
ORIGINAL FULL SCALE 1"=100'
REFERENCE DRAWINGS
NO.
DATE
DESCRIPTION
BY
REVISIONS
COMPUTER FILE MANAGEMENT
LEGEND
444 – BUILDING DESIGNATION
URS
FOR AND ON BEHALF OF URS, CORP.
LOWRY REDEVELOPMENT AUTHORITY
BUCKLEY ANNEX
EXISTING SITE
EX02

Utilities

The site, as currently utilized, is adequately served by both dry and wet utilities. The condition of the underground utilities is unknown at this time, and it is possible that portions of the underground pipes are wrapped with asbestos-containing material (ACM) or Transite. Reuse of any of these utility systems is unlikely, given the random alignments of the existing utilities. It is URS's experience with the balance of the 1,866-acre redevelopment at Lowry AFB, that previous Air Force utilities are not acceptable to CCD.

Water Distribution System

Water serves the Buckley Annex from a 12-inch line in Quebec Street , a 12-inch line in 1st Avenue, and an internal 8-inch connection. The internal water service is private and is being maintained by the Air Force. Water is supplied by the Denver Water Department. The distribution system is located in the Denver Water Zone II (HGL 5620) that includes the connection at Quebec Street. The connection at 1st Avenue is located in Denver Water Zone I (HGL 5540). It is separated from Zone II by a pressure-reducing valve (PRV) located north of Lowry Boulevard on Quebec Street and a check valve and bypass on the internal Buckley Annex line near the 1st Avenue connection. Water service is individually metered for each building on-site. See **Figure CC-2** for reference.

In addition to the 12-inch lines located in 1st Avenue and Quebec Street, there is a 72-inch conduit (Conduit No. 28) located in Monaco Street. The conduit is for potable water transmission and lies within Zone II, and there is no direct connection from the Buckley Annex to the conduit. The current supply capacity of the system is estimated to be approximately 8 million gallons per day, based on the current connection to Quebec Street. The capacity will need to be reevaluated with development of the redevelopment plan.

Denver Water is constructing a reuse water system to provide water for irrigation and non-municipal uses. Reuse water is not treated to the level of drinking water. The Buckley Annex site is located just over one-half mile away from an existing reuse conduit (Conduit No. 306), although current plans by Denver Water do not identify this site as being within the proposed service area.

Due to the alignments of the existing water system, pipe materials and aged condition, Denver Water is unlikely to accept the water system in the redevelopment of this parcel. There is also the possibility that pipe material is Transite, an ACM that would not be acceptable to Denver Water.

Sanitary Sewer Collection System

The sanitary sewer system collects wastewater for the existing on-site buildings and conveys the flows to two separate basins in the adjacent public sanitary sewer systems.

The ancillary buildings (Buildings 407 and 409) located on the east side of the site contribute to a private on-site system that flows to the north and east. At Quebec Street near 1st Avenue, the system connects to the public sanitary sewer system that is owned and maintained by the CCD. Analysis of the downstream sanitary sewer system is included in the *City and County of Denver (CCD) Sanitary Sewer Master Plan*, which suggests upgrades to the downstream system. The purpose of the master plan is to catalog the existing system, locate deficiencies in the system, and estimate a cost for the upgrades. Upgrades would be funded via Capital Improvement Project dollars. Currently, there is no schedule or priority set for the system upgrades.

Building 444 connects to a lift station at the southeast corner of the building. The lift station discharges to a different, private, onsite system that carries flow from the building to the north and west in a 15-inch pipe. The system then connects to the CCD sanitary sewer system at Monaco and 1st Avenue. This system was also analyzed in the *CCD Sanitary Sewer Master Plan* and has upgrades to the downstream system. Please refer to **Figure CC-2** in the appendix as a reference.

Due to the limited capacity available in the system at 1st and Quebec, the majority of the wastewater collection system should convey flows to the northwest outfall. Flows directed to the east need to match the existing flows or the downstream system must be upgraded. The capacity of the northwest sanitary sewer outfall is estimated to be 2.9 cubic feet per second (cfs) at the site boundary. There is a 12-inch sanitary sewer line within Monaco Street, based on the *CCD Master Sanitary Sewer Plan*, but this system has no additional capacity.

Reuse of the existing, private, onsite collection system will be limited. The existing system does not meet current municipal standards (CCD), and its alignment may not be compatible with proposed roadway alignments.

Gas and Electric

Xcel Energy provides both natural gas and electricity to the site. Electricity is delivered by overhead power lines on the perimeter of the site. The main feed is provided from Quebec Street south of Lowry Boulevard, and a backside feed is provided from the Monaco Street overhead line. The onsite electric is underground and located in easements that have been dedicated to Xcel. All of the electricity around the site is three-phase power that will need to be stepped down to single-phase for residential use. The on-site gas system follows the same alignments as the electric. Gas is provided to the site from Quebec Street (See Figure CC-2).

Reuse of the existing electric and gas systems is not a certainty without further evaluation of the system's compatibility with current technology and the horizontal and vertical alignments necessary to serve a selected redevelopment plan. Alternatives should be investigated for relocating the perimeter overhead power underground. Xcel has stated that the system capacity will be able to meet the demands of this development; this needs to be confirmed with development of the redevelopment plan.

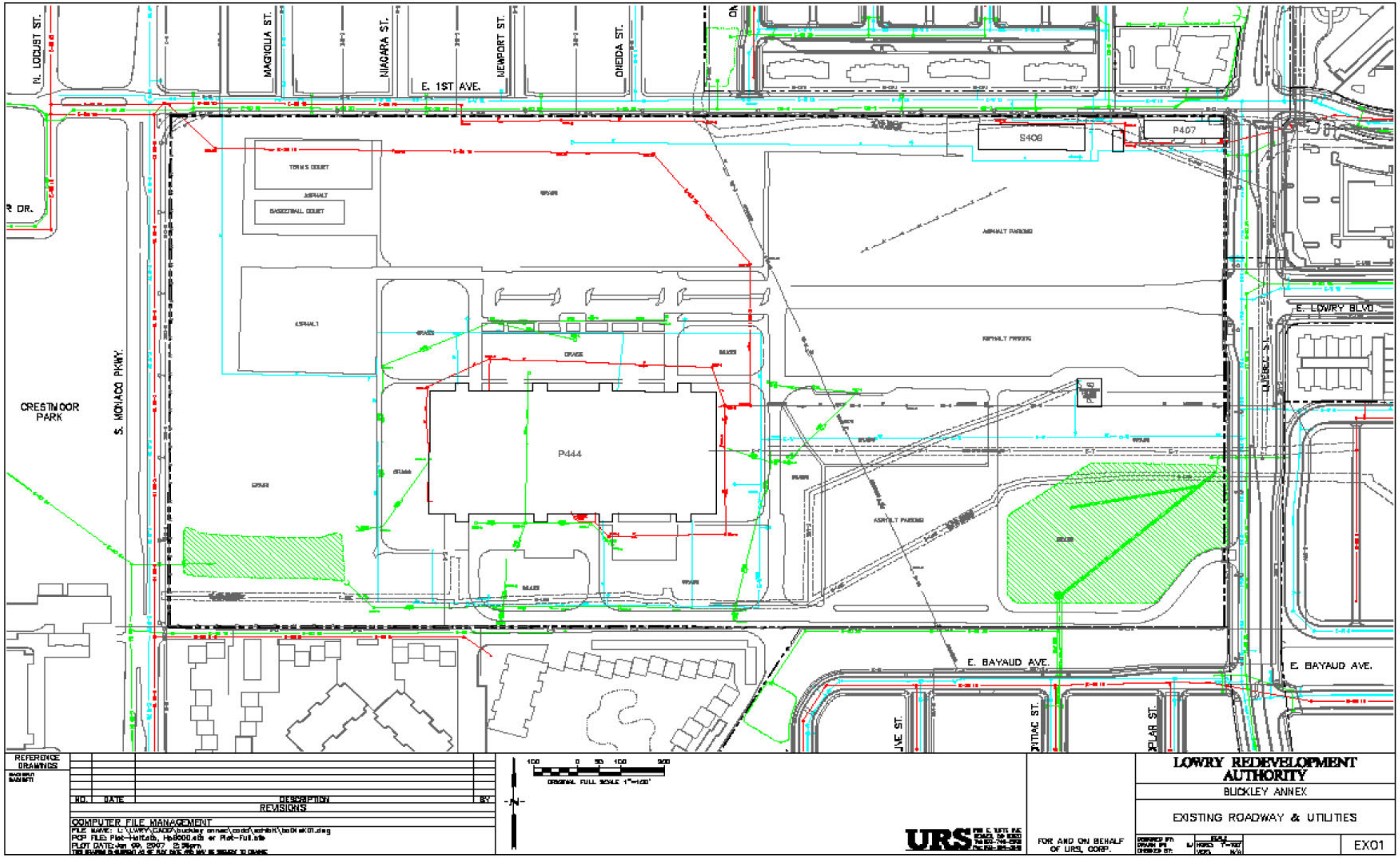
Communications/Cable

Qwest provides communications for the site. Service to Building 444 is provided by an existing fiber optic line from Quebec Street. The fiber optic line is located south of the Lowry Boulevard alignment and connects to existing Qwest facilities located in Quebec Street. Qwest stated that it can abandon that line if it is no longer needed, because the line serves only Building 444. Due to the alignment, it may be difficult to incorporate the fiber optic line into the land plan. If the line were to be relocated, the cost would be the developer's responsibility. Qwest also estimated that the system has the capacity to provide approximately 600 additional phones lines from the existing infrastructure in Quebec Street.

Comcast provides cable to the project from facilities located in Quebec Street, 1st Avenue, and Monaco Street. Service is currently provided from Quebec Street and could be realigned to continue to serve the site (See **Figure CC-2**).

It is important to note that both Comcast and Qwest have the ability to provide similar service, but the consumer has the choice of provider. Therefore, development may allow for each provider to service the entire project.

Figure CC-2


N. LOCUST ST.
MAGNOLIA ST.
NIAGARA ST.
E. 1ST AVE.
NEWPORT ST.
ONEIDA ST.
S408
P407
TENNIS COURT
ASPHALT
BASKETBALL COURT
ASPHALT PARKING
E. LOWRY BLVD.
QUEBEC ST.
CRESTMOOR PARK
S. MONACO PKWY.
P444
ASPHALT PARKING
E. BAYAUD AVE.
E. BAYAUD AVE.
REFERENCE DRAWINGS
NO.
DATE
DESCRIPTION
BY
REVISIONS
COMPUTER FILE MANAGEMENT
ORIGINAL FULL SCALE 1"=100'
URS
FOR AND ON BEHALF OF URS, CORP.
LOWRY REDEVELOPMENT AUTHORITY
BUCKLEY ANNEX
EXISTING ROADWAY & UTILITIES
EX01

Building Facilities

There are currently four structures (Buildings 407, 409, 446 and 444) on the Buckley Annex site. Buildings 407 and 409 are just south of 1st Avenue and west of Quebec Street. These buildings are being used as storage. Building 446 is a concrete, below-grade structure that was used as a sanitary effluent holding tank. The tank was remediated and is now dormant. Building 444 is the largest building on the site. It is three stories and consists of approximately 600,000 square feet of office space occupied by the ARPC and DFAS, as well as other military contractors. Below is a summary of each of the buildings. Please refer to **Figure CC-1** to reference the existing buildings.

Building 407

- The building is a two-story concrete bearing wall structure that was constructed in 1950. The exterior of the building consists of full-height brick masonry with nonreinforced concrete masonry unit back up.
- The roof system is wood-framed trusses spanning the width of the building, approximately 40 feet. The trusses are spaced at 4 feet on center (O.C.). The roof is designed to carry 30 pounds per square foot (PSF) of live load, which meets the current design criteria for the Denver Building Code.
- First floor and second floor construction is 1-inch tongue and groove wood flooring supported by 2x14 wood floor joists at 12 inches or 16 inches O.C.. A portion of the first floor is 4-inch concrete slab on grade.
- The building is founded on concrete wall footings and spread footings beneath several columns. The building has a crawl space under two-thirds of its length that is approximately 4.25 feet deep. The existing soil bearing capacity was not available.
- Due to the concrete masonry bearing wall framing, this building would be very difficult to reconfigure to an open floor plan. It appears that the walls are not reinforced, which will make it difficult for the building to meet the current International Building Code (IBC) seismic design criteria. Therefore, this building has a low potential for reuse.

Building 409

- The building was originally designed as a one-story aircraft hanger. The building is a pre-engineered, bent frame structure with roof purlins and corrugated metal siding. It originally had large sliding doors at the east, west, and south elevations. The building was constructed in 1960.
- In 1988, a renovation was completed on the south elevation, removing the sliding hanger doors and replacing them with a reinforced concrete masonry unit (CMU) wall. In 1995, a similar renovation was completed at the east and west ends of the building.
- The building is currently used as a warehouse with a design live load of approximately 250 PSF.
- There are no drawings or reports to determine the foundation system

for this building. The building is likely to be founded on spread footings similar to Buildings 407 and 444, for which we have information.

- Based on the structural evaluation, the building could be reused if market conditions and the land plan warranted. If the use of the building was to change, however, the structure would have to be updated to current building codes, which could be cost prohibitive.

Building 444

- The building is a 600,000-square-foot, three-story, steel-framed structure built in 1976. The exterior cladding is a combination of precast panels and glass and metal curtain wall. Both materials are hung from the steel structure.
- The roof system is steel framed with metal deck. While available drawings do not reflect the design roof loading, it is probable that the building was designed for 30 PSF, which would meet the current design criteria for the Denver Building Code.
- The elevated floors are steel framed with a 4-inch floor slab (1.5-inch metal deck with 2.5-inch concrete fill). Some portions of the second floor appear to have a 6-inch floor thickness, which indicates a higher loading capacity. Again, the drawings in our possession do not reflect a design live load; nevertheless, an office building is historically designed for 50 PSF plus an additional 20 PSF for partition loading. The first floor, which is below grade, is a 5-inch slab on grade.
- The existing drawings reveal that the building is founded on spread footings. The soil bearing capacity was not available.
- The lateral resisting system in the building could not be determined with the limited drawings made available. Further investigation will need to be conducted.
- This building is very economically designed. Modifications to the floor loading or cutting openings into the floor framing will require reinforcing the existing structure.
- Based on the structural evaluation of Building 444, it is possible to reuse the building as is for office use. If the use of the building changes or the building is structurally modified, the building will have to meet the 2003 IBC with amendments made by the CCD. The upgrades to meet the revised code could be substantial and cost prohibitive.
- For more information about the reuse potential of Building 444, please refer to the **Appendix D.2**.

Building 446

- The building is concrete and is contained mostly below grade.
- The facility was used as a sanitary waste holding station with a capacity of 1 million gallons. Building 444 discharged sanitary waste into the holding tank during the daytime hours. During the night, a pump would activate and drain the facility into the undersized CCD sewer system. Since an upgrade to the on-site sewer service, the building has been used only as a central hazardous waste accumulation site for the Buckley Annex.

- This building has little or no reuse value.

Building 445

- Building 445 serves as a pump station for storm water runoff from Building 444. Runoff that is collected from the below-grade south side of the building is directed to Building 445. The storm water is then pumped from Building 445 to the detention facility located at the southwest corner of the site.
- The building and associated pumps could remain if Building 444 remains. However, inefficiencies of the pumping system and outdated equipment are likely to render this building hard to maintain and use, even if Building 444 remains.

Personal Property

The design team relied on data provided by ARPC on the personal property inventory that will remain onsite when the current tenants have relocated to Buckley AFB or elsewhere. Typical items include modular office systems furniture and miscellaneous other items that support the uses on the site. The potential for reuse or resale of these items is very low. Due to the lack of an available inventory of personal property and the uncertainty of the ultimate disposition/need for the systems furniture, the ARPC has made no determination of the quantity or value of personal property.

Flora and Fauna

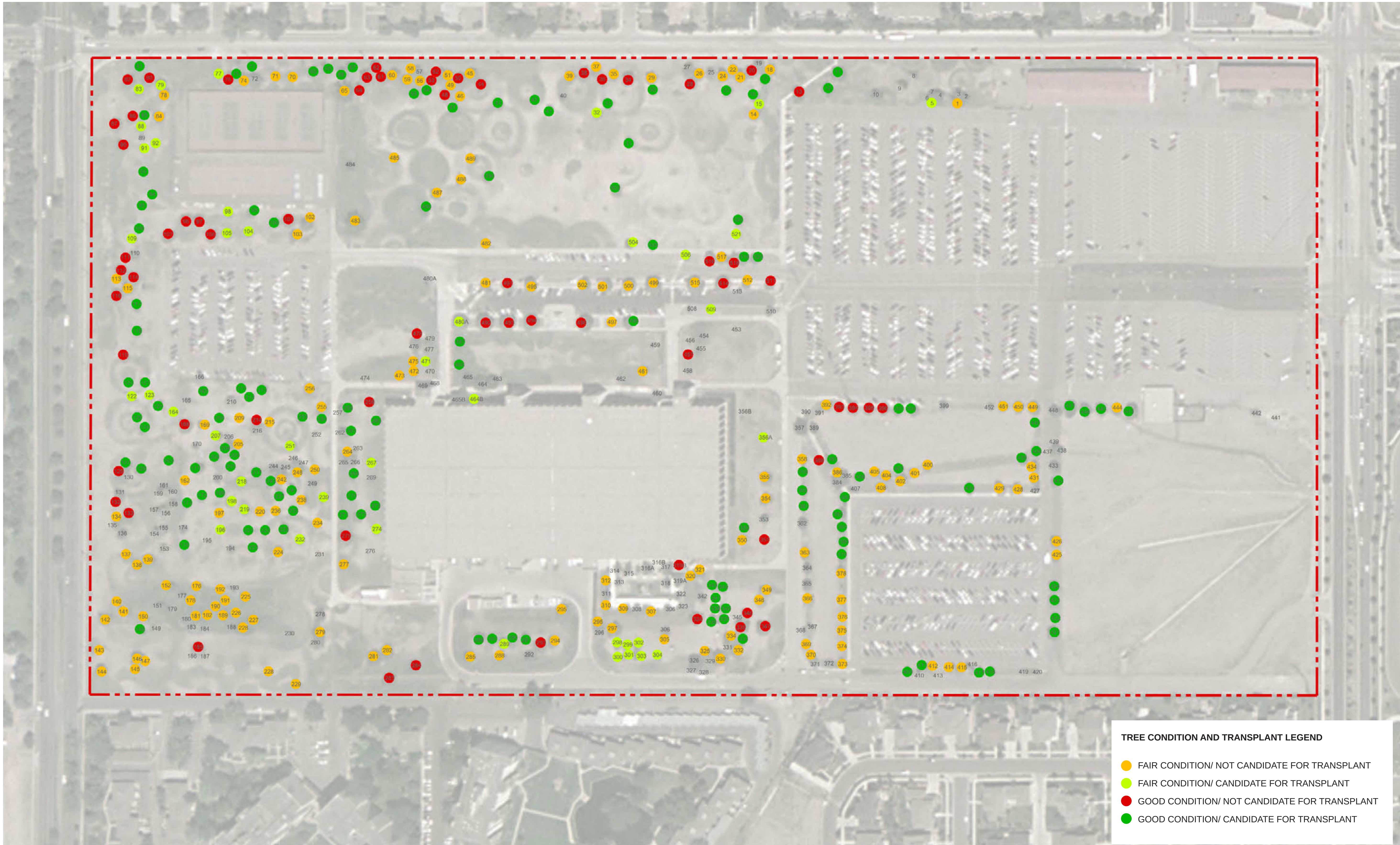
The Buckley Annex and Building 444 were established in the 1970s. As part of the development of this site, the Air Force created large berms, with a variety of landscaping, on the north and west boundaries of the site. Over time these areas have developed into mature landscaped areas with a variety of trees and plants that are now integral to the site. In addition, there is a dense area of plant growth in the southwest corner of the site. Flora in this area has been fed by storm water runoff that has encouraged growth of a number of different species.

Reuse of the existing landscaping should be encouraged, where possible. Included in the report is an exhibit showing trees that could be incorporated into the land plan, relocated, or not good candidates for reuse. The plant growth located in the southwest corner could be reused and continue to serve as a location for storm water runoff, water quality treatment, and detention.

An arborist has been onsite to investigate the existing trees, which have been identified by species, size, condition, and the anticipated survival rate of the tree if it were to be transplanted. Trees were placed into four categories based on their condition: 1) Good, which indicates that the tree has no obvious external, serious health conditions or pest problems; 2) Fair, which signifies that there is no obvious external serious health conditions or pest problems or, if present, they are remediable and relatively healthy; 3) Trees that are considered in poor health, having obvious external, serious health conditions or pest problems that may or may not be remediable and are significant; and 4) Trees that are dying and dead that should be removed during development of the property. It should be noted that there are only a few contractors in the country with equipment capable of transplanting trees of the size and maturity found at the Buckley Annex

See **Figure CC-3** for the location and classification of the trees. Trees on the figure that are dark green are in good condition and are candidates for transplant; trees that are light green are in fair condition and are candidates for transplant; trees that are yellow are in fair condition, but are not candidates for transplant; and trees that are in red are in good condition, but are not candidates for transplant. Trees that were not colored on this exhibit are either in poor condition, are dying, or are dead. Included in **Appendix C.2** is a table of the trees providing information about the species, condition, size and height of each of the trees on the site.

Figure CC-3


TREE CONDITION AND TRANSPLANT LEGEND
FAIR CONDITION/ NOT CANDIDATE FOR TRANSPLANT
FAIR CONDITION/ CANDIDATE FOR TRANSPLANT
GOOD CONDITION/ NOT CANDIDATE FOR TRANSPLANT
GOOD CONDITION/ CANDIDATE FOR TRANSPLANT

Grading and Drainage

When Lowry AFB was operating as an active military base, the location known today as the Buckley Annex was a runway and a concrete apron at the end of a runway. Due to the constraints of runway design, the site is fairly flat, with approximately 3 to 5 feet of fall across the site from east to west (See **Figure CC-4**). There are a number of large berms that border the site along1st Avenue on the north and Monaco Street on the west. The berms vary from 4 to 8 feet in height.

The site is split into three drainage basins. The first is a small basin adjacent to 1st Avenue. It contains runoff from the north side of the berms that sheet flows north to 1st Avenue and the existing public storm sewer system within 1st Avenue. The second basin flows to the east. It drains from a high point west of Quebec Street and flows to the east and to the south. Runoff is either collected by the existing storm sewer system in Quebec Street or the existing detention/water quality pond located at the southeast corner of the site. The rest of the site drains via surface flow and existing private storm sewer to the south and west to an existing detention facility.

The two major drainage facilities on this site are the storm water detention ponds located at the southwest (Pond 1, or Southwest Pond) and southeast (Pond 2, or DFAS Pond) portions of the site. Pond 1 serves the majority of the Buckley Annex site and appears to have been sized for the 10-year event, with a capacity of 4.7 acre-feet. Flows from the site are conveyed via storm sewer or swales to the pond. No off-site flow is detained in this pond. Pond 1 outfalls to an existing system that conveys the runoff through Crestmoor Park and then to the eventual outfall at Sand Creek. There is limited storm sewer within Monaco Street, so the detention facilities for storm sewer on this site should remain close to the existing outfall.

Pond 2, which has a volume capacity of 11.7 acre-feet, collects a smaller amount of runoff from the site; the majority of the capacity is for the development to the south, Lowry Filing No. 2. Pond 2 provides both water quality treatment and detention for the 10-year and 100-year storms. Runoff from the pond is released at a controlled rate (20 cfs maximum) to the Quebec Street storm sewer system. Due to the lack of capacity and location of the storm system in Quebec, the location of the outfall should be maintained. The size of the pond can be varied, but the release rate will remain at 20 cfs maximum.

Detention and water quality will have to be provided for the entire site with the proposed redevelopment plan. During the planning stages, opportunities should be researched to incorporate open space with these features, combine them in one location, or reconfigure them in a number of different forms.

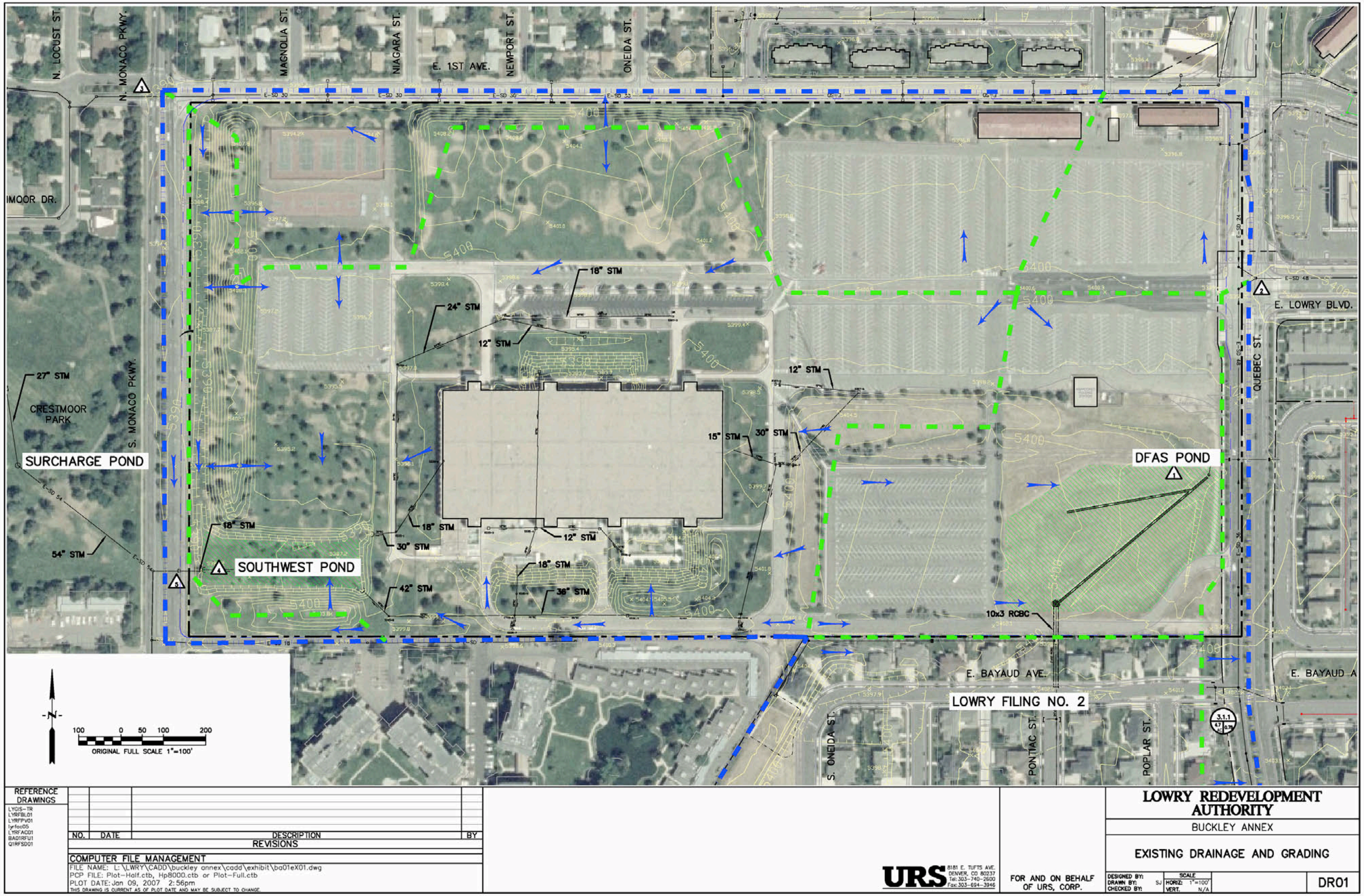
Transportation

Refer to **Appendix F.1** for existing transportation conditions,

Adjacent Land Use

Buckley Annex is surrounded by a number of existing developed neighborhoods (see **Figure CC-5**). The Hilltop Neighborhood surrounds the project on the west side of the site. Land use in the neighborhood is single-family residential to the north and northwest. Crestmoor Park Neighborhood lies to the west and high-density, multi-family residential land use lies to the southwest. The Lowry Field Neighborhood surrounds the rest of the site. Development in this neighborhood is fairly recent and includes single-family and multi-family residential along with a town center with retail and commercial development north and east of Lowry Boulevard and Quebec Street.

Figure CC-4


N. LOCUST ST.
N. MONACO PKWY.
MAGNOLIA ST.
NIAGARA ST.
E. 1ST AVE.
NEWPORT ST.
ONEIDA ST.
IMOOR DR.
27" STM
CRESTMOOR PARK
S. MONACO PKWY.
SURCHARGE POND
54" STM
18" STM
SOUTHWEST POND
24" STM
12" STM
18" STM
30" STM
42" STM
36" STM
15" STM
30" STM
12" STM
E. LOWRY BLVD.
QUEBEC ST.
DFAS POND
10x3 RCBC
E. BAYAUD AVE.
LOWRY FILING NO. 2
S. ONEIDA ST.
PONTIAC ST.
POPLAR ST.
E. BAYAUD A
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REFERENCE DRAWINGS
NO.
DATE
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BY
REVISIONS
COMPUTER FILE MANAGEMENT
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PLOT DATE: Jan 09, 2007 2:56pm
URS
FOR AND ON BEHALF OF URS, CORP.
LOWRY REDEVELOPMENT AUTHORITY
BUCKLEY ANNEX
EXISTING DRAINAGE AND GRADING
DR01

Review of Environmental Baseline Study and Environmental Conditions of Property

The consultant team reviewed the *Final Environmental Condition of Property (ECP) Report* and the *Final Environmental Baseline Survey (EBS)*, both dated April 2007. The reports were provided by the Air Force for review and recommendations from the consultant team for additional testing needed to fill data gaps. The reports are provided in **Appendix C.3**. The ECP was done in accordance with American Societies for Testing and Materials (ASTM) Designation D5746-98, which classifies the property into Area Types. The property classification categories are listed below as reported in the ECP (See **Figure CC-6**):

- **ECP Area Type 1 –** An area or parcel of real property where no release or disposal of hazardous substances or petroleum products or their derivatives has occurred (including no migration of these substances from adjacent properties).
- **ECP Area Type 2 –** An area or parcel of real property where only the release or disposal of petroleum products or their derivatives has occurred.
- **ECP Area Type 3 –** An area or parcel of real property where release, disposal, or migration, or some combination of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action.
- **ECP Area Type 4 –** An area or parcel of real property where release, disposal, or migration, or some combination of hazardous substances has occurred, and all remedial action necessary to protect human health and the environment have been taken.
- **ECP Area Type 5 –** An area or parcel of real property where release, disposal, or migration, or some combination of hazardous substances has occurred and removal or remedial actions, or both, are under way, but all required actions have not been taken.
- **ECP Area Type 6 –** An area or parcel of real property where release, disposal, or migration, or some combination of hazardous substances has occurred, but required response actions have not been initiated.
- **ECP Area Type 7 –** An area or parcel of real property that is unevaluated or requires additional evaluation.

ECP Area Types 1-4 are eligible for property transfer, while Types 5-7 are not.

The Buckley Annex has been designated as ECP Area Types 1, 3, 4, and 5.

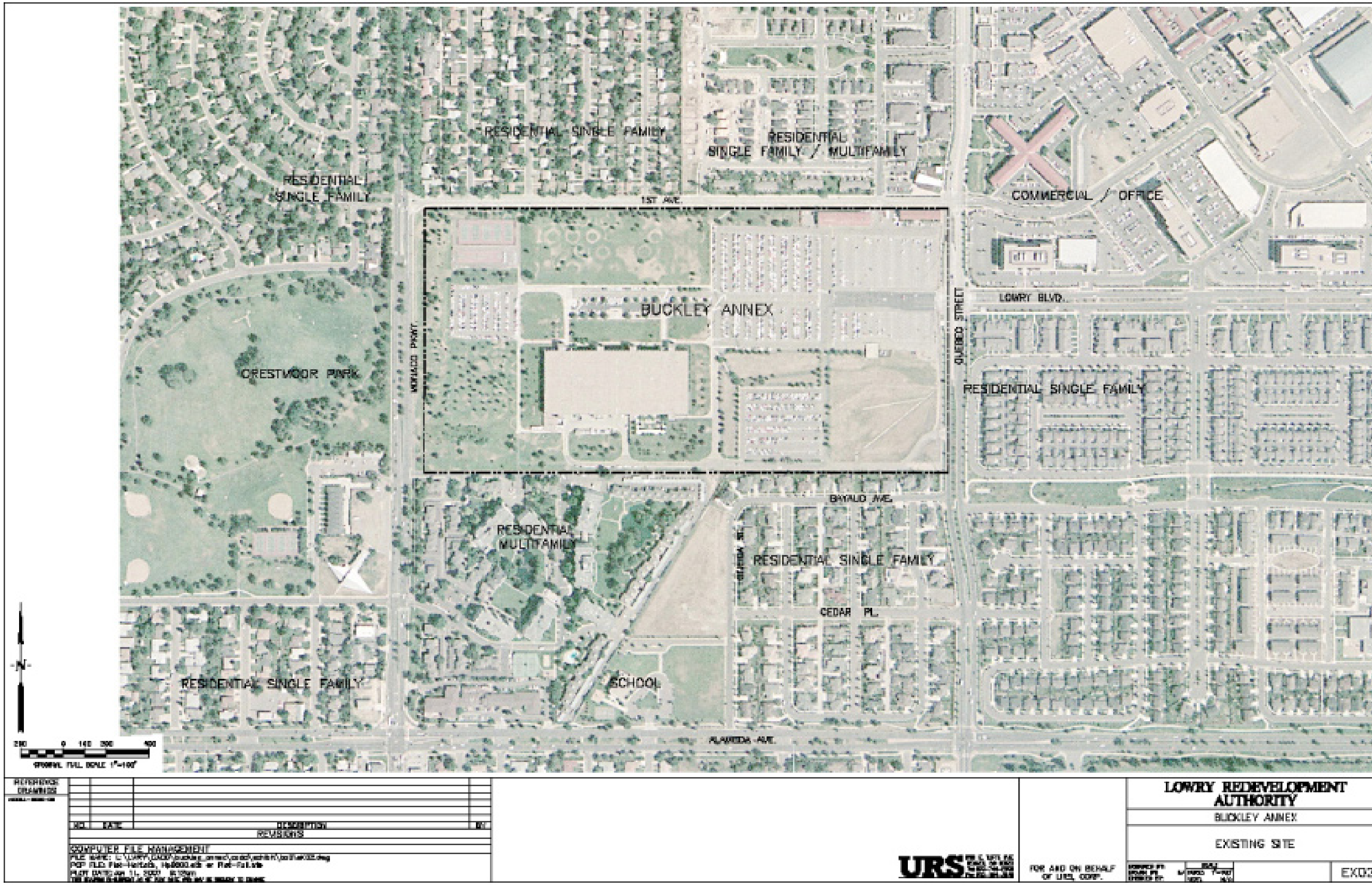
Approximately 50 acres of the site is designated as ECP Area Type 1, 3, or 4 and is eligible for transfer. Refer to the ECP for additional information on the specifics of the designations.

ECP Area Type 5 encompasses approximately 20 acres in two areas of the site. This includes the area near the Quebec Street gate and the west portion of the site. During the redevelopment of Lowry AFB, the Quebec Street gate was found to have soil contamination near Building 407. Contamination was found to contain low levels of gasoline range organics, volatile organic compounds, and metals, with moderate levels of diesel range organics. Further investigation showed that contamination concentrations were below action levels, and a No Further Response Action Planned (NFRAP) Decision Document was prepared; however, this document has not been submitted for regulator approval due to the transfer of property from Headquarters Air Force Space Command to Headquarters Reserve Personnel Center. The document will need to be approved prior to the transfer of land.

The second area located in the ECP Area Type 5 is in the western third of the site. This area contains groundwater contamination. According to the ECP, the groundwater ranges in depth from 40 feet to 60 feet in this area. Contamination in the groundwater has been identified as tetrachloroethene (TCE), with an unknown specific source. Per the ECP the source appears to be located off-site, south of the southwestern corner of the former Lowry AFB boundary. The ECP also states that, even though the portion of the Buckley Annex above the plume is designated as ECP Area Type 5, the property can be transferred without the Air Force conducting remediation.

The consultant team has reviewed the ECP and feels that additional data should be collected on the PCE plume. Without knowing the full extent of the contamination and the source of the contamination, it will difficult to determine the effort necessary to remediate the area and to anticipate the cost of the remediation, as well as the impact on development of the property. It has also been noted that the underground utilities have not been inspected for asbestos or ACM. Due to the earlier findings in the report regarding the underground utility systems, additional investigation into the systems to determine the use of ACM is recommended.

Figure CC-5


RESIDENTIAL SINGLE FAMILY
RESIDENTIAL SINGLE FAMILY / MULTIFAMILY
RESIDENTIAL SINGLE FAMILY
1ST AVE.
COMMERCIAL / OFFICE
LOWRY BLVD.
BUCKLEY ANNEX
CRESTMOOR PARK
MONACO PKWY.
QUEBEC STREET
RESIDENTIAL SINGLE FAMILY
BAYAUD AVE.
RESIDENTIAL MULTIFAMILY
RESIDENTIAL SINGLE FAMILY
CEDAR PL.
RESIDENTIAL SINGLE FAMILY
SCHOOL
ALAMEDA AVE.
N
ORIGINAL FULL SCALE 1"=100'
REVISIONS
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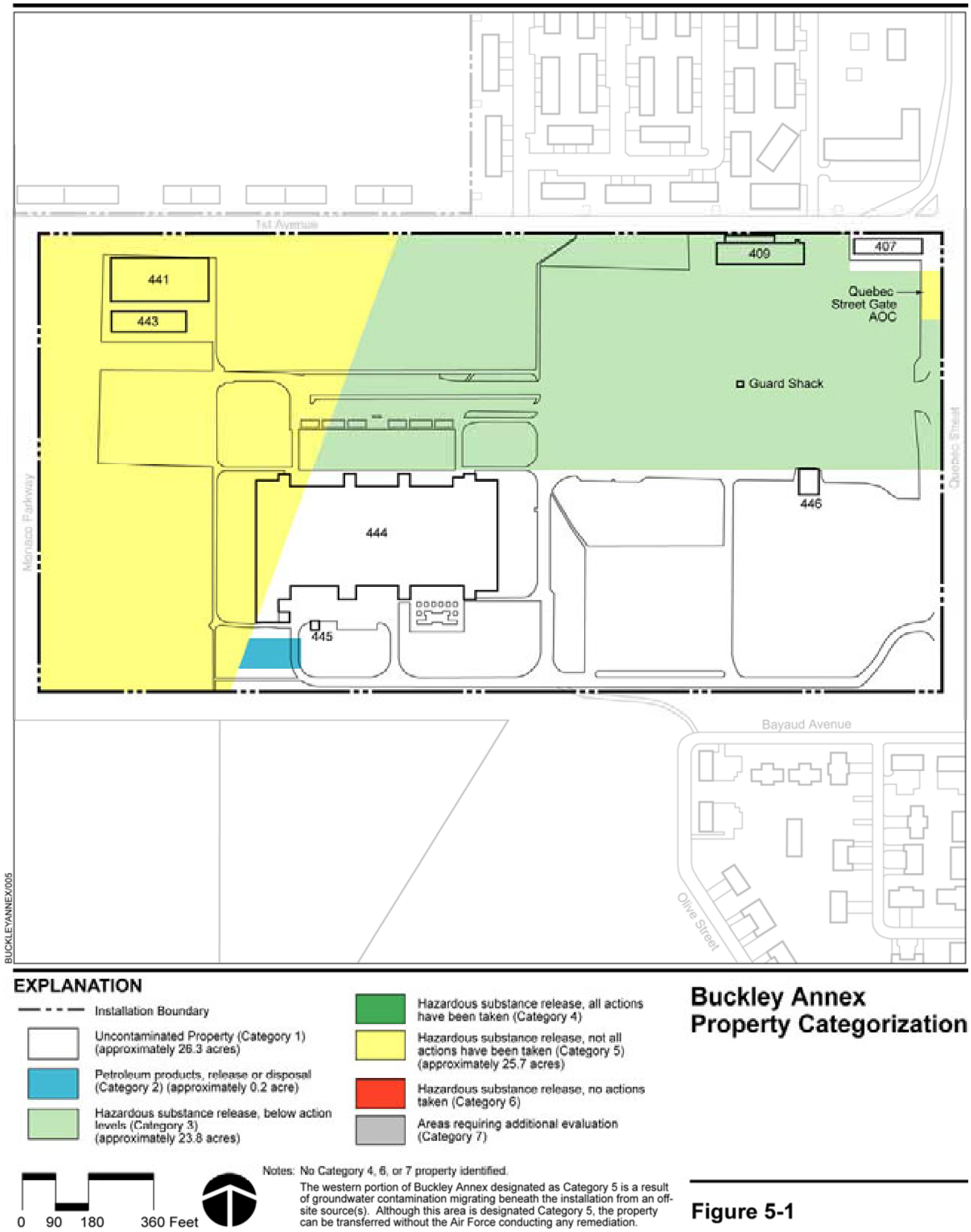
BUCKLEY ANNEX
EXISTING SITE
EX02



5-2 *Environmental Baseline Survey, Buckley Annex, Colorado* April 2007

Figure CC-6

Property Categorization (graphic from Environmental Baseline Survey)

Review of Building Environmental Conditions

As discussed previously, the consultant team reviewed the ECP. As part of the ECP, ACM and lead-based paint (LBP) were identified as contaminants within all of the buildings on the site.

An asbestos survey of the building facilities within the site was conducted in 2004. The survey included Buildings 407, 409, 444, 445, 446, and 449. During the survey it was discovered that Buildings 407, 409, and 444 contain ACM. In Building 407, ACM was found in drywall/joint compound and floor tile with mastic. Building 409 contained ACM in the interior window glazing. ACM was discovered in vinyl floor tile/asphaltic mastic, and exterior thermal system insulation (TSI) on various pipes in the building.

Buildings 407, 409, 444, 445, and 446 were constructed prior to 1978, so it is possible that LBP is present in these buildings. An LBP survey has not been conducted for the site, although a visual inspection of the exterior and interior paint was noted to be good in 2006. Demolition of any other buildings on the site should use all precautions to mitigate the potential for releasing lead into the soil and the groundwater.

The consultant team recommends that an LBP survey be conducted at the site to determine the limit and amount of LBP contained within the buildings. This will aid in determining the potential for reuse or the cost of demolition of any of the buildings on the site.

Summary

The Buckley Annex is a 70-acre site located in the southwest corner of the intersection of 1st Avenue and Quebec Street, west and north of the adjacent Lowry AFB Redevelopment. The site is comprised of a 600,000-square-foot building with 30,000 square feet of ancillary buildings (Buildings 407, 409, and 446) and associated parking on the east and north portions of the site. There are drainage facilities located in the southwest and southeast corners of the property. The site has a long history and was associated with Lowry AFB until its closure in 1994. At that time, the Air Force retained this 70-acre site to continue DFAS and ARPC operations and continued to operate the site.

There are a number of existing conditions on the site that need to be reviewed when developing the redevelopment plan for the Buckley Annex. Building 444 defines the site. The building has a 200,000-square-foot base and dictates the current alignment of the roadway and utilities on the site. Structurally, the building can be reused for commercial development. Any changes to the use of the building will require that the building be retrofitted to meet current building codes.

Exiting utilities on the site are not conducive for reuse. Through previous experience with the redevelopment at the former Lowry AFB the CCD has shown it will generally not accept ownership or maintenance of existing utility facilities. The surrounding utility infrastructure system does have extra capacity to support development in this parcel. Once the redevelopment plan has been finalized, the demand of the development will be determined and compared to the existing capacity. The need for off-site utility upgrades can then be determined.

The transportation system in the vicinity of the DFAS site serves a high demand of both north/south and east/west traffic. The geometry and control provides adequate operations at the majority of intersections while also providing a good multi-modal environment for non-vehicular and transit traffic. The arterial-to-arterial intersections at Quebec/Alameda and Monaco/Alameda are the capacity choke points in this vicinity. Therefore, as vicinity traffic grows, either from nearby development growth or background traffic growth, these intersections are likely to be the first locations where capacity enhancements are warranted. It is estimated that the existing intersection geometry at Monaco/Alameda can accommodate another 10 to 25 percent of traffic, while the Quebec/Alameda intersection can accommodate another 35 to 45 percent of traffic before volumes exceed capacity. Based on current assumptions, there will need to be off-site mitigation measures in place on Monaco Parkway and Quebec Street. These measures will be established in the redevelopment plan.

Environmental concerns within the Buckley Annex site affect approximately a quarter of the total area. The major contributor to the concerns is a groundwater PCE plume that intersects the west third of the site and is downstream of an off-site source of the contamination. The property in this area can be transferred prior to cleanup. The second area of concern is near the entrance at Quebec Street to the property. Contamination was found to contain low levels of gasoline range organics, volatile organic compounds, and metals, with moderate levels of diesel range organics. Further investigation showed that contamination concentrations were below action levels, and a NFRAP Decision Document was prepared; however, it has not been submitted for regulator approval due to the transfer of property from Headquarters Air Force Space Command to Headquarters Reserve Personnel Center. The document will need to be approved before to the transfer of land. As previously stated, the design team recommends determining the location and nature of the PCE source area to aid in determining the remediation measures that may need to occur in the future.

There are also environmental concerns in Buildings 407, 409, and 444. These buildings contain ACM and need to be abated with construction or demolition meeting current standard practices and codes. All buildings on the site were constructed prior to 1978, so there is a strong possibility that LBP was used on the interior and exterior of the buildings. An LBP survey of the buildings has not been completed. The design team recommends that a survey be completed to determine whether LBP is present in the buildings.

DAY & ASSOCIATES
TREE AND LANDSCAPE CONSULTANTS

June 9, 2007

Allyson Mendenhall, Associate
DesignWorkshop, Inc.
1390 Lawrence St., Suite 200
Denver, CO 80204

Re: Tree survey at the Lowry Buckley Annex site, Denver

Dear Allyson:

At your request and authorization, I performed a comprehensive survey and analysis of all trees at the Lowry Buckley Annex site, per the scope of work as described in the proposals dated 23 May and 2 June 2007. The field data was e-mailed to you in spreadsheet format last week. This cover letter, with attached site map, explains and identifies certain criteria used in the survey.

Tree Survey Parameters

TREE NUMBER

Tree numbers on the spreadsheet correspond to numbers on the site map, as amended. Note that some trees were added. Tree numbers with no information in the row represent trees that were not present at the time of the survey, or represent a shrub(s) instead of a tree.

TREE SPECIES

Tree species are identified by accepted common name and Latin (botanical) name. Specific cultivars or varieties were not identified, except as may be noted.

TREE SIZE

Tree size was measured by: i) diameter inches, typically at 4.5 feet above grade, or otherwise where most appropriate; and ii) an estimated height.

TREE CONDITION

Tree condition was determined using, for the most part, criteria listed on the attached Tree Condition Categories form. No 'hazard tree' surveys or analyses were performed to any degree or extent.

TREE TRANSPLANTABILITY

Trees that are good candidates for transplanting were determined based on overall and/or specific conditions, species, location, structure, size, and accessibility. Underground utilities were not considered

Diagnostic, Technical, Forensic, Appraisal, Research, and Educational Services
7066 W. Arlington Drive • Littleton, Colorado 80123 • (303) 973-1515 • Fax (303) 973-5061

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
1	Green ash	Fraxinus pennsylvanica	25	28	Fair	No
2	No Tree Exists					
3	No Tree Exists					
4	No Tree Exists					
5	White ash	Fraxinus americana	15	28	Fair	Yes
6	No Tree Exists					
7	No Tree Exists					
8	Canada red cherry	Prunus virginiana c.v.	10	15	Poor	No
9	Canada red cherry	Prunus virginiana c.v.	14	15	Poor	No
10	White ash	Fraxinus americana	12	22	Poor	No
11	Green ash	Fraxinus pennsylvanica	14	30	Good	Yes
12	Green ash	Fraxinus pennsylvanica	11	30	Good	Yes
13	Lanceleaf cottonwood	Populus x acuminata	15	45	Good	No
14	Austrian pine	Pinus nigra	13	30	Fair	No
15	Austrian pine	Pinus nigra	11	30	Fair	Yes
16	Austrian pine	Pinus nigra	13	30	Good	Yes
17	Austrian pine	Pinus nigra	17	30	Good	Yes
18	Austrian pine	Pinus nigra	17	30	Fair	No
19	Austrian pine	Pinus nigra	18	30	Poor	No
20	Austrian pine	Pinus nigra	16	35	Good	No
21	Austrian pine	Pinus nigra	15	25	Fair	No
22	Austrian pine	Pinus nigra	12	28	Fair	No
23	Honeylocust	Gleditsia triacanthos c.v.	6	22	Good	Yes
24	Austrian pine	Pinus nigra	16	30	Fair	No
25	Austrian pine	Pinus nigra	16	30	Poor	No
26	Austrian pine	Pinus nigra	16	25	Fair	No
27	Austrian pine	Pinus nigra	15	22	Poor	No
28	Austrian pine	Pinus nigra	17	30	Good	No
29	Austrian pine	Pinus nigra	15	22	Fair	No
30	Austrian pine	Pinus nigra	11	22	Good	Yes
31	Honeylocust	Gleditsia triacanthos c.v.	7	16	Good	Yes
32	Honeylocust	Gleditsia triacanthos c.v.	9	16	Fair	Yes
33	Honeylocust	Gleditsia triacanthos c.v.	8	18	Good	Yes

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
34	Austrian pine	Pinus nigra	16	30	Good	No
35	Austrian pine	Pinus nigra	15	22	Fair	No
36	Austrian pine	Pinus nigra	14	22	Good	No
37	Austrian pine	Pinus nigra	14	22	Fair	No
38	Austrian pine	Pinus nigra	17	32	Good	No
39	Austrian pine	Pinus nigra	16	20	Fair	No
40	Honeylocust	Gleditsia triacanthos c.v.	4	14	Dying/Dead	No
41	Honeylocust	Gleditsia triacanthos c.v.	6	18	Good	Yes
42	Honeylocust	Gleditsia triacanthos c.v.	4	14	Good	Yes
43	Honeylocust	Gleditsia triacanthos c.v.	9	22	Good	Yes
44	Ponderosa pine	Pinus ponderosa	16	22	Good	No
45	Ponderosa pine	Pinus ponderosa	19	30	Fair	No
46	Green ash	Fraxinus pennsylvanica	7	16	Fair	No
47	Honeylocust	Gleditsia triacanthos c.v.	9	25	Good	Yes
48	Ponderosa pine	Pinus ponderosa	14	24	Good	No
49	Ponderosa pine	Pinus ponderosa	18	30	Fair	No
50	Ponderosa pine	Pinus ponderosa	18	30	Good	No
51	Ponderosa pine	Pinus ponderosa	14	25	Fair	No
52	Ponderosa pine	Pinus ponderosa	16	27	Good	No
53	Washington hawthorn	Crataegus phaenopyrum	14	14	Good	No
54	Washington hawthorn	Crataegus phaenopyrum	5	14	Good	Yes
55	Ponderosa pine	Pinus ponderosa	17	28	Good	Yes
56	Ponderosa pine	Pinus ponderosa	16	28	Fair	No
57	No Tree Exists					
58	Ponderosa pine	Pinus ponderosa	24	26	Fair	No
59	Ponderosa pine	Pinus ponderosa	14	20	Fair	No
60	Ponderosa pine	Pinus ponderosa	18	30	Fair	No
61	Ponderosa pine	Pinus ponderosa	17	30	Good	No
62	Ponderosa pine	Pinus ponderosa	15	35	Good	No
63	Ponderosa pine	Pinus ponderosa	19	35	Good	No
64	Ponderosa pine	Pinus ponderosa	15	28	Good	No
65	Eastern cottonwood	Populus deltoides var.	28	50	Fair	No
66	Green ash	Fraxinus pennsylvanica	10	25	Good	Yes
67	Ponderosa pine	Pinus ponderosa	13	24	Good	Yes

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
68	Green ash	Fraxinus pennsylvanica	8	25	Good	Yes
69	Green ash	Fraxinus pennsylvanica	9	25	Good	Yes
70	Green ash	Fraxinus pennsylvanica	7	22	Fair	Yes
71	Austrian pine	Pinus nigra	11	20	Fair	No
72	Austrian pine	Pinus nigra	20	16	Poor	No
73	Austrian pine	Pinus nigra	9	18	Good	Yes
74	Austrian pine	Pinus nigra	14	22	Fair	No
75	Austrian pine	Pinus nigra	5	14	Good	Yes
76	Austrian pine	Pinus nigra	14	30	Good	No
77	Austrian pine	Pinus nigra	10	20	Fair	Yes
78	Ponderosa pine	Pinus ponderosa	16	22	Fair	No
79	Ponderosa pine	Pinus ponderosa	13	19	Fair	Yes
80	Ponderosa pine	Pinus ponderosa	16	28	Good	No
81	Ponderosa pine	Pinus ponderosa	12	26	Good	Yes
82	Ponderosa pine	Pinus ponderosa	17	30	Good	No
83	Ponderosa pine	Pinus ponderosa	12	25	Fair	Yes
84	Green ash	Fraxinus pennsylvanica	9	25	Fair	No
85	Austrian pine	Pinus nigra	9	18	Good	Yes
86	Ponderosa pine	Pinus ponderosa	15	25	Good	No
87	Ponderosa pine	Pinus ponderosa	16	32	Good	No
88	Austrian pine	Pinus nigra	9	24	Fair	Yes
89	Austrian pine	Pinus nigra	7	20	Poor	No
90	Ponderosa pine	Pinus ponderosa	15	35	Good	No
91	Ponderosa pine	Pinus ponderosa	10	13	Fair	Yes
92	Bristlecone pine	Pinus aristata	6	11	Fair	Yes
93	Bristlecone pine	Pinus aristata	6	10	Good	Yes
94	Bristlecone pine	Pinus aristata	5	10	Good	Yes
95	Bur oak	Quercus macrocarpa	5	18	Good	Yes
96	Austrian pine	Pinus nigra	16	32	Good	No
97	Austrian pine	Pinus nigra	16	28	Good	No
98	Honeylocust	Gleditsia triacanthos c.v.	7	22	Fair	Yes
99	Honeylocust	Gleditsia triacanthos c.v.	8	20	Good	Yes
100	Austrian pine	Pinus nigra	13	32	Good	Yes
101	Austrian pine	Pinus nigra	20	32	Good	No
102	Austrian pine	Pinus nigra	18	25	Fair	No
103	Austrian pine	Pinus nigra	15	30	Fair	No
104	Austrian pine	Pinus nigra	12	22	Fair	Yes

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
105	Austrian pine	Pinus nigra	11	19	Fair	Yes
106	Austrian pine	Pinus nigra	15	31	Good	No
107	Austrian pine	Pinus nigra	19	30	Good	No
108	Bur oak	Quercus macrocarpa	5	14	Good	Yes
109	Crabapple	Malus x spp.	7	10	Fair	Yes
110	Bristlecone pine	Pinus aristata	7	12	Dying/Dead	No
111	Crabapple	Malus x spp.	10	14	Good	No
112	Ponderosa pine	Pinus ponderosa	20	35	Good	No
113	Ponderosa pine	Pinus ponderosa	15	32	Fair	No
114	Ponderosa pine	Pinus ponderosa	17	28	Good	No
115	Bristlecone pine	Pinus aristata	7	11	Fair	No
116	Ponderosa pine	Pinus ponderosa	18	30	Good	No
117	Bur oak	Quercus macrocarpa	8	28	Good	Yes
118	Honeylocust	Gleditsia triacanthos c.v.	8	23	Good	Yes
119	Ponderosa pine	Pinus ponderosa	15	24	Good	No
120	Bur oak	Quercus macrocarpa	5	20	Good	Yes
121	Bur oak	Quercus macrocarpa	7	22	Good	Yes
122	Bur oak	Quercus macrocarpa	3	12	Fair	Yes
123	Austrian pine	Pinus nigra	6	18	Fair	Yes
124	Bristlecone pine	Pinus aristata	10	15	Good	Yes
125	Honeylocust	Gleditsia triacanthos c.v.	6	25	Good	Yes
126	Honeylocust	Gleditsia triacanthos c.v.	7	28	Good	Yes
127	Green ash	Fraxinus pennsylvanica	9	30	Good	Yes
128	Bristlecone pine	Pinus aristata	9	16	Good	Yes
129	Ponderosa pine	Pinus ponderosa	19	30	Good	No
130	No Tree Exists					
131	No Tree Exists					
132	Ponderosa pine	Pinus ponderosa	17	34	Good	No
133	Ponderosa pine	Pinus ponderosa	17	34	Good	No
134	Ponderosa pine	Pinus ponderosa	19	26	Fair	No
135	No Tree Exists					
136	Ponderosa pine	Pinus ponderosa	14	22	Good	No
137	Ponderosa pine	Pinus ponderosa	15	24	Fair	No
138	Ponderosa pine	Pinus ponderosa	17	24	Fair	No
139	Ponderosa pine	Pinus ponderosa	20	28	Fair	No

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
140	Crabapple	Malus x spp.	3	10	Fair	No
141	No Tree Exists					
142	Siberian elm	Ulmus pumila	10	32	Fair	No
143	No Tree Exists					
144	Ponderosa pine	Pinus ponderosa	14	22	Good	No
145	No Tree Exists					
146	Ponderosa pine	Pinus ponderosa	19	32	Good	No
147	No Tree Exists					
148	European birdcherry	Prunus padus	5	9	Good	Yes
149	European birdcherry	Prunus padus	6	10	Good	No
150	European birdcherry	Prunus padus	3	8	Fair	No
151	Chokecherry	Prunus virginiana	8	20	Dying/Dead	No
152	Cockspur hawthorn	Crataegus crus-galli	9	15	Fair	No
153	No Tree Exists					
154	Russian olive	Elaeagnus angustifolia	12	25	Poor	No
155	No Tree Exists					
156	Ginnala maple	Acer ginnala	9	15	Poor	No
157	Russian olive	Elaeagnus angustifolia	16	28	Poor	No
158	Russian olive	Elaeagnus angustifolia	18	35	Poor	No
159	No Tree Exists					
160	No Tree Exists					
161	No Tree Exists					
162	Austrian pine	Pinus nigra	5	13	Fair	No
163	Honeylocust	Gleditsia triacanthos c.v.	5	22	Good	Yes
164	Austrian pine	Pinus nigra	5	14	Fair	Yes
165	Canada red cherry	Prunus virginiana c.v.	3	13	Poor	No
166	No Tree Exists					
167	Honeylocust	Gleditsia triacanthos c.v.	6	20	Good	Yes
168	Honeylocust	Gleditsia triacanthos c.v.	15	30	Good	No
169	Austrian pine	Pinus nigra	8	16	Fair	No
170	Canada red cherry	Prunus virginiana c.v.	4	13	Poor	No
171	Green ash	Fraxinus pennsylvanica	7	28	Good	Yes

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
172	American linden	Tilia americana	7	24	Good	Yes
173	American linden	Tilia americana	8	26	Good	Yes
174	Austrian pine	Pinus nigra	10	22	Fair	Yes
175	American linden	Tilia americana	5	20	Good	Yes
176	Crabapple	Malus x spp.	6	15	Fair	No
177	No Tree Exists					
178	European birdcherry	Prunus padus	5	12	Fair	No
179	No Tree Exists					
180	No Tree Exists					
181	Siberian elm	Ulmus pumila	6	35	Fair	No
182	Green ash	Fraxinus pennsylvanica	4	20	Fair	No
183	No Tree Exists					
184	Russian olive	Elaeagnus angustifolia	8	30	Poor	No
185	Ponderosa pine	Pinus ponderosa	18	32	Good	No
186	No Tree Exists					
187	No Tree Exists					
188	No Tree Exists					
189	American elm	Ulmus americana	6	24	Fair	No
190	Crabapple	Malus x spp.	7	12	Fair	No
191	Crabapple	Malus x spp.	6	10	Fair	No
192	Crabapple	Malus x spp.	8	13	Fair	No
193	Russian olive	Elaeagnus angustifolia	4	16	Poor	No
194	Honeylocust	Gleditsia triacanthos c.v.	6	17	Poor	No
195	Austrian pine	Pinus nigra	3	8	Poor	No
196	American linden	Tilia americana	6	18	Fair	Yes
197	Austrian pine	Pinus nigra	9	20	Fair	No
198	American linden	Tilia americana	7	22	Fair	Yes
199	Austrian pine	Pinus nigra	11	23	Good	Yes
200	Canada red cherry	Prunus virginiana c.v.	6	23	Good	No
201	Green ash	Fraxinus pennsylvanica	4	23	Good	Yes
202	Green ash	Fraxinus pennsylvanica	8	25	Good	Yes
203	Green ash	Fraxinus pennsylvanica	4	22	Good	Yes

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
204	American linden	Tilia americana	8	23	Good	Yes
205	Lanceleaf cottonwood	Populus x acuminata	16	40	Fair	No
206	No Tree Exists					
207	Green ash	Fraxinus pennsylvanica	6	18	Fair	Yes
208	Austrian pine	Pinus nigra	3	13	Good	Yes
209	Green ash	Fraxinus pennsylvanica	3	11	Fair	No
210	Russian olive	Elaeagnus angustifolia	12	28	Poor	No
211	Honeylocust	Gleditsia triacanthos c.v.	4	18	Good	Yes
212	Austrian pine	Pinus nigra	8	24	Good	Yes
213	Honeylocust	Gleditsia triacanthos c.v.	6	20	Good	Yes
214	Lanceleaf cottonwood	Populus x acuminata	12	40	Good	No
215	Austrian pine	Pinus nigra	6	20	Fair	No
216	No Tree Exists					
217	Green ash	Fraxinus pennsylvanica	8	29	Good	Yes
218	Green ash	Fraxinus pennsylvanica	9	26	Fair	Yes
219	Honeylocust	Gleditsia triacanthos c.v.	5	22	Fair	Yes
220	Canada red cherry	Prunus virginiana c.v.	4	16	Fair	No
221	Austrian pine	Pinus nigra	8	20	Good	Yes
222	American linden	Tilia americana	7	23	Good	Yes
223	American linden	Tilia americana	6	21	Good	Yes
224	Austrian pine	Pinus nigra	11	21	Fair	No
225	Crabapple	Malus x spp.	8	15	Fair	No
226	Cockspur hawthorn	Crataegus crus-galli	7	15	Fair	No
227	Cockspur hawthorn	Crataegus crus-galli	7	15	Poor	No
228	Bristlecone pine	Pinus aristata	6	12	Fair	No
229	Hawthorn	Crataegus sp.	12	20	Fair	No
230	No Tree Exists					
231	Honeylocust	Gleditsia triacanthos c.v.	3	14	Poor	No
232	Austrian pine	Pinus nigra	9	18	Fair	Yes
233	Honeylocust	Gleditsia triacanthos c.v.	6	25	Good	Yes

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
234	Austrian pine	Pinus nigra	8	22	Fair	No
235	American linden	Tilia americana	5	24	Good	Yes
236	Green ash	Fraxinus pennsylvanica	5	20	Fair	No
237	Honeylocust	Gleditsia triacanthos c.v.	7	25	Good	Yes
238	Canada red cherry	Prunus virginiana c.v.	4	18	Fair	No
239	Austrian pine	Pinus nigra	6	20	Fair	Yes
240	No Tree Exists					
241	Green ash	Fraxinus pennsylvanica	7	25	Good	Yes
242	Lanceleaf cottonwood	Populus x acuminata	18	40	Fair	No
243	Green ash	Fraxinus pennsylvanica	7	28	Good	Yes
244	No Tree Exists					
245	No Tree Exists					
246	No Tree Exists					
247	No Tree Exists					
248	Lanceleaf cottonwood	Populus x acuminata	12	40	Fair	No
249	American linden	Tilia americana	6	23	Good	Yes
250	Green ash	Fraxinus pennsylvanica	3	19	Fair	No
251	Austrian pine	Pinus nigra	8	19	Fair	Yes
252	No Tree Exists					
253	Austrian pine	Pinus nigra	9	19	Good	Yes
254	Green ash	Fraxinus pennsylvanica	3	16	Good	Yes
255	Austrian pine	Pinus nigra	15	23	Fair	No
256	Austrian pine	Pinus nigra	17	30	Fair	No
257	No Tree Exists					
258	Littleleaf linden	Tilia cordata c.v.	11	24	Good	Yes
259	Lanceleaf cottonwood	Populus x acuminata	7	33	Good	No
260	Blue spruce	Picea pungens	11	30	Good	Yes
261	Littleleaf linden	Tilia cordata c.v.	11	25	Good	Yes
262	No Tree Exists					
263	Blue spruce	Picea pungens	5	17	Poor	No
264	Lanceleaf cottonwood	Populus x acuminata	13	45	Fair	No
265	No Tree Exists					
266	No Tree Exists					

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
267	Austrian pine	Pinus nigra	5	20	Fair	Yes
268	Green ash	Fraxinus pennsylvanica	4	17	Good	Yes
269	Austrian pine	Pinus nigra	5	18	Dying/Dead	No
270	American linden	Tilia americana	5	21	Good	Yes
271	Honeylocust	Gleditsia triacanthos c.v.	6	23	Good	Yes
272	Honeylocust	Gleditsia triacanthos c.v.	6	22	Good	Yes
273	Blue spruce	Picea pungens	8	26	Good	Yes
274	Austrian pine	Pinus nigra	9	18	Fair	Yes
275	Littleleaf linden	Tilia cordata c.v.	18	35	Good	No
276	No Tree Exists					
277	Lanceleaf cottonwood	Populus x acuminata	7	30	Fair	No
278	Eastern cottonwood	Populus deltoides var.	17	48	Poor	No
279	Eastern cottonwood	Populus deltoides var.	22	60	Fair	No
280	No Tree Exists	No Tree Exists				
281	Austrian pine	Pinus nigra	20	38	Fair	No
282	Austrian pine	Pinus nigra	18	30	Fair	No
283	Littleleaf linden	Tilia cordata c.v.	15	30	Good	No
284	Austrian pine	Pinus nigra	17	36	Good	No
285	Scots pine	Pinus sylvestris	13	35	Fair	No
286	Scots pine	Pinus sylvestris	13	33	Good	Yes
287	Austrian pine	Pinus nigra	11	30	Good	Yes
288	Scots pine	Pinus sylvestris	15	22	Fair	No
289	Scots pine	Pinus sylvestris	11	30	Fair	Yes
290	Scots pine	Pinus sylvestris	11	32	Good	Yes
291	Scots pine	Pinus sylvestris	10	30	Good	Yes
292	Scots pine	Pinus sylvestris	13	32	Poor	No
293	Scots pine	Pinus sylvestris	13	33	Fair	No
294	Scots pine	Pinus sylvestris	12	29	Fair	No
295	Littleleaf linden	Tilia cordata c.v.	14	30	Fair	No
296	No Tree Exists					
297	Crabapple	Malus x spp.	13	22	Fair	No
298	Cockspur hawthorn	Crataegus crus-galli	6	12	Fair	Yes
299	Cockspur hawthorn	Crataegus crus-galli	6	12	Fair	Yes
300	Cockspur hawthorn	Crataegus crus-galli	6	12	Fair	Yes

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
301	Cockspur hawthorn	Crataegus crus-galli	6	12	Fair	Yes
302	Cockspur hawthorn	Crataegus crus-galli	6	12	Fair	Yes
303	Cockspur hawthorn	Crataegus crus-galli	6	12	Fair	Yes
304	Cockspur hawthorn	Crataegus crus-galli	6	12	Fair	Yes
305	Crabapple	Malus x spp.	10	20	Fair	No
306	Honeylocust	Gleditsia triacanthos c.v.	8	20	Poor	No
307	Honeylocust	Gleditsia triacanthos c.v.	9	25	Fair	No
308	Honeylocust	Gleditsia triacanthos c.v.	8	20	Poor	No
309	Honeylocust	Gleditsia triacanthos c.v.	9	20	Fair	No
310	Honeylocust	Gleditsia triacanthos c.v.	6	17	Poor	No
311	Honeylocust	Gleditsia triacanthos c.v.	8	20	Poor	No
312	Honeylocust	Gleditsia triacanthos c.v.	8	20	Fair	No
313	Honeylocust	Gleditsia triacanthos c.v.	9	20	Poor	No
314	Honeylocust	Gleditsia triacanthos c.v.	9	18	Poor	No
315	Honeylocust	Gleditsia triacanthos c.v.	10	22	Poor	No
316A	Honeylocust	Gleditsia triacanthos c.v.	8	14	Dying/Dead	No
316B	Honeylocust	Gleditsia triacanthos c.v.	11	28	Poor	No
317	Honeylocust	Gleditsia triacanthos c.v.	8	21	Poor	No
318	Honeylocust	Gleditsia triacanthos c.v.	10	22	Poor	No
319A	Honeylocust	Gleditsia triacanthos c.v.	9	26	Poor	No
319B	Honeylocust	Gleditsia triacanthos c.v.	13	40	Good	No
320	Crabapple	Malus x spp.	13	23	Fair	No
321	Crabapple	Malus x spp.	12	20	Fair	No
322	Honeylocust	Gleditsia triacanthos c.v.	8	22	Poor	No
323	Honeylocust	Gleditsia triacanthos c.v.	6	18	Poor	No
324	Crabapple	Malus x spp.	14	18	Good	No

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
325	Austrian pine	Pinus nigra	16	20	Fair	No
326	Austrian pine	Pinus nigra	23	48	Good	No
327	No Tree Exists					
328	No Tree Exists					
329	No Tree Exists					
330	Austrian pine	Pinus nigra	20	35	Fair	No
331	No Tree Exists					
332	Austrian pine	Pinus nigra	18	30	Fair	No
333	Green ash	Fraxinus pennsylvanica	8	29	Good	Yes
334	Austrian pine	Pinus nigra	19	33	Fair	No
335	Austrian pine	Pinus nigra	20	40	Good	No
336	No Tree Exists					
337	Cockspur hawthorn	Crataegus crus-galli	6	10	Good	Yes
338	Cockspur hawthorn	Crataegus crus-galli	6	10	Good	Yes
339	Cockspur hawthorn	Crataegus crus-galli	6	10	Good	Yes
340	Cockspur hawthorn	Crataegus crus-galli	6	10	Good	Yes
341	Cockspur hawthorn	Crataegus crus-galli	6	10	Good	Yes
342	Crabapple	Malus x spp.	10	13	Dying/Dead	No
343	Cockspur hawthorn	Crataegus crus-galli	6	10	Good	Yes
344	Cockspur hawthorn	Crataegus crus-galli	6	10	Good	Yes
345	No Tree Exists					
346	Blue spruce	Picea pungens	18	34	Good	No
347	Littleleaf linden	Tilia cordata c.v.	15	33	Good	No
348	Blue spruce	Picea pungens	18	23	Fair	No
349	Blue spruce	Picea pungens	18	26	Fair	No
350	Blue spruce	Picea pungens	9	20	Fair	No
351	Green ash	Fraxinus pennsylvanica	5	16	Good	No
352	Blue spruce	Picea pungens	13	30	Good	Yes
353	Littleleaf linden	Tilia cordata c.v.	11	18	Poor	No
354	Green ash	Fraxinus pennsylvanica	9	20	Fair	No
355	Green ash	Fraxinus pennsylvanica	11	20	Fair	No
356A	Green ash	Fraxinus pennsylvanica	10	17	Fair	Yes
356B	Austrian pine	Pinus nigra	5	13	Poor	No

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
357	Honeylocust	Gleditsia triacanthos c.v.	12	27	Good	No
358	Austrian pine	Pinus nigra	9	14	Fair	No
359	Austrian pine	Pinus nigra	8	20	Good	Yes
360	Austrian pine	Pinus nigra	7	17	Good	Yes
361	Austrian pine	Pinus nigra	11	20	Good	Yes
362	Austrian pine	Pinus nigra	14	33	Good	No
363	Austrian pine	Pinus nigra	15	35	Fair	No
364	Austrian pine	Pinus nigra	15	30	Good	No
365	Austrian pine	Pinus nigra	14	30	Good	No
366	Russian olive	Elaeagnus angustifolia	12	28	Fair	No
367	No Tree Exists					
368	No Tree Exists					
369	Russian olive	Elaeagnus angustifolia	12	25	Fair	No
370	Russian olive	Elaeagnus angustifolia	11	25	Fair	No
371	No Tree Exists					
372	No Tree Exists					
373	Bristlecone pine	Pinus aristata	10	12	Fair	No
374	Bristlecone pine	Pinus aristata	10	12	Fair	No
375	Bristlecone pine	Pinus aristata	9	11	Fair	No
376	Bristlecone pine	Pinus aristata	9	13	Fair	No
377	Bristlecone pine	Pinus aristata	9	13	Fair	No
378	Bristlecone pine	Pinus aristata	5	10	Fair	No
379	Bur oak	Quercus macrocarpa	11	30	Good	Yes
380	Bur oak	Quercus macrocarpa	10	28	Good	Yes
381	Bur oak	Quercus macrocarpa	9	25	Good	Yes
382	Bur oak	Quercus macrocarpa	10	28	Good	Yes
383	Bur oak	Quercus macrocarpa	10	25	Good	Yes
384	Pinyon pine	Pinus edulis	7	14	Poor	No
385						
386	Honeylocust	Gleditsia triacanthos c.v.	12	30	Fair	No
387	Honeylocust	Gleditsia triacanthos c.v.	11	25	Good	Yes
388	Austrian pine	Pinus nigra	5	15	Good	No
389	Honeylocust	Gleditsia triacanthos c.v.	7	23	Poor	No

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
390	No Tree Exists					
391	Honeylocust	Gleditsia triacanthos c.v.	5	15	Poor	No
392	Honeylocust	Gleditsia triacanthos c.v.	7	17	Fair	No
393	Honeylocust	Gleditsia triacanthos c.v.	9	15	Poor	No
394	Austrian pine	Pinus nigra	14	32	Good	No
395	Austrian pine	Pinus nigra	15	33	Good	No
396	Austrian pine	Pinus nigra	15	25	Good	No
397	Austrian pine	Pinus nigra	12	26	Good	Yes
398	Austrian pine	Pinus nigra	13	24	Good	Yes
399	Norway maple	Acer platanoides c.v.	9	20	Dying/Dead	No
400	Scots pine	Pinus sylvestris	9	20	Fair	No
401	Scots pine	Pinus sylvestris	11	25	Fair	No
402	Russian olive	Elaeagnus angustifolia	13	30	Fair	No
403	Scots pine	Pinus sylvestris	8	25	Good	Yes
404	Scots pine	Pinus sylvestris	13	25	Fair	No
405	Scots pine	Pinus sylvestris	16	25	Fair	No
406	Austrian pine	Pinus nigra	8	22	Good	Yes
407	No Tree Exists					
408	Russian olive	Elaeagnus angustifolia	10	23	Fair	No
409	Bur oak	Quercus macrocarpa	8	21	Good	Yes
410	No Tree Exists					
411	Bur oak	Quercus macrocarpa	7	21	Good	Yes
412	Russian olive	Elaeagnus angustifolia	12	28	Fair	No
413	No Tree Exists					
414	Russian olive	Elaeagnus angustifolia	10	26	Fair	No
415	Russian olive	Elaeagnus angustifolia	12	28	Fair	No
416	Russian olive	Elaeagnus angustifolia	13	32	Poor	No
417	Bur oak	Quercus macrocarpa	8	26	Good	Yes
418	Bur oak	Quercus macrocarpa	8	27	Good	Yes
419	No Tree Exists					
420	No Tree Exists					

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
421	Hackberry	Celtis occidentalis	10	24	Good	Yes
422	Hackberry	Celtis occidentalis	9	24	Good	Yes
423	Hackberry	Celtis occidentalis	9	24	Good	Yes
424	Hackberry	Celtis occidentalis	11	22	Good	Yes
425	Ponderosa pine	Pinus ponderosa	11	16	Fair	No
426	Austrian pine	Pinus nigra	14	23	Fair	No
427	No Tree Exists					
428	Russian olive	Elaeagnus angustifolia	10	21	Fair	No
429	Russian olive	Elaeagnus angustifolia	14	30	Fair	No
430	Austrian pine	Pinus nigra	13	30	Good	Yes
431	Limber pine	Pinus flexilis	11	18	Fair	No
432	Ponderosa pine	Pinus ponderosa	10	22	Good	Yes
433	Green ash	Fraxinus pennsylvanica	11	20	Poor	No
434	Limber pine	Pinus flexilis	11	25	Fair	No
435	American linden	Tilia americana	10	30	Good	Yes
436	Limber pine	Pinus flexilis	11	28	Good	Yes
437	No Tree Exists					
438	No Tree Exists					
439	Green ash	Fraxinus pennsylvanica	10	14	Poor	No
440	Limber pine	Pinus flexilis	9	25	Good	Yes
441	No Tree Exists					
442	No Tree Exists					
443	Kentucky coffeetree	Gymnocladus dioicus	10	25	Good	Yes
444	Kentucky coffeetree	Gymnocladus dioicus	11	21	Fair	No
445	Kentucky coffeetree	Gymnocladus dioicus	9	24	Good	Yes
446	Kentucky coffeetree	Gymnocladus dioicus	10	24	Good	Yes
447	Kentucky coffeetree	Gymnocladus dioicus	12	30	Good	Yes
448	Green ash	Fraxinus pennsylvanica	11	16	Poor	No
449	Norway maple	Acer platanoides c.v.	11	24	Fair	No
450	Norway maple	Acer platanoides c.v.	10	22	Fair	No

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
451	Norway maple	Acer platanoides c.v.	9	20	Fair	No
452	Norway maple	Acer platanoides c.v.	8	15	Dying/Dead	No
453	No Tree Exists					
454	Callery pear	Pyrus calleryana c.v.	3	9	Poor	No
455	Crabapple	Malus x spp.	8	9	Poor	No
456	Callery pear	Pyrus calleryana c.v.	4	13	Poor	No
457	Callery pear	Pyrus calleryana c.v.	5	16	Fair	No
458	Crabapple	Malus x spp.	6	9	Poor	No
459	Honeylocust	Gleditsia triacanthos c.v.	3	12	Poor	No
460	Aspen	Populus tremuloides	12	40	Poor	No
461	Washington hawthorn	Crataegus phaenopyrum	5	17	Fair	Yes
462	No Tree Exists					
463	Honeylocust	Gleditsia triacanthos c.v.	10	28	Dying/Dead	No
464A	Honeylocust	Gleditsia triacanthos c.v.	10	28	Poor	No
464B	Green ash	Fraxinus pennsylvanica	7	25	Fair	Yes
465A	Honeylocust	Gleditsia triacanthos c.v.	10	28	Dying/Dead	No
465B	White ash	Fraxinus americana	4	25	Fair	Yes
466	Honeylocust	Gleditsia triacanthos c.v.	10	26	Good	Yes
467	Honeylocust	Gleditsia triacanthos c.v.	7	22	Good	Yes
468	No Tree Exists					
469	No Tree Exists					
470	Littleleaf linden	Tilia cordata c.v.	4	11	Poor	No
471	Callery pear	Pyrus calleryana c.v.	5	18	Fair	Yes
472	Crabapple	Malus x spp.	10	15	Fair	No
473	Lanceleaf cottonwood	Populus x acuminata	5	27	Fair	No
474	No Tree Exists					
475	Crabapple	Malus x spp.	7	12	Fair	No
476	Crabapple	Malus x spp.	8	12	Poor	No
477	Callery pear	Pyrus calleryana c.v.	4	13	Poor	No

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
478	Crabapple	Malus x spp.	14	15	Good	No
479	Crabapple	Malus x spp.	8	12	Poor	No
480A	Callery pear	Pyrus calleryana c.v.	6	14	Fair	Yes
480B	Littleleaf linden	Tilia cordata c.v.	15	28	Good	No
481	Littleleaf linden	Tilia cordata c.v.	12	20	Fair	No
482	Green ash	Fraxinus pennsylvanica	7	14	Poor	No
483	Eastern cottonwood	Populus deltoides var.	28	60	Fair	No
484	Lanceleaf cottonwood	Populus x acuminata	13	42	Poor	No
485	Honeylocust	Gleditsia triacanthos c.v.	8	20	Good	Yes
486	Honeylocust	Gleditsia triacanthos c.v.	7	21	Good	Yes
487	White ash	Fraxinus americana	8	18	Fair	No
488	Green ash	Fraxinus pennsylvanica	10	19	Fair	No
489	Green ash	Fraxinus pennsylvanica	9	18	Fair	No
490	Honeylocust	Gleditsia triacanthos c.v.	6	19	Good	Yes
491	Littleleaf linden	Tilia cordata c.v.	12	20	Good	No
492	Littleleaf linden	Tilia cordata c.v.	16	28	Good	No
493	Littleleaf linden	Tilia cordata c.v.	15	28	Good	No
494	Littleleaf linden	Tilia cordata c.v.	14	27	Good	No
495	Littleleaf linden	Tilia cordata c.v.	13	20	Fair	No
496	Littleleaf linden	Tilia cordata c.v.	14	25	Good	No
497	Littleleaf linden	Tilia cordata c.v.	7	22	Good	Yes
498	Littleleaf linden	Tilia cordata c.v.	11	22	Good	Yes
499	Littleleaf linden	Tilia cordata c.v.	16	28	Fair	No
500	Littleleaf linden	Tilia cordata c.v.	13	22	Fair	No
501	Littleleaf linden	Tilia cordata c.v.	12	22	Fair	No
502	Littleleaf linden	Tilia cordata c.v.	13	24	Fair	No
503	Honeylocust	Gleditsia triacanthos c.v.	10	20	Good	Yes
504	Green ash	Fraxinus pennsylvanica	8	18	Fair	Yes
505	Honeylocust	Gleditsia triacanthos c.v.	7	18	Good	Yes
506	Washington hawthorn	Crataegus phaenopyrum	3	14	Fair	Yes
507	No Tree Exists					
508	Green ash	Fraxinus pennsylvanica	4	13	Poor	No

TREE #	COMMON NAME	LATIN NAME	DIAMETER INCHES	HEIGHT	CONDITION CATEGORY	TRANSPLANT CANDIDATE
509	Green ash	Fraxinus pennsylvanica	3	14	Fair	Yes
510	Green ash	Fraxinus pennsylvanica	8	13	Poor	No
511	Littleleaf linden	Tilia cordata c.v.	9	20	Good	No
512	Littleleaf linden	Tilia cordata c.v.	8	16	Fair	No
513	No Tree Exists					
514	Littleleaf linden	Tilia cordata c.v.	15	29	Good	No
515	Littleleaf linden	Tilia cordata c.v.	14	26	Fair	No
516	Crabapple	Malus x spp.	18	16	Good	No
517	Littleleaf linden	Tilia cordata c.v.	9	20	Fair	No
518	Crabapple	Malus x spp.	16	17	Good	No
519	Crabapple	Malus x spp.	12	14	Good	Yes
520	Crabapple	Malus x spp.	10	12	Good	Yes
521	Ponderosa pine	Pinus ponderosa	8	16	Fair	Yes
522	Austrian pine	Pinus nigra	12	24	Good	Yes

Figure CC-7

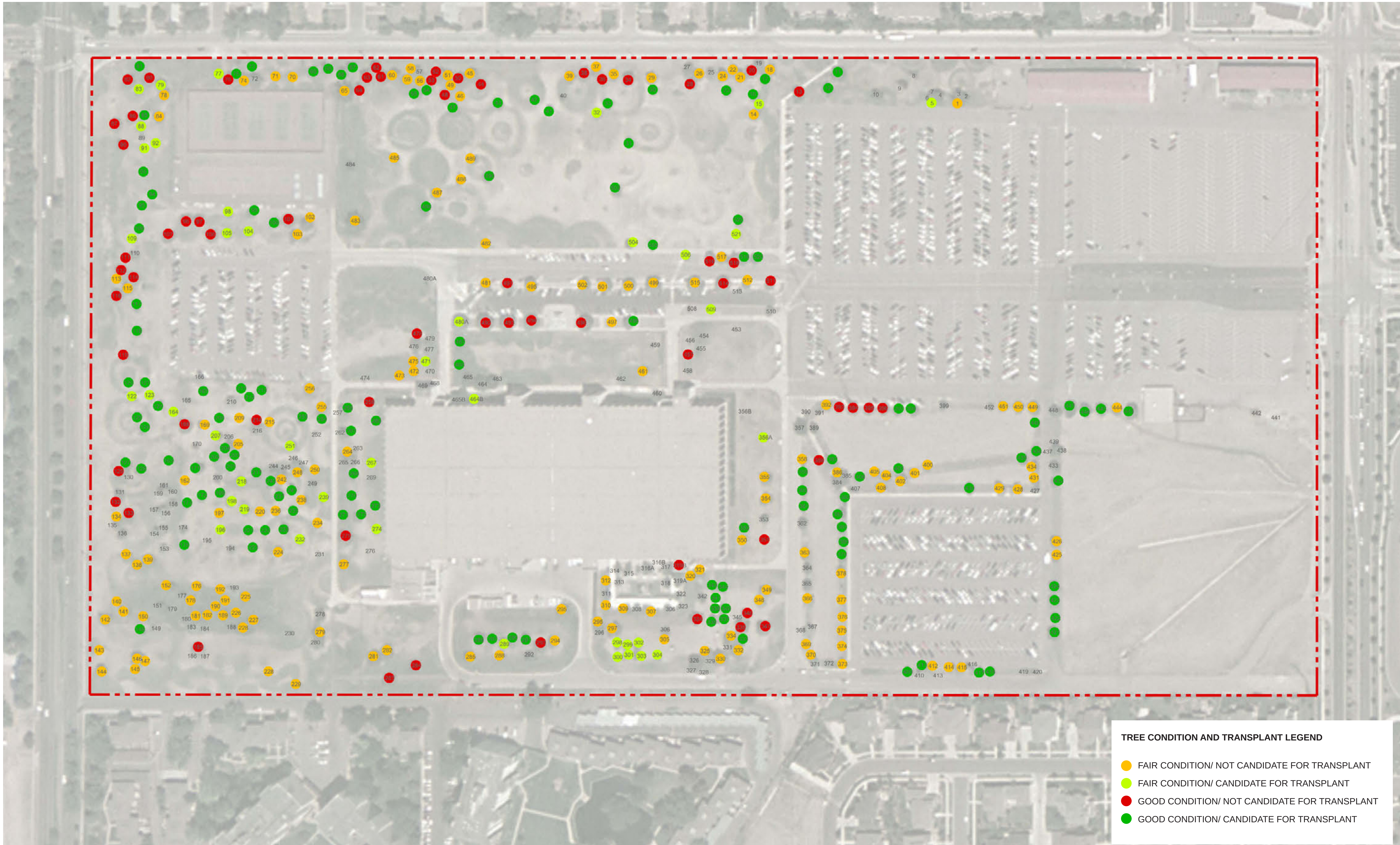
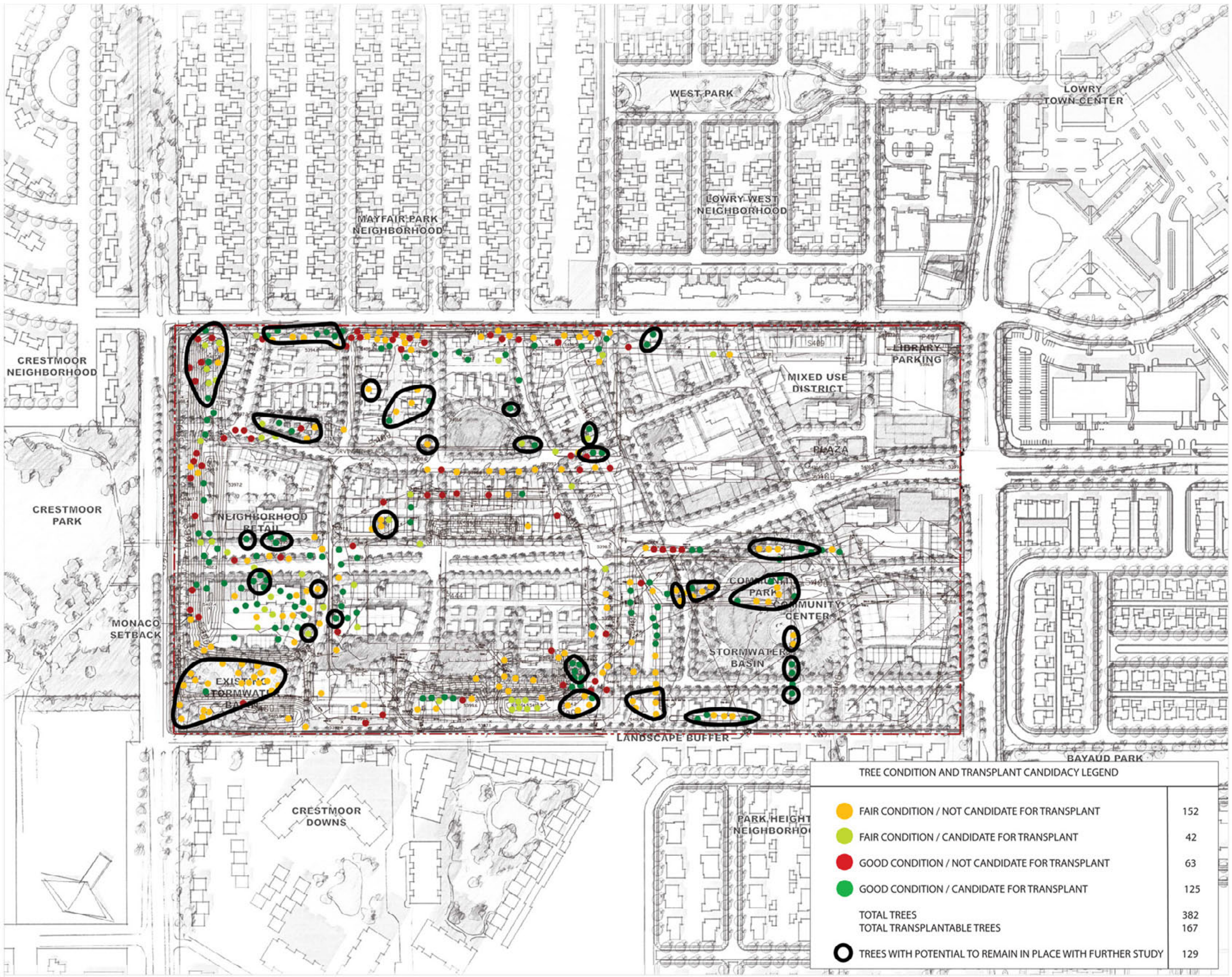
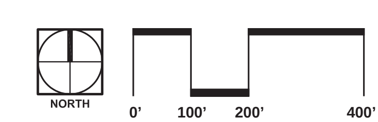

TREE CONDITION AND TRANSPLANT LEGEND
FAIR CONDITION/ NOT CANDIDATE FOR TRANSPLANT
FAIR CONDITION/ CANDIDATE FOR TRANSPLANT
GOOD CONDITION/ NOT CANDIDATE FOR TRANSPLANT
GOOD CONDITION/ CANDIDATE FOR TRANSPLANT

Figure CC-8


WEST PARK
LOWRY TOWN CENTER
LOWRY WEST NEIGHBORHOOD
MAYFAIR PARK NEIGHBORHOOD
CRESTMOOR NEIGHBORHOOD
LIBRARY PARKING
MIXED USE DISTRICT
PLAZA
CRESTMOOR PARK
NEIGHBORHOOD RETAIL
COMMUNITY PARK
COMMUNITY CENTER
MONACO SETBACK
STORMWATER BASIN
EXISTING STORMWATER BASIN
LANDSCAPE BUFFER
BAYAUD PARK
CRESTMOOR DOWNS
PARK HEIGHTS NEIGHBORHOOD
TREE CONDITION AND TRANSPLANT CANDIDACY LEGEND
FAIR CONDITION / NOT CANDIDATE FOR TRANSPLANT 152
FAIR CONDITION / CANDIDATE FOR TRANSPLANT 42
GOOD CONDITION / NOT CANDIDATE FOR TRANSPLANT 63
GOOD CONDITION / CANDIDATE FOR TRANSPLANT 125
TOTAL TREES 382
TOTAL TRANSPLANTABLE TREES 167
TREES WITH POTENTIAL TO REMAIN IN PLACE WITH FURTHER STUDY 129


NORTH
0'
100'
200'
400'

Appendix C.3: Environmental Condition of Property Report & Environmental Baseline Study

Appendix D

Economic & Demographic Conditions

Appendix D.1: Full Market Study

Introduction & Summary of Findings

The Lowry Redevelopment Authority retained a consultant team led by Design Workshop (DW) to prepare a redevelopment plan for the Buckley Annex property located in Denver, Colorado. Economic & Planning Systems (EPS) is part of the DW Team responsible for market and financial analysis inputs to the plan. This report contains the findings and conclusions of EPS regarding the real estate development potentials of the Buckley Annex property.

Background

In February of 1992, the Department of Defense Base Realignment and Closure Commission (BRAC) voted to close the Lowry Air Force Base. The 70-acre Buckley Annex property was annexed to the Buckley Air Force Base in order to allow the Denver Center of Defense Finance and Accounting Services (DFAS) and the Air Reserve Personnel Center (ARPC) to remain active. The property became known as the Buckley Annex because of this status. In the summer of 2005, BRAC voted to close the Buckley Annex and relocate the DFAS and ARPC to Buckley Air Force Base in east Aurora, Colorado.

The 70-acre Buckley Annex property lies at the western edge of the former Lowry Air Force Base between East 1st Avenue and Bayaud Avenue west of Quebec Street. The site includes an existing three-story 600,000 square foot building partially occupied by the remaining two military agencies. The closure is anticipated to occur over four years and end in 2011. Before the property can be transferred for development, federal regulation requires that the local community generate a redevelopment plan for the facility.

The Buckley Annex Redevelopment Plan will provide a basis for the transfer of the property for development. The redevelopment plan will include an inventory and analysis of the physical, environmental, and socioeconomic characteristics of the site and the surrounding area. This market study report will identify economic conditions and development forecasts for the site, including specific target market opportunities. The results of this study will be utilized to identify potential opportunities and constraints for redevelopment.

Scope of Work

The market study includes an analysis of the development potentials for residential development, community and neighborhood level commercial uses, and office development. The analysis and report include the following tasks:

- **Economic and Demographic Framework –** EPS analyzed demographic and economic trends and forecasts for the Denver metropolitan area, the City and County of Denver, and a competitive market area for residential and commercial development. The market area is comprised of six eastern Denver neighborhoods surrounding the former Lowry Air Force Base, including: Montclair, East Colfax, Hilltop, Lowry, Washington/Virginia Vale, and Windsor.
- **Residential Development Potentials –** EPS investigated the residential development and sales trends in the City and County of Denver. The analysis focuses on competitive projects both in the Lowry Redevelopment and elsewhere in Denver. The report reviews the performance characteristics of existing and planned competition in order to forecast the Buckley Annex site market capture and recommended product mix and price range.
- **Retail Development Potentials –** EPS identified the market potentials for the inclusion of retail uses within the Buckley Annex site. The analysis includes the market potential of a supermarket or natural grocer as an anchor use for the project. The analysis also considers the feasibility of lifestyle tenants and additional ancillary space to complement the existing Lowry Town Center.
- **Office Development Potentials –** EPS reviewed the existing office development and absorption within the Lowry redevelopment between 1999 and 2006. The analysis considers the site's competitive position as a regional employment activity node. Finally, EPS provides an estimate of supportable office development, absorption, and pricing that can potentially be accommodated on the site.
- **Recommended Development Program –** Based on the supportable development by land use category, EPS presents a recommended development program for the site. The amount and mix of development is balanced based on pricing, supportable land values, and expected absorption.

Summary of Findings

The following points summarize the analysis of residential and commercial development potentials for the Buckley Annex site.

1. ***The Buckley Annex property is located in a desirable neighborhood undergoing significant residential and commercial development.***

The Buckley Annex property is located immediately west and south of the 1,800-acre Lowry Redevelopment Area (**Figure DD-1**). Since 1998, Lowry has built 4,000 housing units (an average of 500 per year), 1.2 million square feet of commercial and office development space and is approximately 80 percent built out. The project has captured 10 percent of the total Denver housing market and has experienced above average appreciation rates as well. The Buckley Annex site is also adjacent to the even higher income Crestmoor and Hilltop neighborhoods to the east of Monaco Parkway.

2. ***The Buckley Annex property provides an opportunity for the Lowry neighborhood to continue capturing housing growth as the existing LRA developed area becomes built out.***

Over the next 10 years, the greater Lowry Market Area is forecast to continue to capture between 350 and 500 housing units per year. The forecasted housing mix is approximately 50 percent single family and 50 percent multifamily. The Buckley Annex, CCCS campus, and Landfill properties are the largest remaining undeveloped parcels available for development. The Buckley parcel is optimally located to be developed for a mixed density residential neighborhood with a modest level of community level commercial space. Major additional office or regional commercial uses were not determined to be high potential uses for the site.

3. ***Residential absorption varies significantly by product type and influences the ability of a residential product to generate land value.***

Annual absorption in the market area ranges from 9 to 36 units annually per project. Urban lot single family homes and entry-level medium density multifamily units absorb the quickest at 3.0 units per month or 36 units annually per project. The urban lot single family absorption is driven by Lowry's central location and the lack of available new construction single family homes in the area. The entry-level medium density multifamily absorption is driven by price: specifically, the ability to provide entry level for-sale housing. Upscale products including custom homes and condominiums absorb the slowest at 9 to 12 units annually per project due to the more limited demand for higher priced products.

4. ***The residential market analysis indicates that a mix of urban density single family and medium density residential uses will generate the highest estimated land value.***

Land value is influenced by four inputs: pricing, absorption, density, and site constraints. Striking the right balance between these inputs will generate the greatest land value. The physical constraints of the site limit the number and variety of residential products obtainable on the site. Therefore, the real limiting factor of the development potential for the Buckley Annex site will be the development capacity of the site and the individual absorption of the parcels or projects to be constructed. The development plan should include a range of product types that attract multiple market segments and, thereby, increase overall absorption.

5. ***The Buckley Annex site can support an additional 20,000 to 30,000 square feet of ancillary commercial space as an expansion to the existing Lowry Town Center.***

Recent and projected household growth in the Lowry trade area will support the development of a modest amount of additional complimentary community oriented retail space in the Lowry Town Center area. This space, estimated at 20,000 to 30,000 square feet of restaurant and other small neighborhood and community oriented uses, could be located on the eastern edge of the Buckley Annex property along Quebec within at least visual proximity to the existing Town Center commercial node.

6. ***The Buckley Annex could attract a small scale natural foods grocer or drug store anchor to support a larger commercial center.***

The Lowry trade area can support a natural foods grocery store such as Sunflower Farmers Market, Trader Joe's, or Vitamin Cottage Natural Grocers. These stores are smaller, more specialized stores that complement rather than replace the traditional supermarket for most shoppers. The typical store would range from 15,000 to 25,000 square feet. This use could anchor a small commercial mixed use node with an additional 15,000 to 25,000 square feet of space comprised of the complimentary ancillary uses described above. This 30,000 to 50,000 square foot commercial node would be ideally located with access and visibility from Quebec to become an extension or expansion of the existing Town Center.

7. ***A full line natural supermarket could create the opportunity to develop a second Lowry area town center on the western portion of the Buckley site.***

The acquisition of Wild Oats by Whole Foods has placed temporary uncertainty on the expansion and development plans of the latter company. That being said, the Lowry area may still prove to be a feasible location for a full line natural foods supermarket within the planning horizon of the site. A full line natural grocer of 50,000 or more square feet could anchor a new town center west of the Buckley site on Monaco Parkway with a total of 125,000 square feet of retail space. The town center could also be a viable location for a small increment of community oriented office space and apartments that could be built as upper story uses over first level retail space.

8. *The Buckley Annex site can support a modest amount of additional office development ranging from 30,000 to 50,000 square feet of space.*

The estimated demand for single user and multi-tenant office buildings in the Lowry area is modest and can be accommodated in the existing Lowry Town Center area and on the CCCS Campus property. The Buckley Annex site is smaller in size and is best suited to a primarily residential development with a village or town center. A small increment of community oriented office space estimated at 30,000 to 50,000 square feet could be accommodated in the village or town center as upper story uses in retail buildings or in smaller footprint buildings built close to the retail core.

Economic & Demographic Framework

This section of the report describes the economic and demographic growth trends for the Denver metropolitan region, the City and County of Denver, and the Lowry Market Area. The market area population and household forecasts provide the basis for an estimate of housing demand between 2010 and 2020. The forecasted residential growth, in turn, provides the basis for forecasting retail growth potentials.

Metropolitan Denver

The seven-county Denver metropolitan area is composed of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson Counties. The region experienced significant employment growth between 1990 and 2000, which fueled population and household growth. Although growth slowed in the 2001 to 2003 time period, along with the rest of the nation, the region's economy has heated up in 2005 and 2006 with healthy employment gains and unemployment rates well below national levels.

Employment Trends

The Denver metro economy has both matured and diversified. The strongest growth occurred in telecommunications, computer software and other "knowledge" industries through the 1990s. In recent years, the national economic slowdown has affected the region, and job growth declined between 2001 and 2003; however, the regional economy has rebounded along with the nation in the last three years. During the 1990s, the health of the area economy diverged from slowdowns elsewhere in the nation, stimulating population immigration at rates not seen since the early 1970s. As a result, residential construction began occurring at similarly high rates.

From 2001 to 2003, total employment in the seven-county Denver metropolitan area decreased by an average of 36,000 jobs per year, as shown in **Table DD-1**. Total employment then increased in 2004 and 2005 by an average of 18,000, which equates to an average annual growth rate of 1.4 percent. Recent employment growth has been concentrated in the health care and government sectors. The information sector has not completely rebounded from the national slow down, with a net loss of 25,000 jobs since 2001.

Table DD-1

Denver Metro Employment by Sector, 2001-2005
Buckley Annex Market Study

Industry Sector	2001	2002	2003	2004	2005	Change 2001-2005 #	Avg.	Ann. %
Agriculture	2,588	2,424	2,226	2,029	2,218	-370	-93	-3.8%
Mining	5,526	5,364	5,266	5,509	5,589	63	16	0.3%
Utilities	3,610	2,864	3,734	3,767	3,816	206	52	1.4%
Construction	98,863	93,868	85,917	85,453	89,076	-9,787	-2,447	-2.6%
Manufacturing	106,790	97,301	90,777	90,593	91,004	-15,786	-3,947	-3.9%
Wholesale Trade	73,980	70,140	67,582	66,800	67,799	-6,181	-1,545	-2.2%
Retail Trade	141,434	139,230	136,154	136,261	139,838	-1,596	-399	-0.3%
Transportation & Warehousing	48,451	45,647	44,717	44,993	44,610	-3,841	-960	-2.0%
Information	82,459	70,917	64,340	60,653	57,291	-25,168	-6,292	-8.7%
Finance & Insurance	73,868	72,726	73,511	74,239	75,195	1,327	332	0.4%
Real Estate, Rental, & Leasing	29,156	28,623	28,811	28,687	28,480	-676	-169	-0.6%
Professional & Technical Services	112,475	104,242	101,476	104,553	109,622	-2,853	-713	-0.6%
Management of Companies & Enterprises	14,380	15,508	16,887	16,492	19,731	5,351	1,338	8.2%
Administrative & Waste Services	94,158	87,123	83,905	86,167	88,583	-5,575	-1,394	-1.5%
Educational Services	15,621	15,824	16,091	16,900	17,843	2,222	556	3.4%
Health Care & Social Assistance	105,159	108,630	111,288	114,114	117,310	12,151	3,038	2.8%
Arts, Entertainment, & Recreation	16,975	17,218	17,208	18,857	19,120	2,145	536	3.0%
Accomodation & Food Services	108,805	107,559	106,784	109,094	112,492	3,687	922	0.8%
Other Services	40,421	40,613	39,733	39,535	39,284	-1,137	-284	-0.7%
Government	177,266	183,964	184,164	183,729	185,222	7,956	1,989	1.1%
State	37,250	38,521	38,407	38,590	39,227	1,977	494	1.3%
Local	108,063	113,353	113,559	113,489	114,772	6,709	1,677	1.5%
Federal	31,954	32,094	32,198	31,650	31,228	-726	-182	-0.6%
Total (Private)	**1,175,130**	**1,126,993**	**1,096,563**	**1,107,230**	**1,130,480**	**-44,650**	**-11,163**	**-1.0%**
Total (All Industries)	**1,352,395**	**1,310,957**	**1,280,727**	**1,290,959**	**1,315,701**	**-36,694**	**-9,174**	**-0.7%**

Source: Colorado Department of Labor and Employment; Economic & Planning Systems

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Early estimates indicate nearly 26,000 jobs were added in metropolitan Denver during 2006, or an estimated annual gain of 1.9 percent building on strong growth in 2005. In 2005, more than 40 major business relocations or expansions occurred within the metro area. These expansions and relocations added nearly 4,000 new jobs or approximately 16 percent of the growth in 2005. Notable relocations and expansions included:

- **United Launch Alliance**, a partnership between Boeing and Lockheed Martin, will work to increase U.S. competitiveness in the international business of commercial space launches. The alliance is expected to employ nearly 1,000 individuals.
- **Aviation Technology Group** selected the Front Range Airport in Adams County for its commercial and military jet manufacturing business. The company anticipates employing 150 individuals.
- **Northrop Grumman**, a software and systems integration company in Aurora; added approximately 350 new jobs with average salaries of $80,000 and a $13 million, 75,000 square foot new office building.
- **Corporate Express**, an office supplies and service company in Aurora; added approximately 600 new jobs and invested nearly $7.7 million.

Area employment is shown by county in **Table DD-2**. Denver County is the region's employment hub with 427,000 jobs or about one-third of the region's total. Approximately, half of this employment is concentrated in Downtown and the southeast corridor including the Denver Tech Center.

Table DD-2

Denver Metro Area Employment by County, 2000-2006
Buckley Annex Market Study

								Change 2000/02[2]-2006		
Area	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006** [1]	**#**	**Avg.**	**Ann. %**
Adams	144,502	146,043	144,052	139,987	141,343	147,701	151,499	6,997	1,166	0.8%
Arapahoe	283,927	285,963	276,543	270,461	268,290	271,199	273,711	-10,216	-1,703	-0.6%
Boulder	179,599	184,755	156,346	150,579	151,833	154,379	154,980	-24,619	-4,103	-2.4%
Broomfield	---	---	25,480	25,852	27,737	28,741	29,327	3,847	962	3.6%
Denver	468,995	461,996	438,864	425,693	423,470	424,662	427,358	-41,637	-6,940	-1.5%
Douglas	56,656	63,263	63,590	65,000	74,564	82,928	83,195	26,539	4,423	6.6%
Jefferson	210,315	210,375	205,972	203,154	203,605	206,000	205,964	-4,351	-725	-0.3%
Metro Area	**1,343,994**	**1,352,395**	**1,310,847**	**1,280,726**	**1,290,842**	**1,315,610**	**1,326,033**	**-17,962**	**-2,994**	**-0.2%**

[1] Note: 2006 is Average Employment based on 1st and 2nd Quarter data.
[2] Note: Broomfield change is for 2002 because it became a city and county in Nov. 2001
Source: Bureau of Labor Statistics; Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-Employment.xls]Overall

Population and Households

The Denver metropolitan area reached a population of 2.7 million in 2006, growing by an average of 53,217 persons, or 2.4 percent per year over the 1990 to 2006 time period. The metropolitan area accounts for 57 percent of the total state population of 4.6 million. Population growth has been most heavily concentrated along the suburban edge, particularly to the south, east, and north, of the metropolitan area. Douglas and Adams Counties were the fastest growing areas, accounting for 42 percent of total metropolitan growth during the time period, as shown in **Table DD-3**. Douglas County has in fact been one of the fastest growing counties in the nation, growing at a 9.6 percent annual rate.

Table DD-3

Population and Household by County, 1990-2006
Buckley Annex Market Study

County	1990	2000	2006	1990-2006 Tot. #	Ann. #	Ann. %
Population						
Adams County	265,038	363,857	422,483	157,445	9,840	3.0%
Arapahoe County	391,511	487,967	543,033	151,522	9,470	2.1%
Boulder County	225,339	291,288	297,003	71,664	4,479	1.7%
Broomfield County	---	---	48,469	---	---	---
Denver County	467,610	554,636	585,680	118,070	7,379	1.4%
Douglas County	60,391	175,766	262,699	202,308	12,644	9.6%
Jefferson County	438,430	527,056	540,418	101,988	6,374	1.3%
Metro Total	**1,848,319**	**2,400,570**	**2,699,785**	**851,466**	**53,217**	**2.4%**
Households						
Adams County	96,353	128,156	149,215	52,862	3,304	2.8%
Arapahoe County	154,710	190,909	214,423	59,713	3,732	2.1%
Boulder County	88,402	114,680	118,148	29,746	1,859	1.8%
Broomfield County	---	---	17,632	---	---	---
Denver County	210,952	239,235	260,302	49,350	3,084	1.3%
Douglas County	20,844	60,924	91,964	71,120	4,445	9.7%
Jefferson County	166,545	206,067	214,076	47,531	2,971	1.6%
Metro Total	**737,806**	**939,971**	**1,065,760**	**327,954**	**20,497**	**2.3%**

Source: US Census; DRCOG; Economic & Planning Systems

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The City and County of Denver has been growing at a significant rate for a central city core. After reaching a high of 514,678 people in 1970, its population declined over the next two decades. The City and County of Denver has experienced positive population growth during the past fifteen years. As of 2006, the City and County of Denver has an estimated population of 585,680, an increase of 118,070 over 1990. Several factors have contributed to this turnaround:

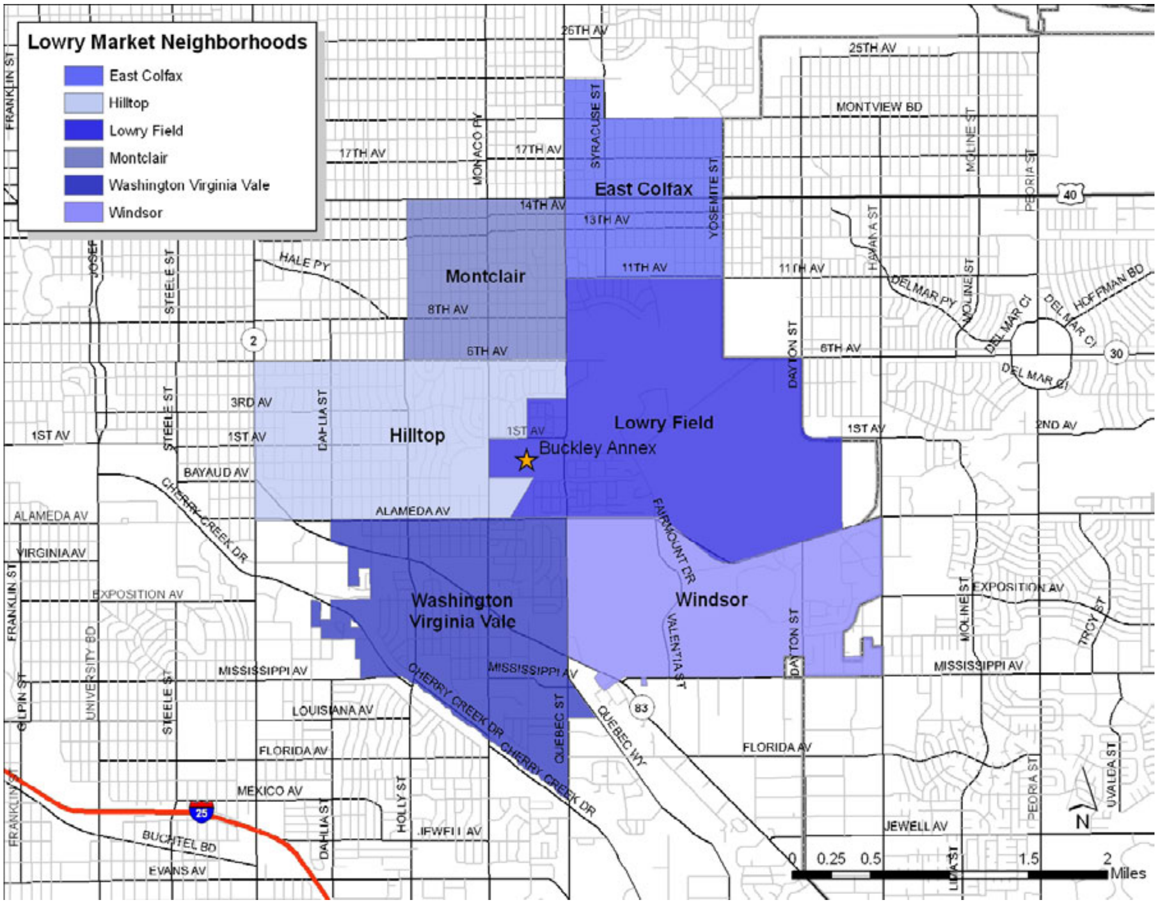
- The 1,866-acre Lowry Redevelopment developed rapidly with 4,000 of the 4,500 planned units completed or under-construction. The neighborhood occupies the site of the former Lowry Air Force Base on the east edge of the city.
- The 4,400-acre Gateway Area and Denver International Airport (DIA) annexed to the city with 17,500 planned residential units.
- The 4,700-acre Stapleton Development quickly saw the construction and/or completion of more than 2,000 of its 12,000 units. The Traditional Neighborhood Development (TND) project, which occupies the site of the former Stapleton International Airport that closed in 1995, is commonly referred to as the nation's largest urban infill development.
- There has been considerable infill development and reinvestment in existing houses in the city's turn-of-the-century neighborhoods around downtown.

- The central Denver area including Downtown, Central Platte Valley, Uptown, and Capitol Hill has added nearly 1,200 new loft, condominium and apartment units per year over the 2000 to 2005 time period, for a total of approximately 7,000 new units.

Lowry Market Area

The Lowry Market Area encompasses the census tracts that correspond to six eastern Denver neighborhoods surrounding the Buckley Annex site as shown in **Figure DD-1**. The market area defined for residential analysis is equivalent to the primary trade area for the retail analysis. The market area in an urban context is typically tightly defined due to the dense nature of urban development and the number of competitive projects. The six neighborhoods included in the market area capture much of eastern and southeastern Denver. However, the demand for housing will not only come from the market area but will also be driven by demand from the larger metropolitan area.

Figure DD-1
Lowry Market Neighborhoods
Buckley Annex Market Study



The Lowry Market Area has experienced a surge of infill development over the past five years. The pace of development accelerated during the 1990s through 2000. Between 2000 and 2006, the market area accounted for nearly 19 percent of Denver's total growth. As a result, the Lowry Market Area now accounts for 9.2 percent of the city's population up from 8.7 percent in 2000. The Lowry Market Area kept pace with the larger metropolitan area at 1.9 percent growth over the last six years and 2.0 percent the period before, as shown in **Table DD-4**. Denver has grown more conservatively at only 0.9 percent over the last six years compared to 1.7 percent during the prior decade.

Table DD-4

Population Trends, 1990-2006
Buckley Annex Market Study

The total number of households within the Lowry Market Area grew to over

Characteristics	1990	2000	2006	1990-2000 Change	1990-2000 Ann. %	2000-2006 Change	2000-2006 Ann. %
Lowry Market Area	**39,230**	**48,034**	**53,804**	**8,804**	**2.0%**	**5,770**	**1.9%**
Percent of City	8.4%	8.7%	9.2%				
Percent of Metropolitan Area	2.1%	2.0%	2.0%				
Percent of State	1.2%	1.1%	1.1%				
City & County of Denver	467,610	554,636	585,680	87,026	1.7%	31,044	0.9%
Percent of Metropolitan Area	25.3%	23.1%	21.7%				
Percent of State	14.2%	12.9%	12.5%				
Denver Metropolitan Area	1,848,319	2,405,000	2,699,785	556,681	2.7%	294,785	1.9%
Percent of State	56.1%	55.9%	57.6%				
State of Colorado	3,294,394	4,301,261	4,689,832	1,006,867	2.7%	388,571	1.5%

Source: US Census; City & County of Denver; Economic & Planning Systems

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25,000 in 2006, as shown in **Table DD-5**. Between 2000 and 2006 the households within the market area grew by nearly 2,000 or 1.4 percent annually. Household growth trailed population growth because the average household size increased from 2.04 to 2.11. The Lowry Market Area accounted for 9.4 percent of the total household growth within the city as a whole.

Table DD-5
Household Trends, 1990-2006
Buckley Annex Market Study

Characteristics	1990	2000	2006	1990-2000 Change	1990-2000 Ann. %	2000-2006 Change	2000-2006 Ann. %
Lowry Market Area	**19,596**	**23,563**	**25,537**	**3,967**	**1.9%**	**1,974**	**1.4%**
Household Size	2.00	2.04	2.11				
Percent of City	9.3%	9.8%	9.8%				
Percent of Metropolitan Area	2.7%	2.5%	2.4%				
Percent of State	1.5%	1.4%	1.4%				
City & County of Denver	210,717	239,235	260,302	28,518	1.3%	21,067	1.4%
Household Size	2.22	2.32	2.25				
Percent of Metropolitan Area	28.6%	25.5%	24.4%				
Percent of State	16.4%	14.4%	14.5%				
Denver Metropolitan Area	737,806	939,971	1,065,760	202,165	2.5%	125,789	2.1%
Household Size	2.51	2.56	2.53				
Percent of State	57.5%	56.7%	59.2%				
State of Colorado	1,282,489	1,658,238	1,800,350	375,749	2.6%	142,112	1.4%
Household Size	2.57	2.59	2.60				

Source: U.S.Census; City & County of Denver; Economic & Planning Systems

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A closer look at the six market area neighborhoods reveals where the population and households change has actually occurred. **Table DD-6** shows that Lowry, along with a small contribution from Windsor, is responsible for all of the growth in the market area. Between 2000 and 2006, Lowry's population grew from 2,025 to 7,672, and households grew by approximately 2,300 to 3,118 in 2006.

Table DD-6
Population & Household Trends by Neighborhood, 2000-2006
Buckley Annex Market Study

	2000		2006		2000-2006 Pop		2000-2006 HH	
	Pop	HH	Pop	HH	Change	Ann. %	Change	Ann. %
Neighborhood								
East Colfax	10,136	4,063	9,982	3,886	-154	-0.3%	-177	-0.7%
Montclair	5,373	2,739	4,925	2,526	-448	-1.4%	-213	-1.3%
Hilltop East [1]	4,800	2,098	4,631	1,989	-169	-0.6%	-109	-0.9%
Lowry	**2,025**	**823**	**7,672**	**3,118**	**5,647**	**24.9%**	**2,295**	**24.9%**
Washington Virginia Vale	13,128	6,647	12,779	6,293	-349	-0.4%	-354	-0.9%
Windsor	12,572	7,193	13,815	7,725	1,243	1.6%	532	1.2%
Total	**48,034**	**23,563**	**53,804**	**25,537**	**5,770**	**1.9%**	**1,974**	**1.4%**

[1] Only includes the eastern census tract of the neighborhood as defined by the City of Denver

Source: Claritas; Economic & Planning Systems

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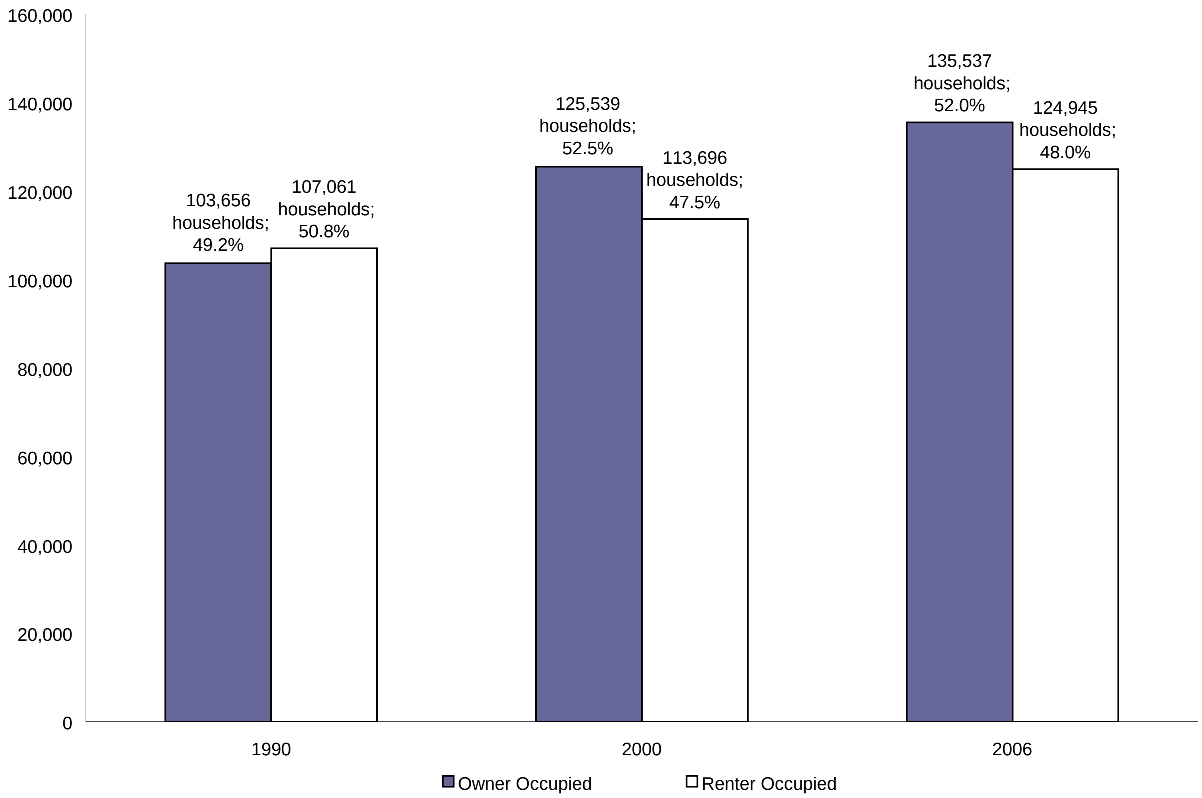
Demographic Characteristics

Tenure

A significant shift in the distribution of households within Denver County occurred between 1990 and 2000. Owner-occupied households became the majority, overtaking renter-occupied households in 2000, accounting for approximately 126,000 households or 53 percent, as shown in **Figure DD-2**. Renter-occupied households have increased since 2000 and account for approximately 124,945 households or 48 percent of total households in 2006.

Figure DD-2

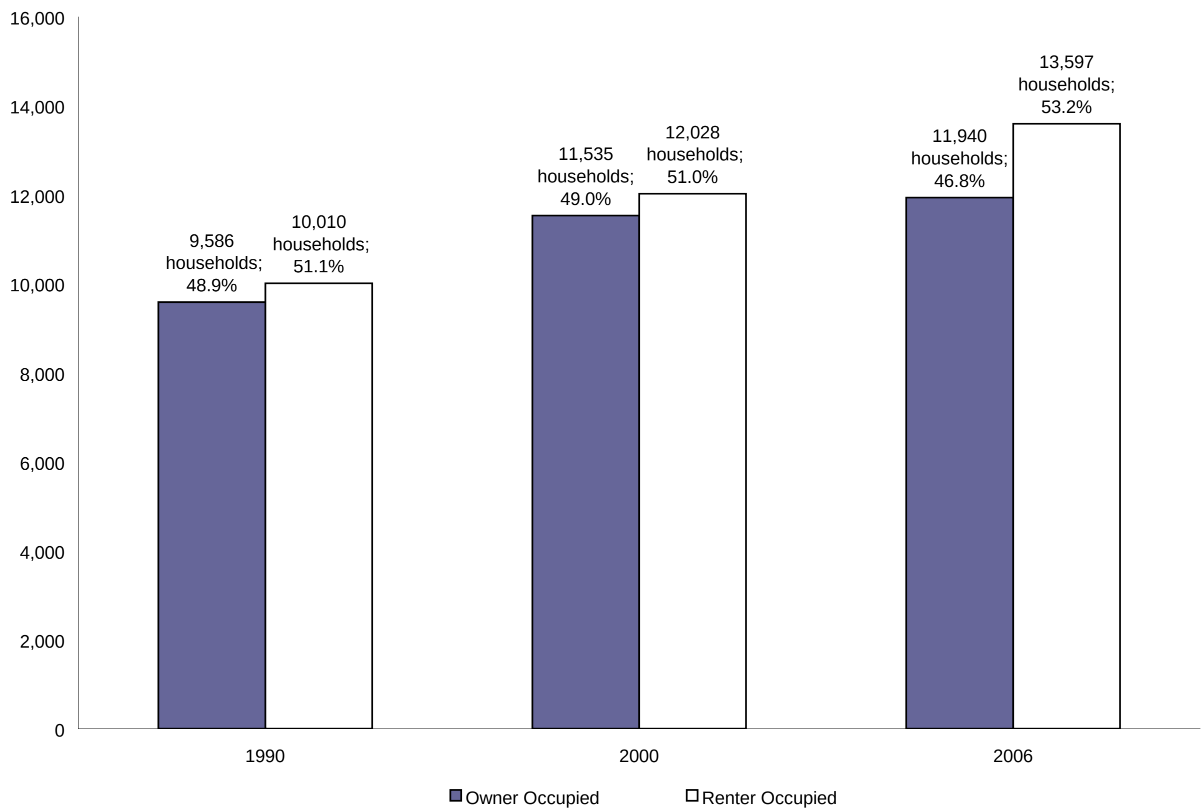
City and County of Denver Tenure, 1990-2006
Buckley Annex Market Study



The Lowry Market Area has had a greater presence of renters historically than the larger city. In 1990, 48.9 percent of the market was owner-occupiers and 51.1 percent renters, as shown in **Figure DD-3**. In 2000, there was little change, but the shift toward a more predominantly renter market occurred between 2000 and 2006. By 2006, the percentage of renters exceeded the percentage of owner-occupiers by 6.4 percent in the market area.

Figure DD-3

Lowry Market Area Tenure, 1990-2006
Buckley Annex Market Study



Income

The median household income within the market area grew to approximately $46,000 and the average income grew to approximately $67,000 as shown in **Table DD-7**. The average income within the market area grew by 3.3 percent exceeding both the state and national rate of growth during the same time period. However, both the Denver and state average incomes exceed the market area income.

The difference between the average and median household incomes also indicates a rise in the disparity between high- and low-income earners. Where the median income does not increase at the same rate as the average household income, there is a greater increase in this disparity. The change in median household income from 2000 to 2006 for the U.S. was $1,068 per year and the change for the market area over the same period was $1,153 per year. The change in average household income in the U.S. was $1,534 per year compared to $1,952 per year for the market area. The difference between the annual change in median household income and average household income over this period indicates both an in-migration of higher-income households and a greater disparity between those households' earners.

Table DD-7
Household Income Trends, 2000-2006
Buckley Annex Market Study

Characteristics	2000	2006	2000-2006 Change Total	2000-2006 Change Avg Ann %
Lowry Market Area				
Households	23,542	24,639	183	0.8%
Household Median	$39,010	$45,928	$1,153	2.8%
Household Average	$55,132	$66,846	$1,952	3.3%
City and County of Denver				
Households	239,235	260,302	3,511	1.4%
Household Median	$39,573	$48,194	$1,437	3.3%
Household Average	$55,087	$67,586	$2,083	3.5%
State of Colorado				
Households	1,659,308	1,800,350	23,507	1.4%
Household Median	$47,394	$56,146	$1,459	2.9%
Household Average	$61,437	$73,440	$2,001	3.0%

Table DD-8 supports the notion that the number of higher-income earners increased in the market area from 2000 to 2006. While the growth in the number of households for the entire market area was only 2.5 percent, the growth in households earning $75,000 or more was 7.6 percent, or an addition of 449 households per year. Furthermore, the percentage of those earning $75,000 or more per year increased from 20.8 percent in 2000 to 27.9 percent by 2006.

Table DD-8

Lowry Market Area Income Distribution, 2000-2006
Buckley Annex Market Study

Household Income Category	2000 HH	2000 %	2006 HH	2006 %	2000-2006 Annual #	2000-2006 Annual %
Less than $10,000	1,937	8.2%	1,955	7.2%	3	0.2%
$10,000 - $25,000	4,928	20.9%	4,464	16.4%	-77	-1.6%
$25,000-$50,000	7,723	32.8%	8,395	30.8%	112	1.4%
$50,000-$75,000	4,058	17.2%	4,854	17.8%	133	3.0%
$75,000-$100,000	2,106	8.9%	2,693	9.9%	98	4.2%
$100,000-$150,000	1,670	7.1%	2,742	10.1%	179	8.6%
$150,000-$250,000	838	3.6%	1,535	5.6%	116	10.6%
$250,000-$500,000	207	0.9%	428	1.6%	37	12.9%
Over $500,000	75	0.3%	195	0.7%	20	17.2%
Total	**23,542**	**100.0%**	**27,260**	**100.0%**	**620**	**2.5%**
$75,000 or more	**4,896**	**20.8%**	**7,592**	**27.9%**	**449**	**7.6%**

Source: Claritas; Economic & Planning Systems

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A closer look at the average incomes for the six neighborhoods within the market area shows that the greatest increase in household income was concentrated in the Lowry neighborhood itself. The average household income increased between 2000 and 2006 from $76,537 to $100,488 as shown in **Table DD-9**.

Table DD-9

Household Income Trends by Neighborhoods, 2000-2006
Buckley Annex Market Study

	2000 Avg HH Income	2000 Index [1]	2006 Avg HH Income	2006 Index [1]	2000-2006 Change	2000-2006 Ann. %
Neighborhood						
East Colfax	$36,847	66.9	$44,920	66.5	$8,073	3.4%
Montclair	$71,209	129.3	$92,953	137.5	$21,744	4.5%
Hilltop East	$83,543	151.7	$100,359	148.5	$16,816	3.1%
Lowry	**$76,537**	**138.9**	**$100,488**	**148.7**	**$23,951**	**4.6%**
Washington Virginia Vale	$54,553	99.0	$62,762	92.9	$8,209	2.4%
Windsor	$50,237	91.2	$56,408	83.5	$6,170	1.9%
Household Average Income	**$55,132**	**100.1**	**$66,846**	**98.9**	**$11,714**	**3.3%**

[1] Note: City of Denver Average HH Income = 100.

Source: Claritas; Economic & Planning Systems

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Housing Construction

Housing start activity in 2006 was down considerably over the previous year in the metropolitan area and the nation as a whole, but remained strong in Denver, as shown in **Table DD-10**. An estimated 16,376 building permits were issued in 2006 across the entire metropolitan area, a reduction of approximately 23 percent from 2005. Single family detached permits were down by approximately 36 percent. Only multifamily building permits increased in 2006 over its 2005 level.

Table DD-10

Denver Metro Building Permits by Type, 2000-2005
Buckley Annex Market Study

	2000	2001	2002	2003	2004	2005	2006	Average 2000-2006
Denver Metro Area								
Single Family Detached	17,738	16,414	15,511	14,802	19,069	17,903	11,431	16,124
Single Family Attached	764	634	715	393	374	471	206	508
Multifamily	10,957	13,157	8,062	3,059	3,108	2,953	4,739	6,576
Total	**29,459**	**30,205**	**24,288**	**18,254**	**22,551**	**21,327**	**16,376**	**23,209**

Source: US Census C40 Series; Economic & Planning Systems

I:\Data\Denver Metro Statistics\[C40 Metro.xls]Permit #s

Denver County continued its recent trend for strong housing construction growth, as shown in **Table DD-11**. There were 1,691 single-family units permitted in 2006 versus the average of 1,480; there were 257 duplex units permitted versus the average of 210; and there were also 1,691 multifamily units permitted, slightly lower than the average of 1,998. In 2006, Denver accounted for 20.6 percent of the metropolitan area total, up from 15.5 percent in 2005.

Between 2000 and 2006 Denver permitted an average of 3,700 residential units annually. Nearly 54 percent of residential units built annually were constructed as multifamily units, with an annual average of approximately 2,000 units.

Table DD-11

Denver Building Permits by Type, 2000-2006
Buckley Annex Market Study

Year	Single Family #	Single Family % Total	Two Family #	Two Family % Total	Multi-Family #	Multi-Family % Total	Total
2000	1,348	35%	279	7%	2,243	58%	3,870
2001	1,006	33%	266	9%	1,768	58%	3,040
2002	1,555	32%	194	4%	3,170	64%	4,919
2003	1,444	45%	119	---	1,673	52%	3,236
2004	1,444	38%	167	4%	2,189	58%	3,800
2005	1,875	57%	186	6%	1,250	38%	3,311
2006	1,691	46%	257	7%	1,691	46%	3,639
Total	**8,672**	**39%**	**1,211**	**5%**	**12,293**	**55%**	**22,176**
Average	**1,480**	**40%**	**210**	**6%**	**1,998**	**54%**	**3,688**

Source: City and County of Denver, Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-HousingDemandAnalysis.xls]Denver Demand

Population and Household Forecasts

The Denver Regional Council of Governments (DRCOG) manages a detailed model used to forecast regional growth within the Denver metropolitan area. The Lowry Market Area is projected to grow between 2010 and 2030 from a population of 57,246 to 65,338, an annual average increase of 0.7 percent. The annual increase in population for the market area is projected to be 405 or less than 1 percent of the Denver metro total of 48,953 per year, as shown in **Table DD-12**.

Table DD-12
Population and Household Forecasts, 2010-2030
Buckley Annex Market Study

Place	2010	2020	2030	2010 - 2030 Change Annual	Total	Ann. Avg.
Neighborhood Trade Area						
Population	57,246	61,089	65,338	405	8,092	0.7%
Households	27,131	28,952	30,966	192	3,835	0.7%
% of Metro Area	2.0%	1.8%	1.7%			
Regional Trade Area						
Population	212,184	225,020	239,667	1,374	27,484	0.6%
Households	101,570	108,201	115,695	706	14,125	0.7%
% of Metro Area	7.5%	6.8%	6.2%			
Denver Metropolitan Area [1]						
Population	2,841,098	3,320,473	3,850,616	48,953	1,223,822	1.5%
Households	1,127,475	1,329,725	1,554,959	20,685	517,117	1.6%

[1] Defined as the seven county area, including: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson

Source: DRCOG; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-TPI&Sales.xls]Growth

Housing Demand Forecast

The DRCOG model is based on a regional control total and an allocation by county. It is considered the most accurate source at the county level. The agency, which is also the metropolitan planning organization (MPO) responsible for transportation planning, also allocates growth down to the traffic analysis zone (TAZ) level based partially on development capacity from a land use model. The data is less reliable at this level for development forecasts. EPS typically reviews the small area forecasts but also considers historical construction activity as an additional factor in developing its forecasts at the market level.

Considering the DRCOG population and household estimates as the foundation, a housing demand forecast was developed by product type for the City and County of Denver. The housing demand analysis considers the time period between 2010 and 2030 and apportions the household growth to four product types, including: single family detached, single family attached, multifamily for-sale and apartments. The development potential for the Buckley Annex site was estimated with historic construction activity and absorption as additional inputs.

DRCOG projects the City and County of Denver will grow by nearly 70,000 households between 2010 and 2030, reaching a total of approximately 337,000 households in 2030, as shown in **Table DD-13**. Assuming a stabilized vacancy rate of 5.0 percent, the estimated growth in households translates to approximately 73,000 households. These housing units have been apportioned to the four product types on a net new basis and therefore, constitute the total estimated demand for new housing units. The estimate of demand assumes that the distribution between unit types will follow historic building permit trends.

Table DD-13
Housing Demand Forecast, 2010-2030
Buckley Annex Market Study

Denver County	Factor	2010	2020	2030	2010 - 2020 Housing Demand Total #	2010 - 2020 Housing Demand Annual #	2020 - 2030 Housing Demand Total #	2020 - 2030 Housing Demand Annual #
Housing Demand Forecast								
Households	---	266,829	299,951	336,514	33,123	3,312	36,563	3,656
Required Housing Units	5%	280,872	315,738	354,225	34,866	3,487	38,487	3,849
Housing Unit Forecast								
Single Family Detached	40.0%	112,349	126,295	141,690	13,946	1,395	15,395	1,539
Single Family Attached	6.0%	16,852	18,944	21,254	2,092	209	2,309	231
Condo	30.0%	84,262	94,721	106,268	10,460	1,046	11,546	1,155
Apartment	24.0%	67,409	75,777	85,014	8,368	837	9,237	924
Total	**100.0%**	**280,872**	**315,738**	**354,225**	**34,866**	**3,487**	**38,487**	**3,849**

Source: DRCOG; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-HousingDemandAnalysis.xls]Denver Demand

An estimated 40 percent of the total new units are projected to be single family detached units, with 6 percent single family attached units (e.g., townhomes, duplexes, etc.), and 54 percent distributed between owner- and renter-occupied multifamily units. These forecasts assume that more owner-occupied multifamily units are constructed between 2010 and 2030 than renter-occupied units (55 percent owner- and 45 percent renter-occupied) for a total of 30 percent of estimated growth as owner-occupied versus 24 percent as renter-occupied multifamily units. The result is a demand for an average of 2,000 multifamily residential units annually between 2010 and 2030.

According to LRA inventory, there was an average of 520 units built per year in the 1999 to 2006 time period in the Lowry neighborhood, as shown in **Table DD-14.** This represents approximately 14 percent of historic building activity (3,700 units annually between 2000 and 2006) in the city as a whole. Of the nearly 520 units constructed annually approximately 62 percent were for-sale and 38 percent were for-lease.

Table DD-14
Lowry Redevelopment Construction Activity, 1999-2006
Buckley Annex Market Study

Neighborhood	For-Lease [1]	For-Sale	Total
Northwest	---	807	807
Southwest	1,014	633	1,647
Town Center	385	527	912
West	---	282	282
Total	**1,399**	**2,249**	**3,648**
Percent of Total	**38%**	**62%**	**100%**
Annual Activity	**200**	**320**	**520**

[1] Includes Market Rate and Senior Housing Apartments

Source: Lowry Redevelopment Authority; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-LowryDevInventory.xls]Res Const Activity

Capturing 10 percent of the DRCOG Denver forecasts would translate to approximately 350 units per year at Lowry. This represents a low baseline figure as shown in **Table DD-15**. On the high end, demand could continue at the current development pace of approximately 520 units per year if sufficient land and product were available. In the next section the competitive development activity is analyzed to develop a bottom up approach to demand.

Table DD-15

Residential Development Potential, 2010-2020
Buckley Annex Market Study

		2010-2020 Total			Annual		
Model	**Factor**	**For-Lease**	**For-Sale**	**Total**	**For-Lease**	**For-Sale**	**Total**
DRCOG Forecast							
Denver County		18,142	16,724	34,866	1,814	1,672	3,487
Lowry Market Area	10%	1,814	1,672	3,487	181	167	349
Tenure Distribution		52%	48%		52%	48%	
Construction Activity							
Lowry Market Area		2,000	3,200	5,200	200	320	520
Tenure Distribution		38%	62%		38%	62%	

Source: DRCOG; City and County of Denver; Lowry Redevelopment Authority; Economic & Planning Systems

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Residential Development

This section of the report reviews competitive residential development trends in Denver with a focus on the Lowry Market Area. The competitive projects are tabulated by neighborhood and include sales prices, absorption, and volume for the for-sale market and lease rates, unit mix, unit size, and vacancy for apartment projects. The section includes a brief overview of planned and proposed competitive projects as an input to determining the recommended product mix and pricing at the Buckley Annex redevelopment site.

Residential Sales Market

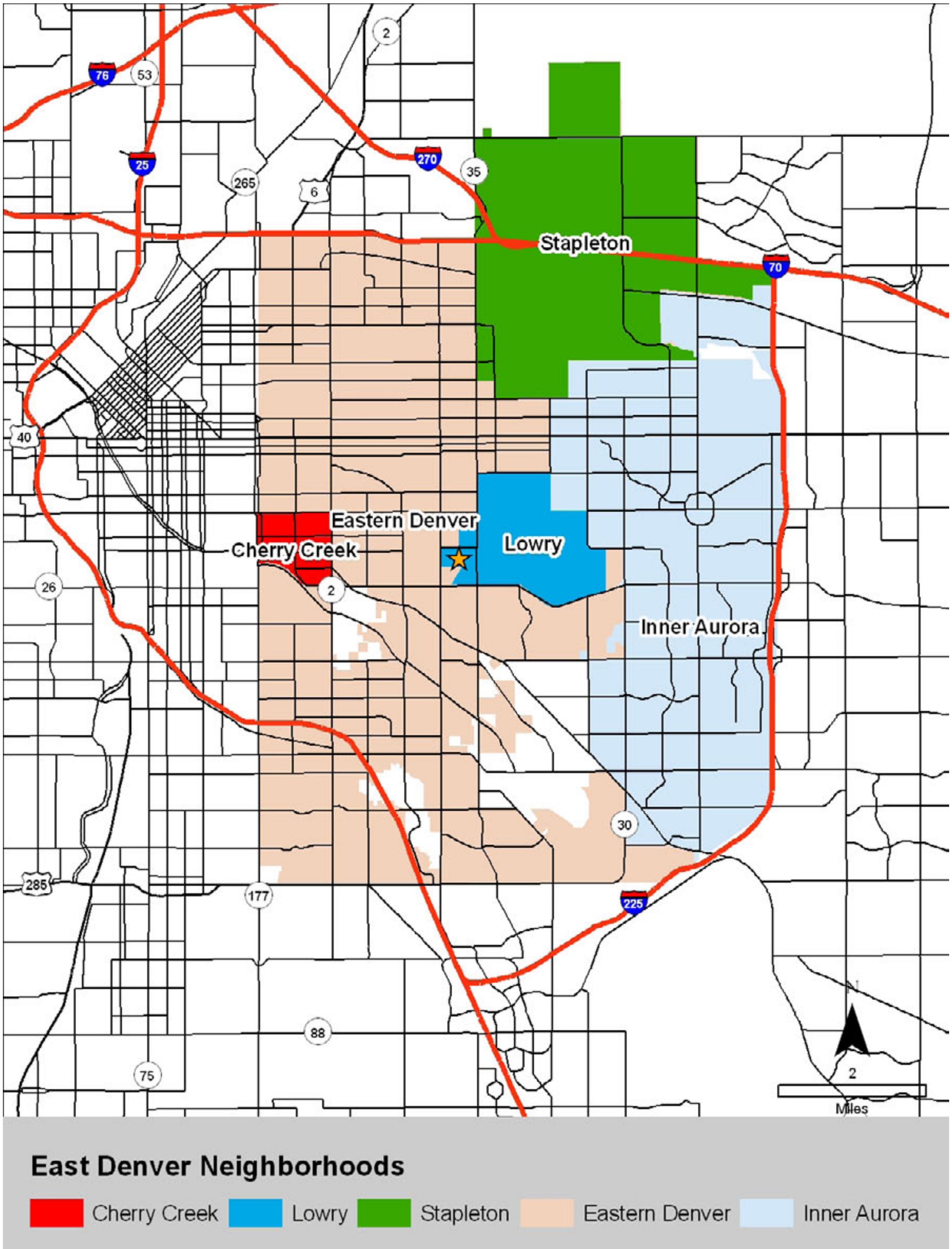
Although the Lowry neighborhood under development by the LRA is building out, there are other competitive areas that will come on line over the next 20 to 25 years. The ability of the Buckley Annex site to capitalize on this trend will depend on the position the residential development takes in the larger competitive market. **Figure DD-4** identifies the competitive market area used in the for-sale residential market analysis. These neighborhoods were chosen because of their high level of development activity and their proximity to the Buckley Annex site as described below.

- **Stapleton –** A 4,700-acre mixed-use development project under development by Forest City Stapleton on the former Stapleton International Airport property in the northeast portion of the City and County of Denver. The Peter Calthorpe-designed Stapleton Development Plan was approved for a total of 12,000 housing units, 3.0 million square feet of retail space, and 10.0 million square feet of office and industrial uses. The site is adjacent to industrial development areas and lower income neighborhoods. The project's vision is to establish a mixed-use development incorporating the principles of new urbanism. The project has been highly successful since development began in late 2002. There are about 2,000 occupied homes and nearly 2.0 million square fee of retail space.
- **Lowry –** A 1,866-acre mixed-use infill development of the former Lowry Air Force Base. In 1991 the BRAC listed the Air Force Base for closure. By 1994 the base closed and the Lowry Redevelopment Authority was created to manage the redevelopment of the site. The new neighborhood now houses approximately over 4,000 homes with approximately 9,500 residents. Lowry has over 100 employers with approximately 7,000 workers, and provides nearly 140,000 square feet of retail shopping.
- **Cherry Creek –** This central Denver neighborhood has undergone significant reinvestment over the past 25 years. The Cherry Creek North neighborhood has become a premier infill area of townhouses and condominiums largely occupied by empty nesters and other groups attracted to the 16 block Cherry Creek North Business District, the largest specialty retail district in the city. The Cherry Creek Shopping Center was redeveloped in 1989 as a major regional mall encompassing

1.0 million square feet of retail space. The addition of the mall coincided with the rezoning of much of the adjoining Cherry Creek East neighborhood. The result has been significant additional townhouse and condominium development east of the shopping center between Steele and Colorado Boulevard.

- **East Denver –** East Denver includes the portion of the city contained within the boundaries of University to the west, Hampden to the south, I-70 to the north, and the city boundary to the east. This area includes a number of older Denver neighborhoods (including Congress Park, Hilltop, Park Hill, Montclair, and University Park) that have undergone significant reinvestment, primarily in the form of renovations and expansions of existing homes or new homes built on scrape off lots.
- **Northwest Aurora –** This portion of Aurora, bounded by the city boundary on the west, I-70 on the north, I-225 on the east, and Hampden on the south, constitutes the core of the inner suburban ring on the east side of the metropolitan area. Aside from a few redevelopment projects, including the former Fitzsimons Army Medical Center and infill along Colfax, this area has steadily declined over recent years.

Figure DD-4
East Denver Neighborhoods
Buckley Annex Market Study

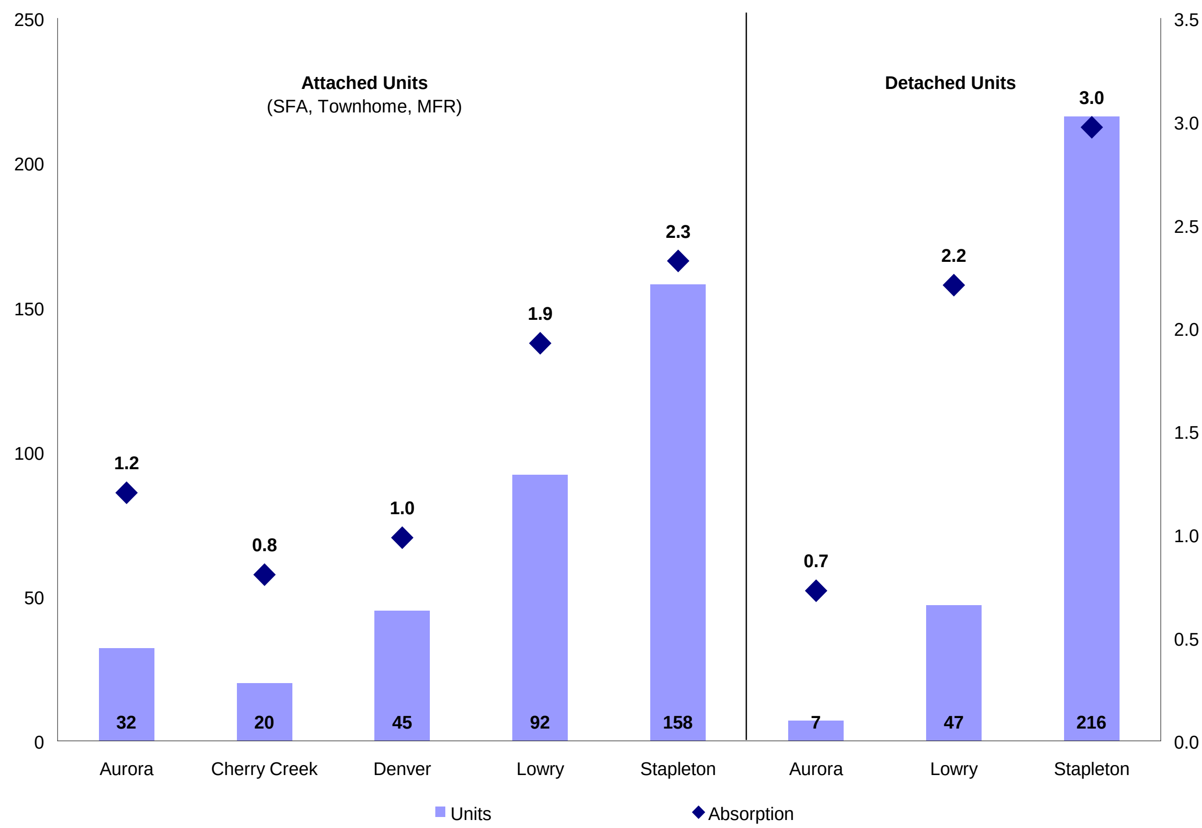


For-Sale Housing

During 2006, nearly 600 new residential units were sold at over 50 competitive development projects within the market area defined above. These projects provide a representative sample of the residential development occurring within the market area. Lowry and Stapleton contain the vast majority of these units, as shown in **Figure DD-5**. Monthly absorption has been strongest amongst detached product in Stapleton; however, absorption of attached product has been strong within Stapleton and Lowry as well.

Figure DD-5

New Construction Sales Volume, 2006
Buckley Annex Market Study



The volume and pace of sales of various housing products is a function in part of its pricing. Cherry Creek contains the highest sales price for attached residential product at $432 per square foot; the proximity of Cherry Creek to downtown and the presence of shopping and dining combine to drive prices higher in this neighborhood. On average, Lowry and Stapleton have averaged approximately $200 per square foot for attached product and $220 per square foot for detached product, as shown in **Figure DD-6**. The average prices presented for Lowry and Stapleton include affordable housing projects, which affect the average.

Figure DD-6

Average Sales Price per Square Foot, 2007
Buckley Annex Market Study

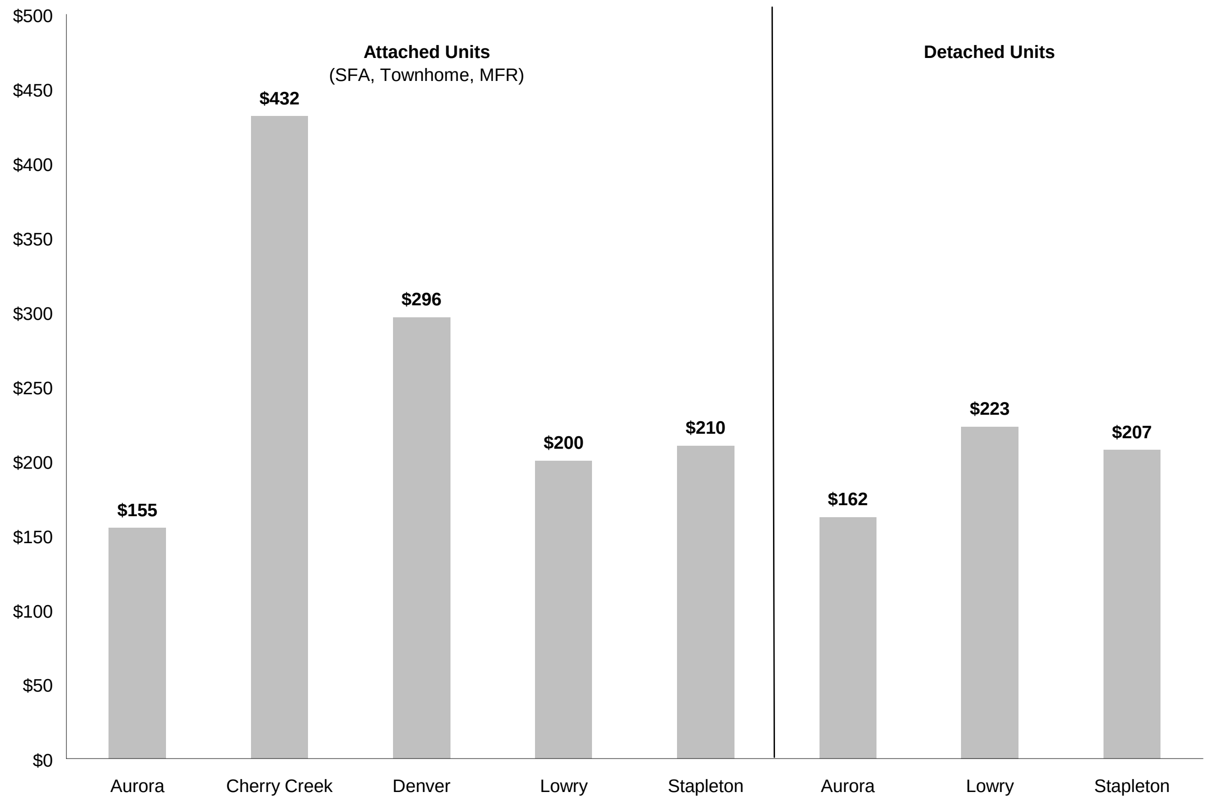
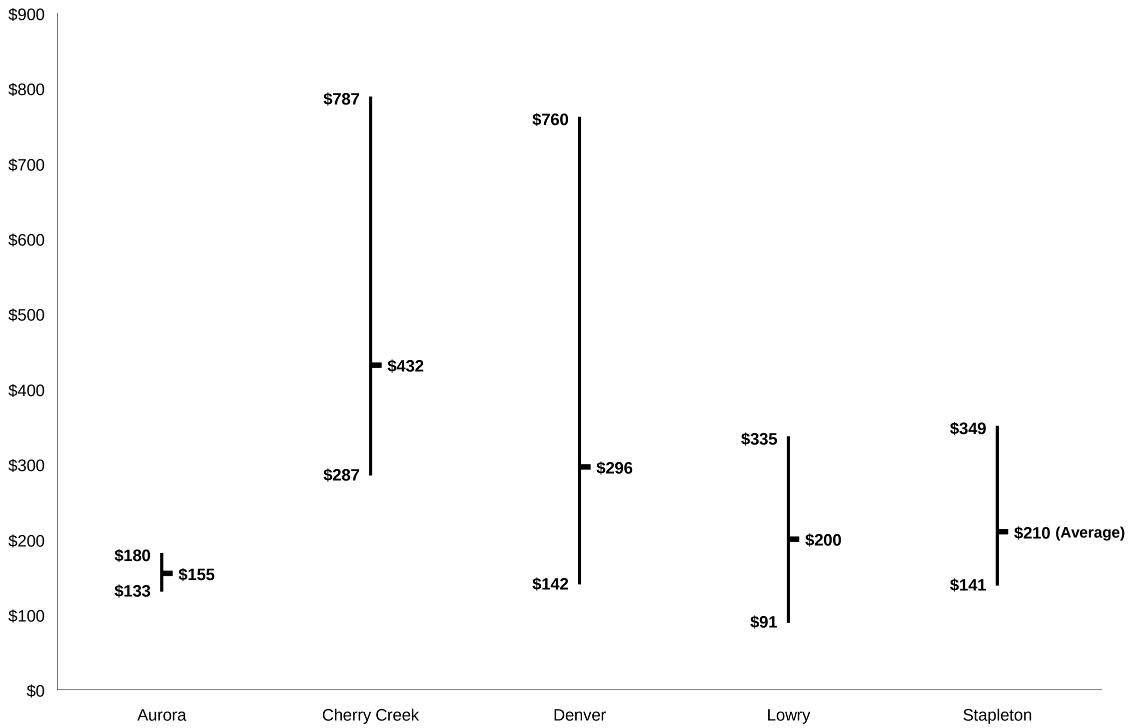


Figure DD-7 illustrates the diversity of the attached products offered in each of the areas. The variation in price per square foot spans about $200 in Lowry and Stapleton (including affordable housing projects at the low end of the range). The average price per square foot is $200 at Lowry and $210 at Stapleton. By contrast, the range of housing in Cherry Creek and other Denver neighborhoods spans a greater range reflecting the diversity of product as well as age of housing. Average prices at $432 per square foot for Cherry Creek and $296 per square foot for other Denver neighborhoods illustrate the price advantage of both Lowry and Stapleton for buyers looking to maximize the size of house they can buy. By comparison, the nearby portions of Aurora are substantially lower priced with a range from $133 to $180 per square foot and an average of $155 per square foot.

Figure DD-7
Multifamily Sales Price per Square Foot Range, 2007
Buckley Annex Market Study



The volume of home sales was tracked from County assessor data. The data primarily represents existing home sales, although some new homes are also included. The total residential sales volume for Denver approached 18,000 in 2005, as shown in **Table DD-16**. Approximately 1,300 of these sales occurred within the Lowry Market Area or 7.4 percent. The average sales price in the Lowry neighborhood (excluding custom homes) was $350,000, which is approximately 30 percent higher than the city as a whole at $270,000. The Lowry neighborhood accounted for 32 percent of the sales, twice the amount of the next highest neighborhood, Windsor, at 16 percent as shown.

Table DD-16
Average per Unit Sales Price, 2005
Buckley Annex Market Study

	2005	
	$	#
Lowry Market Area		
East Colfax - North	$156,104	102
East Colfax - South	$153,413	87
Hilltop	$737,088	154
Hilltop - 6th Avenue	$652,345	17
Hilltop Downs	$382,000	1
Lowry	$350,080	425
Lowry Custom	$766,250	2
Montclair	$347,318	99
Virginia Vale	$181,825	168
Washington	$239,236	53
Windsor	$90,799	204
Subtotal	**$305,414**	**1,312**
City and County of Denver	**$271,379**	**17,838**

Source: Denver County Assessor; Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-CleanAssessor.xls]AVGpu

Lowry Redevelopment Residential Market

In April 1996, the Lowry Redevelopment Authority began a 30-month long infrastructure project to prepare the former Air Force Base for redevelopment. This significant public investment stimulated private development. The residential development began to attract young married couples with children or anticipating children that worked downtown. These residents were looking for larger homes with yards without a suburban commute time. The first residents moved into the neighborhood in 1998. As of 2006, the neighborhood has reached an estimated 4,000 homes with approximately 9,500 residents.

Redevelopment continues at Lowry with approximately 80 percent of the project built-out; its anticipated completion date is 2009 (excluding the Buckley Annex site). Nearly 2,250 of the units were constructed as for-sale units including single family and multifamily, as shown in **Table DD-17**. Multifamily units account for approximately 49 percent of the total with single family accounting for the remaining 51 percent. The largest share of for-sale units were constructed as urban lot detached units, accounting for 32 percent.

Lowry has developed into four distinct neighborhoods to date within the larger Lowry community. Three of these neighborhoods have a residential emphasis and the fourth, the Town Center, offers a mixed-use activity node for the entire neighborhood. The northwest neighborhood is the most recently constructed and contains 36 percent of all the for-sale residential units. The original southwest neighborhood also contains nearly a third of the for-sale residential units at 28 percent or approximately 633 units. The town center and west neighborhoods combined contain the remaining third. (The east neighborhood, with 600 units planned including for-sale and for-lease, is now being built.)

Table DD-17

Lowry Redevelopment For-Sale Housing Inventory
Buckley Annex Market Study

	Neighborhoods				All Neighborhoods	
Product	North West	South West	Town Center	West	Total	Percent
Multifamily						
Condo/Loft	174	---	480	---	654	29.1%
Duplex	34	---	---	---	34	1.5%
Town/Rowhome	12	188	30	188	418	18.6%
Subtotal	**220**	**188**	**510**	**188**	**1,106**	**49.2%**
Percent of Subtotal	19.9%	17.0%	46.1%	17.0%	100.0%	
Single Family						
Patio Home	65	83	---	---	148	6.6%
Urban Lot Detached	435	180	7	94	716	31.8%
Large Lot Semi-Custom	29	101	---	---	130	5.8%
Large Lot Custom	58	81	10	---	149	6.6%
Subtotal	**587**	**445**	**17**	**94**	**1,143**	**50.8%**
Percent of Subtotal	51.4%	38.9%	1.5%	8.2%	100.0%	
Total	**807**	**633**	**527**	**282**	**2,249**	**100.0%**
Percent of Total	35.9%	28.1%	23.4%	12.5%	100.0%	

Source: Lowry Redevelopment Authority; Economic & Planning Systems

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An additional 1,940 apartment, senior housing, and transitional housing units have been constructed in the four neighborhoods, as shown in **Table DD-18**. Market rate apartment units account for 67 percent of the total.

The LRA has provided a significant amount of senior and transitional housing, primarily through the conversion of former military buildings. Senior housing accounts for 8.4 percent of all housing units and affordable/transitional housing accounts for 6.6 percent. Combined, these two housing types account for 14 percent of total housing stock in the larger Lowry neighborhood.

Table DD-18

Lowry Redevelopment Rental Inventory
Buckley Annex Market Study

Use	Total Units	Percent
Market Rate	1,307	67%
Senior Housing	353	18%
Affordable/Transitional Housing	279	14%
Total	**1,939**	**100%**

Source: Lowry Redevelopment Authority; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-LowryDevInventory.xls]Rental Inv

The density within the three residential neighborhoods spans a broad range from 3.6 to 7.6 dwelling units per acre on a gross basis, as shown in **Table DD-19**. These densities are indicative of a traditional neighborhood design (TND) with relatively small lots and front setbacks and alley loaded garages. The west neighborhood includes a proportionally higher number of multifamily units than either of the other two residential neighborhoods and, therefore, has a higher overall gross density.

Table DD-19

Lowry Redevelopment Densities
Buckley Annex Market Study

	Dwelling Units	Acres	Density (DUs/Acre)
Neighborhoods			**Gross**
Northwest	1,010	225.00	4.5
West	282	37.00	7.6
Southwest	633	177.50	3.6
Projects			**Net**
AMLI Apartments	1,014	46.85	14.8
Grand Lowry Lofts	261	6.82	38.3
Officers' Row Lofthomes	108	5.09	21.2
Promenade Townhomes	140	9.40	14.8

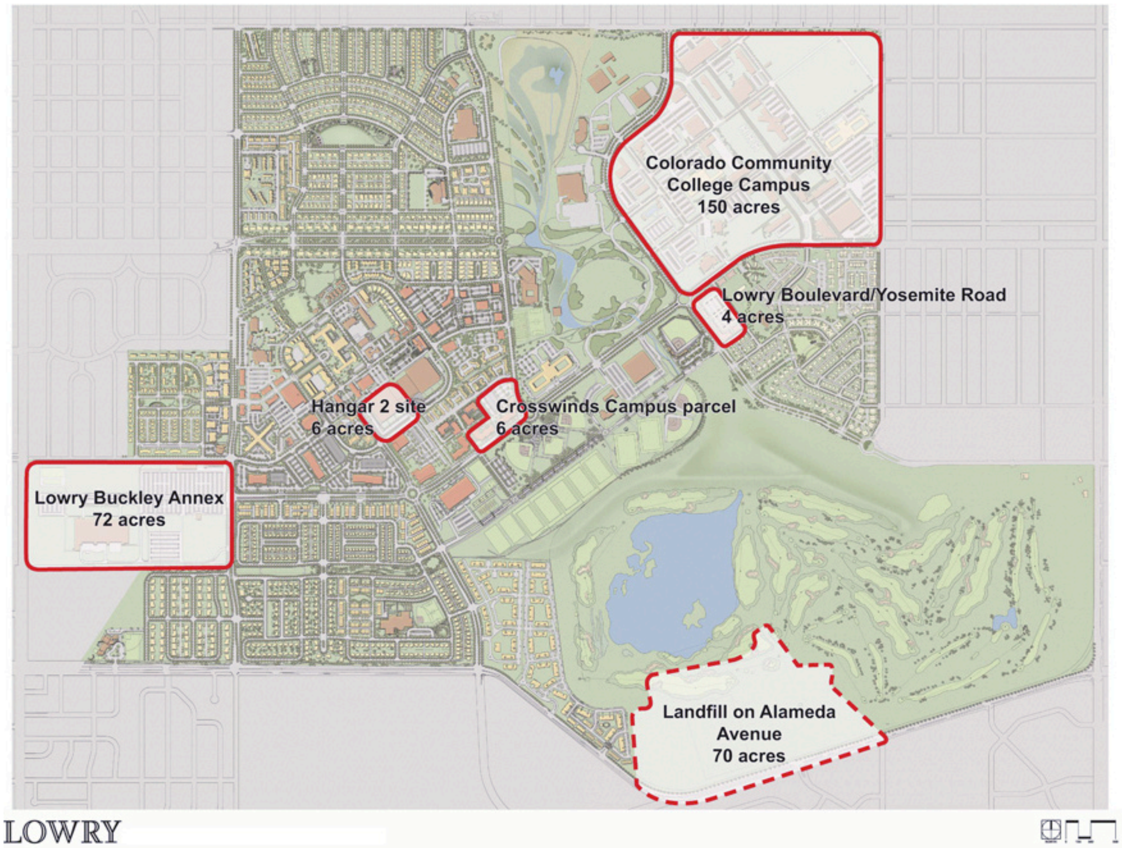
Source: Lowry Redevelopment Authority

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-LowryDevInventory.xls]LRA Density

Outstanding Infill Sites

The Lowry redevelopment area is approaching buildout. There are several major redevelopment projects remaining within the former Air Force Base, aside from the Buckley Annex site. These projects, shown on **Figure DD-8,** are briefly described below.

Figure DD-8
Lowry Redevelopment Outstanding Infill Sites
Buckley Annex Market Study



Source: Design Workshop

These projects are briefly described below:

- **Lowry East Neighborhood –** The last major residential development on land owned by the LRA, the neighborhood is planned as largely residential. The plan calls for approximately 212 condominium units, 72 townhomes, 120 transitional apartments, and nearly 200 single family detached units for a total of approximately 600 units.
- **CCCS Campus –** The Colorado Community College System (CCCS) campus occupies approximately 150 acres of land in the northeastern corner of the former Air Force Base. The center has plans to enter into a public private partnership to develop approximately 80 acres of land as a mixed-use neighborhood. The development would be leveraged to construct approximately 800,000 square feet of new classroom space. No specific plans have been issued for the project.
- **IRG Landfill Site –** The approximately 70-acre site was recently sold

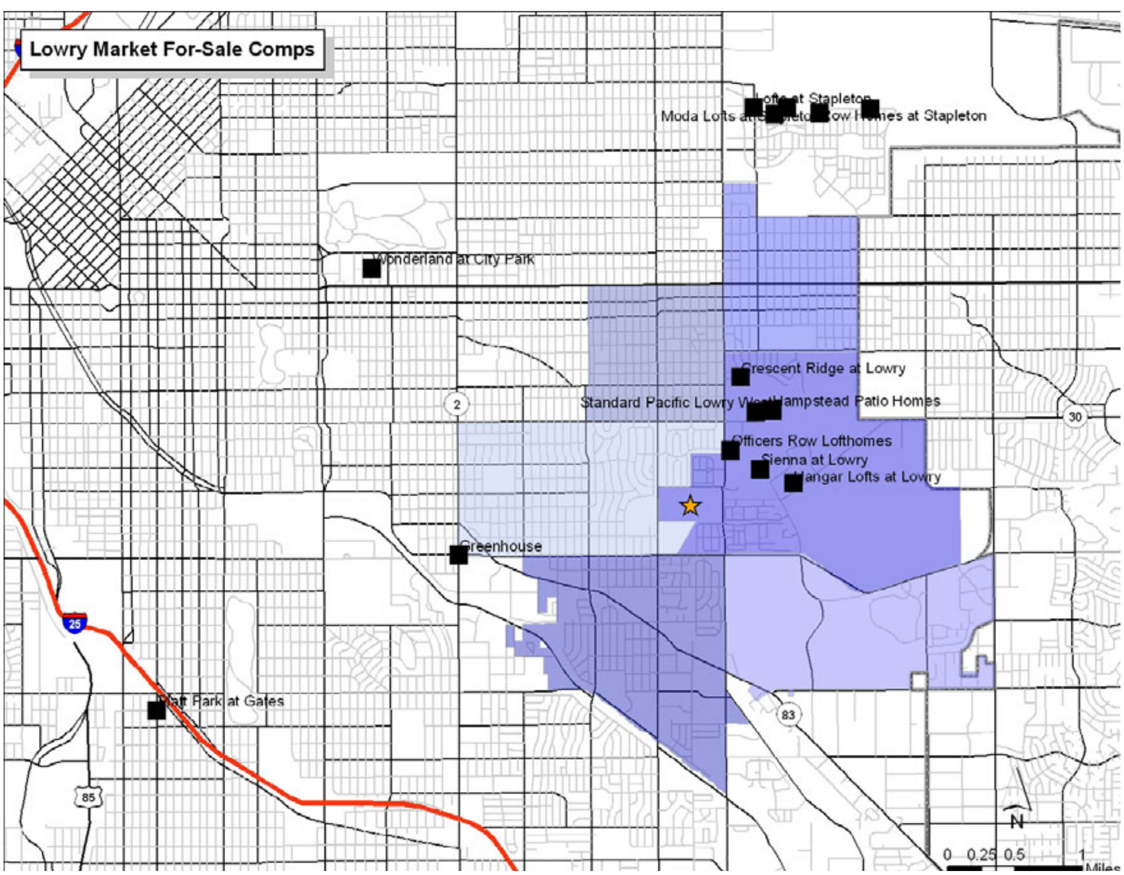
to IRG because it is responsible for the long-term maintenance of the passive cap protecting the former landfill. IRG has contemplated the redevelopment of the site into a mixed-use project. No specific plans have been issued for the project.

- **Other Projects –** There is approximately 16-acres of additional developable land.
  over three parcels. These parcels are distributed throughout the site. The parcels are in various stages of development. All three parcels are anticipated to develop before 2009.

Competitive For-Sale Market

A proportionate number of attached and detached products as well as duplexes, townhouses, multifamily and single family are used to look at a possible range of product pricing and sales absorption capabilities. For the Lowry and Stapleton areas, most of the competitive projects come from the Stapleton and Lowry neighborhoods, as shown in **Figure DD- 9**. However, several projects come from other Denver locations outside the market area. These additional projects provide a reference point for higher density and urban infill residential development. Additional information is provided in a subsequent section on competitive infill projects.

Figure DD-9
Competitive Residential For-Sale Projects
Buckley Annex Market Study



The project specifications were gathered on all active and recently closed (last 12 months) competitive project within the market area. The approximately 50 projects provided a basis for understanding the competitive for-sale market influencing the ability of the Buckley Annex site to develop residential for-sale product. From the full dataset, 14 projects were selected because they provided the most direct comparison to anticipated development on the Buckley Annex site, as shown in **Table DD-20** and summarized below.

Single Family Detached

There are six single family products profiled at Lowry and Stapleton. The Standard Pacific single family detached units in Lowry capture the highest absorption at 3.5 units sold per month since the project opened in 2004. The project is the lowest priced detached project currently available at Lowry with an average price of $381,500 and has an average square footage of 1,717 and an average price per square foot of $235. The competitive products at Stapleton, including Town and Country, Town Square, KB Homes and Infinity are also averaging 3 to 4.7 sales per month, as shown.

Townhomes

There are four townhome products profiled at Lowry and Stapleton. The Rowhomes at Stapleton built by McStain have captured the highest absorption at 4.1 units sold per month since the project opened in 2002. The project offers a wide range of prices with an average of $307,150 and has an average square footage of 1,540 for an average price per square foot of $196. The Crescent Ridge at Lowry, also by McStain, is competitively priced and averages 3.0 sales per month as shown. The remaining townhome products cater to an upscale market and, therefore, are more expensive at $243 and $273 per square foot on average. Absorption for these projects is diminished at 0.8 and 1.4 sales per month.

Duplexes

Three duplex or patio home product have been profiled from Lowry, Stapleton, and central Denver. The Paired Homes at Stapleton built by John Laing have captured the highest absorption at 2.8 units sold per month since the project opened in 2004. The project is the lowest priced duplex or patio home product profiled with an average price of $434,700 and an average square footage of 2,141 for an average price per square foot of $197. The remaining two projects have captured lower absorption rates of 0.9 and 1.0 sales per month. These more expensive products sell for $211 and $268 per square foot.

Condominiums

There are six condominium products profiled at Lowry, Stapleton, and central Denver. The Hanger Lofts at Lowry condominium units capture the highest absorption at 2.8 units sold per month since the project opened in 2006. The project is the lowest priced condominium project currently available at Lowry with an average price of $257,200 and an average square footage of 968 for an average price per square foot of $259. The remaining competitive projects have experienced diminished absorption ranging from 0.4 to 1.6 units sold per month. All but one of the projects is more expensive than the Hanger Lofts, ranging in sales price from $216 to $340 per square foot.

Table DD-20
Competitive Multifamily For-Sale Projects
Buckley Annex Market Study

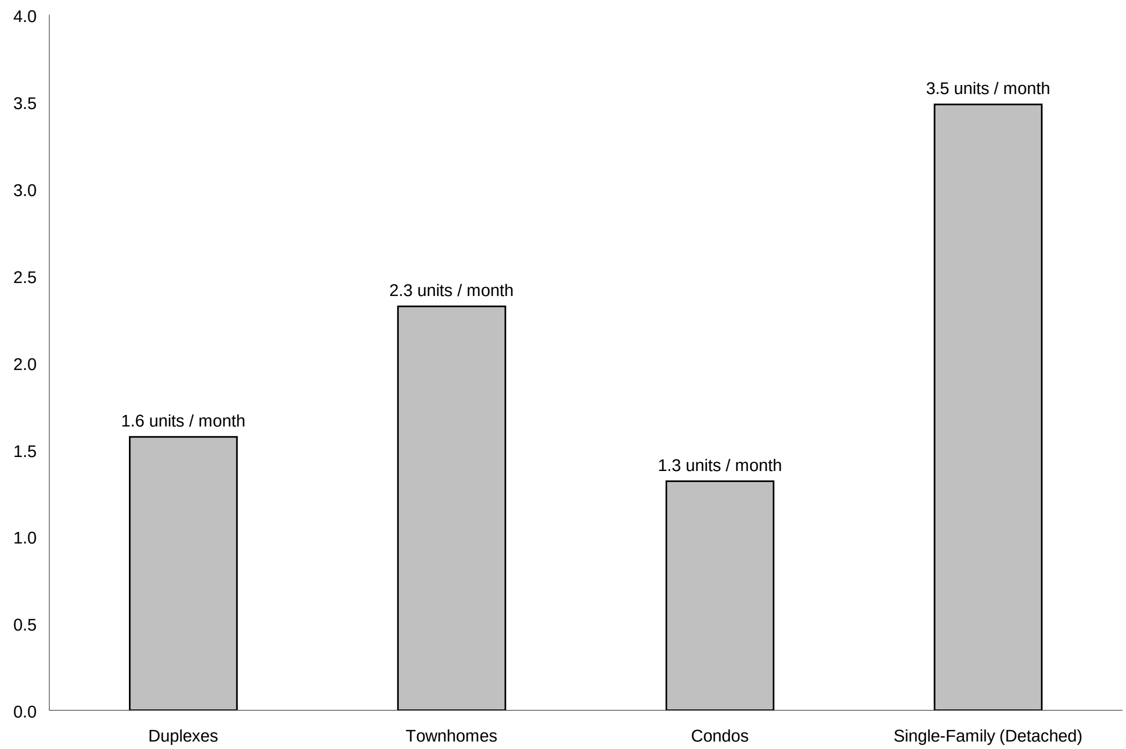
	Open	Minimum			Maximum			Average			
Type / Project	Year	$	$ / SF	SF	$	$ / SF	SF	$	$ / SF	SF	Absorption
Duplexes											
Platt Park at Gates Development	2006	$485,900	$254	1,724	$514,900	$282	2,030	$500,400	$268	1,877	1.0
Lowry Hampstead Patio Homes	2002	$494,500	$180	2,045	$599,500	$242	3,332	$547,000	$211	2,689	0.9
Paired Homes at Stapleton	2004	$381,900	$186	1,938	$487,500	$208	2,343	$434,700	$197	2,141	2.8
Subtotal		**$381,900**	**$180**	**1,724**	**$599,500**	**$282**	**3,332**	**$494,033**	**$225**	**2,235**	**1.6**
Townhomes											
Crescent Ridge at Lowry	2005	$249,000	$215	1,157	$329,900	$234	1,443	$289,450	$225	1,300	3.0
Lowry Officers' Row Lofthomes	1999	$310,000	$154	1,050	$349,000	$332	2,017	$329,500	$243	1,534	0.8
Row Homes at Stapleton	2002	$259,900	$175	1,346	$354,400	$218	1,733	$307,150	$196	1,540	4.1
Sky Terrace at Stapleton	2006	$539,900	$272	1,988	$619,900	$275	2,254	$579,900	$273	2,121	1.4
Subtotal		**$249,000**	**$154**	**1,050**	**$619,900**	**$332**	**2,254**	**$376,500**	**$234**	**1,624**	**2.3**
Condos											
Wonderland at City Park South	2005	$263,767	$236	830	$409,023	$318	1,449	$336,395	$277	1,140	1.5
Greenhouse	2000	$156,000	$231	644	$580,000	$399	1,454	$368,000	$315	1,049	0.8
Hangar Lofts at Lowry	2006	$223,500	$242	870	$290,900	$276	1,066	$257,200	$259	968	2.8
Sienna at Lowry	2006	$421,200	$318	1,296	$778,205	$335	2,323	$599,703	$326	1,810	0.8
The Lofts at Stapleton	2003	$180,000	$182	720	$349,936	$250	1,489	$264,968	$216	1,105	1.6
Moda Lofts at Stapleton	2005	$279,900	$331	820	$399,900	$349	1,146	$339,900	$340	983	0.4
Subtotal		**$156,000**	**$182**	**644**	**$778,205**	**$399**	**2,323**	**$361,028**	**$289**	**1,176**	**1.3**
Single-Family Units (Detached)											
Standard Pacific Lowry West	2004	$338,500	$205	1,367	$424,500	$264	2,066	$381,500	$235	1,717	3.5
Town & County at Stapleton	2002	$342,900	$155	1,812	$522,400	$219	2,927	$432,650	$187	2,370	3.1
Town Square at Stapleton	2002	$318,900	$181	1,554	$548,900	$224	2,853	$433,900	$203	2,204	3.2
Garden Courts at Stapleton	2002	$322,900	$205	1,182	$378,900	$274	1,836	$350,900	$239	1,509	3.3
Infinity Homes at Stapleton	2004	$529,900	$175	2,438	$648,750	$223	3,214	$589,325	$199	2,826	3.2
KB Homes at Stapleton	2002	$294,995	$162	1,556	$348,995	$190	2,153	$321,995	$176	1,855	4.7
Subtotal		**$318,900**	**$155**	**1,182**	**$548,900**	**$274**	**2,927**	**$399,738**	**$216**	**1,950**	**3.5**
Area Total		**$156,000**	**$154**	**644**	**$778,205**	**$399**	**3,332**	**$403,397**	**$241**	**1,723**	**2.3**

Source: Hanley Wood; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-HanleyWood.xls]Comps Summary

Figure DD-10 illustrates this absorption by product types within the selected competitive for-sale projects. Of the attached products, townhouses have been selling the fastest.

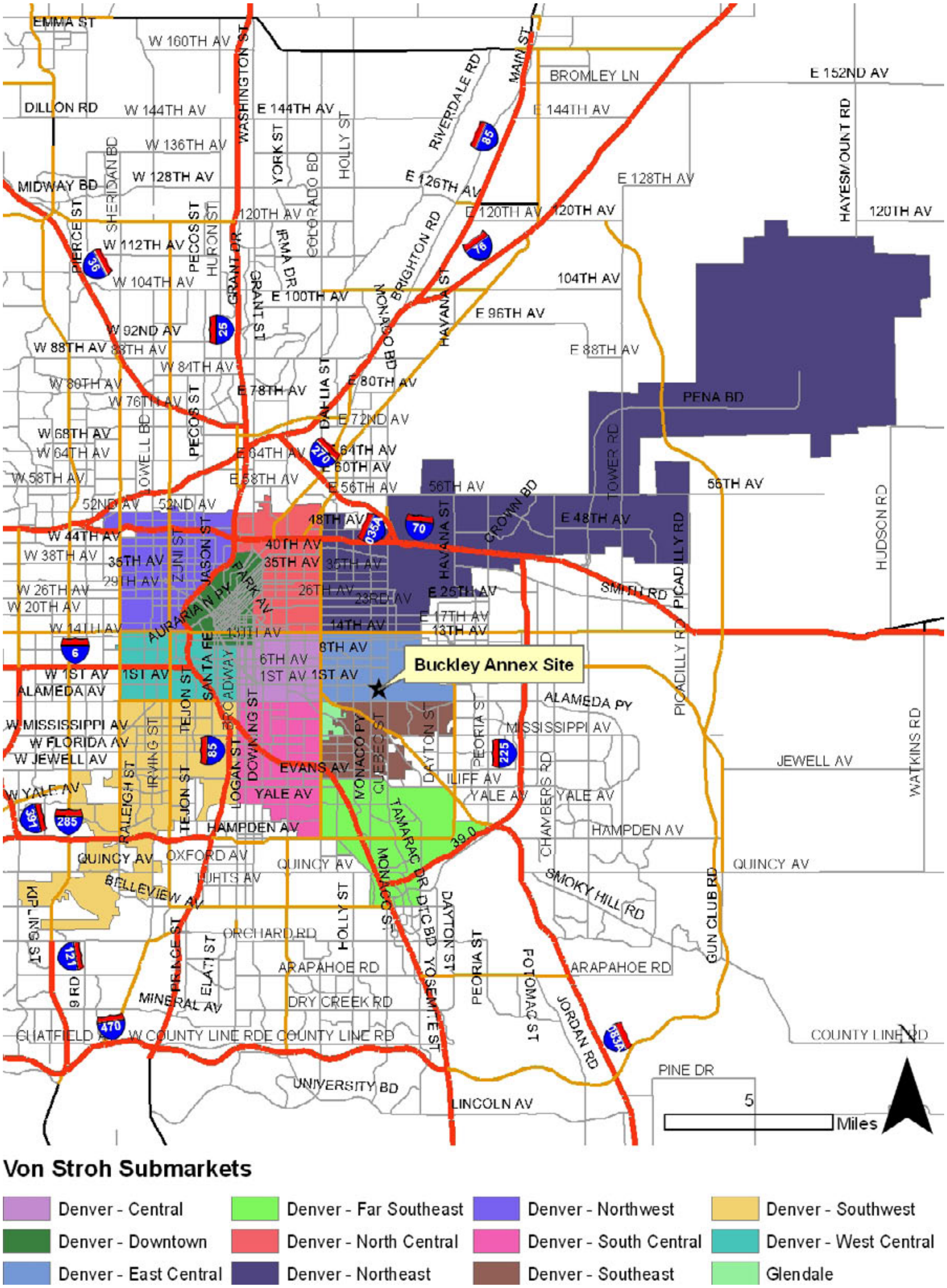
Figure DD-10
Competitive Multifamily For-Sale Absorption, 2007
Buckley Annex Market Study



Apartment Market
This section reviews current market conditions and recent development activity for multifamily for-rent housing. The data on current conditions is from the Von Stroh apartment survey. Data on competitive projects is from field research.

Rental Market Conditions
The competitive apartment market for the Buckley Annex site includes three eastern Denver subareas and two Aurora subareas. The five target market areas are Central Denver, Downtown Denver, and Denver Southeast, Aurora Central Northwest, and Aurora Central Southwest, as shown in **Figure DD-11**. These five areas encompass the competitive apartment market for the Buckley Annex site.

Figure DD-11
Regional Apartment Market Areas
Buckley Annex Market Study



Denver County has 25,715 apartment units and the market area has 14,237, as shown in **Table DD-21**. The proportions of apartment types in the Denver County are almost identical to the proportions of apartment types in the market area. Denver County has 50.8 percent one-bedroom apartments and 9.1 percent studios; the market area has 45.5 percent one-bedroom apartments and 2.0 percent studios.

Table DD-21
Denver County Apartment Mix, 2006 1st Quarter
Buckley Annex Market Study

Location	Studio	1 Bed	2 Bed 1 Bath	2 Bed 2 Bath	3 Bed	Other	All
Market Area							
Denver West Central	54	91	43	31	4	---	223
Denver Northeast	68	890	134	834	160	36	2,122
Denver Southeast	138	2,286	1,054	1,488	65	8	5,039
Aurora Central Northwest	6	1,026	210	597	116	12	1,967
Aurora Central Southwest	24	2,178	776	1,689	201	18	4,886
Subtotal	**290**	**6,471**	**2,217**	**4,639**	**546**	**74**	**14,237**
Percent of Total	2.0%	45.5%	15.6%	32.6%	3.8%	0.5%	
Denver County	**2,344**	**13,053**	**4,199**	**5,442**	**466**	**211**	**25,715**
Percent of Total	9.1%	50.8%	16.3%	21.2%	1.8%	0.8%	

Source: Denver Area Apartment Vacancy and Rent Survey; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-VonStroh.xls]Unit Mix

Table DD-22 shows the differences between the vacancy rates of the various apartment types in the market area, as defined by the five survey subareas, and the Denver County average. With the exception of the vacancy rate for studio apartments in Aurora Central Southwest, the rates are lower in the market area than in Denver County, particularly for three-bedroom apartments.

Table DD-22

Denver County Apartment Vacancy, 2006 1st Quarter
Buckley Annex Market Study

Location	Studio	1 Bed	2 Bed 1 Bath	2 Bed 2 Bath	3 Bed	Other	All
Market Area							
Denver West Central	6.5%	7.0%	9.8%	5.3%	3.4%	6.4%	7.1%
Denver Northeast	6.9%	5.3%	1.9%	---	---	0.0%	4.3%
Denver Southeast	6.5%	7.0%	12.5%	7.9%	8.5%	0.0%	8.4%
Aurora Central Northwest	8.7%	6.5%	10.8%	8.8%	12.7%	8.3%	8.0%
Aurora Central Southwest	40.0%	7.3%	9.9%	8.5%	15.4%	0.0%	8.8%
Average	**13.7%**	**6.6%**	**9.0%**	**7.6%**	**10.0%**	**2.9%**	**7.3%**
Denver County	**7.1%**	**6.9%**	**9.7%**	**8.0%**	**18.5%**	**5.7%**	**7.8%**

Source: Denver Area Apartment Vacancy and Rent Survey; Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-VonStroh.xls]Vacancy Rates by Type

Table DD-23 displays the monthly rents by apartment type and location. The overall average rent in the Lowry Market Area is $676, $110 per month less than the average for Denver County. In the market area, rents for the studio and one-bedroom apartments are similar, but both varieties of two-bedroom apartments and three-bedroom apartments are much less expensive than the County average.

Table 23

Denver County Apartment Rent, 2006 1st Quarter
Buckley Annex Market Study

Location	Studio	1 Bed	2 Bed 1 Bath	2 Bed 2 Bath	3 Bed	All
Market Area						
Denver West Central	$480	$578	$617	---	$802	$565
Denver Northeast	$404	$557	$606	---	---	$561
Denver Southeast	$534	$726	$864	$1,073	$1,607	$867
Aurora Central Northwest	$561	$552	$645	$750	$943	$630
Aurora Central Southwest	$485	$664	$756	$850	$855	$756
Average	**$493**	**$615**	**$698**	**$891**	**$1,052**	**$676**
Denver County	**$545**	**$698**	**$847**	**$997**	**$1,326**	**$786**

Source: Denver Area Apartment Vacancy and Rent Survey; Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-VonStroh.xls]Average Rents by Type

In general, the rents per square foot for these apartment types in the market area are similar by comparison to the average rents of the market area to the County averages, as seen in **Table DD-24**. The only exception is the rent per square foot for the two-bedroom/ two-bath apartment, which has a higher average value affected mainly by the comparatively high rent per square foot of the Denver Southeast market – mostly Cherry Creek.

Table DD-24
Denver County Apartment Rent per Square Foot, 2006 1st Quarter
Buckley Annex Market Study

Location	Studio	1 Bed	2 Bed 1 Bath	2 Bed 2 Bath	3 Bed	All
Market Area						
Denver West Central	$1.36	$1.21	$0.81	---	$0.90	$1.15
Denver Northeast	$0.99	$1.06	$0.74	---	---	$1.01
Denver Southeast	$1.26	$1.04	$0.94	$1.15	$1.15	$1.01
Aurora Central Northwest	$1.00	$0.90	$0.81	$0.82	$0.80	$0.86
Aurora Central Southwest	$0.96	$0.97	$0.88	$0.87	$0.84	$0.92
Average	**$1.11**	**$1.04**	**$0.84**	**$0.95**	**$0.92**	**$0.99**
Denver County	**$1.24**	**$1.05**	**$0.95**	**$0.93**	**$0.99**	**$1.03**

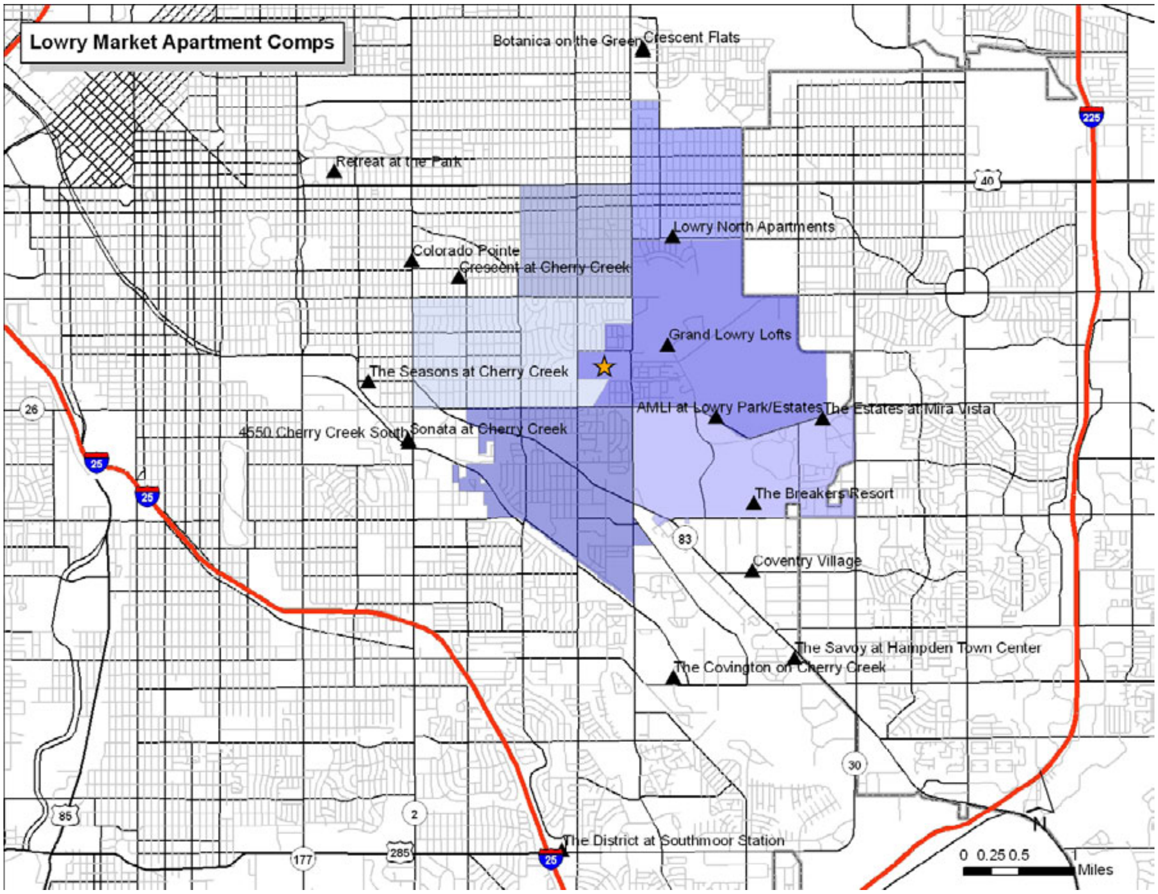
Source: Denver Area Apartment Vacancy and Rent Survey; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-VonStroh.xls]Rents per SF by Type

Competitive Apartment Market

The most competitive apartment projects within the primary market area and nearby mixed-use development centers are shown in **Figure DD-12**. The details on these competitive apartment properties provide an accurate understanding of the market potential at the Buckley Annex site. The competitive analysis includes nearly 6,200 units in 16 developments, including existing, new construction, and recently renovated properties. These competitive apartments account for 23.9 percent of the units in the Denver Metro Area.

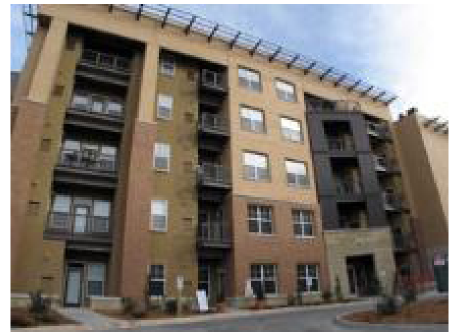
Figure DD-12
Competitive Apartments
Buckley Annex Market Study



Of the 16 projects examined in the market area, five projects stand out as the most comparable to potential apartment development at the site. These include AMLI at Lowry, Botanica on the Green in Stapleton, Retreat at the Park, District at Southmoor Station, and Colorado Pointe. A brief description of each project is provided below.

- **AMLI at Lowry –** This complex has 1,014 units, of which 48 percent or 476 units are one-bedrooms and 31 percent or 303 units are two-bedroom/two-bath apartments. The site is located in the Lowry neighborhood, and located on Alameda just east of Quebec Avenue. Community amenities include four resort-style pools and spas, two fitness centers, two business centers, two 9-hole putting greens, two media rooms with digital surround-sound, two game rooms, sand volleyball, two teaching kitchens, car care center and laundry facilities. Apartment amenities include designer kitchen and bathroom cabinetry, gourmet island kitchens, spacious patios/balconies and selected units include many special features such as surround gas fireplaces, full-size washer and dryer, oversized oval garden tubs, built-in computer desks, and built-in bookshelves.

- **Retreat at the Park (9) –** Currently under construction, Retreat at the Park is leasing two of three buildings. The entire project will include 240 units with over half offered as one-bedroom units (53 percent) and nearly two-fifths as two-bedroom units (37 percent). The development included the purchase of an existing parking structure adjacent to the project. The site is immediately south of the 317-acre City Park along 17th Street in the City Park neighborhood. The development sits on the former site of the Mercy Hospital and will share the site with two for-sale residential projects. The property offers a collection of amenities including parking garage, swimming pool and spa, billiards room, and fitness center.



- **Botanica on the Green –** Construction of this project was completed in the summer of 2003 and has 90 total units, of which 53 percent or 48 units are one-bedroom and 29 percent or 26 units are two-bedroom/two-bath units. The site is located adjacent Founder's Green in Stapleton at 29th Avenue just east of Quebec Avenue. Community amenities include a courtyard with fire pit, Jacuzzi and access to 2.5 acres of open space. Apartment amenities include high-quality fixtures and appliances, private balconies, full-size washer and dryer, and select units have features such as oval tubs and showers, direct access garages, and up to a 12-foot ceiling height.

- **District at Southmoor Station –** This apartment complex has 281 apartment units, of which 36 percent or 102 units are studios and 32 percent or 92 units are two-bedroom/ two-bath units. The site is located within walking distance of the new RTD Southmoor light rail station and a variety of retail shops and restaurants. The apartment units were constructed surrounding a newly built parking structure. Community amenities includes a heated pool and spa with landscaped decking, a 24-hour workout facility, courtyards with fire pits, grills and fountains, a multi-level parking structure, billiards, shuffleboard and large plasma screen television.

- **Colorado Pointe –** The site is located on Colorado Boulevard between 9th and 10th Avenues across from the existing University of Colorado Medical Center. Colorado Pointe has 190 units, 61 percent or 116 of which are one-bedroom apartments and 28 percent or 54 of which are two-bedroom/two-bath units. There are a wide range of community amenities on site: covered parking, high-speed internet, heated outdoor swimming pool, a spa, hot-tub and sauna. Apartment features include island kitchens, fully equipped kitchens, private patios or balconies, walk-in closets, and a washer and dryer unit.

One-bedroom units account for between 42 and 57 percent of the total inventory of units, and two-bedroom/two-bath units account for between 29 and 33 percent of the total units, as shown in **Table DD-25**. Studio apartments make up a much smaller portion of any given apartment project, from 0 to 7 percent of the total; two-bedroom/one-bath units are not as common as the two-bath variety, but still amount to between 0 and 10 percent of the total of any given project; three-bedroom units also may account for between 0 and 10 percent of the total; and townhouses or patio homes account for between 0 and 9 percent of the totals.

Table DD-25
Competitive Apartment Unit Mix
Buckley Annex Market Study

Complex	Unit Mix						
	Studio	1 BR[1]	2 BR / 1 BA	2 BR / 2 BA	3 BR	TH/PH	Total
Lowry							
Grand Lowry Lofts	0	156	53	52	0	0	261
AMLI at Lowry Park/Estates	16	476	40	303	68	86	989
Lowry North Apartments		66	36	60	30		192
Subtotal	**16**	**698**	**129**	**415**	**98**	**86**	**1,442**
% of Subtotal	1%	48%	9%	29%	7%	6%	
Stapleton							
Crescent Flats	0	36	0	30	0	0	66
Botanica on the Green	0	48	0	26	16	0	90
Subtotal	**0**	**84**	**0**	**56**	**16**	**0**	**156**
% of Subtotal	0%	54%	0%	36%	10%	0%	
Cherry Creek							
4550 Cherry Creek	0	112	0	154	22	0	288
The Seasons of Cherry Creek	92	291	0	48	0	0	431
Sonata at Cherry Creek	0	189	0	74	3	0	266
The Covington on Cherry Creek	0	148	48	192	36	0	424
Subtotal	**92**	**740**	**48**	**468**	**61**	**0**	**1,409**
% of Subtotal	7%	53%	3%	33%	4%	0%	
Central Denver							
Colorado Pointe	16	116	4	54	0	0	190
Retreat at the Park	0	85	0	60	16	0	161
Subtotal	**16**	**201**	**4**	**114**	**16**	**0**	**351**
% of Subtotal	5%	57%	1%	32%	5%	0%	
Other							
The Estates at Mira Vista	0	108	0	120	12	0	240
The Breakers Resort	0	632	0	637	0	254	1,523
Coventry Village	0	156	78	78	0	0	312
The Savoy at Hampden Town Center	0	222	184	0	38	0	444
The District at Southmoor Station	102	67	20	92	0	0	281
Subtotal	**102**	**1,185**	**282**	**927**	**50**	**254**	**2,800**
% of Subtotal	4%	42%	10%	33%	2%	9%	
Total	**226**	**2,908**	**463**	**1,980**	**241**	**340**	**6,158**
% of Total	4%	47%	8%	32%	4%	6%	

[1] includes 1 Bedroom + Den Units

Source: Economic & Planning Systems

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Unit sizes at these competitive projects range widely even within the categories of unit types. **Table DD-26** shows that studio apartments range from 498 to 805 square feet, one-bedroom apartments range from 498 to 1,947 square feet, the maximum coming from 4550 Cherry Creek. Both varieties of two-bedroom units range from 759 to 1,937 square feet, and three-bedroom apartments range from 1,300 to 1,994 square feet.

Table DD-26

Competitive Apartment Unit Sizes
Buckley Annex Market Study

Complex	Studio	1 BR [1]	2 BR/1 BA	2 BR/2 BA	3 BR	TH/PH
Lowry						
Grand Lowry Lofts	---	515 - 1,120	759 - 1,120	801 - 1,074	---	---
AMLI at Lowry Park/Estates	500 - 523	627 - 822	890 - 978	956 - 1,246	1,330 - 1,377	---
Lowry North Apartments	---	702	978	1,000	1,200	---
Range	**500 - 523**	**515 - 1,120**	**759 - 1,120**	**801 - 1,246**	**1,330 - 1,377**	**-**
Stapleton						
Crescent Flats	---	685	---	1,145 - 1,374	---	---
Botanica on the Green	---	704 - 812	---	1,184	1,461 - 1,774	---
Range	**-**	**704 - 812**	**-**	**1,145 - 1,374**	**1,461 - 1,774**	**-**
Cherry Creek						
4550 Cherry Creek	---	851 - 1,947	---	1,231 - 1,937	1,854 - 1,994	---
The Seasons of Cherry Creek	570 - 656	700 - 1,150	---	1,000 - 1,070	---	---
Sonata at Cherry Creek	---	698 - 869	---	992 - 1,187	1,429	---
Crescent at Cherry Creek	---	705 - 796	---	1,008	---	---
The Covington on Cherry Creek	---	848 - 875	954	1,063 - 1,183	1,283	---
Range	**570 - 656**	**698 - 1,947**	**- 954**	**992 - 1,937**	**1,854 - 1,994**	**-**
Central Denver						
Colorado Pointe	660	945	1,156	1,528	---	---
Retreat at the Park	---	600 - 1,300	---	900 - 1,300	1,300 - 1,400	---
Range	**- 660**	**600 - 1,300**	**- 1,156**	**900 - 1,528**	**1,300 - 1,400**	**-**
Other						
The Estates at Mira Vista	---	687 - 913	---	1,116 - 1,251	1,348	---
The Breakers Resort	---	650 - 1,267	998 - 1,052	1,077 - 1,282	---	---
Coventry Village	---	780	1,070	1,060	---	---
The Savoy at Hampden Town Center	---	695 - 868	---	1,154 - 1,040	1,519	---
The District at Southmoor Station	498 - 805	498 - 1,265	903 - 1,058	903 - 1,576	---	---
Range	**498 - 805**	**498 - 1,267**	**903 - 1,070**	**903 - 1,576**	**- 1,519**	**-**
Overall Range	**498 - 805**	**498 - 1,947**	**759 - 1,156**	**801 - 1,937**	**1,300 - 1,994**	**---**

[1] Includes 1 Bed + Den

Source: Economic & Planning Systems

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Vacancy rates reported individually by managers of each competitive apartment project are displayed in **Table DD-27**. The highest vacancy rates are in the newest projects that are still leasing-up. Colorado Pointe and the Retreat at the Park, both in Central Denver, have comparatively high vacancy rates given the overall average of 12 percent. The lowest vacancy rates are in two Stapleton projects, Crescent Flats at 2 percent vacancy and Botanica on the Green with 0 percent vacancy reported.

Table DD-27

Competitive Apartment Vacancy, 2007
Buckley Annex Market Study

Complex	Total
Lowry	
Grand Lowry Lofts	10%
AMLI at Lowry Park/Estates	7%
Lowry North Apartments	8%
Subtotal	**8%**
Stapleton	
Crescent Flats	2%
Botanica on the Green	0%
Subtotal	**1%**
Cherry Creek	
4550 Cherry Creek	10%
The Seasons of Cherry Creek	17%
Sonata at Cherry Creek	3%
Crescent at Cherry Creek	4%
The Covington on Cherry Creek	4%
Subtotal	**8%**
Central Denver	
Colorado Pointe	33%
Retreat at the Park	20%
Subtotal	**26%**
Other	
The Estates at Mira Vista	6%
The Breakers Resort	11%
Coventry Village	16%
The Savoy at Hampden Town Center	5%
The District at Southmoor Station	60%
Subtotal	**20%**
Average of All Units	**12%**
Average Stabilized Vacancy [2]	**9%**

[1] Recent openings still in lease-up or under construction
[2] Excludes projects still in lease-up
Source: Economic & Planning Systems
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The spread in rents per square foot for these projects ranges from $1.05 per square foot average for the two-bedroom/one-bath unit to an average $1.46 per square foot for the studio apartments. The lowest rents per square foot are captured by Coventry Village and the Grand Lowry Lofts, at $0.70 to $0.77 per square foot and $0.79 to $0.87 per square foot. The highest price per square foot comes from the Seasons at Cherry Creek and the District at Southmoor Station, both generally over $1.50 per square foot and exceeding $1.80 per square foot at the Seasons.

Many of the competitive projects analyzed have structured parking including Grand Lowry Lofts, 4550 Cherry Creek, Retreat at the Park, and the District at Southmoor Station. Although rents at these comparable projects tend towards the high-end of the spectrum ($0.79 to $1.70 per square foot), the projects remain within the competitive price range for the market area.

Table DD-28
Competitive Apartment Market Rent per Square Foot
Buckley Annex Market Study

Complex	Studio	1 BR	2 BR/1 BA	2 BR/2 BA	3 BR
Lowry					
Grand Lowry Lofts	---	$0.79	$0.86	$0.87	---
AMLI at Lowry Park/Estates	$1.25	$1.16	$1.00	$1.00	$1.01
Lowry North Apartments	---	$1.11	$1.00	$0.98	$0.98
Subtotal	**$1.25**	**$0.94**	**$0.88**	**$0.95**	**$0.95**
Stapleton					
Crescent Flats	---	$1.53	---	$1.53	---
Botanica on the Green	---	$1.39	---	$1.63	$1.17
Subtotal	**---**	**$1.39**	**---**	**$1.53**	**$1.17**
Cherry Creek					
4550 Cherry Creek	---	$1.16	---	$1.45	$1.70
The Seasons of Cherry Creek	$1.80	$1.32	---	$1.77	---
Sonata at Cherry Creek	---	$1.00	---	$1.05	$1.04
The Covington on Cherry Creek	---	$0.89	$0.85	$0.81	$0.79
Subtotal	**$1.80**	**$0.98**	**$0.85**	**$1.15**	**$1.17**
Central Denver					
Colorado Pointe	$1.29	$1.11	$1.37	$1.14	---
Retreat at the Park	---	$1.08	---	$1.31	---
Subtotal	**$1.29**	**$1.10**	**$1.37**	**$1.41**	**---**
Other					
The Estates at Mira Vista	---	$0.96	---	$0.83	$0.88
The Breakers Resort	---	$1.02	$0.98	$1.06	---
Coventry Village	---	$0.77	$0.70	$0.77	---
The Savoy at Hampden Town Center	---	$0.95	---	$0.96	$0.92
The District at Southmoor Station	$1.48	$1.57	$1.58	$1.55	---
Subtotal	**$1.48**	**$1.45**	**$1.18**	**$1.28**	**$0.82**
Total	**$1.46**	**$1.11**	**$1.05**	**$1.18**	**$1.25**

Source: Economic & Planning Systems

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Concessions vary greatly from project to project. Many of them are merely discounts of one to three months free and prorated over the lease term, but some are rather creative conversions of a prorated discount. **Table DD-29** summarizes the various concessions offered by the competitive apartment projects. Some, such as the AMLI at Lowry, Sonata at Cherry Creek, Crescent at Cherry Creek, Colorado Pointe, and the Savoy at Hampden offer no concession either because they have no trouble filling the units or because they are too new and, thus, seem to be testing the market. On the other end of the spectrum, the Estates at Mira Vista is offering a free cruise for two at a value of $1,800 to anyone who signs a lease.

Table 29

Competitive Apartment Concessions, 2007
Buckley Annex Market Study

Complex	Concessions Discount offered by month
Lowry	
AMLI at Lowry Park/Estates	none
Lowry North Apartments	$500 look-and-lease
Stapleton	
Crescent Flats	sign 15 month lease - get first month free
Botanica on the Green	sign 15 month lease - get first month free
Cherry Creek	
4550 Cherry Creek	1 mth free - 6 mth lease; 2 mths free - 12 mth lease
The Seasons of Cherry Creek	1 mth free - 12 to 15 mth lease, but not on small unit types
Sonata at Cherry Creek	none
Crescent at Cherry Creek	none
The Covington on Cherry Creek	$300 off 1st mth if place deposit w/in 3 days of viewing
Central Denver	
Colorado Pointe	none
Retreat at the Park	2-3 mths free pro-rated over lease term - 12 to 13 mth lease
Other	
The Estates at Mira Vista	cruise for 2 with signing of lease ($1800 value)
The Breakers Resort	each floor plan has discount from market price between 10 and 20% off
Coventry Village	typical rents are $250-$300 higher than the discounted rates online
The Savoy at Hampden Town Center	none
The District at Southmoor Station	7 to 12 mth - 1 mth free pro-rated; 13 to 15 mth - 2 mth free pro-rated

Source: Economic & Planning Systems

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After accounting for concessions, rents for these projects range as widely as the square-footages found in **Table DD-26.** The overall concession rents range from $505 for a one-bedroom apartment at the Estates at Mira Vista to $2,928 for a three-bedroom apartment at 4550 Cherry Creek in Cherry Creek, as shown in **Table DD-30**.

Table DD-30

Competitive Apartment Concession Rents per Square Foot, 2007
Buckley Annex Market Study

Complex	Studio	1 BR [1]	2 BR/1 BA	2 BR/2 BA	3 BR	TH/PH
Lowry						
Grand Lowry Lofts	---	$550 - $742	$625 - $998	$625 - $998	---	---
AMLI at Lowry Park/Estates	$600 - $680	$700 - $979	$901 - $971	$889 - $1,320	$1,276 - $1,471	---
Lowry North Apartments	---	$707 - $768	$897 - $978	$887 - $998	$1,067 - $1,198	---
Range	**$600 - $680**	**$550 - $979**	**$625 - $998**	**$625 - $1,320**	**$1,067 - $1,471**	**-**
Stapleton						
Crescent Flats	---	---	---	---	---	---
Botanica on the Green	---	---	---	---	---	---
Range	**-**	**-**	**-**	**-**	**-**	**-**
Cherry Creek						
4550 Cherry Creek	---	$1,166 - $1,545	---	$1,732 - $2,087	$2,532 - $2,928	---
The Seasons of Cherry Creek	$910 - $1,295	$1,090 - $1,345	---	$1,333 - $1,721	---	---
Sonata at Cherry Creek	---	$785	---	$1,140	$1,485	---
The Covington on Cherry Creek	---	$787	$702 - $804	$764 - $919	$845 - $1,012	$972 - ---
Range	**$910 - $1,295**	**$1,090 - $1,545**	**$702 - $804**	**$764 - $2,087**	**$845 - $2,928**	**$972 -**
Central Denver						
Colorado Pointe	$850	$950 - $1,150	$1,584	$1,450 - $2,030	---	---
Retreat at the Park	---	$786 - $921	---	$1,164 - $1,237	---	---
Range	**- $850**	**$786 - $1,150**	**- $1,584**	**$1,164 - $2,030**	**-**	**-**
Other						
The Estates at Mira Vista	---	$505 - $737	---	$745 - $919	$965 - $1,100	---
The Breakers Resort	---	$675 - $1,279	$875 - $1,132	$890 - $1,599	---	---
Coventry Village	---	$575 - $620	$720 - $775	$790 - $835	---	---
The Savoy at Hampden Town Center	---	$650 - $835	---	$965 - $1,145	$1,390 - $1,390	---
The District at Southmoor Station	---	$667 - $1,095	$717 - $1,820	$1,361 - $1,480	$1,338 - $2,173	---
Range	**-**	**$505 - $1,279**	**$717 - $1,820**	**$745 - $1,599**	**$965 - $2,173**	**-**
Overall Range	**$600 - $1,295**	**$505 - $1,545**	**$625 - $1,820**	**$625 - $2,087**	**$845 - $2,928**	**$972 - ---**

[1] Includes 1 Bed + Den

Source: Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-Apartment Comps.xls]CRent

Apartment development at the Buckley Annex site can expect to obtain rents ranging from $1.00 to $1.50 per square foot, depending on the type of unit. These rents will support construction similar to the Retreat at the Park and the District at Southmoor Station, including structured parking and modern apartment amenities. Initial financial modeling should assume a relatively higher average vacancy rate of about 6 or 8 percent until rents stabilize over time, at which time vacancies of around 5 percent could be achieved on average.

Infill Redevelopment Projects

Four major infill redevelopment projects (under construction or in planning stages) are comparable to the Buckley Annex site. These four projects include the redevelopment of the Gates Rubber Plant site east of Broadway (Lionstone Property), the redevelopment of Villa Italia mall in Lakewood (Belmar), redevelopment of the University of Colorado Health Sciences Center by Shea Neighborhoods, and the redevelopment of the Colorado Seminary site by Continuum Partners (Kent Place). The projects are described below:

Lionstone Property

The general development plan (GDP) for the Gates East site has been approved with a range of allowable development, as shown in **Table DD-31**. The total site is 29 acres of which about 24 acres is developable. Each parcel has been given various ranges of uses, summarized below by category of residential, retail/service/office or open space.

Table DD-31
Lionsgate (Gates East) Development Activity
Buckley Annex Market Study

	Residential		Retail/Service/Office		Open Space	
	Min	Max	Min	Max	Min	Max
Parcel A	160,000	200,000	408,000	1,420,000	30,000	52,000
Parcel B	---	---	70,000	70,000	22,000	22,000
Parcel D	160,000	200,000	25,000	100,000	---	---
Parcel F	20,000	60,000	20,000	20,000	---	---
Parcel G	120,000	150,000	40,000	105,000	---	---
Total	**460,000**	**610,000**	**563,000**	**1,715,000**	**52,000**	**74,000**

Source: Denver Department of Planning; Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-CompetitiveInfill.xls]GatesEast

Parcel B includes the 40 McStain Platt Park Manor Homes as summarized in **Table DD-32**. The products varied in size from 1,931 square feet to 2,494 square feet, and were priced between $400,000 and $549,000. As of March 2007, only seven units remain to be sold.

Table DD-32
Platt Park Manor Homes, McStain Properties
Buckley Annex Market Study

Item	Value
McStain Manor Homes	
Total Lots	40
Sold	33
Available	7
Square-Footage	
Min	1,931
Max	2,494
Price Range	
Min	$400,000
Max	$549,000
Price / SF	
Min	$207.15
Max	$220.13

Source: Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-CompetitiveInfill.xls]PlattPark

Belmar

This infill project is the redevelopment of the former Villa Italia Mall by Continuum Partners. The 100-acre mixed use Town Center project includes 346 planned residential units in a variety of for-sale and rental product types, some of which are open or planned, as shown in **Table DD-33**. Prices per square foot for the for-sale products range from $180,000 to $1,000,000 and sizes of products range from 730 to 2,900 square feet. Of the rental products, the rents started at $955 per month and go up to $2,055 per month, with a range in apartment unit size of 646 to 1,533 square feet.

Table DD-33
Belmar Development Activity
Buckley Annex Market Study

Project Name	Status	# Units	Sale Price [1] Min	Sale Price [1] Max	Size Min	Size Max	Price / SF Min	Price / SF Max
For-Sale Product								
The Residences at Belmar Plaza	Open	62	$200,000	$1,000,000	950	2,888	$210.53	$346.26
Theater Lofts	Open	---	---	---	1,020	1,020	---	---
Urban Rowhomes by McStain	Open	132	$399,500	$429,500	1,593	2,471	$250.78	$173.82
Alaska Flats	Planned	18	$180,000	$300,000	730	1,394	$246.58	$215.21
The Lofts at Belmar Square	Planned	11	---	---	822	1,371	---	---
Live / Work Units	Open	4	$700,000	$700,000	2,300	2,700	$304.35	$259.26
The Courtyards at Belmar	Planned	10	$659,000	$679,900	2,900	2,900	$227.24	$234.45
Eastside Townhomes	Planned	---	---	---	1,762	2,394	---	---
Subtotal		**237**	**$180,000**	**$1,000,000**	**730**	**2,900**	**$210.53**	**$346.26**
Rental								
470 South Teller Street	Open	8	---	---	1,250	1,394	---	---
410 South Teller Street	Open	35	$1,030	$2,055	689	1,533	$1.34	$1.49
Gallery Residences	Open	66	$955	$1,700	646	1,288	$1.32	$1.48
7133 West Virginia	Planned	---	---	---	---	---	---	---
Subtotal		**109**	**$955**	**$2,055**	**646**	**1,533**	**$1.32**	**$1.49**
Total		**346**						

[1] Note: Rentals are expressed as $ / month rent.

Source: Urban Neighborhoods; Hanley Wood; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-CompetitiveInfill.xls]Belmar

University of Colorado Health Sciences Center

Shea Properties plans to create a mixed-use development on the University of Colorado Health Sciences Center (UCHSC) at east 9th Avenue and Colorado Boulevard in Denver, CO. The medical, hospital, and research uses are being relocated to the Fitzsimons campus in Aurora. The development proposes to be a neighborhood retail street with pedestrian walkways that link sites internally as well as to the surrounding neighborhoods. Plans include mixed housing, office, retail, restaurants, and mass transit access. The development could be predominantly residential.

The purchase agreement was signed on June 30, 2006, with the plan to have the site vacated by mid-2008. Full site-takedown is anticipated in 2009 or 2010. Prior to closing, however, a deed restriction must be resolved with the original heirs of the property before the title can be cleared.

Kent Place at Cherry Hills Village

Kent Place is Continuum Partner's new project in Englewood. The 11.5-acre mixed-use development is located at the former Denver Seminary site on South University and East Hampden Avenue and will be the eastern gateway into the city. Continuum has partnered with JVF, LLC and plans to build 350 residential units and 65,000 square feet of retail and office space on the site. Construction on Phase I of the project began in late 2006.

The first phase of development will include all of the retail. Tenants include Merrill Lynch and Community Bank of Colorado. In addition, 111 residential units will be built, including 89 condominium units in two mid-rise towers, one nine-story condominium building and one 11-story condominium building, as well as 22 townhomes.

Condominium units will range from 1,200 square feet for a one bedroom to 3,000 or 4,000 square feet for a penthouse unit. Prices will span $500,000 for the smallest units to over $3 million for the penthouses. Townhomes will range from two to three bedrooms, 2,000 to 3,300 square feet, and $1 million to $1.6 million.

Buckley Annex Residential Potentials

Recent trends document strong demand for a range of residential development products in and around Lowry. The 70-acre Buckley Annex site is one of the last large parcels of land in the Lowry neighborhood. It is therefore an excellent site for both for-sale and for-rent housing.

Several factors combine to make the Buckley Annex site a strong residential location, although several constraints limit its total achievable residential density. The site's major advantages and disadvantages are summarized below:

- **Site Size –** The 70-acre parcel presents an opportunity to develop a critical mass of residential development and create a separate neighborhood within the larger Lowry community. The site size will allow for the development of site amenities that strengthen the success of residential development and contribute to the larger Lowry neighborhood.
- **Adjacent Land Use –** The site is predominately surrounded by residential development including the high density Crestmoor Downs project to the south, the existing Lowry Town Center neighborhood to the east, and the Lowry west neighborhood to the north. The site design should respect these adjacent uses. Furthermore, these adjacent uses provide a context and precedent for similar or complementary development on the Buckley Annex site allowing for a range of housing from low-density single family detached to higher density apartment development.
- **Central Location –** The site is located in the desirable southeast portion of Denver and is close to several major employment centers including Downtown Denver, Denver Tech Center, Fitzsimons, and the Aurora Town Center. This central location makes it attractive for professionals, including couples, couples with children, and singles that may work in any of the nearby employment centers. In addition, the site has excellent access to the cultural amenities of downtown.

Housing Development Potential

The supportable development potential for the Buckley Annex site will depend on two factors: the demand for housing and the existing supply of housing within the market area. The housing demand for the entire Lowry Market Area was previously estimated to range from 350 to 500 residential units per year between 2010 and 2020. The site can be expected to capture a portion of the market area annual housing demand based on the following inputs:

- The historic Lowry capture of housing construction activity in the City and County of Denver, which has ranged from 10 to 15 percent.
- The size of the site and its ability to provide a variety of product types and a critical mass of residential units.
- The central location of the site in an established and popular Denver neighborhood.
- Limited anticipated competition. Excluding the CCCS campus and the IRG Landfill site, there are no other major development projects anticipated with the larger Lowry Market Area.

From a marketability perspective, there is a lot of flexibility concerning what could be feasibly developed on the site. Therefore, the real limiting factor of the development potential for the Buckley Annex site will most likely be the development capacity of the site and the individual absorption of the parcels or projects to be constructed. The Buckley Annex redevelopment project presents an opportunity to continue the successful development trend established by the rest of the Lowry redevelopment.

Residential Pricing

The Buckley Annex site product pricing and absorption is based primarily on the competitive projects described above within Stapleton and Lowry. **Table DD-34** presents a variety of residential products that could be developed on the Buckley Annex site. Four single family products and five multifamily products have been modeled. The single family products range from custom homes to duplexes and are described briefly below:

- **Custom Lot –** The larger lots sizes of this product allow for semi-custom and custom homes, similar to homes surrounding the Crescent Park and 6th Avenue in Lowry's northwest neighborhood. These homes appeal to older professional couples and affluent households. They are anticipated to sell for $1.0 to $1.5 million and will average less than 1.0 units per month or approximately 9 units annually.

- **Urban Lot –** This alley loaded detached product primarily appeals to young professional couples, either with children or expecting children. The lot size typically ranges from 4,500 to 6,500 square feet, similar to much of the single family development in the Lowry northwest neighborhood and throughout Stapleton. These units should sell for prices ranging from $350,000 to $550,000 with average absorption of 3.0 units per month or 36 units annually.
- **Patio Home (Upscale) –** This low maintenance product provides a single family detached residence without a lawn to maintain. These units appeal to empty nesters and older professional couples who prioritize entertaining and travel. They prefer a larger home but are not interested in a large lot or exterior maintenance. These homes are anticipated to sell for between $450,000 to $600,000 and absorb at an average of approximately 1.5 units per month or 18 units annually.
- **Duplex (Upscale) –** This product provides a more affordable alternative to a patio home similar to the John Laing paired homes in Stapleton or the McStain Platt Park Manor Homes. In addition, these homes provide more outdoor space and typically include some lawn to maintain. They primarily appeal to professional couples – young and old without children. They are anticipated to sell for between $375,000 to $550,000 and absorb at an average of approximately 2.0 units per month or 24 units annually.

This market study has evaluated three multifamily product types spanning two market segments. The entry level market segment is typified by first-time home buyers, mainly comprised of singles and young couples in the 25 to 35 year age group. This market segment is price conscious and susceptible to changes in the employment and interest rate markets. The move-up market is typified by established families or professional couples in the 30 to 40 year age group looking to expand their homes. These buyers desire more space and higher quality finishes; therefore, the pricing of these units is higher. The five resulting multifamily products are described below:

- **Townhouse (Entry) –** This product is typically alley loaded in traditional neighborhood designs and appeals to young professionals both singles and couples and price conscious empty nesters. These units are similar to the McStain Crescent Ridge townhomes in the Lowry northwest neighborhood. These units currently sell for between $250,000 to $350,000 in Lowry and average absorption of 3.0 units per month or 36 units annually.
- **Townhouse (Move Up)** - These homes are typically designed with architectural interest and larger floor plans, similar to the Sky Terrace units in Stapleton and Officers' Row Lofthomes in Lowry. These units appeal to older professionals, either empty nesters or couples without children. These units are anticipated to sell for between $400,000 to $650,000 and average absorption of 1.5 units per month or 18 units annually.
- **Condominium (Entry)** - This is the most affordable market rate

product anticipated for the Buckley Annex site, similar to the Hanger Lofts offered in the Lowry Town Center. Therefore, these units appeal to young professionals and recently married couples. This market segment is characterized by price conscious first time home buyers. The units will sell for between $225,000 to $300,000 and average absorption of 3.0 units per month or 36 units annually.

- **Condominium (Upscale) –** This stacked flat product is typically designed with structured or underground parking and offers a zero maintenance lifestyle, similar to the Sienna at Lowry and Moda Lofts at Stapleton. These units typify luxury and, therefore, attract older professionals either empty nesters or couples without children. These units will sell for $400,000 to $800,000 and average absorption of 1.0 units per month or 12 units annually.
- **Apartments –** This location would support a variety of upscale apartment products. Lower density products similar to the AMLI at Lowry Park/Estates at Lowry could be built. Alternatively, a somewhat higher density product in the 30 to 40 units an acre range utilizing structured parking similar to the Retreat at the Park in central Denver, or Botanica on the Green in Stapleton, are also feasible for development. The units will rent for between $1.00 and $1.50 per square foot per month. Typically apartment absorption averages 12 units per month or 120 units annually.

Table DD-34
Housing Development Pricing and Absorption
Buckley Annex Market Study

Product	Average Density (DUs/Acre)	Price Range	Annual Absorption	Average Land Value (% of Market)
Single Family				
Custom Lot	3.0	$1.0 to $1.5 million	9	20%
Urban Lot	4.5	$350,000 to $550,000	36	20%
Patio Home (Upscale)	5.5	$450,000 to $600,000	18	20%
Duplex (Upscale)	6.5	$375,000 to $550,000	24	20%
Multifamily				
Townhouse (Entry)	14.0	$250,000 to $350,000	36	13%
Townhouse (Move Up)	12.0	$400,000 to $650,000	18	13%
Condominium (Entry)	30-40	$225,000 to $300,000	36	13%
Condominium (Upscale)	30-40	$400,000 to $800,000	12	13%
Apartments	30-40	$1.00 to $1.50/SqFt	120	13%

Source: Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-HousingPotentials.xls]Summary

Based on the above pricing and absorption information several conclusions can be drawn regarding product mix for the site. These conclusions will be further refined as development concepts are developed that include the physical constraints, design limitations, traffic and transportation solutions, and other site constraints. The following points summarize the conclusions about product mix:

- A development concept that includes a single product type will not generate the highest value. Instead, the development plan should include several product types that attract multiple market segments and, thereby, increase overall absorption.
- Timing and absorption area as important to the creation of value as price and density. High value dense products do not generate significant value if the associated absorption is slow. Finding a mixture of products that include a range of price points and absorption rates will generate the highest value.

Retail Development

This section evaluates the market potentials for additional retail development within the Lowry neighborhood. The analysis is based on an evaluation of existing competition as well as retail sales growth from the projected increase of population and households in the trade area.

Retail Definitions

For purposes of analysis, retail stores are categorized based on shopping and trade area characteristics listed below. Each is described with examples to clarify the types of retail stores included in each of the categories.

- **Convenience Goods –** This category includes supermarkets and other grocery stores, convenience stores, as well as liquor, drug, other specialty food stores, and coffee shops. In addition, this category includes convenience services such as laundry, mail, hair/barber, and copies. These stores generally sell frequently purchased, low cost items with little product differentiation. The primary locations for convenience goods stores are the supermarket-anchored neighborhood shopping centers and smaller convenience centers, as these items are most often bought close to home.
- **Shoppers Goods –** This category includes general merchandise, apparel, furniture, appliance, and specialty goods stores. General merchandise stores include traditional department stores (such as JCPenney) as well as discount department stores (Wal-Mart, Target, and Kmart). The product lines of these stores are generally more expensive, less frequently purchased items. In general, people are more likely to comparison shop for shoppers goods, and are often more willing to travel farther to buy them. The primary locations for regional shoppers goods are traditional downtown shopping districts, regional shopping centers, free-standing discount department and membership warehouse stores, and power centers dominated by mass merchandise tenants.
- **Eating and Drinking Establishments –** This category covers restaurants including conventional sit-down and fast food, and bars. Businesses in this category exhibit some of the characteristics of convenience stores in that many restaurant expenditures are made at establishments close to home and on a frequent basis. However, some higher quality restaurants, more unique in the marketplace, can have a regional draw.
- **Building Materials/Nurseries –** This category is made up of stores selling lumber, paint, glass, hardware, plants and garden supplies, and other retail items related to home improvement. Home improvement centers such as Home Depot and Lowe's are the largest stores in this category.

Retail Market Areas

Population and household growth forecasts were previously shown for Denver and the metropolitan area; however, retail stores and developers area more interested in the population and income in a specific trade area radius. For neighborhood level retail goods and services, the trade area is generally 1.5 to 2 miles in an urban area. For regional goods and services, the trade area is generally 3 to 5 miles in an urban area. The defined neighborhood trade area encompasses the census tracts that correspond to six eastern Denver neighborhoods within a 1.5-mile radius of the Buckley Annex site (refer to **Figure DD-1** above). The regional trade area is defined as a radius of approximately three miles from the site, primarily to account for existing competitive centers.

The population within the neighborhood trade area is expected to grow by 0.7 percent annually between 2010 and 2030. It will reach an estimated 61,000 in 2020 or approximately 29,000 households, as shown in **Table DD-35**. The regional trade area population is expected to grow by 0.6 percent as well during the same time period. The population is estimated to reach 225,000 by 2020 or approximately 108,000 households.

The DRCOG forecast for the two trade areas shows slower anticipated growth than the Denver metropolitan area of 1.5 percent annually. Therefore, both trade areas will be contracting in terms of their share of the overall metropolitan area. Combined the two trade areas will account for 7.5 percent of the metropolitan area in 2010. This share is expected to decline to 6.2 percent by 2030. It is important to note that the current version of the DRCOG forecast does not account for any additional residential development at the Buckley Annex site.

Table DD-35
Trade Area Growth Forecast
Buckley Annex Market Study

Place	2010	2020	2030	2010 - 2030 Change Annual	Total	Ann. Avg.
Neighborhood Trade Area						
Population	57,246	61,089	65,338	405	8,092	0.7%
Households	27,131	28,952	30,966	192	3,835	0.7%
% of Metro Area	2.0%	1.8%	1.7%			
Regional Trade Area						
Population	212,184	225,020	239,667	1,374	27,484	0.6%
Households	101,570	108,201	115,695	706	14,125	0.7%
% of Metro Area	7.5%	6.8%	6.2%			
Denver Metropolitan Area [1]						
Population	2,841,098	3,320,473	3,850,616	48,953	1,223,822	1.5%
Households	1,127,475	1,329,725	1,554,959	20,685	517,117	1.6%

[1] Defined as the seven county area, including: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson

Source: DRCOG; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-TPI&Sales.xls]Growth

Sales Potential

Retail expenditure potentials can be estimated based on the percent of income spent on average by store category as outlined in the steps below:

- Based on the *Census of Retail Trade* for the State of Colorado, the percent of TPI spent by store category is determined for the State as a whole. This calculation estimates current area store spending patterns, but at a level of geography large enough to negate the impacts of in-flows and outflows of sales.
- The average percent of TPI spent by store category in the State is applied to the applicable Lowry trade area TPI to estimate current expenditure potentials regardless of location of purchase (on site, elsewhere in the city, or by e-commerce).

The growth in trade area expenditure potential is estimated by the same calculation applied to the estimated growth in TPI by time period. TPI calculations are made in constant dollars (no inflation).

The neighborhood trade area TPI is estimated at $1.7 billion in 2006, up from $1.3 billion in 2000, as shown in **Table DD-36**. Based on projected population and household growth and 0.5 percent real income growth, the neighborhood trade area TPI is anticipated to grow to $1.9 billion in 2010, $2.1 billion by 2020, and $2.3 billion by 2030.

The regional trade area TPI is estimated at $6.0 billion in 2006, up from $5.1 billion in 2000. Based on population and household growth and 0.5 percent real income growth, the regional trade area TPI is anticipated to grow to $6.7 billion in 2010, $7.5 billion in 2020, and $8.4 billion in 2030. The TPI for the two trade areas combined is estimated at $7.7 billion in 2006, up from $6.4 billion in 2000. The combined TPI for the two trade areas is expected to grow to $8.6 billion by 2010, $9.6 billion by 2020, and $10.8 billion by 2030.

Table DD-36

Total Personal Income, 2005-2015
Buckley Annex Market Study

Geography	2000	2006	2010	2020	2030
Neighborhood Trade Area					
Households	23,563	25,537	27,131	28,952	30,966
Average HH Income	$55,132	$66,846	$68,193	$71,680	$75,346
Total Personal Income ($000s)	**$1,299,075**	**$1,707,060**	**$1,850,144**	**$2,075,290**	**$2,333,168**
Regional Trade Area					
Households	92,729	93,322	101,570	108,201	115,695
Average HH Income	$55,478	$64,717	$66,021	$69,397	$72,946
Total Personal Income	**$5,144,419**	**$6,039,520**	**$6,705,761**	**$7,508,869**	**$8,439,534**
Total Personal Income	**$6,443,495**	**$7,746,580**	**$8,555,905**	**$9,584,159**	**$10,772,702**

Source: DRCOG; Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-TPI&Sales.xls]TPI

Total retail expenditure potential within the neighborhood trade area is estimated to increase to $594 million in 2010 based on Census of Retail Trade average of 32.1 percent of TPI spent at retail stores. The retail expenditure potential is estimated to grow by $72 million between 2010 and 2020 in the neighborhood trade area, as shown in **Table DD-37**. Supermarket/grocery, general merchandise, and eating and drinking stores are anticipated to grow the most during this time period at $14 million, $15 million, and $12 million in expenditure potential, respectively.

Total retail expenditure potential within the regional trade area is estimated to increase to $2.2 billion in 2010. The retail expenditure potential is estimated to grow by $258 million between 2010 and 2020. Total shoppers goods expenditure potential is anticipated to grow by $117 million during the same time period.

Table DD-37

Lowry Trade Area Expenditure Potential, 2010-2020
Buckley Annex Market Study

Store Type	Pct. Of TPI	Neighborhood Trade Area			Regional Trade Area		
		2010 ($000s)	2020 ($000s)	Net New ($000s)	2010 ($000s)	2020 ($000s)	Net New ($000s)
Total Personal Income	**---**	**$1,850,144**	**$2,075,290**	**$225,147**	**$6,705,761**	**$7,508,869**	**$803,108**
Convenience Goods							
Supermarkets / Grocery	6.0%	111,009	124,517	13,509	402,346	450,532	48,186
Specialty Food Stores	0.2%	3,700	4,151	450	13,412	15,018	1,606
Convenience Stores	0.1%	1,850	2,075	225	6,706	7,509	803
Beer, Wine, & Liquor Stores	0.8%	14,801	16,602	1,801	53,646	60,071	6,425
Health and Personal Care	1.4%	25,902	29,054	3,152	93,881	105,124	11,244
Total Convenience Goods	**8.5%**	**157,000**	**176,000**	**19,000**	**570,000**	**638,000**	**68,000**
Shopper's Goods							
General Merchandise							
Department Stores	1.1%	20,352	22,828	2,477	73,763	82,598	8,834
Discount Department Stores	1.6%	29,602	33,205	3,602	107,292	120,142	12,850
Warehouse clubs & supercenters	3.5%	64,755	72,635	7,880	234,702	262,810	28,109
All other general merchandise stores	0.4%	7,401	8,301	901	26,823	30,035	3,212
Total General Merchandise	6.6%	122,000	137,000	15,000	443,000	496,000	53,000
Clothing & Accessories	2.1%	38,853	43,581	4,728	140,821	157,686	16,865
Furniture & Home Furnishings	1.6%	29,602	33,205	3,602	107,292	120,142	12,850
Sport, Hobby, Book, & Music	1.5%	27,752	31,129	3,377	100,586	112,633	12,047
Electronics & Appliances	1.3%	24,052	26,979	2,927	87,175	97,615	10,440
Miscellaneous Retail	1.5%	27,752	31,129	3,377	100,586	112,633	12,047
Total Shopper's Goods	**14.6%**	**270,012**	**303,023**	**33,012**	**979,461**	**1,096,710**	**117,249**
Eating and Drinking	5.2%	96,207	107,915	11,708	348,700	390,461	41,762
Building Material & Garden	3.8%	70,305	78,861	8,556	254,819	285,337	30,518
Total Retail Goods	**32.1%**	**$593,524**	**$665,799**	**$72,275**	**$2,152,979**	**$2,410,508**	**$257,528**

Source: 2002 Census of Retail Trade; DRCOG; Economic & Planning Systems

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Table DD-38
Supportable Retail Square Footage, 2010-2020
Buckley Annex Market Study

Store Type	Pct. Of TPI	Neighborhood Trade Area			Regional Trade Area		
		2010	2020	Net New	2010	2020	Net New
Convenience Goods							
Supermarkets / Grocery	$400	278,000	311,000	33,000	1,006,000	1,126,000	120,000
Specialty Food Stores	$350	11,000	12,000	1,000	38,000	43,000	5,000
Convenience Stores	$300	6,000	7,000	1,000	22,000	25,000	3,000
Beer, Wine, & Liquor Stores	$250	59,000	66,000	7,000	215,000	240,000	25,000
Health and Personal Care	$250	104,000	116,000	12,000	376,000	420,000	44,000
Total Convenience Goods		**458,000**	**512,000**	**54,000**	**1,657,000**	**1,854,000**	**197,000**
Shopper's Goods							
General Merchandise							
Department Stores	$250	81,000	91,000	10,000	295,000	330,000	35,000
Discount Department Stores	$325	91,000	102,000	11,000	330,000	370,000	40,000
Warehouse clubs & supercenters	$400	162,000	182,000	20,000	587,000	657,000	70,000
All other general merchandise stores	$250	30,000	33,000	3,000	107,000	120,000	13,000
Total General Merchandise		364,000	408,000	44,000	1,319,000	1,477,000	158,000
Clothing & Accessories	$350	111,000	125,000	14,000	402,000	451,000	49,000
Furniture & Home Furnishings	$250	118,000	133,000	15,000	429,000	481,000	52,000
Sport, Hobby, Book, & Music	$300	93,000	104,000	11,000	335,000	375,000	40,000
Electronics & Appliances	$250	96,000	108,000	12,000	349,000	390,000	41,000
Miscellaneous Retail	$250	111,000	125,000	14,000	402,000	451,000	49,000
Total Shopper's Goods		**893,000**	**1,003,000**	**110,000**	**3,236,000**	**3,625,000**	**389,000**
Eating and Drinking	$250	385,000	432,000	47,000	1,395,000	1,562,000	167,000
Building Material & Garden	$300	234,000	263,000	29,000	849,000	951,000	102,000
Total Retail Goods		**1,970,000**	**2,210,000**	**240,000**	**7,137,000**	**7,992,000**	**855,000**

Source: 2002 Census of Retail Trade; DRCOG; Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-TPI&Sales.xls]Supportable SqFt

Table DD-38 converts the estimated retail expenditure potential growth into an estimate of supportable retail square footage, which is determined by dividing the expenditure potential by average annual sales per square foot figures by store category. These sales per square foot figures are estimated based on sales at comparable retail centers and stores within the Denver metropolitan area.

The increase in expenditure potential in the Lowry neighborhood trade area, based on household and real income growth, is estimated to support 240,000 square feet of additional retail space across all store categories. However, much of this space falls into store categories offering regionally oriented shoppers goods, as shown. Therefore, the anticipated household and income growth would support 54,000 square feet of convenience oriented retail and 47,000 square feet of eating and drinking space, a portion of which would be oriented to a larger regionally trade area.

The increase in expenditure potential in the regional trade area is estimated to support 855,000 square feet or retail space between 2010 and 2020. The majority of the anticipated supportable square footage falls within store categories that offer regionally oriented shoppers goods. However, a sizable portion (197,000 square feet) of the supportable retail space is in neighborhood oriented convenience goods store categories.

Table DD-39 allocates the supportable square footage by store category. The locally oriented retail space includes all of the convenience goods and approximately 30 percent of the miscellaneous shoppers goods retail, and 50 percent of the eating and drinking. Therefore, by 2020 an estimated 82,000 square feet of locally oriented retail space will be supported in the trade area. The remaining 658,000 square feet will be regional in orientation and locate at larger regionally accessible sites.

The Buckley Annex site will compete with other retail developments in the combined trade area for this growth in anticipated supportable square footage. However, the site may have locational advantages over other competitors for specific types of retail. Furthermore, the site may have specific physical constraints and locational limitations that prevent it from competing for other forms of retail. These advantages and disadvantages will be discussed in detail below.

Table DD-39
Neighborhood vs. Regional Retail, 2010-2030
Buckley Annex Market Study

Category	2010-2020 Factor	Neighborhood	Factor	Regional	Total
Convenience Goods					
Supermarkets / Grocery	100%	33,000	0%	0	33,000
Specialty Food Stores	100%	1,000	0%	0	1,000
Convenience Stores	100%	1,000	0%	0	1,000
Beer, Wine, & Liquor Stores	100%	7,000	0%	0	7,000
Health and Personal Care	100%	12,000	0%	0	12,000
Total Convenience Goods		**54,000**		**0**	**54,000**
Shopper's Goods					
General Merchandise					
Department Stores	0%	0	100%	35,000	35,001
Discount Department Stores	0%	0	100%	40,000	40,001
Warehouse clubs & supercenters	0%	0	100%	70,000	70,001
All other general merchandise stores	0%	0	100%	13,000	13,001
Total General Merchandise	0%	0		158,000	158,004
Clothing & Accessories	0%	0	100%	49,000	49,001
Furniture & Home Furnishings	0%	0	100%	52,000	52,001
Sport, Hobby, Book, & Music	0%	0	100%	40,000	40,001
Electronics & Appliances	0%	0	100%	41,000	41,001
Miscellaneous Retail	30%	4,200	100%	49,000	53,201
Total Shopper's Goods		**4,200**		**389,000**	**393,209**
Eating and Drinking	50%	23,500	100%	167,000	190,501
Building Material & Garden	0%	0	100%	102,000	102,001
Total Retail Goods		**81,700**		**658,000**	**739,700**

Source: 2002 Census of Retail Trade; DRCOG; Economic & Planning Systems

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The supportable square footage and preliminary conclusions of development potentials are summarized by category below:

- **Convenience Goods** - Neighborhood oriented retail centers are typically anchored by a supermarket/grocery store. The anticipated household and income growth within the regional trade area would support an additional 33,000 square feet of supermarket/grocery retail space, as shown. This estimate is not sufficient to support a full size supermarket within the trade area; full-line supermarkets are typically 55,000 to 65,000 square feet in urban markets. Specialty markets or natural food grocers (e.g., Wild Oats and Whole Foods) have typically been 30,000 to 40,000 square feet; however, Whole Foods has recently been constructing even larger stores in urban areas. The net growth of grocery sales potential, plus a modest capture of existing store sales from area competitors, may provide an opportunity to attract a full line or natural grocer to the site. Many natural grocers (e.g., Sunflower, Vitamin Cottage, and Trader Joe's) typically occupy store space between 15,000 to 30,000 square feet. Further analysis is presented on this development potential below.

- **Shoppers Goods –** Regional retail centers can take many forms, including: regional malls, lifestyle centers, and power centers. These regional retail centers typically range from 350,000 to over 1.0 million square feet of retail space. The combined trade area will support an estimated 393,000 square feet of shoppers goods space by 2020. This amount barely includes the minimum threshold for a typical regional retail center assuming a 100 percent capture. However, not all shoppers goods stores must locate within a traditional regional retail format. Further, an allowance needs to be made for existing and future competition. Therefore, some regional retailers may consider the Buckley Annex site if suitable space is provided, particularly in a mixed-use setting. Further analysis is presented on the regional retail potentials at the Buckley Annex site below.
- **Eating and Drinking –** Restaurants and bars are both local neighborhood and regional serving. The estimated 24,000 square feet of space, indicated as neighborhood eating and drinking, could be supported in existing locations, such as the existing Lowry Town Center, along the Leetsdale and Monaco corridors, and other neighborhood business districts. However, the Buckley Annex site can capture a significant portion of this space if suitable space were provided as part of the redevelopment plan.
- **Building Material & Garden –** A typical large format home improvement center (e.g., Lowe's and Home Depot) ranges from 120,000 to 160,000 square feet including a garden center. The estimated 102,000 square feet of supportable square footage anticipated by 2020 in the combined trade area would not be sufficient to support a large format home center. However, there may be demand for specialty building material and/or garden stores in the trade area. The Buckley Annex site could capture a portion of this retail potential if suitable space were provided for this type of user.

Existing Retail Supply

Determining the retail development potentials for a site requires analyzing both the demand and supply side of the equation. The estimate of supportable square footage by store category in the trade area discussed above provides the demand side of the equation. An analysis of the existing store location pattern summarizes the supply side of the equation. Together, the demand and supply analyses provide a clear picture of the retail development potentials for a site. The analysis of the existing retail supply for the Buckley Annex site is presented in three sections including: Supermarket/ Natural Grocers, Regional Shopping Centers, and the Lowry Town Center.

Supermarkets/Natural Grocers

Supermarkets

There are five supermarkets within the neighborhood trade area of the Buckley Annex site: Albertson's at the Lowry Town Center, King Soopers at 14th and Krameria, Safeway at 14th and Krameria, King Soopers at Leetsdale and Monaco, and Safeway at Leetsdale and Quebec, as shown in **Figure DD-13**. Outside of the neighborhood trade area but inside the regional trade area are four additional Safeways and four additional King Soopers. The site appears well served by national full-line supermarkets. However, the expenditure potential analysis estimates that an additional 33,000 square feet of supermarket/grocery space will be supportable by 2020.

There is one smaller natural foods grocer located within the neighborhood trade area; Vitamin Cottage near Leetsdale and Holly, as shown in **Figure DD-14**. Two additional natural grocers are located outside of the neighborhood and regional trade areas; Wild Oats at Colorado Boulevard and Exposition and Whole Foods and University and 1st Avenue in Cherry Creek.

Figure DD-13
Lowry Trade Area Supermarkets
Buckley Annex Market Study

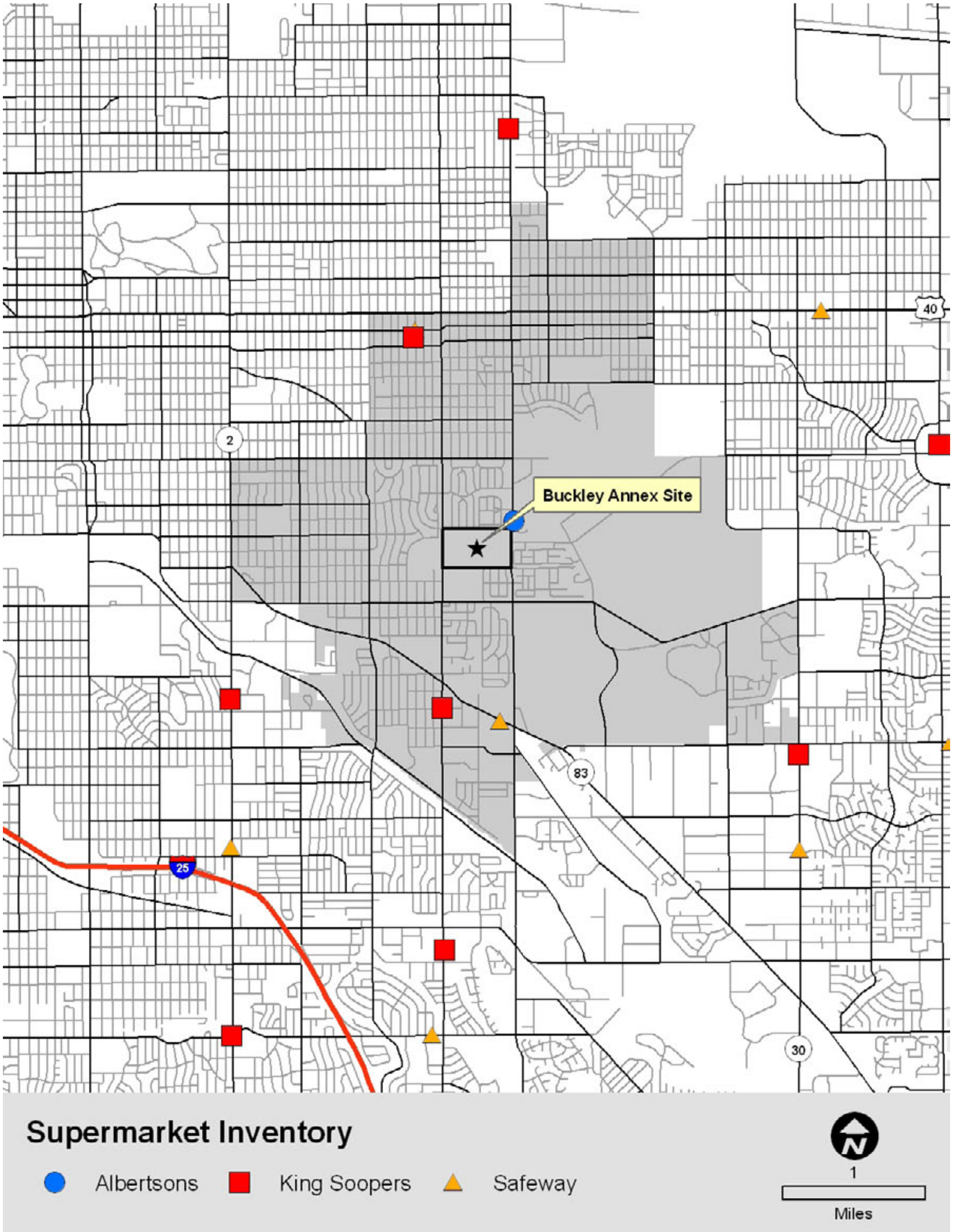
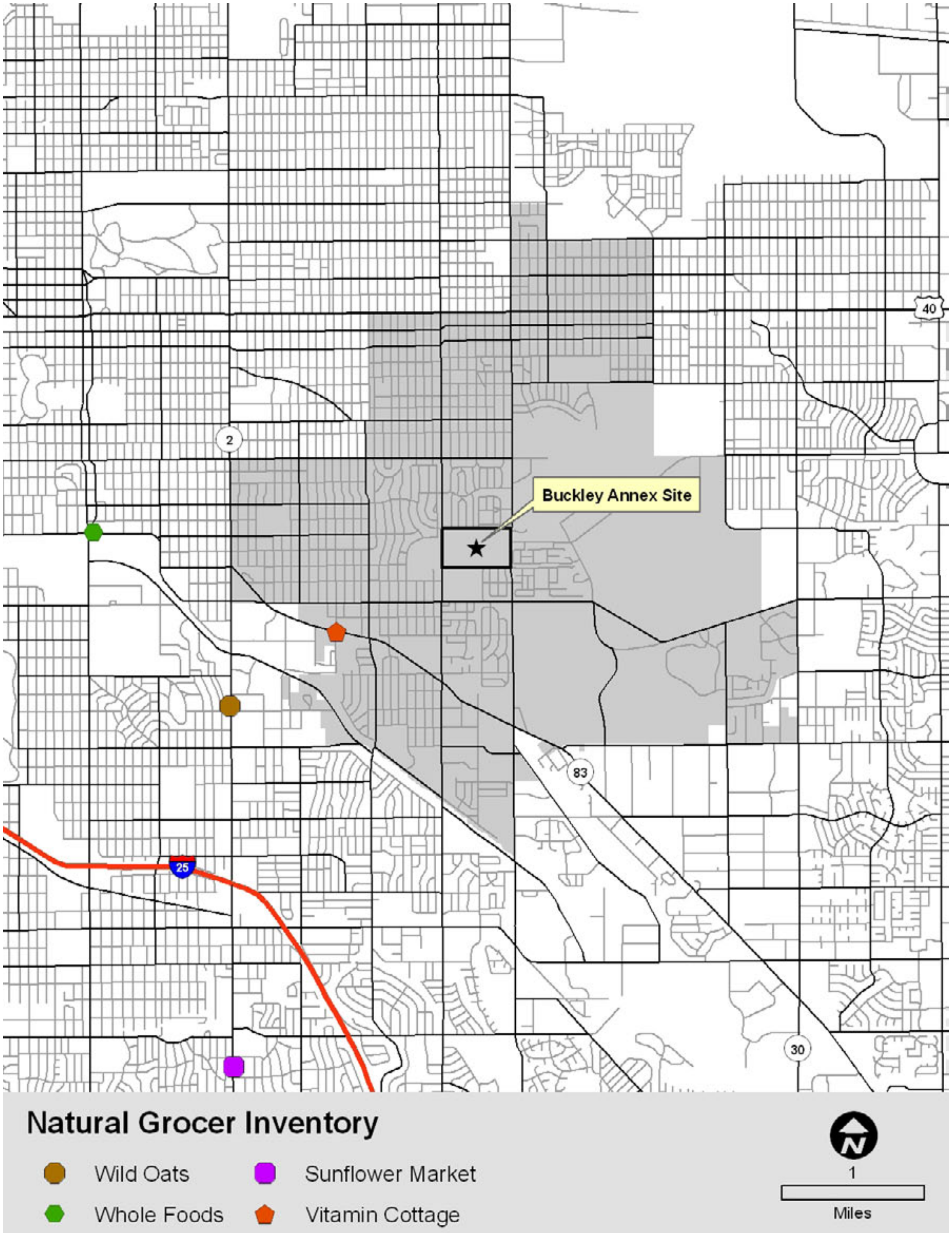


Figure DD-14

Lowry Trade Area Natural Grocers

Buckley Annex Market Study



The supermarket/grocery store sales have been estimated for each of the 11 grocery stores where the 1.5-mile trade area radius around the store overlaps the neighborhood trade area. A geographic information system (GIS) was used to estimate the share of each stores' trade area that overlaps the Buckley Annex neighborhood trade area. These shares were multiplied by the estimated sales at each store. The result is an estimate of the current grocery sales originating from neighborhood trade area residents at each of the 11 stores.

The total estimated sales to neighborhood trade area residents from all 11 stores are approximately $76 million in total, as shown in **Table DD-40**. Supermarket/grocery sales represent 6.0 percent of TPI on average; therefore, the total supermarket/grocery expenditure potential of the neighborhood market area is approximately $99 million. Using estimated sales levels of $70 million, the current distribution of grocery stores captures approximately 77 percent of the expenditure potential. Therefore, approximately 23 percent of the expenditure potential is likely spent at other grocery stores in the area, such as natural grocers.

Table DD-40

Existing Supermarket / Grocery Sales, 2006
Buckley Annex Market Study

	Sales to Residents	
Store	**% of Store Sales**	**Estimated Sales [1]**
Albertsons		
200 Quebec St	94.8%	$18,958,000
King Soopers		
1155 South Havana	20.7%	$4,141,000
2810 Quebec St	11.1%	$2,229,000
1355 Krameria St	47.7%	$9,532,000
825 South Colorado Blvd	25.0%	$4,997,000
890 South Monaco Pkwy	55.1%	$11,019,000
Safeway		
1677 South Havana	8.8%	$1,766,000
10777 East Colfax Ave	6.2%	$1,234,000
7150 Leetsdale Dr	56.7%	$11,348,000
6220 East 14th Ave	46.1%	$9,213,000
1653 South Colorado Blvd	5.6%	$1,121,000
Total Existing Grocery Sales		**$75,558,000**
Supermarket / Grocery Expenditure Potential (2006)		**$102,423,580**
Local Capture of Expenditure Potential		**73.8%**

Source: Economic & Planning Systems

[1] Estimated sales at $20 million per store based on an average size of 50,000 square feet multiplied by an estimated $400 per square foot in sales

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-GroceryDemandAnalysis.xls]Grocery Sales

As shown, there is little demand for another full-line supermarket within the neighborhood trade area. Furthermore, both King Soopers and Safeway have at least two stores that depend heavily on the neighborhood market area for sales, including: Kings Soopers at 14th and Krameria and Leetsdale and Monaco, and Safeway at 14th and Krameria and Leetsdale and Quebec. The only opportunity for a new full-line supermarket to enter the market would be as a replacement for the current Albertson's in the Lowry Town Center. This opportunity could arise if Albertson's continues to close stores in Colorado.

Natural Grocers

The other potential grocery anchors for the site include Whole Foods, Trader Joe's, Sunflower Farmers Market, and Vitamin Cottage. These stores are more specialized and considered secondary or supplemental shopping trips for most shoppers; therefore, they typically have larger trade area and population requirements than traditional full-line supermarkets. The trade area and population requirements of each of the natural grocers are described below:

- **Whole Foods** - This Austin based chain is the largest and most successful natural foods grocer in the country with 172 stores nationwide and five stores in the Denver area. Whole Foods has recently acquired its most direct competitor, Wild Oats, which has 110 stores nationwide, and 11 stores in the Denver metro area. The closest Whole Foods store is in Cherry Creek and the closest Wild Oats is on Colorado Boulevard near Exposition. It is expected that Whole Foods will convert the larger more successful Wild Oats stores to Whole Foods and will close the smaller less successful locations. The typical new Whole Foods store is 55,000 square feet with stores as large as 74,000 square feet in selected locations. The chain looks for affluent urban locations with a population of 130,000 within a 3-mile radius.
- **Trader Joe's** - This California based specialty grocer has 260 stores, although its stores are considerably smaller in the 15,000 square foot range. The chain is presently in 19 states with the closest being New Mexico. Although it is not in Colorado, Trader Joe's has plans to expand nationwide. Reportedly, Colorado has been low on its list because it typically gets a large portion of its revenues from in-house wine and liquor sales. Colorado's liquor laws permit each corporation to have only one liquor outlet regardless of the number of stores. Nevertheless, Trader Joe's is reportedly evaluating at least one Colorado location and is expected to be in the state before Buckley closes in 2011. The chain prefers high income and college area locations with a minimum population of 90,000 with a median income of $60,000 or greater within five miles.
- **Sunflower Farmers Markets** - This relatively new natural foods grocer was started in 2002 in Albuquerque and has 11 stores in Colorado, Arizona, New Mexico, and Nevada. Started by Mike Gilliland who was one of the founders of Alfalfa's in Boulder (later acquired by Wild Oats),

the store is described as a cross between a farmers market and a Trader Joe's and specializes in bulk natural foods and produce. The stores average 25,000 to 30,000 square feet and have been most frequently located in existing spaces (such as vacant older neighborhood center anchor buildings) in dense urban locations. The chain typically rents these existing buildings and pays an average of $6 to $8 per square foot in rent. The store has plans for several new Colorado locations in the next two years.

- **Vitamin Cottage Natural Grocers** - This family owned Colorado based vitamin store has been expanding its store sizes to carry a greater amount of natural foods and produce. There are 27 existing stores in Colorado and New Mexico that range in size from 7,500 to 10,000 square feet. Newer stores are tending to be about 15,000 square feet. The company looks for both freestanding and shopping center locations.

The retail demand analysis suggests that a natural foods grocer may be supportable on site. The strongest opportunity would be to attract a new retailer to the market or wait for demand to entice an existing retailer to open a new store on site. Whole Foods (including recently acquired Wild Oats) has two stores at the edge of the 3-mile regional trade area to the west. To the east, north, and south, there is no close by competition.

There is an existing Vitamin Cottage within the neighborhood trade area making an additional store at the site unlikely. The closest Sunflower Farmers Market is located over four miles away at Colorado Boulevard and Yale Avenue. Sunflower prefers to reuse existing neighborhood anchor buildings. However, the chain constructed its first new building as part of a neighborhood oriented retail development in the Highlands, just outside downtown Denver. The retailer's expansion plans are limited over the next few years, with plans to open only three to four new stores a year in the region.

Regional Shopping Centers

In eastern Denver and Aurora, the regional retail market is dominated by several major retail centers. The Cherry Creek area (including Cherry Creek North shopping area and Cherry Creek Shopping Center) and Aurora City Center area (including Aurora City Place and Aurora Mall) are the largest with over 1.3 and 1.7 million square feet, respectively. Several other significant regional retail centers fall within the three to five mile regional retail trade area surrounding the site, as shown in **Figure DD-15**. Each of the competitive regional retail shopping centers is described briefly below:

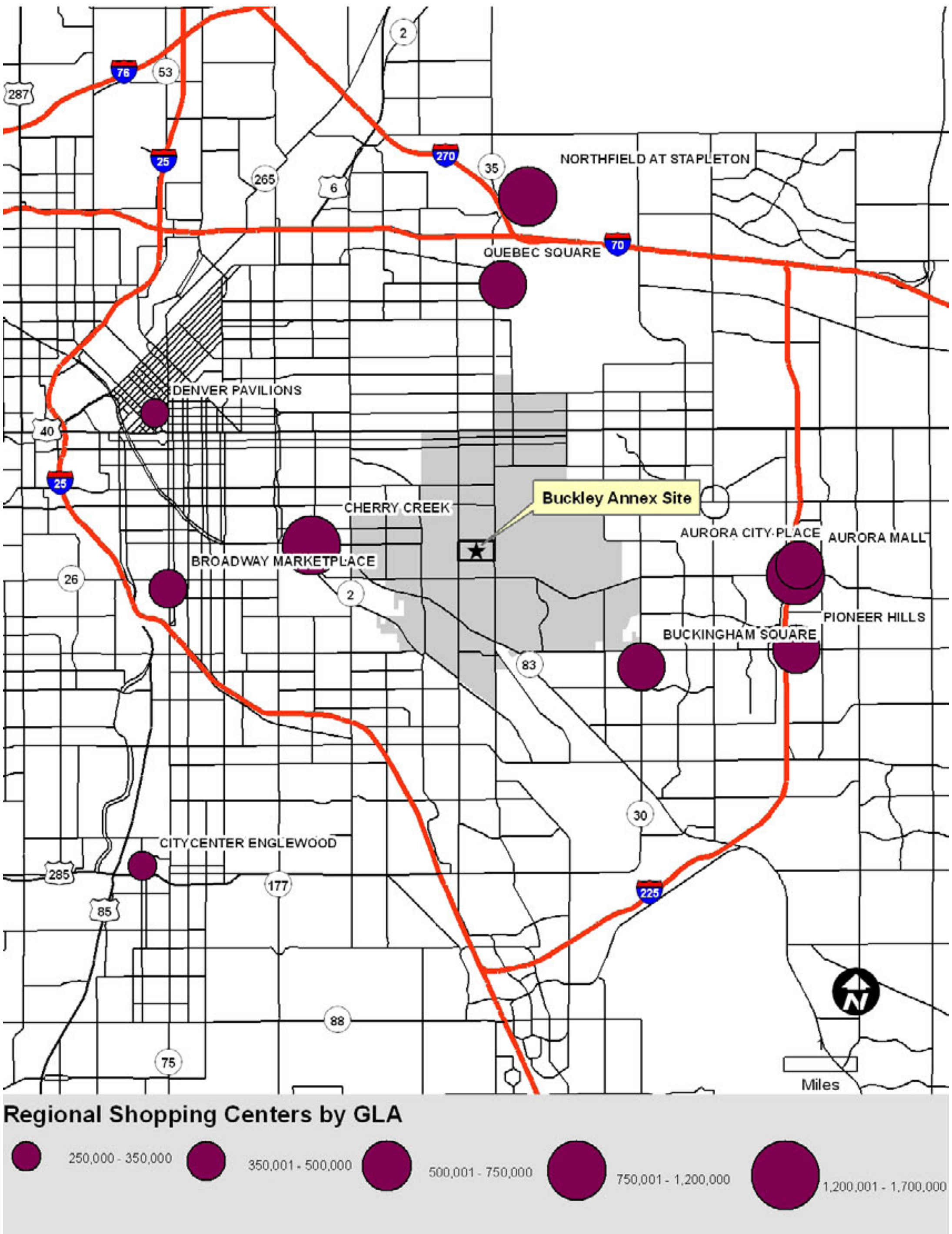
- **Cherry Creek Area –** The Cherry Creek district is recognized as the largest specialty shopping destination within Denver. The Cherry Creek Shopping Center contains four major department stores, including Macy's, Neiman Marcus, Saks Fifth Avenue, and Nordstrom's (currently under construction). In addition, nearly every national lifestyle tenant and many unique local retailers can be found between the mall and the Cherry Creek North shopping area.

- **Aurora City Center Area –** This 1.0 million square foot suburban mid-market mall, owned by MaceRich, is anchored by JCPenney, Sears, Dillard's, and Macy's. The newest project in the Aurora City Center area is a 550,000 square foot hybrid project developed by Miller Weingarten is anchored by Super Target, and located on the northeast corner of I-225 and Alameda Avenue. It contains a strong mix of mid boxes including Linen 'n Things, Pier 1, CompUSA, Barnes & Noble, Ross, and Men's Wearhouse.
- **Northfield at Stapleton –** Forest City Corporation is currently developing this 1.1 million square foot hybrid center at I-70 and Havana. (A hybrid center typically adds a pedestrian-oriented lifestyle component to a power center project, or inversely adds a number of larger format stores to a lifestyle center.) The center has five large format anchors, including Bass Pro Shops, Macy's, Super Target, Harkins Theatres, and JCPenney's. The project also has a strong mix of junior anchors and lifestyle-oriented apparel and home furnishings stores. The project partially came on line in late 2006 but there are some key tenant spaces still remaining.
- **Quebec Square –** The 700,000 square foot power center was developed as the first phase of retail within the Stapleton redevelopment project, by Forest City Corporation. The center is anchored by a Wal-Mart Supercenter, Sam's Club, and Home Depot. In addition, the site contains several mass merchandisers or junior anchors, including: Linens 'N Things, Office Depot, PetSmart, and Ross.
- **Buckingham Square Redevelopment –** Miller-Weingarten is redeveloping the former Buckingham Square Mall at Havana and Mississippi into a regional power/ hybrid center including the expansion of the existing Target Greatland into a Super Target, Kohl's, Home Depot, four junior anchors and ancillary retail space. The redevelopment is expected to include a total of 589,000 square feet of retail space, a 320-unit apartment complex, approximately 34 mixed-use apartments, and 12 townhomes.
- **IRG Landfill Site –** The 65-acre site was recently sold to IRG because it is responsible for the long-term maintenance of the passive cap protecting the former landfill. IRG has contemplated the redevelopment of the site into a mixed-use project. The site would need additional environmental remediation before development could occur. If IRG proceeds, the development could include high density residential, lifestyle retail, and commercial development.

The retail demand analysis indicates the two trade areas combined can support an estimated additional 575,000 square feet of regional retail, between shoppers goods, eating and drinking, and building materials and garden space. There is already a total of over 6.3 million square feet of regional retail within five miles of the Buckley Annex site. Many of the sites (e.g., Northfield at Stapleton, Buckingham Square Redevelopment, and IRG Landfill Site) are not completely built out. These competitive projects will erode the demand for regional retail on the Buckley Annex site. Therefore, development of a major regional retail center on the Buckley Annex site appears unlikely, given current market conditions.

Figure DD-15

East Metro Denver Regional Shopping Centers
Buckley Annex Market Study

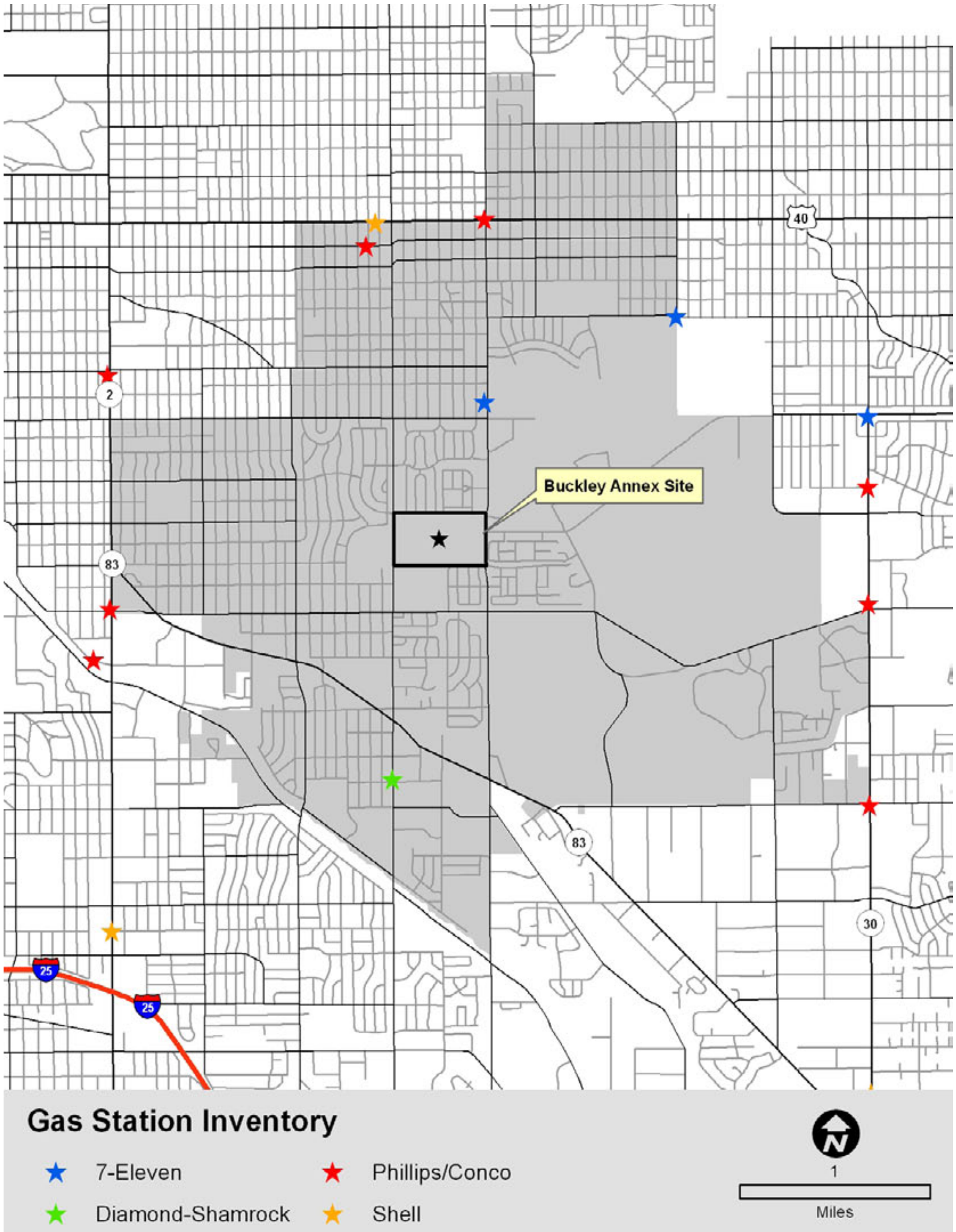


Convenience Stores with Gas

The Lowry neighborhood remains underserved by convenience stores offering gasoline. The historic use of the area as an Air Force base created a void in the distribution of these retailers. Convenience stores tend to locate along major arterials, such as Colorado Boulevard, Colfax Avenue, and Monaco Parkway, as show in **Figure 16**. The historic edges of the base are ringed with several gas stations; however, the nearest convenience store, excluding the 7-Eleven at 7^{th} and Quebec, is over a mile from the Buckley Annex site at Colfax Avenue and Quebec.

There is a clear market demand for a convenience store offering gasoline at the Buckley Annex site. Convenience stores can generate significant land value for a specific portion of the development. However, these auto oriented uses tend to have negative impacts on the land value of adjoining parcels.

Figure DD-16
Lowry Area Convenience Stores
Buckley Annex Market Study



Lowry Town Center

The 130,000 square foot Lowry Town Center, developed by Miller-Weingarten in 2001, is located at 2nd Avenue and Quebec. It is anchored by an Albertson's grocery store. Convenience goods retailers, including Albertson's, occupy nearly half of the retail space as shown in **Table DD-41**. There are also eight restaurants/bars with a total square feet of space. The center has a significant contingent of shoppers goods stores (13.5 percent in 12 stores), mostly in the form of specialty retail stores (e.g., Chewey's Bonetique, Timbuk Toys, Fire Fly Furnishings, and Pedal Pushers Cyclery). Personal services (e.g., Nail Touch, Cost Cutters, Executive Tans, and Salon Tobie) accounts for 8.2 percent of the square footage.

Table DD-41
Lowry Town Center Retail Inventory
Buckley Annex Market Study

Store Type	Number of Businesses	Square Feet	Percent of Total
Convenience Goods	5	64,181	49.1%
Shoppers Goods	12	17,707	13.5%
Eating and Drinking	8	18,096	13.8%
Services	8	10,774	8.2%
Other Uses	8	19,981	15.3%
Total	**41**	**130,739**	**100.0%**

Source: Miller-Weingarten; Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-LowryTownCenterInv.xls]Retail Inv Summary

The Lowry Town Center acts as a focal point within the Lowry neighborhood, providing residents with convenience goods and services and an increment of community oriented specialty stores and restaurants. The retail demand analysis suggested that the neighborhood trade area would support an additional increment of neighborhood oriented retail space. Absent an additional supermarket/grocery anchor on the Buckley Annex site, the Lowry Town Center provides a logical foundation from which to build a second phase of retail development.

Buckley Annex Retail Potentials

Current market conditions support the growth of additional neighborhood community oriented retail uses at Buckley Annex. In addition, there are several attributes that limit the ability of the site to offer retail space fitting the potential demand for regional retail. The major site attributes and the impact each has on the retail development potential of the site are discussed below:

- **Site Size –** The site is large enough to create a "sense of place." This sense of place will help to stimulate the demand for retail space. In addition, the size of the site allows for true mixed-use development with land uses including office, residential, and retail. This mixture of uses allows the site to achieve a critical mass that translates into identification of the site as a distinct place. This will also drive retail traffic.
- **Proximity to Arterials –** The site is enclosed on two sides by major arterial streets. Each street, Quebec Street and Monaco Parkway, offer opportunities to capture the visibility gained by being adjacent to major arterials for retail tenants. The Quebec Street frontage has the advantage of connecting to the existing Lowry Town Center node at least visually. The Monaco frontage would be attractive only for a larger Town Center level increment of development that could "stand on its own". In addition, each arterial provides access to large well-established residential neighborhoods to the north.
- **Adjacent Uses –** The proximity to the Lowry and Hilltop neighborhoods is an asset. The access to these two affluent neighborhoods makes the site ideal for neighborhood oriented retail, services, and eating and drinking establishments.

Retail Formats

Anchors drive retail development; a neighborhood oriented retail center is no different from a power center or regional mall in this manner that anchor simply takes a different form (e.g., restaurant cluster, supermarket, drug store). The strongest anchor use for the site would be a supermarket. It has the potential to establish the site as a place providing a stimulus to both residential absorption and to additional neighborhood level retail demand and supportable space. The most likely opportunity would be for a natural grocer in the trade area. In the absence of a natural grocer, a drug store could anchor a smaller neighborhood center. Finally, an additional increment of neighborhood oriented retail, particularly more restaurants, could be developed as a second phase to the Lowry Town Center.

Each of the retail development scenarios is briefly described below:

- **Neighborhood Center (Small Natural Grocer Anchor)** - The most likely opportunity to attract a natural grocer would be either Sunflower Farmers Market or Trader Joe's. In either case the anchor would range from 15,000 to 25,000 square feet. These retailers could support an additional increment of complementary space between 35,000 to 50,000 square feet. The likely mix of this space would include quick casual restaurants (10,000 to 15,000 square feet), additional full-service restaurant space (10,000 to 15,000 square feet), and ancillary retail and service uses (15,000 to 20,000 square feet). Total commercial space is estimated at 50,000 to 75,000 square feet and could be developed as part of a mixed-use activity node.

- **Neighborhood Center (Drug Store Anchor) –** Another opportunity for the Buckley Annex site would be to attract a drug store to anchor a new neighborhood oriented retail center. The remaining store mix could be similar to the neighborhood node anchored by the national grocer with a total of 30,000 to 50,000 square feet.
- **Lowry Town Center Phase II –** Absent a strong anchor, such as a small natural grocer or drug store, a modest increment of additional restaurant and ancillary retail and service space could be supported as a second phase to the existing development. This scenario could support a total of approximately 20,000 to 30,000 square feet of space. Because of its relatively small size, it would need to be located on or close to Quebec to have advantage of the existing Town Center draw.
- **Second Town Center (Full Line Natural Grocer Anchor) –** A full line natural grocer such as Whole Foods is a less likely anchor tenant, but if it could be attracted to the site, would leverage the largest increment of neighborhood retail and a second town center for Lowry. This development scenario would ideally be located close to Monaco to allow for better spacing with the existing Albertson's supermarket as well as a greater draw from the affluent Hilltop and Crestmoor neighborhoods.

  Whole Foods builds 60,000 square foot or larger stores and attracts consumers from large trade area. These attributes would combine to generate support for an additional increment of ancillary space ranging between 40,000 to 60,000 square feet. This scenario would support a total of approximately 125,000 square feet of retail space. This development option could also support an increment of community oriented office space and apartment uses within the center potentially as upper story uses in mixed use buildings.

Each of the retail scenarios includes additional ancillary space. This space provides an opportunity to build on the success of the existing Lowry Town Center with additional complementary tenants. Specialty retail and restaurants benefit from large concentrations of similar stores. A wider array of tenants leads to a critical mass that draws additional traffic and creates an activity node that benefits all the retailers and restaurateurs. These additional complementary tenants could include quick casual restaurants, full service restaurants, additional specialty retailers, and additional personal care services.

Office Development

This section evaluates market potentials for office development uses at the Buckley Annex site. Office inventory, vacancy, and rental rates are tabulated for the metropolitan region. Office demand for the study area is then forecast over the 2010 to 2030 time period based on employment growth, as well as other development factors. Using this study area demand, the future office development is estimated for the site.

Office Market Overview

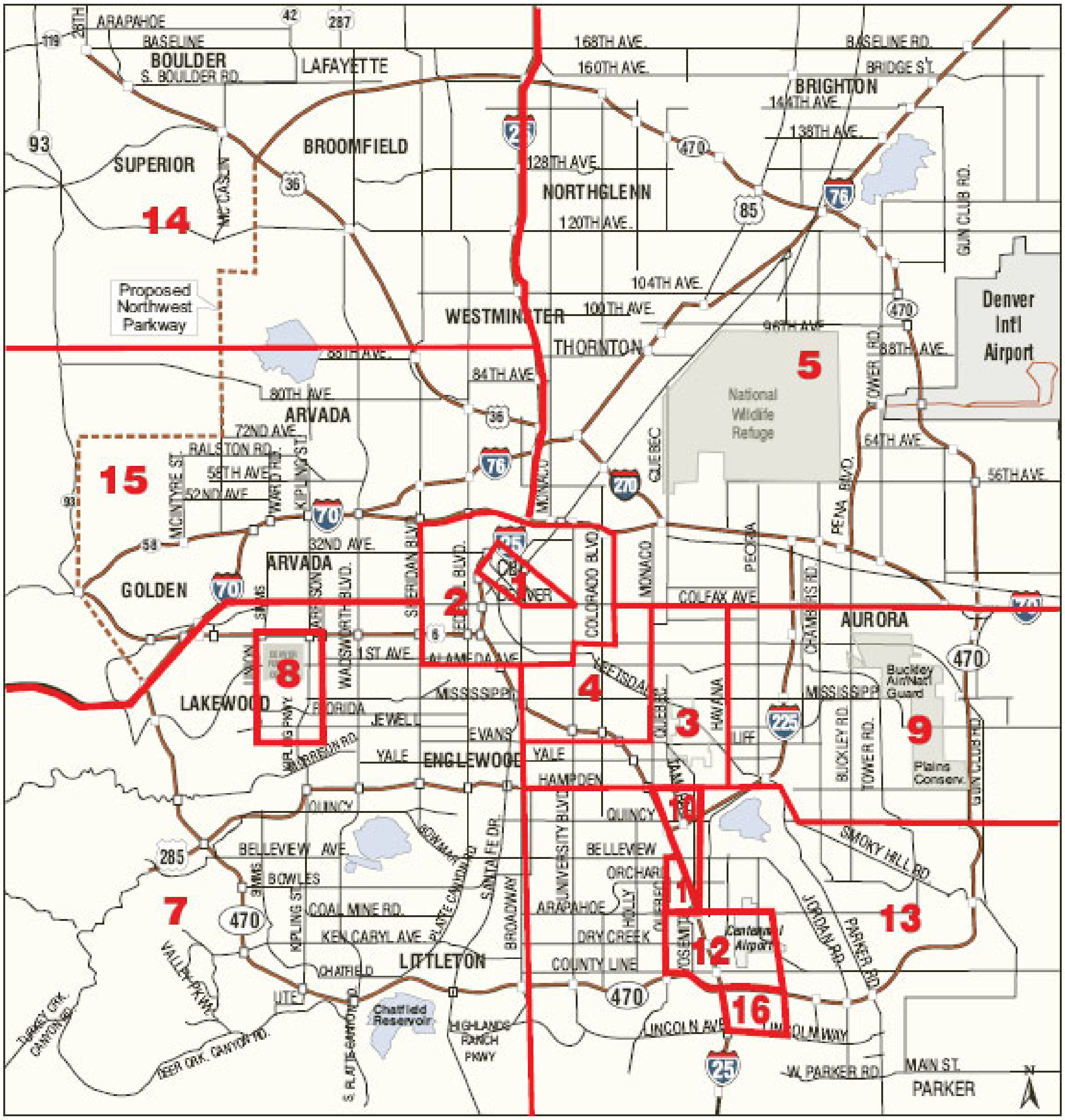
The metropolitan Denver office market is tracked by subareas, as shown in **Figure DD-17**. The overall office market extends north to include development in and around Longmont, Boulder, and the Denver International Airport. To the south and southeast, it includes the Denver Tech Center, Inverness, and Meridian Business Parks. The Central Business District (CBD) includes office space in the Downtown Central Business District, and Lower Downtown (LoDo).

As of 2006, there is a total of 88.5 million square feet of multi-tenant space in the Denver metro area office inventory. The overall office inventory has increased by approximately 13.4 million square feet in the past nine years, between 1998 and 2006. Overall, this increase translates into an annual increase of 1.7 million or 2.1 percent, as shown in **Table DD-42**. The most significant growth during this time period occurred in the Denver Boulder Corridor at 547,000 square feet annually or 16.9 percent and Inverness/Panorama at 383,000 square feet or 10.6 percent annually. The Buckley Annex site falls within the Southeast submarket, which grew at a modest rate of 27,000 square feet or 1.1 percent annually.

Figure DD-17

Denver Metropolitan Office Markets

Buckley Annex Market Study



1. Central Business District
2. Midtown
3. Southeast
4. Cherry Creek
5. Northeast
7. Southwest
8. Union Square
9. East / Aurora
10. DTC
11. Greenwood Plaza
12. Inverness / Panorama
13. Arapahoe Rd.
14. Den/Boulder Turnpike
15. West Denver
16. Meridian

Table DD-42

Metro Denver Office Inventory, 1998-2006
Buckley Annex Market Study

	1998	1999	2000	2001	2002	2003	2004	2005	2006	1998-2006 Annual Change #	%
CBD	**22,868,599**	**22,900,535**	**23,008,353**	**23,402,161**	**23,402,161**	**23,687,358**	**23,861,499**	**22,781,449**	**23,154,768**	**35,771**	**0.16%**
Non-CBD											
Midtown	3,305,708	3,115,805	3,035,316	3,035,316	3,035,316	3,049,646	3,049,646	2,781,260	2,819,737	-60,746	-2.0%
Southeast	2,439,315	2,473,296	2,512,969	2,602,969	2,602,969	3,049,646	3,049,646	2,729,326	2,655,940	27,078	1.1%
Cherry Creek	6,978,622	7,185,157	7,170,157	7,170,157	7,170,157	7,170,157	7,170,157	7,377,487	7,273,094	36,809	0.5%
Northeast	1,554,661	1,717,661	1,657,661	1,869,919	1,869,919	1,931,919	1,931,919	1,801,110	2,122,080	70,927	4.0%
Southwest	5,170,213	5,484,450	6,937,876	7,317,673	7,338,673	7,375,210	7,565,506	6,621,016	6,736,553	195,793	3.4%
Union Square	2,055,550	2,014,815	2,014,815	2,014,815	2,014,815	2,014,815	2,058,015	2,044,984	2,160,544	13,124	0.6%
East / Aurora	4,095,318	4,278,365	4,308,609	4,374,609	4,374,609	4,374,609	4,374,609	4,361,270	4,380,375	35,632	0.8%
Denver Tech Center	6,761,308	7,386,250	7,627,932	7,749,095	7,749,095	7,865,927	7,865,927	8,568,358	8,865,151	262,980	3.4%
Greenwood Plaza	6,613,919	6,896,523	7,082,158	7,553,528	7,553,528	7,416,528	7,416,528	7,218,152	7,232,535	77,327	1.1%
Inverness / Panorama	2,463,271	2,352,910	2,685,634	2,715,608	2,715,608	2,996,144	5,448,097	5,571,430	5,526,690	382,927	10.6%
Arapahoe Road	4,820,094	5,719,199	6,436,970	7,202,446	7,621,536	7,871,794	2,915,868	2,817,607	2,935,864	-235,529	-6.0%
Meridian	--- [1]	--- [1]	--- [1]	--- [1]	--- [1]	--- [1]	2,071,542	1,817,825	1,817,825	---	---
Denver Boulder Corridor	1,767,767	3,669,661	3,920,934	5,287,640	5,769,920	5,930,184	5,972,074	5,689,302	6,144,084	547,040	16.9%
West Denver	4,243,189	4,315,438	4,420,438	4,444,438	4,506,276	4,572,876	4,572,876	4,596,926	4,686,688	55,437	1.3%
Subtotal	**52,268,935**	**56,609,530**	**59,811,469**	**63,338,213**	**64,322,421**	**65,619,455**	**65,462,410**	**63,996,053**	**65,357,160**	**1,636,028**	**2.8%**
Total	**75,137,534**	**79,510,065**	**82,819,822**	**86,740,374**	**87,724,582**	**88,860,136**	**88,905,232**	**86,777,502**	**88,511,928**	**1,671,799**	**2.1%**

[1] Data not collected

Source: Cushman & Wakefield

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-OfcMktConds.xls]Inventory

Office vacancy rates decreased significantly in 2006 by almost 3.0 percent overall, as shown in **Table DD-43**. The CBD vacancy rate fell by nearly 4.0 percent in 2006 to 10.5 percent. The vacancy rate in the Southeast submarket has begun to fall from a high in 2004 of 22.4 percent to 16.7 percent in 2006. The current vacancy rate in the submarket is significantly higher than the low point of 5.7 percent in 2000. Therefore, office absorption is expected to continue at a modest rate in the Southeast submarket.

Table DD-43

Metro Denver Office Vacancy Rates, 1998-2006

Buckley Annex Market Study

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
CBD	**9.6%**	**7.4%**	**7.2%**	**4.7%**	**7.8%**	**10.8%**	**14.8%**	**18.7%**	**14.6%**	**10.5%**
Non-CBD										
Midtown	13.0%	10.8%	8.4%	4.6%	6.2%	6.9%	13.4%	14.2%	14.0%	10.9%
Southeast	12.2%	10.5%	7.7%	5.7%	8.5%	8.4%	19.6%	22.4%	18.8%	16.7%
Cherry Creek	6.3%	8.6%	8.4%	7.9%	8.7%	10.1%	16.4%	20.8%	20.4%	18.3%
Northeast	34.5%	28.2%	19.5%	10.9%	11.1%	11.5%	21.4%	15.6%	17.2%	23.6%
Southwest	8.4%	8.2%	8.6%	5.2%	8.1%	9.1%	11.4%	15.5%	15.1%	17..1%
Union Square	15.4%	13.7%	6.4%	7.1%	9.6%	11.4%	11.3%	21.7%	17.3%	17.0%
East / Aurora	10.5%	9.3%	11.2%	13.8%	15.4%	16.0%	19.6%	21.8%	20.5%	17.9%
Denver Tech Center	8.2%	5.9%	10.4%	8.4%	17.0%	19.2%	22.3%	23.7%	17.5%	13.3%
Greenwood Plaza	10.3%	6.0%	10.4%	8.1%	16.9%	18.7%	23.7%	28.7%	20.6%	17.2%
Inverness / Panorama	8.7%	4.6%	5.7%	7.2%	12.3%	10.9%	25.6%	25.0%	20.1%	14.3%
Arapahoe Road	5.4%	5.4%	3.5%	10.1%	16.5%	15.6%	13.3%	16.9%	22.9%	22.7%
Meridian	--- [1]	--- [1]	--- [1]	--- [1]	--- [1]	--- [1]	--- [1]	10.6%	13.1%	9.7%
Denver Boulder Corridor	--- [1]	5.4%	21.5%	1.3%	28.3%	32.2%	20.5%	26.2%	22.8%	17.2%
West Denver	--- [1]	16.2%	17.8%	19.4%	19.4%	14.6%	16.2%	18.1%	14.1%	13.3%
Total	**10.2%**	**8.5%**	**9.4%**	**7.4%**	**12.7%**	**14.1%**	**17.1%**	**20.6%**	**17.6%**	**14.7%**

[1] Data not collected

Source: Cushman & Wakefield

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-OfcMktConds.xls]Vacancy

Overall lease rates for Class A office have nearly returned to the 1998 rate of $21.88. However, overall lease rates remain $3.00 per square foot below the peak of $24.53 set in 2000. Lease rates across the metropolitan area have been increasing over the past four years coinciding with decreases in vacancy rates. The only two submarkets to see real lease rate increases over the entire nine year period include the CBD and Northeast submarkets at $0.18 and $0.70 per square foot, respectively. Lease rates on Class A space increased by nearly $2.00 per square foot in the Southeast submarket, suggesting bullish expectations by landlords for the market.

Table DD-44

Metro Denver Office Lease Rates, 1998-2006
Buckley Annex Market Study

Market	1998	1999	2000	2001	2002	2003	2004	2005	2006	1998-2006 Annual Change #	1998-2006 Annual Change %
CBD	**$22.84**	**$24.71**	**$29.12**	**$24.25**	**$23.38**	**$19.76**	**$21.59**	**$22.41**	**$24.24**	**$0.18**	**0.75%**
Non-CBD											
Midtown	N/A	N/A	$20.13	$20.53	$16.27	$15.17	N/A	$20.50	$21.00	---	---
Southeast	$19.23	$18.84	$19.57	$19.90	$17.12	$14.75	$16.11	$15.61	$17.52	($0.21)	-1.2%
Cherry Creek	$20.30	$23.59	$25.52	$23.31	$18.48	$17.34	$18.45	$19.05	$18.84	($0.18)	-0.9%
Northeast	$19.75	$18.75	$19.95	$20.43	$15.31	$13.22	$20.00	$21.00	$25.32	$0.70	3.2%
Southwest	$23.00	$23.70	$25.00	$21.16	$17.00	$16.05	$21.33	$20.03	$22.77	($0.03)	-0.1%
Union Square	$22.04	$19.71	$21.17	$20.07	$18.96	$16.19	$18.17	$18.31	$19.47	($0.32)	-1.5%
East / Aurora	$17.00	$18.00	$18.34	$18.26	$19.21	$14.27	$14.93	$14.75	$15.07	($0.24)	-1.5%
Denver Tech Center	$23.64	$25.41	$24.33	$20.00	$20.82	$17.02	$17.95	$18.52	$20.75	($0.36)	-1.6%
Greenwood Plaza	$24.70	$24.76	$24.59	$20.00	$19.44	$16.45	$19.74	$20.47	$21.55	($0.39)	-1.7%
Inverness / Panorama	$22.39	$20.57	$23.19	$19.00	$19.08	$16.14	$18.00	$19.20	$19.92	($0.31)	-1.5%
Arapahoe Road	$21.36	$22.66	$22.72	$22.00	$15.19	$15.22	$16.64	$15.00	---	---	---
Meridian	--- [1]	--- [1]	--- [1]	--- [1]	--- [1]		$18.02	$18.06	$20.90	---	---
Denver Boulder Corridor	$25.91	$23.44	N/A	$22.85	$18.61	$17.50	$18.00	$19.37	$21.66	($0.53)	-2.2%
West Denver	$18.99	$19.99	$19.75	$19.14	$17.61	$14.93	$18.20	$17.94	$17.58	($0.18)	-1.0%
Overall Average	**$21.88**	**$23.39**	**$24.53**	**$23.63**	**$19.76**	**$16.92**	**$19.27**	**$19.70**	**$21.31**	**($0.07)**	**-0.3%**

NOTE: Direct weighted average Class A lease rate
[1] Data not collected
Source: Cushman & Wakefield
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-OfcMktConds.xls]LRates

A long-term historic analysis of the Denver metropolitan office market indicates that as vacancy rates approach 10.0 percent, lease rates begin to rise and speculative construction gains strength. The CBD has begun to experience similar market conditions; as a result five new Class A office construction projects have been announced in downtown and LoDo. These projects are briefly described below:

- **1400 Wewatta –** Opus Northwest has proposed a 3-building mixed-use complex at the corner of 15th Street and Wewatta Street in LoDo along Cherry Creek. The project is anticipated to include approximately 440,000 square feet of office and residential development with retail at the ground floor.
- **1515 Wynkoop –** Hines is developing an 8-story 285,000 square foot office building at the corner of 15th Street and Wynkoop Street in LoDo. The project will include underground parking and ground floor retail space.
- **Kennedy and Associates –** The developer announced plans to develop 335,000 square feet of office along the 16th Street Mall at the intersection of Delgany Street and Wewatta Street near Union Station, in LoDo. The project is anticipated to span 18-stories.
- **Westfield Development Company –** The developer is currently in the planning stages of an office building that could include as much as

450,000 square feet of space. The project would between 18th and 19th Streets along Larimer Street.

- **Sugar *Building –** Urban Villages is developing a 10-story mixed-use building with 50,000 square feet of office, retail, and apartments. The project will be located at 16th Street and Blake Street in LoDo.

Office Demand Forecast

Despite strong market conditions and renewed development interest in the CBD and southeast corridor, the suburban office market is still struggling to climb out of the recent downturn. Office vacancy rates increased and lease rates decreased sharply after the information and telecommunications industry busts in 2000 and 2001. The suburban markets, in particular the Denver Tech Center and Denver Boulder Corridor, were hit hard by this downturn in employment.

Overall, Denver metropolitan employment has grown since 2001 at approximately 0.6 percent or over 7,000 jobs annually, as shown in **Table DD-45**. Denver County employment as a whole has increased over the past two years. Specific submarkets have performed stronger than others as indicated by vacancy rates, as shown. These shifts in employment indicate market conditions are stabilizing and the Denver metropolitan area can expect to see growth continue in the near term.

Table DD-45

Employment Trends, 1990-2006
Buckley Annex Market Study

	Denver Metropolitan Area			Denver County			
Year	Employment	Ann. Change	Ann. % Change	Employment	Ann. Change	Ann. % Change	% of Metro Area
Total Employment							
1990	945,395	---	---	385,754	---	---	40.8%
1995	1,106,051	32,131	3.2%	410,747	4,999	1.3%	37.1%
2000	1,343,994	47,589	4.0%	468,995	11,650	2.7%	34.9%
2001	1,352,395	8,401	0.6%	461,996	-6,999	-1.5%	34.2%
2002	1,310,847	-41,548	-3.1%	438,864	-23,132	-5.0%	33.5%
2003	1,280,726	-30,121	-2.3%	425,693	-13,171	-3.0%	33.2%
2004	1,290,842	10,116	0.8%	423,470	-2,223	-0.5%	32.8%
2005	1,315,610	24,768	1.9%	424,662	1,192	0.3%	32.3%
2006	1,340,607	24,997	1.9%	427,358	2,696	0.6%	31.9%
Change							Share of New Growth
1990-1995	160,656	32,131	3.2%	24,993	4,999	1.3%	15.6%
1995-2001	246,344	41,057	3.4%	51,249	8,542	2.0%	20.8%
2002-2006	29,760	7,440	0.6%	-11,506	-2,877	-0.7%	---
1990-2006	395,212	24,701	2.2%	41,604	2,600	0.6%	10.5%

Source: US Bureau of Labor Statistics; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-empl_demand.xls]1-Growth Rate

Office demand is driven directly by employment growth. Two employment forecasts are presented in **Table DD-46**, including 1) stable growth based on the 1990 to 2006 average, and 2) high growth based on DRCOG's forecast for employment. The stable growth forecast projects nearly 65,000 new jobs between 2010 and 2030 or 2,600 jobs annually. The high growth forecast indicates approximately 6,600 jobs annually for a total of 165,000 jobs during the time period.

Table DD-46

Denver County Employment Forecast, 2010-2030
Buckley Annex Market Study

					Change 2010-2030		
Employment	Ann. Job Growth	2010	2020	2030	Total #	Ann. #	Ann. %
EPS Denver County Employment Forecast							
Stable Growth (1990-2006 avg.)	2,600	549,980	575,980	601,980	65,000	2,600	0.5%
High Growth (DRCOG)	6,600	569,980	635,980	701,980	165,000	6,600	1.1%
DRCOG Forecast							
Denver Metro Area		1,719,788	2,042,295	2,364,801	806,266	32,251	1.7%
Denver County		570,198	636,635	703,072	166,092	6,644	1.1%
Denver County % of Metro Area		33.2%	31.2%	29.7%	20.6%		

Source: US Bureau of Labor Statistics; DRCOG; Economic & Planning Systems

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An analysis of office inventory and historical employment growth indicates an average growth of 60 square feet of office space per employee in aggregate. Therefore, **Table DD-47** presents an estimate the demand for office space for each of the two forecasts. The cumulative demand provides an estimate of the net demand for office space within Denver County. The analysis accounts for current vacant space assuming the space is backfilled until a stabilized vacancy of 10.0 percent is reached across the entire county.

Table DD-47
Denver County Office Demand, 2010-2030
Buckley Annex Market Study

Land Use	Ann. Job Growth	Occ. Sq. Ft. per Job	Total Sq. Ft. 2010	2020	2030
Stable Growth (1990-2006 avg.)					
Office Space Demand	2,600	60	32,998,800	34,558,800	36,118,800
Cummulative Demand			0	1,902,412	5,225,452
High Growth (DRCOG)					
Office Space Demand	6,600	60	34,198,800	38,158,800	42,118,800
Cummulative Demand			0	5,599,553	11,556,593

Source: US Bureau of Labor Statistics; Cushman & Wakefield; DRCOG; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-empl_demand.xls]4-Demand

Based on the employment forecast shown, approximately 5.2 to 11.6 million square feet of office space are estimated to be supportable between 2010 and 2030. As stated, this projection assumes current vacant space will be leased until a vacancy rate of 10.0 percent has been achieved across the entire county. The forecast estimates stabilized vacancy will be achieved between 2010 and 2014 depending on employment growth. Therefore, no major office demand will occur prior to these years. However, as the market conditions within the CBD suggest, submarkets may experience divergent situations. Furthermore, this analysis represents the demand for office throughout Denver County. The market conditions surrounding the Buckley Annex site may present different circumstances.

Lowry Office Market Conditions

The Lowry Reuse Plan addressed several priorities including the replacement of jobs after closure of the base. Approximately 1.2 million square feet of commercial space was renovated or developed between 1999 and 2006. Nearly 95.0 percent of the commercial space is currently occupied by tenants. Traditional office space accounts for nearly half of the commercial space or 608,000 square feet. In addition, over 300,000 square feet of medical office space has been developed or approximately 25 percent of total space.

Table DD-48

Lowry Redevelopment Commercial Inventory
Buckley Annex Market Study

Use	Occupied	Vacant	Total SqFt	Total Percent
Industrial	23,000	0	23,000	1.9%
Medical	83,149	0	83,149	6.8%
Medical Office Building	307,607	0	307,607	25.2%
Office	544,198	64,151	608,349	49.9%
Retail	198,204	0	198,204	16.2%
Total	**1,156,158**	**64,151**	**1,220,309**	**100.0%**
Percent of Total	94.7%	5.3%	100.0%	

Source: Lowry Redevelopment Authority; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-LowryDevInventory.xls]Comm Inv - Tenants

The commercial space was constructed over the course of nine years for an average of approximately 160,000 square feet delivered annually. Office development accounted for over half of the annual absorption at approximately 84,000 square feet delivered annually. However, construction delivery does not equate to absorption, which requires a lease for the space. Absorption numbers are not readily available for the Lowry neighborhood; therefore, construction delivery provides a proxy for absorption signifying the upper end of anticipated absorption.

Table DD-49

Lowry Redevelopment Commercial Construction, 1999-2007
Buckley Annex Market Study

Use	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total	Average
Industrial	---	---	23,000	---	---	---	---	---	---	23,000	2,875
Medical	---	---	---	---	7,500	---	---	---	---	7,500	938
Medical Office Building	---	150,000	50,000	---	---	---	81,500	39,300	33,900	354,700	44,338
Office	100,000	287,000	66,246	101,000	50,000	8,700	27,820	---	33,000	673,766	84,221
Retail	---	---	---	131,780	---	---	37,000	44,454	---	213,234	26,654
Total	**100,000**	**437,000**	**139,246**	**232,780**	**57,500**	**8,700**	**146,320**	**83,754**	**66,900**	**1,272,200**	**159,025**
Percent of Total	8%	34%	11%	18%	5%	1%	12%	7%	5%	100%	13%

Source: Lowry Redevelopment Authority; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Data\[16882-LowryDevInventory.xls]Comm Absorb.

Lowry has developed with a variety of office users and tenant space. Several of the prominent office developments are described below:

- **Lowry Business Park –** Coughlin and Company restored the Rampart Campus, which included two vacant classroom buildings and a hanger. The developer combined historic preservation grants and tax credits to remodel the buildings into modern office space. Combined, the three buildings contain approximately 100,000 square feet of space. Coughlin began leasing space in 2001 and reached full occupancy in the third quarter of 2005. Rents at Rampart Campus range from the low- to mid-teens on a NNN basis. Four users occupy 80 percent of the available space; the remaining users average approximately 2,000 square feet per suite.
- **COPIC –** This insurance company became the first commercial tenant at Lowry in 2000 when it purchased a 100,000 square foot building; part of the Quad at Lowry commercial development. The company was looking to consolidate offices into one location. The choice to move to Lowry was made in part because an employees' survey determined that 80 percent lived within three miles of the site.
- **The Quad at Lowry IV –** Commonly referred to as the Covad building, this 140,000 square foot building houses three main tenants, including: Covad, a telecommunications company, Centex Home Equity Corporation, and a Bonfils Blood Center. The building sold in 2006 for $22.7 million or approximately $160 per square foot.
- **Pinnacol Assurance –** The state's largest and oldest provider of workers compensation insurance purchased another of the Quad at Lowry buildings. The 140,000 square foot building is completely occupied by Pinnacol Assurance.

A majority of the office space available at Lowry is owner-occupied; the remaining space has been leased to small users. These small users are predominantly medical users such as doctors and small practices (e.g., Colorado Allergy and Asthma). Lowry has become a magnet for medical office users because of the close proximity to the new Fitzsimons campus. In addition, many doctors live in the neighborhoods surrounding the area.

Lowry has attracted a small number of professional users and typically those tenants not motivated by proximity to other employment users. It is unlikely Lowry will become a major draw for professional service tenants because it cannot provide a critical mass of office space (i.e., 1.0 million square feet or more). However, many developers within the market are optimistic about the opportunity to deliver space appealing to the small market segment attracted to the Lowry area because of its location and proximity to their homes.

In 2006, five different commercial developments broke ground in or near the Lowry Town Center. These projects are briefly described below:

- **PowerHouse Plaza –** The office condominium building offers suites ranging in size from 700 to 2,200 square feet for prices averaging $210 per square foot. The suites can be finished for professional or medical use. The list of tenants includes an accountant, healthcare providers, dentist, and others.
- **Lowry Professional Building –** The 14,000 square foot building offers four suites for purchase from the high $200,000s. A dental practice has already purchased a suite.
- **Lowry Two Medical Center –** The new 33,900 square foot building is located next door to the Lowry Medical Center. Suites are available from 1,500 to 16,000 square feet. Building ownership is available to all tenants.
- **Promenade Place –** Located at the corner of 1st Avenue and Unita Way, the three building complex will offer lease or ownership suites from 1,300 square feet and up. Medical condominiums are offered starting in the low $200,000s.
- **Spruce Street Place –** This mixed-use building, main floor retail and second floor office, is located at 100 Spruce Street in the Lowry Town Center. The building will offer retail space from 661 square feet, office space from 2,777 square feet, and a freestanding building of 4,000 square feet at the corner.

Buckley Annex Office Potentials

The existing market conditions indicate Lowry is a niche office location and not a major business or office park destination. Several factors combine to limit the site's ability to develop as a major employment node. However, there are several attributes that would make the Buckley Annex site a strong location for a small increment of neighborhood or community oriented office space. The major site attributes and the impact each has on the retail development potential of the site are discussed below:

- **Site Size –** At 70 acres, the Buckley Annex site cannot support a major employment activity node without consuming the entire site. A 50 to 100 acre site would allow for 1.0 to 2.0 million square feet of development, achieving the critical mass needed to distinguish the site as a new employment node. Office development on the Buckley Annex site will have to build upon the success of existing office and medical space.
- **Central Location –** The central location of the Buckley Annex site, in addition to proximity to the Fitzsimons campus, makes it an extremely attractive location for small independently owned medical practices. However, the existing development at Lowry has attracted a significant number of these users and there remains sufficient additional land in the Lowry Town Center. Also, the existing development character of the CCCS campus property is more conducive to additional office development.
- **Area Vitality –** The Lowry neighborhood is experiencing significant

investment, both in terms of new residential space and new office development. This vitality suggests a strong adjacent market. Existing office developers are optimistic about the market for additional office space within the neighborhood. However, recent office developments have only provided a modest increment of new space, ranging from 20,000 to 35,000 square feet.

Office Demand Forecast

- The Buckley Annex site will not likely capture a large portion of the forecast office demand between 2010 and 2030, as described above. **Table DD-50** provides an estimate of office space demand for Lowry assuming the neighborhood captures between 1.5 and 3.0 percent of the Denver County office demand between 2010 and 2030.
- The capture rate has been applied to each of the two office space forecasts described previously. The result is a range of office demand for the site from 29,000 to 168,000 square feet between 2010 and 2020 and 50,000 to 179,000 square feet between 2020 and 2030. The total demand for office space is estimated between 78,000 to 347,000 square feet.

Table DD-50
Office Capture Estimates for Buckley Annex Site
Buckley Annex Market Study

	Capture	Total Sq. Ft.			New Demand (Change)		
Land Use	**Rate [1]**	**2010**	**2020**	**2030**	**2010-2020**	**2020-2030**	**Total**
Office Space							
Low Forecast (County)		0	1,902,412	5,225,452	1,902,412	3,323,040	5,225,452
Low Capture	1.5%	0	28,536	78,382	28,536	49,846	78,382
High Capture	3.0%	0	57,072	156,764	57,072	99,691	156,764
High Forecast (County)		0	5,599,553	11,556,593	5,599,553	5,957,040	11,556,593
Low Capture	1.5%	0	83,993	173,349	83,993	89,356	173,349
High Capture	3.0%	0	167,987	346,698	167,987	178,711	346,698

[1] Considers other competitive locations including the Downtown, Stapleton, Fitzsimmons, and the I-70 Corridor.

Source: Economic & Planning Systems

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Office Development Formats

- Although the estimated demand for office space on the Buckley Annex site is modest, the potential demand spans a large range and, therefore, can be developed in one of two ways. These office development possibilities are described briefly below:
- **Mixed-use –** The existing Lowry Town Center contains approximately 17,000 square feet of second level office use over the retail space developed by Miller-Weingarten. The Buckley Annex site could build upon this precedence and provide 30,000 to 50,000 square feet of office space in a mixed-use format if a second town center were developed. This space could be built as second level space in mixed-use buildings or in smaller footprint buildings close to the retail core.
- **Single use –** Any remaining office space demand could be developed in single purpose buildings similar to the Lowry Quad development. Existing office buildings in the Lowry Town Center area have some deck parking to allow for an overall density of approximately 0.5 floor-area-ratio (FAR).
- **Owner-occupied** - As previously stated, most of the Lowry office space is owner-occupied; therefore, it is likely that additional single user tenants could be attracted to the site. At least one such user would need to locate at Lowry to achieve the upper threshold of the estimated office space demand. These users have been willing to pay for structured parking; therefore, this opportunity presents the best chance to achieve higher density office development beyond the mixed-use increment discussed above.

Memorandum

To:	Monty Force; Lowry Redevelopment Authority
From:	Dan Guimond, Nicole Monroe Layman, & Josh Birks; EPS
Subject:	Buckley Annex Redevelopment Plan – Building 444 Reuse; EPS #16882
Date:	June 7, 2007

Economic & Planning Systems (EPS) as part of an interdisciplinary team including Design Workshop (DW), URS, and the Osprey Group, has been working with the Lowry Redevelopment Authority on a redevelopment plan for the property. A primary task of the EPS market analysis (providing input to the redevelopment plan) is to determine if the existing Building 444 can be reused for economic gain, either in the short-term or long-term. This memorandum presents market, economic, and financial based findings concerning the reuse of the building.

Background

The Buckley Annex parcel lies at the western edge of the former Lowry Air Force Base between East 1st Avenue and Bayaud Avenue west of Quebec Street. During airfield operations, the site contained a runway apron used for aircraft parking and maintenance. The apron led to Runway 1, which was oriented east-west. Between 1968 and 1976, airfield operations ceased at the base. In 1976, Building 444 was constructed on the southern portion of the parcel (previously vacant) to house the Defense Finance/Accounting Service (DFAS) and the Air Reserve Personnel Center (ARPC). These agencies have operated from the facility for the past 30 years.

As a Department of Defense (DOD) facility, the three story 600,000 square foot building must comply with Antiterrorism Force Protection (AT/FP) regulations. The facility is one of the few Federal buildings in the Denver Metropolitan Area that complies fully with the AT/FP regulations. In addition, Building 444 benefits from a significant and redundant fiber optic connection to the internet.

Reuse Scenarios

Based on the structural analysis conducted by URS and current market conditions, five future use scenarios were evaluated for Building 444 as described below:

- **Option 1: Reuse Building As Is –** This option would reuse the building with only minor interior modifications to accommodate multiple office tenants. As is, the building would provide Class C office space. The existing mechanical systems (HVAC and electrical) are approaching the end of its useful lifespan and cannot likely be leased for more than five years without significant remodeling and rehabilitation. The building would maintain its surface parking on approximately 16.5 acres of adjacent land.
- **Option 2: Remodel Building –** This option upgrades the existing building for multi-tenant office use, including the cost of upgrading the HVAC systems. By remodeling the space, the building can be improved to Class B space. The basic configuration of the building (a three story building with large floorplates and a low ratio of window offices) will not allow for upgrade to a Class A building. This option includes the development of structured parking to replace the existing surface parking. This option would therefore provide a long-term reuse option for the building.
- **Option 3: Remodel Building with Integrated Parking –** This option would remodel the interior office space, including upgraded HVAC systems. In addition, the garden level would be remodeled for structured parking. This would reduce the land required for parking outside of the building. Remodeling and retrofit cost will be significant including seismic upgrades and possibly floor and foundation reinforcement or upgrades. However, this option could allow the building to remain permanently as part of the overall site redevelopment and eliminate surface parking.
- **Option 4: Reuse Building for Structured Parking –** This option would retrofit the building as a parking structure that would be used to support adjacent development. Structural remodel and retrofit costs would be significant in order to bear the larger weight loads. Furthermore, any change in use will require the building adhere to the 2003 International Building Code, which would require significant seismic upgrades to the structure. These upgrades, due to the original construction type, will likely have to occur as exterior improvements to the façade of the building.
- **Option 5: Demolish Building –** This option demolishes the building and clears the site for redevelopment. The redevelopment plan would encourage the recycling and reclaiming of construction materials, either for use in the larger parcel or elsewhere in the community. An additional cost with demolition of the building will be the remediation of the asbestos containing materials and possible lead based paint that was used in the construction of the building. Based on the data presented in the Environmental Conditions of Property Report, dated April 2007,

the building contains vinyl floor tile /asphaltic mastic and an exterior thermal system insulation wrap.

Findings

The feasibility of reusing Building 444 relies on several factors, including market demand, financial feasibility, and the impact of the building on the overall site design. The following section provides summary of our findings.

Market Demand

Given the unique nature of Building 444 it can potentially be reused as either a traditional office building or as Federal government office space. As one of the only AT/FP compliant buildings in the Denver metropolitan area, there may be demand for the building by Federal agencies. The demand for traditional office and Federal office space has been estimated as part of the reuse analysis.

Traditional Office

Current office market conditions are stabilizing, with several new buildings under development in the CBD. The suburban subareas can expect to see new office development in the near future. However, Lowry has not established itself as a major multi-tenant office location. Rather, the area has become a niche market attracting a significant number of owner-occupied medical and medical office, financial, and insurance uses.

Based on DRCOG employment forecasts, the City and County of Denver could support approximately 5.2 to 11.6 million square feet of office space between 2010 and 2030. However, as the market conditions within the CBD suggest submarkets can and do experience divergent situations. The office development potentials of the Buckley Annex are estimated at 350,000 square feet of space (based on the most optimistic capture rate) over the 2010 to 2030 time period.

Reuse of the 600,000 square foot Building 444 does not appear likely given the estimated market demand for office space for this site. If Building 444 captured 100 percent of the Lowry area demand, the 350,000 square feet would only occupy approximately 60 percent of the building space and would take 20 years to absorb.

A single user needing 600,000 square feet could conceivably enter the marketplace at any time in the future. It is however, an extremely low probability scenario. Therefore, holding the property for this use would only make sense if there is not a more lucrative use for the land available at the time of sale.

Federal Government Office

According to the Government Services Agency (GSA) Rocky Mountain Region office, there are approximately eight Department of Defense (DOD) agencies in the Denver metropolitan region that must comply with AT/FP regulations. These eight agencies currently occupy a total of approximately 100,000 square feet of office space. All eight agencies combined would generate a demand for only 17 percent of the entire building. Based on available information it does not appear there is sufficient demand locally to justify reusing the building for this purpose. However, four of these agencies have leases which expire before 2009 and will likely have relocated before Building 444 becomes available. This further reduces the probability that this reuse option would prove to be viable.

Demand for AT/FP compliant space will not only come from the Denver metropolitan market but from the national market as well. Identifying and securing a commitment to relocate by a large Federal operation requires significant political capital. Municipalities and State governments typically prefer to preserve the employment generated by these agencies within their home districts. However, nothing prohibits Federal agencies from relocating when it makes financial sense.

The probability of a large Federal agency relocating to Denver is unlikely. However, in rare cases such relocations do occur. Reuse of the building by such an agency is unlikely to occur within a reasonable timeframe (i.e. the first five years after sale of the property). Therefore, holding the property for this use would only make sense if there is not a more lucrative use for the land available at the time of sale.

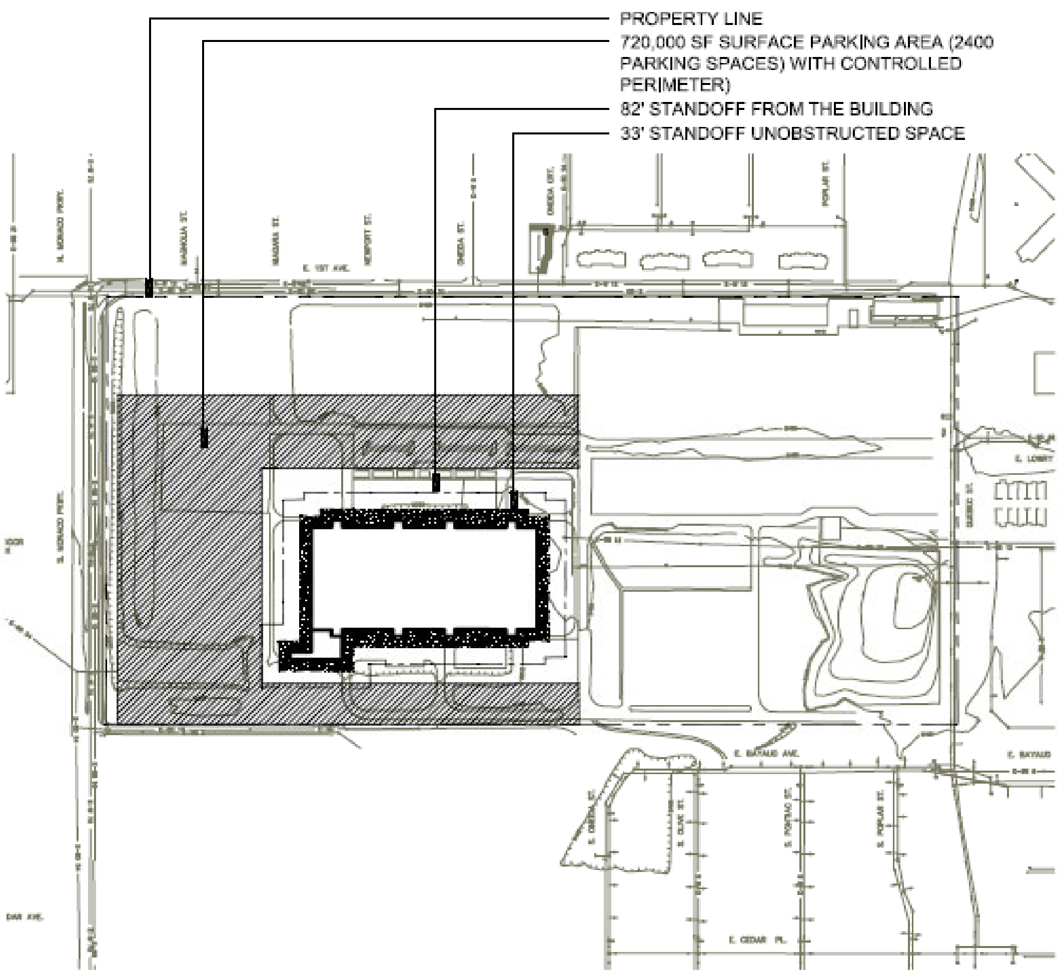
Parking

Parking for the 600,000 square foot building will impose a significant impact, whether surface parking is preserved or structured parking is developed. At a parking ratio of 4.0 spaces per 1,000 square feet, a fully occupied Building 444 will require approximately 2,400 parking spaces. These parking spaces would occupy approximately 16.5 acres, as shown in **Figure DD-18,** of land if preserved as surface parking or approximately 36 percent of the estimated 46 acres of developable land[1]. Given current market conditions, 16.5 acres of land represents between $5.0 and $6.5 million in land value, assuming between $7 and $9 per square foot in value (a blended average of residential and commercial entitled land values at Lowry).

Figure DD-18

Surface Parking Land Consumption

Buckley Annex Market Analysis



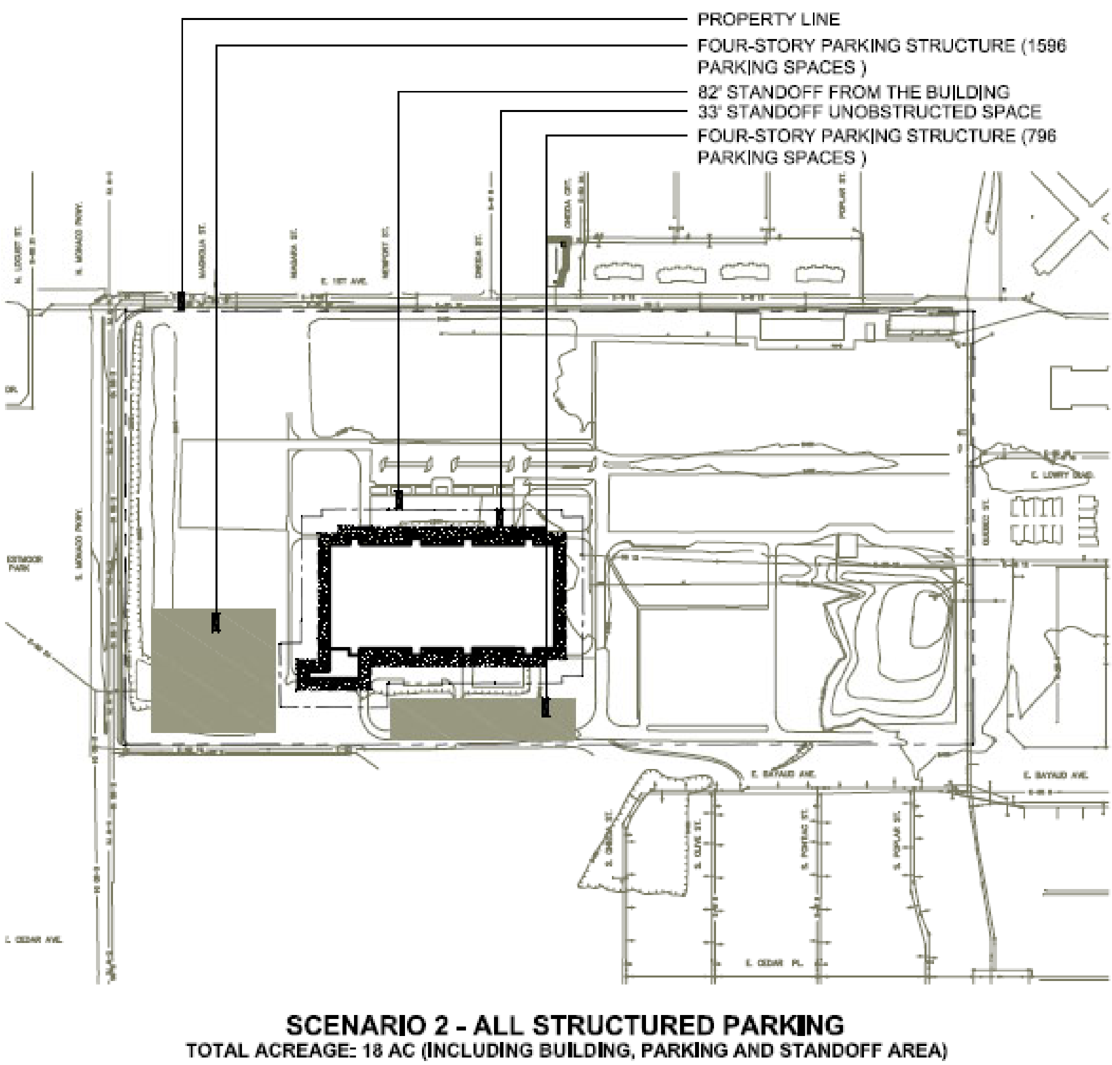
SCENARIO 1 - ALL SURFACE PARKING

TOTAL ACREAGE: 30 AC (INCLUDING BUILDING, PARKING AND STANDOFF AREA)

1 *Developable acreage was assumed at 46.0 acres based on a preliminar land analysis.*

The impact to the overall site design and developable land could be reduced by constructing structured parking to replace the surface parking currently available to the building. At an estimated $20,000 per space, constructing 2,400 parking spaces would cost approximately $48.0 million, as shown in **Table DD-51**. This parking structure would occupy an estimated 4.5 acres, as shown in **Figure DD-19**, of land[2] or 13 percent of the developable acreage. The land beneath the structure represents between $1.4 and $1.7 million in land value.

Figure DD-19
Structured Parking Land Consumption
Buckley Annex Market Analysis



[2] *The calculation assumes 375 square feet per space and a four story structure occupying 75 percent of the land necessary to construct the facility.*

Building Rehabilitation Costs

In addition to the cost of parking, building rehabilitation would require significant additional investments. The building is over 30 years old with older HVAC systems that will likely need to be updated, upgraded, or replaced during the next 5 years. Furthermore, the spartan interior finish would need to be significantly upgraded in order for the facility to compete in the office market. Finally, any change in the use of the building (e.g. for parking, medical office, etc.) would require the building adhere to the 2003 International Building Code with City and County of Denver amendments. The code, which was adopted by the City of Denver since the building was constructed, would require significant seismic upgrades and additional retrofitting.

Typical tenant improvements (equivalent to competitive Class B space) range from $30 to $40 per square foot which equates to $18.0 to $24.0 million for the entire building. In addition, the cost to retrofit the building for compliance with the 2003 International Building Code and seismic requirements will cost approximately $5 per square foot adding an additional $3.0 million. The total cost to remodel, retrofit, and upgrade the building could range from $21.0 to $27.0 million. These costs do not include the opportunity cost associated with the land under the building and/or parking.

Building 444 was constructed using a steel frame and metal deck flooring. Therefore, reusing the building as a parking structure would require significant reinforcement as well as renovations to add access ramps drainage infrastructure, fire protection, and other upgrades required for a parking garage. In addition, the change in use would necessitate similar retrofitting and seismic upgrades to those described above. The cost of reusing the building in this manner would not differ significantly from the cost to construct new structured parking. Therefore it seems an inappropriate use of the building, which limits the design options of the larger parcel, for structured parking.

The cost to demolish Building 444 is significantly lower than initially anticipated because of the style of construction. The steel frame and metal deck flooring will require less labor to demolish. The estimated demolition cost will range from $3 to $5 per square foot or between $1.8 and $3.0 million with an additional abatement cost of $2 to $3 per square foot, for a total of between $3.0 and $4.8 million. This estimate of demolition costs does not include any revenue that could be generated by the reuse of materials. The substantial amount of steel and concrete used to construct the building could be reused either on- or off-site.

Table DD-51
Redevelopment Costs
Buckley Annex Market Analysis

Item	Units	Estimated Cost Factor	Low	High
Lost Land Value (Opportunity Cost)				
Surface Parking	16.5 Acres	$7 - $9/SqFt	$5,031,000	$6,469,000
Integrated Approach	3.5 Acres	$7 - $9/SqFt	$1,067,000	$1,372,000
Structured Parking	4.5 Acres	$7 - $9/SqFt	$1,372,000	$1,764,000
Building Envelope	13.5 Acres	$7 - $9/SqFt	$4,116,000	$5,293,000
Rehabilitation/Remodel Costs				
Remodel Interior	600,000 SqFt	$30 - $40/SqFt	$18,000,000	$24,000,000
Retrofit/Seismic Upgrades	600,000 SqFt	$5/SqFt	$3,000,000	---
Structured Parking	2,400 Spaces	$20,000/Space	$48,000,000	---
Building Demolition Costs				
Demolition	600,000 SqFt	$3 - $5/SqFt	$1,800,000	$3,000,000
Abatement	600,000 SqFt	$2 - $3/SqFt	$1,200,000	$1,800,000
Subtotal			**$3,000,000**	**$4,800,000**

[1] Based on a blended average of current SFD and commercial land sales in Lowry

Source: URS; Economic & Planning Systems

H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-Reuse.xls]Remodel Costs

Site Constraints

Keeping the structure will significantly impact development potentials for the larger 72-acre parcel. In order to maintain AT/FP minimum stand off distances and security features, the building will require an envelope of approximately 13.5 acres or 30 percent of the developable acreage (based on 46 developable acres). Furthermore, the building lies in the path of the proposed Lowry Boulevard alignment, which allows for a fully signalized intersection at Monaco Boulevard. In addition, this optimal alignment of Lowry Boulevard allows for a greater transition distance from the sensitive single family land use pattern north of 1st Avenue to a more intense activity corridor along the proposed boulevard.

The location of the building may prevent the most cost efficient and effective delivery of infrastructure to the entire 72 acres. The building divides the parcel in half. This bifurcation would likely result in less efficient utility, drainage, and water detention facilities. Demolishing the building allows a future developer to design and construct a system that can service the entire site without diverting around a major portion of the site.

The analysis of quantifiable impacts does not consider the reduction in value of adjacent sites due to aesthetic and visual impacts of 2,400 surface, structured parking spaces, or the massing and design character of the building. These features are largely incompatible with the proposed features of the surrounding land uses. In addition, the presence of the building eliminates the opportunity to locate dense residential development on the southwest corner of the property adjacent to the existing already dense Crestmoor Downs apartment community. The opportunity to develop retail along the western edge of the property is also eliminated by the preservation of Building 444.

Conclusions

The previously discussed factors have been used in analyzing each of the proposed reuse scenarios. **Table DD-52** presents a matrix containing the results of the analysis. A reuse or demolition cost has been estimated for each of the scenarios along with an estimate of the land consumed by the option. The matrix also includes the results of a qualitative site impact analysis and an estimate of the market support for reuse of the building.

Table DD-52

Reuse Options Matrix
Buckley Annex Market Analysis

Criteria	Reuse Building As Is (Scenario 1)	Remodel Building (Scenario 2)	Remodel w/ Integrated Parking (Scenario 3)	Parking Structure (Scenario 4)	Demolish Building (Scenario 5)
Cost (Millions) [1]	**$12 - $15**	**$66 - $72**	**$33 - $36**	**$35**	**$3 - $5**
Land Consumed (Acres)	**18 - 30**	**18 - 30**	**17**	**14**	**0**
Lost Land Value (Millions)	$7 - $12	$5 - $7	$5 - $7	$4 - $5	$0
Site Impacts					
Road Network	Yes	Yes	Yes	Yes	No
Optimal Infrastructure Design	No	No	No	No	Yes
Asset NPV (Millions) [2]	**$8**	**$11**	**$10**	**$0**	**$4 - $5**
Development Value (Millions)	**($4 - $7)**	**($55 - $61)**	**($23 - $26)**	**($35)**	**$0 - $1**
Market Support	**Low**	**Low**	**Low**	**Unknown**	**High**
Feasibility	**Low**	**Low**	**Low**	**Low**	**High**

[1] Costs include interior finish upgrades, seismic improvements, and structured parking (not all costs apply to each scenario)
[2] Based on a 10 year investment period, absorption of 60,000 square feet annually, and reversion at 10 percent Cap Rate in Year 11
Source: Design Workshop; URS; Economic & Planning Systems
H:\16882-Buckley Annex DEFAS Redevelopment Plan\Models\[16882-Reuse.xls]Reuse Matrix

Based on the matrix, the following conclusions can be drawn about each of the reuse scenarios presented above.

- **Option 1: Reuse Building As Is –** The cost to use the building "as-is" with minimal interior upgrades is estimated to range from $12.0 to $15.0 million. In comparison, the value of the building over a 10-year investment period is equal to $8.0 million based on estimated absorption and rental rates. The result is a loss of between $4.0 and $7.0 million in value. Furthermore, the land beneath the building and parking is worth approximately $7.0 to $12.0 million of additional lost value. Therefore, this scenario is not financially feasible and limits the overall site capacity and design.
- **Option 2: Remodel Building –** The cost to remodel the building to Class B status ranges from $66.0 to $72.0 million assuming all structured parking. In comparison, the value of the building over a 10-year period is $11.0 million. The result is a loss of between $55.0 and $61.0 million in value. Furthermore, the underlying land is worth between $5.0 and $7.0 million of additional lost value. Therefore, this scenario is not financially feasible and limits the overall site capacity and design.
- **Option 3: Remodel Building with Integrated Parking –** Retrofitting and remodeling the building will cost between $33.0 and $36.0 million. In comparison, the value of the building over a 10-year period is $10.0 million. The result is a loss of between $23.0 and $26.0 million in value. In addition, the underlying land is worth between $5.0 and $7.0 million. This makes the project infeasible from a financial perspective.
- **Option 4: Reuse Building for Structured Parking –** Retrofitting the existing building for 1,600 parking spaces will cost approximately $35.0 million. This cost does not differ significantly from the price of constructing structured parking from the ground up. In addition, preserving the building for parking creates several site design and infrastructure constraints. If the site requires 1,600 parking structure parking spaces new construction would allow for a more efficient distribution of the spaces. Therefore, this option is infeasible from a financial or site design perspective.
- **Option 5: Demolish Building** - Demolishing the building and clearing the site for redevelopment provides the greatest site design and planning flexibility. The cost to demolish the building ranges from $3.0 to $4.8 million, while the underlying land value (based on the conservative estimate of $7 to $9 per square foot in value) ranges from $4.0 to $5.0 million or up to $1.0 million in development value after netting out the cost of demolition and abatement. The actual underlying value of the land will depend on the entitlement of the parcel. It is likely the entitlement will allow for greater density than currently present in Lowry, and, therefore result in a higher land value and greater profit for the developer.

Appendix E

Plan Development Process

(No Appendices for this Chapter)

Appendix F

Redevelopment Plan

Existing Conditions

The Buckley Annex is one of the last remaining Lowry AFB properties that are still controlled by the Department of Defense. The site is located approximately 7 miles east of Downtown Denver and 2 miles south of the Stapleton Redevelopment project. Redevelopment of this site is considered part of the Lowry Redevelopment that has taken place over the last 12 years and as such falls under the authority of the Lowry Redevelopment Authority (LRA). The surrounding land use is primarily residential, with some mixed-use retail and office type properties that were constructed as part of the Lowry Redevelopment project. Additionally, there are some senior housing and institutional type land uses, including a day care, church and library in the immediate vicinity of the Buckley Annex site.

Existing Roadway Classification

Roads in the immediate vicinity of the project site consist of principal and minor arterials, as well as numerous collectors and local streets. The purpose of arterial roadways is to provide a high degree of mobility rather than convenient access to specific properties, while local roadways are tailored more toward providing access to specific properties. Collectors are designed to balance mobility and access needs depending on adjacent land use. An inventory of the existing road classifications, cross section laneage, average daily traffic (ADT) volumes and posted speeds is provided in **Table FF-1**.

Table FF-1
Existing Road Inventory

Roadway	Classification	Through Lanes	Median Left-Turn Lane	ADT	Posted Speed
Alameda Avenue	Principal Arterial	6	Yes	35,500	35 mph
Monaco Pkwy(1)	Principal Arterial	6	Yes	31,000	35 mph
Quebec Street(1)	Principal Arterial	4	Yes	27,500	35 mph
Lowry Boulevard	Minor Arterial	2	Yes	11,500	35 mph
1st Avenue	Collector	2	Yes	5,500	30 mph
Cedar Avenue	Local	2	No	850	25 mph

Notes:
(1) The Denver Strategic Transportation Plan, which is still under development by the City and County of Denver, is expected to identify Monaco and Quebec as part of the north/south travel shed and Alameda as part of the east/west travel shed. This finding would be consistent with the travel characteristics of arterial roadways.
Source: CCD Street Functional Classification Map, February 2007 counts and roadway inventory.

The City and County of Denver's *Blueprint Denver: An Integrated Land Use and Transportation Plan*, which was adopted in 2002 as a supplement to the Comprehensive Plan, considers traditional street classifications too broad to effectively integrate other modes of travel on a consistent basis.

Therefore *Blueprint Denver* developed multi-modal street classifications that relate the mobility function of the roadway to the adjacent land use. This refined classification results in a better integration of other transportation modes because the type and intensity of the adjacent land use directly influences the use of alternative travel modes. The refined *Blueprint Denver* classifications for project vicinity roadways are:

Mixed-Use

- **Arterial: Lowry Boulevard**
  Blueprint Denver Definition – "mixed-use streets emphasize a variety of travel choices such as pedestrian, bicycle and transit use; on-street parking, bicycle lanes, landscaping and sidewalk width are higher priorities than the number of travel lanes."

Residential

- **Arterial: Alameda Avenue, Monaco Parkway and Quebec Street**
  Blueprint Denver Definition – "balance transportation choices with land access, without sacrificing auto mobility; tend to be more pedestrian oriented, giving a higher priority to landscaped medians, tree lawns, sidewalks, on-street parking and bicycle lanes."
- **Collector: 1st Avenue / Local: Cedar Avenue**
  Blueprint Denver Definition – "designed to emphasize walking, bicycling and land access over mobility, tend to place a higher priority on pedestrian and bicycle friendliness than on auto mobility."

Existing Intersection Geometry and Control

The study intersections operate under various controls. Six of the sixteen intersections operate under signalized control, while the remaining ten operate with unsignalized controls on the side streets. **Table FF-2** lists each intersection and its intersection control.

Table FF-2

Existing Study Area Intersection Controls

Table 2: Existing Study Area Intersection Controls

Intersection	Control Type	Comment
Quebec/Alameda(1)	Signalized	Coordinated (100-sec cycle AM/PM peaks; 90-sec cycle off-peak)
Quebec/Cedar	Unsignalized	Two-Way Stop Control on Cedar Place
Quebec/Bayaud	Unsignalized	RIRO access on Bayaud Avenue on each side of Quebec Street
Quebec/Lowry	Signalized	Coordinated (100-sec cycle AM/PM peaks; 90-sec cycle off-peak)
Quebec/1st Avenue	Signalized	Coordinated (100-sec cycle AM/PM peaks; 90-sec cycle off-peak)
Monaco/Alameda	Signalized	Coordinated (100-sec cycle AM/PM peaks; 90-sec cycle off-peak)
Monaco/ManorCare	Unsignalized	RIRO access to ManorCare site on east side of Monaco Parkway
Monaco/Cedar	Signalized	Coordinated (100-sec cycle AM/PM peaks; 90-sec cycle off-peak)
Monaco/Bayaud	Unsignalized	One-Way Stop Control on Bayaud Avenue
Monaco/1st Avenue	Signalized	Coordinated (100-sec cycle AM/PM peaks; 90-sec cycle off-peak)
1st Ave/Magnolia	Unsignalized	One-Way Stop Control on Magnolia Street
1st Ave/Niagara	Unsignalized	One-Way Stop Control on Niagara Street
1st Ave/Newport	Unsignalized	One-Way Stop Control on Newport Street
1st Ave/Oneida St	Unsignalized	One-Way Stop Control on Oneida Street
1st Ave/Oneida Ct	Unsignalized	One-Way Stop Control on Oneida Court
1st Ave/Poplar	Unsignalized	One-Way Stop Control on Poplar Street

Notes:

(1) Alameda Avenue acts as a breakpoint for Quebec Street coordination.

Source: CCD Traffic Staff and February 2007 roadway inventory.

As **Table FF-2** indicates, Monaco Parkway and Quebec Street are operated as coordinated north/south corridors. The Quebec Street corridor is interconnected and it's timings are currently in the process of being modified as part of a DRCOG retiming project. This project is scheduled to implement new timing plans in April 2007 that are designed to improve north/south progression along Quebec Street. These new timing plans for the most part have maintained the basic cycle lengths and splits that are in operation today, but have fine-tuned the offsets in an effort to limit queues and improve arterial progression.

Existing Traffic Volumes

Existing traffic counts, to include turning movements and daily directional tube counts, were completed on February 27, 2007. The turning movement counts were completed during the morning (AM) and evening (PM) peak periods at the following six locations:

- Quebec/Alameda
- Quebec/Lowry
- Quebec/1st Avenue
- Monaco/Alameda
- Monaco/Cedar
- Monaco/1st Avenue

The turning movement counts were recorded at each of the six locations from 7:00am - 9:00am and 4:00pm - 6:00pm to interpolate peak hour turn-

ing movement volumes and travel patterns during both the morning and evening commute periods. It is noted that the peak arrival and departure time of Buckley Annex traffic is before the general peak commuting times outlined above. Therefore the counts at the Lowry Boulevard intersection do not represent the peak volumes into and out of the site, but they do represent the volumes that overlap with the general commuting times.
Daily directional tube counts were recorded at seven locations to generate a current average daily traffic (ADT) estimate. The estimate is useful to get a quick picture of the general traffic patterns and whether the roadways are operating near capacity. The locations for the tube counts are shown in **Table FF-3.**

Table FF-3
ADT Tube Count Locations

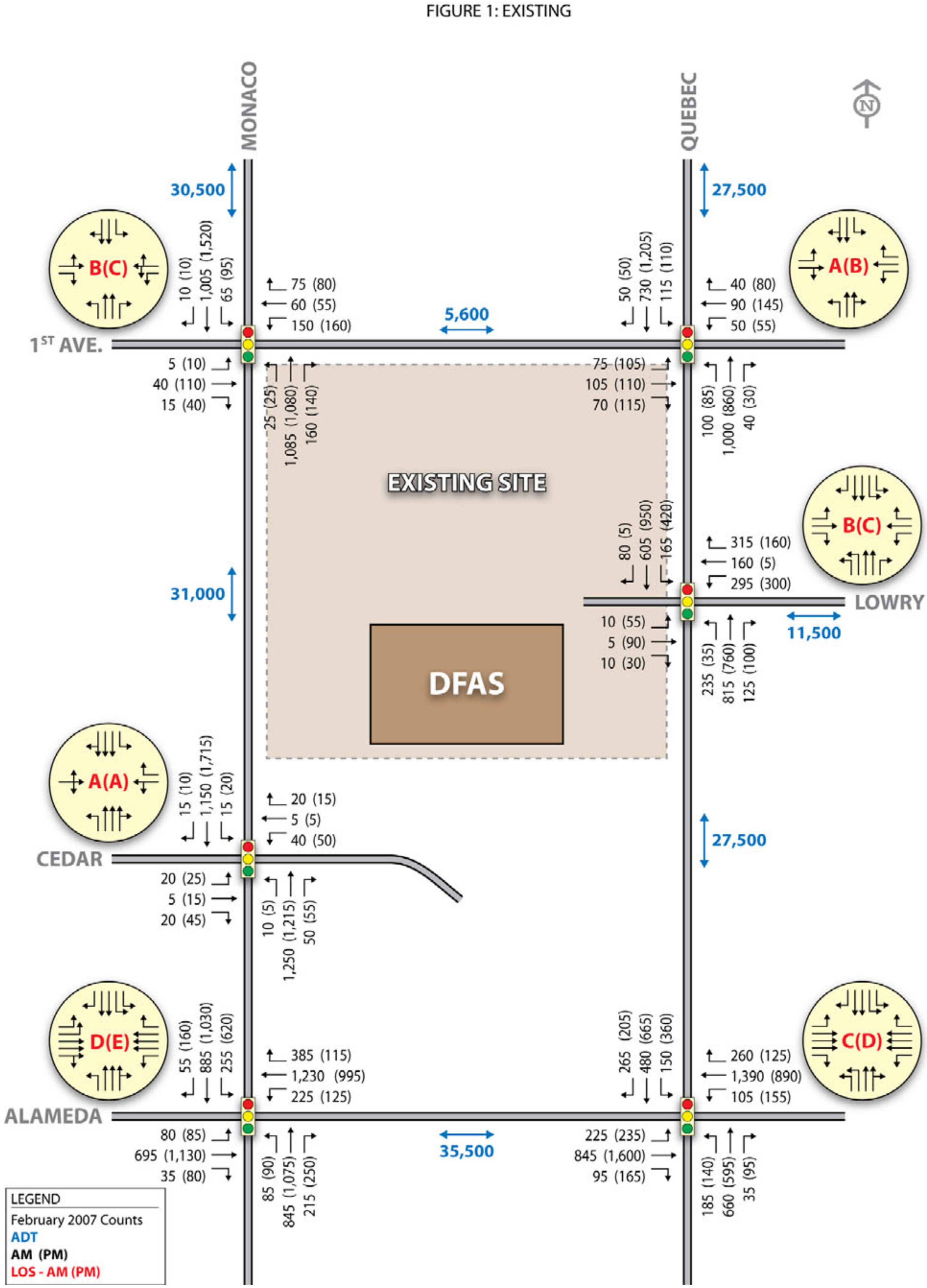
Roadway	Tube Count Location Between
Alameda Avenue	Newport Way and Oneida Street
Monaco Parkway	Bayaud Ave and 1st Avenue
	1st Avenue and 4th Avenue
Quebec Street	Bayaud Avenue and Lowry Boulevard
	1st Avenue and 2nd Avenue
Lowry Boulevard	Quebec Street and Rosemary Street
1st Avenue	Newport Way and Oneida Street

Source: URS Corporation.

It is noted that because there are several unsignalized intersections that grant localized access to the surrounding land uses between the signalized count locations, the counts did not originally balance. But when the analysis was completed with Synchro 6.0, the intermediate unsignalized intersections were coded and turning movement volumes from these local roadways was estimated to smooth the volume differences between the signalized intersections. The existing peak hour traffic volumes, levels-of-service and geometry for the study intersections are shown in **Figure FF-1**.

The general traffic patterns in the area are northbound and westbound during the AM peak commute and southbound and eastbound during the PM peak period. Capacity constraints in this area are the result of closely spaced signalized intersections. Operational concerns are primarily limited to the Quebec and Monaco intersections with Alameda. These intersections operate near capacity due to the regional significance of Quebec and Monaco as north/south travel corridors and Alameda as an east/west travel corridor.

Figure FF-1
Existing Conditions



Source: URS Corporation – February 2007 roadway inventory and level of service analysis with Synchro 6.0.

Existing Bus Service

This project site is currently serviced by two bus routes. Each of these routes only provides limited service to the DFAS site in the peak hours, meaning only one or two buses actually enter the site during the peak periods. The two bus routes are:

- **Route 6** - Travels east/west on 6th Avenue and north/south along Pecos Street between the Town Center at Aurora and Northglenn. The route diverts through Lowry via Quebec Street and Lowry Boulevard before rejoining 6th Avenue.
- **Route 65** - Travels north/south on Monaco Parkway between Stapleton and the Denver Tech Center (DTC). The buses that divert into the DFAS site use 1st Avenue and Quebec Street to access the site opposite Lowry Boulevard.

Additionally, there are three routes in the area that don't directly serve the site, but travel adjacent to or in close proximity to the site.

- **Route 73** - Travels north/south on Quebec Street between DTC and Stapleton. The route diverts through Lowry via Lowry Boulevard, Yosemite Street and 11th Avenue before rejoining Quebec Street north of Lowry.
- **Route 3** - Travels east/west on Alameda Avenue between the Federal Center and the Aurora Town Center.
- **Route 3L** - Travels east/west on Alameda Avenue between the downtown Civic Center Station and east Aurora.

The bus travel times from the DFAS site to the key destinations was reviewed. The times are approximate as the times fluctuate based on the time of day. Therefore the times listed generally reflect peak period conditions.

- DFAS to DTC: ~ 30 minutes
- DFAS to Downtown: ~ 30 minutes
- DFAS to Stapleton: ~ 15 minutes

Pedestrian and Bike Connectivity

The majority of the project vicinity roadways have sidewalks on both sides of the road. These sidewalks range in width and in the separation provided from the adjacent travel lanes. The majority of the sidewalks in the area are detached, but there are still a few locations where the sidewalks are attached. The two locations where sidewalks are not provided on both sides of the road are:

- Quebec Street to the south of Alameda Avenue - sidewalk provided on the west side only.
- Monaco Parkway to the north of 1st Avenue - no sidewalks provided, however this design is consistent with this older area of development.

There are several bike routes in the area, none of which travel directly through the site. These vicinity bike routes include D-14 (Alameda), D-19 (Quebec), and D-21 (High Line Canal).

Summary

The existing transportation system in the vicinity of the DFAS site serves a high demand of both north/south and east/west traffic demand. The current geometry and control provides adequate operations at the majority of intersections while also providing a good multi-modal environment for non-vehicular and transit traffic. The arterial to arterial intersections at Quebec/Alameda and Monaco/Alameda are the capacity choke points in this vicinity. Therefore as vicinity traffic grows, either from nearby development growth or background traffic growth, these intersections will likely be the first locations where capacity enhancements are warranted. It is estimated that the existing intersection geometry at Monaco/Alameda can accommodate 10%-25% more traffic, while the Quebec/Alameda intersection can accommodate another 35%-45% of traffic before volumes exceed capacity.

Future Conditions

Projected traffic conditions were analyzed for the design horizon year of 2030. This year was chosen because it represents a typical 20-year outlook or "design life" for proposed improvements made in conjunction with the Buckley Annex project, and because it represents the current forecast year for most transportation demand analyses conducted in the Denver area at this time.

Travel Demand Forecasting

Future traffic volumes were established using the Denver Regional Council of Governments (DRCOG) travel demand forecasting models for 2005 and 2030.

The travel demand forecasting models are tools that have been developed to aid in region-wide planning for the Denver metro area. The models are maintained and updated by DRCOG and provide output for different horizon periods (2015, 2020, and 2030). The base model year (2005) is calibrated to regional traffic and land use data from that year and is used as a base for all future forecast models. The future forecast models incorporate future roadway and transit plans as well as land use forecasts for the entire region. These inputs are used to estimate future traffic demand as well as locate areas needing infrastructure improvement. The models provide forecasts for daily travel demand, as well as demand during both peak hours.

Network Adjustments

The roadway network in the 2030 model was adjusted to reflect the proposed changes under project conditions. The following changes were made to the model network.

- Lowry Boulevard was extended from Quebec Street west to Monaco Parkway. This extension was identified as a four-lane minor arterial for forecasting purposes.
- Two new Traffic Analysis Zones (TAZs) were added to the model to represent the development areas north and south of the Lowry Boulevard extension. The north TAZ provided full access to Lowry Boulevard and 1st Avenue. A right-in/right-out access was provided to Monaco Parkway. The south TAZ provided full access to Lowry Boulevard and right-in/right-out access to both Monaco Parkway and Quebec Street.

No geometric changes were made to the remaining roadway links in the model.

Land Use Forecasts

The socioeconomic data in the model was adjusted for the two new TAZs to represent the different land use scenarios for the development site, as defined by Design Workshop and the project team. The DRCOG model estimates of traffic generation for these scenarios were considered alongside traffic generation estimates from the Institute of Transportation Engineers (ITE) *Trip Generation* manual (2003 edition), an industry standard reference resource.

Travel Demand Volume Adjustments

The output volumes from the different land use scenarios were compared to observe volume changes between the different model runs. Link volumes along Quebec Street, Monaco Parkway and Alameda Avenue varied approximately five percent for the different scenarios. This showed that traffic volumes in this area of the model would remain relatively stable no matter what development scenario was analyzed.

Link volume forecasts from the 2030 model were adjusted to reflect expected growth from existing counts to the year 2030. In many cases, the 2005 forecast volume did not accurately reflect the 2007 count for the same location. The adjustment process was used to take this into account. This process is documented by National Cooperative Research Program (NCHRP) Report No. 255 procedures for refining travel demand model output and developing turning movements estimations. Three data sources were used in this process: 2005 model forecasts, 2007 counts and 2030 model forecasts.

Future volume estimates were generated using two separate adjustments. The ratio adjustment used a ratio of the 2007 count to the 2005 forecast volume which was multiplied with the 2030 forecast volume. The difference adjustment used the difference between the 2030 forecast volume and the 2005 forecast volume and added that to the 2007 count. In both of these cases, if the 2030 forecast volume was less than the 2005 forecast volume, the 2007 count was used as the future adjusted volume. Since the project site is located in an urban area, it would be unlikely that traffic in the area would decrease over time. Once the ratio adjustment and the difference adjustment were calculated, the average of the two values was taken and used as the adjusted future volume. This volume would then be used for analysis purposes.

An extra set of adjustments were made for the Monaco Parkway and Quebec Street corridors. Raw traffic forecasts for the two streets show a higher volume of traffic on Quebec Street compared to Monaco Parkway. Quebec Street however has capacity constraints both north and south of the project area, so this output was considered unrealistic. It was assumed that demand on these two arterials would likely be even. As a result, traffic was shifted from Quebec Street to Monaco Parkway prior to the future volume adjustment process. The amount of traffic shifted was approximately 400 vehicles in each direction during both the AM and PM peak hours and approximately 4,000 vehicles in each direction on a daily basis.

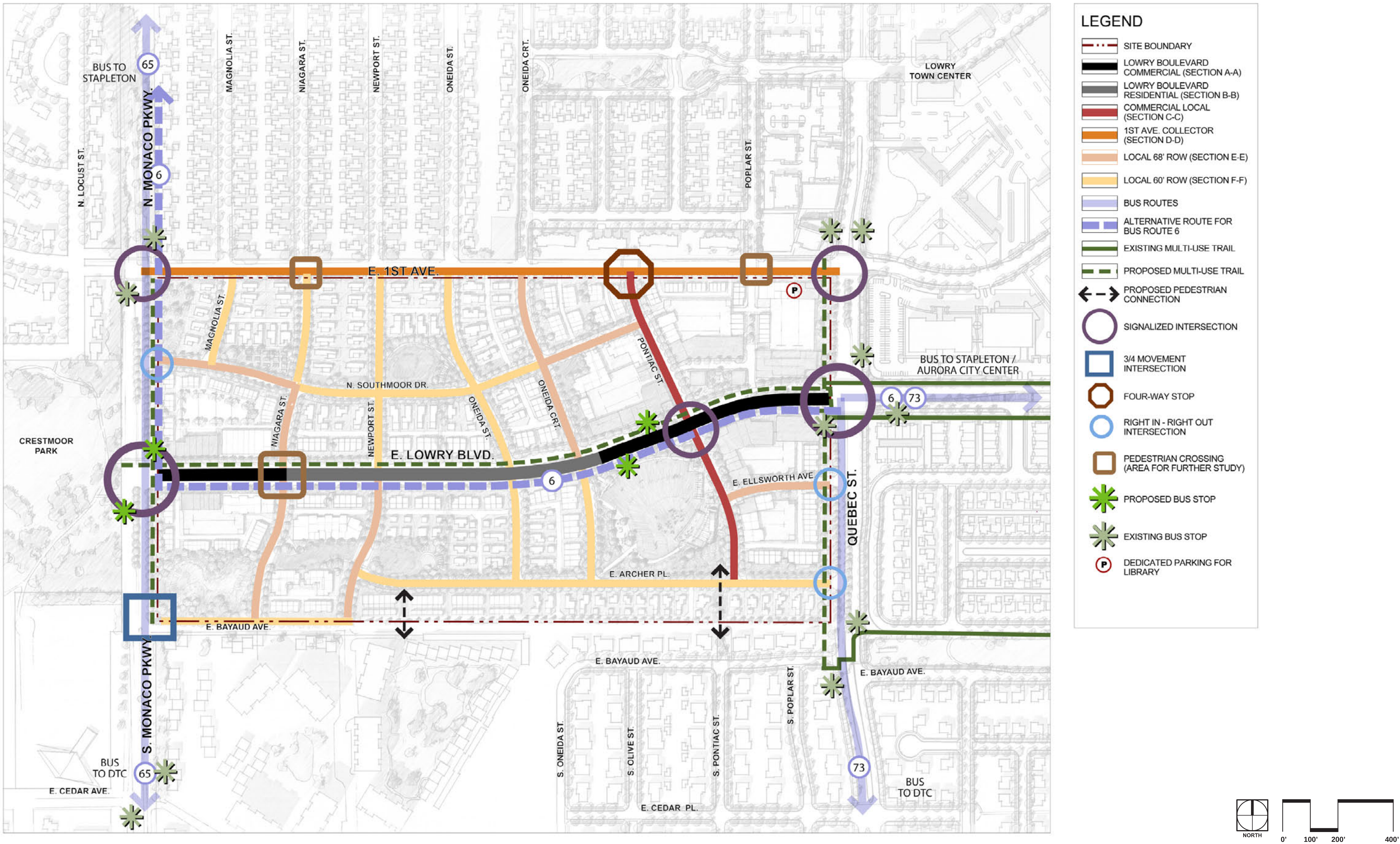
Peak Hour Intersection Turning Movement Estimation

AM and PM peak hour turning movements at each intersection were developed using the adjusted model peak hour link volumes and the National Cooperative Research Program (NCHRP) Report No. 255 procedures. NCHRP 255 procedures use existing turning movement counts and future intersection flows to estimate future turning movement forecasts. Future inbound and outbound flows are estimated into turning movements based on the proportion of traffic performing each movement in the intersection in existing counts. This process is repeated over several iterations until the estimated future turning movements converge on a set of values. These values are then used as an initial turning movement forecast for that intersection. Final minor adjustments are made to ensure a logical balance in traffic from one intersection to the next. In other words, the amount of traffic leaving one intersection should be equal to the amount arriving at the next downstream intersection, except where there are mid-block driveway locations.

Proposed Transportation Network

The Buckley Annex redevelopment would extend the local street grid network south of 1st Avenue into the site to connect directly with the extension of Lowry Boulevard. Access would be primarily east and west, with a new signal at Lowry/Monaco, and enhanced signal at Lowry/Quebec, and supplemental limited accesses (right-in/right-out) to both Monaco and Quebec. The proposed transportation network concept is shown in **Figure FF-2**.

Figure FF-2


BUS TO STAPLETON
65
N. MONACO PKWY.
6
N. LOCUST ST.
MAGNOLIA ST.
NIAGARA ST.
NEWPORT ST.
ONEIDA ST.
ONEIDA CRT.
POPLAR ST.
LOWRY TOWN CENTER
E. 1ST AVE.
P
MAGNOLIA ST.
PONTIAC ST.
N. SOUTHMOOR DR.
NIAGARA ST.
NEWPORT ST.
ONEIDA ST.
ONEIDA CRT.
BUS TO STAPLETON / AURORA CITY CENTER
6
73
CRESTMOOR PARK
E. LOWRY BLVD.
6
E. ELLSWORTH AVE.
QUEBEC ST.
E. ARCHER PL.
E. BAYAUD AVE.
E. BAYAUD AVE.
E. BAYAUD AVE.
S. MONACO PKWY.
S. ONEIDA ST.
S. OLIVE ST.
S. PONTIAC ST.
S. POPLAR ST.
BUS TO DTC
65
E. CEDAR AVE.
E. CEDAR PL.
73
BUS TO DTC
LEGEND
SITE BOUNDARY
LOWRY BOULEVARD COMMERCIAL (SECTION A-A)
LOWRY BOULEVARD RESIDENTIAL (SECTION B-B)
COMMERCIAL LOCAL (SECTION C-C)
1ST AVE. COLLECTOR (SECTION D-D)
LOCAL 68' ROW (SECTION E-E)
LOCAL 60' ROW (SECTION F-F)
BUS ROUTES
ALTERNATIVE ROUTE FOR BUS ROUTE 6
EXISTING MULTI-USE TRAIL
PROPOSED MULTI-USE TRAIL
PROPOSED PEDESTRIAN CONNECTION
SIGNALIZED INTERSECTION
3/4 MOVEMENT INTERSECTION
FOUR-WAY STOP
RIGHT IN - RIGHT OUT INTERSECTION
PEDESTRIAN CROSSING (AREA FOR FURTHER STUDY)
PROPOSED BUS STOP
EXISTING BUS STOP
P
DEDICATED PARKING FOR LIBRARY
NORTH
0'
100'
200'
400'

The transportation network shown in **Figure FF-2** is inconsistent with the transportation analysis in one small respect. The southernmost limited access to the Buckley Annex site is shown in **Figure FF-2** as a right-in/right-out access, but it was assumed to be a ¾-movement access (left turns in allowed) in the analysis. The northbound left turn pocket was eliminated by the planning team after the traffic analysis was completed. While that distinction could be important in the analysis of the final development plan for this site, it was not deemed important enough at this level to warrant revisiting the detailed intersection analysis calculations.

Traffic Distribution

The replacement of the existing government office building facility with a mixed-use site represents a tremendous opportunity to improve on the current situation for two reasons. Today, the office building uses only one access point to the public street network, at the Lowry Boulevard/Quebec Street intersection. Not only is nearly all of the traffic required to use this single driveway, because a single employer owns and operates the entire site, nearly all of the traffic generated on the site leaves the site all at the same time. The distribution of traffic across multiple times and to multiple site access points is much more efficient and represents a much lower peak traffic load on the public street system.

Traffic was distributed to the street network based on information from the DRCOG regional travel demand model, the local extent of the public street network, the proposed layout of land uses of the Buckley Annex site, and general existing travel pattern information. It is important to note that the traffic generated by the proposed Buckley Annex development, about 9,500 vehicle trips per day, is about the same as the traffic generated by the current government office building when it was fully occupied.

The traffic distribution for the current office building use and the proposed Buckley Annex project are presented in **Figure FF-3**.

Intersection Traffic Operations Analysis

The intersection turning movements developed as described previously were analyzed for overall traffic operations service quality using the established "Level of Service" concept. This concept, developed by the US Department of Transportation's Transportation Research Board and documented in its "Highway Capacity Manual", defines intersection service quality using a letter-grade scale based on the average amount of delay encountered by the vehicles traversing the intersection in a specified time period (usually the peak hour). Level of Service (LOS) grades range from A (best) to F (worst), with LOS F conditions generally recognized as unacceptable. LOS grades are assigned based on separate average-delay thresholds for signalized and unsignalized intersections as shown in **Table FF-4**.

The LOS and delay estimation methodology of the Highway Capacity Manual is implemented by several widely-used software programs. For Buckley Annex, the Synchro program by Trafficware (version 6) was used to estimate intersection delay and LOS. The projected daily traffic volumes, peak hour intersection turning movement volumes and peak hour intersection LOS for 2030 conditions with the Buckley Annex project are presented in **Figure FF-4**.

Table FF-4

Delay Thresholds for Intersection LOS

LOS	Signalized	Unsignalized
A	0-10.0	0-10.0
B	10.1-20.0	10.1-15.0
C	20.1-35.0	15.1-25.0
D	35.1-55.0	25.1-35.0
E	55.1-80.0	35.1-50.0
F	80.1 or more	50.1 or more

Source: Transportation Research Board Special Report 209, Highway Capacity Manual (2000)

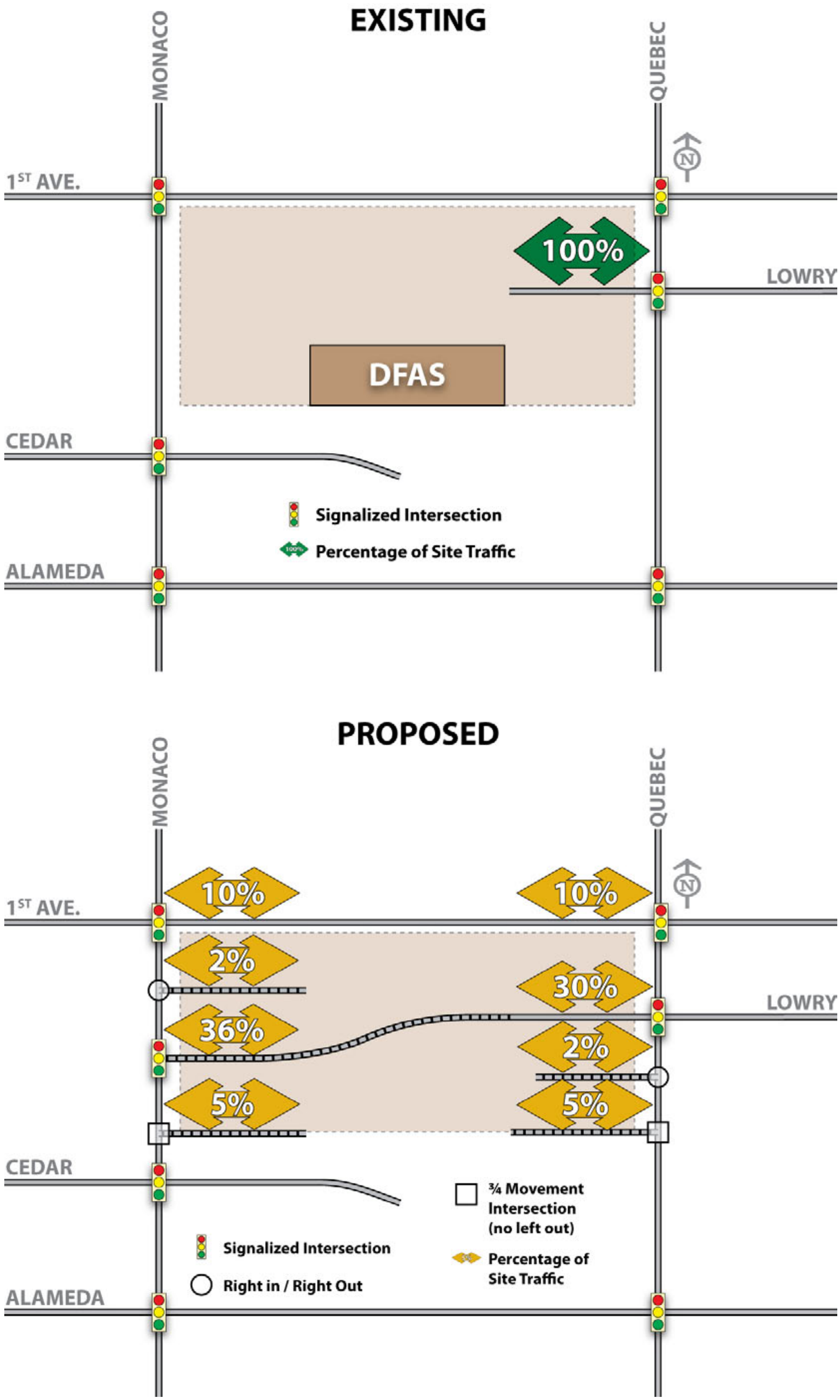
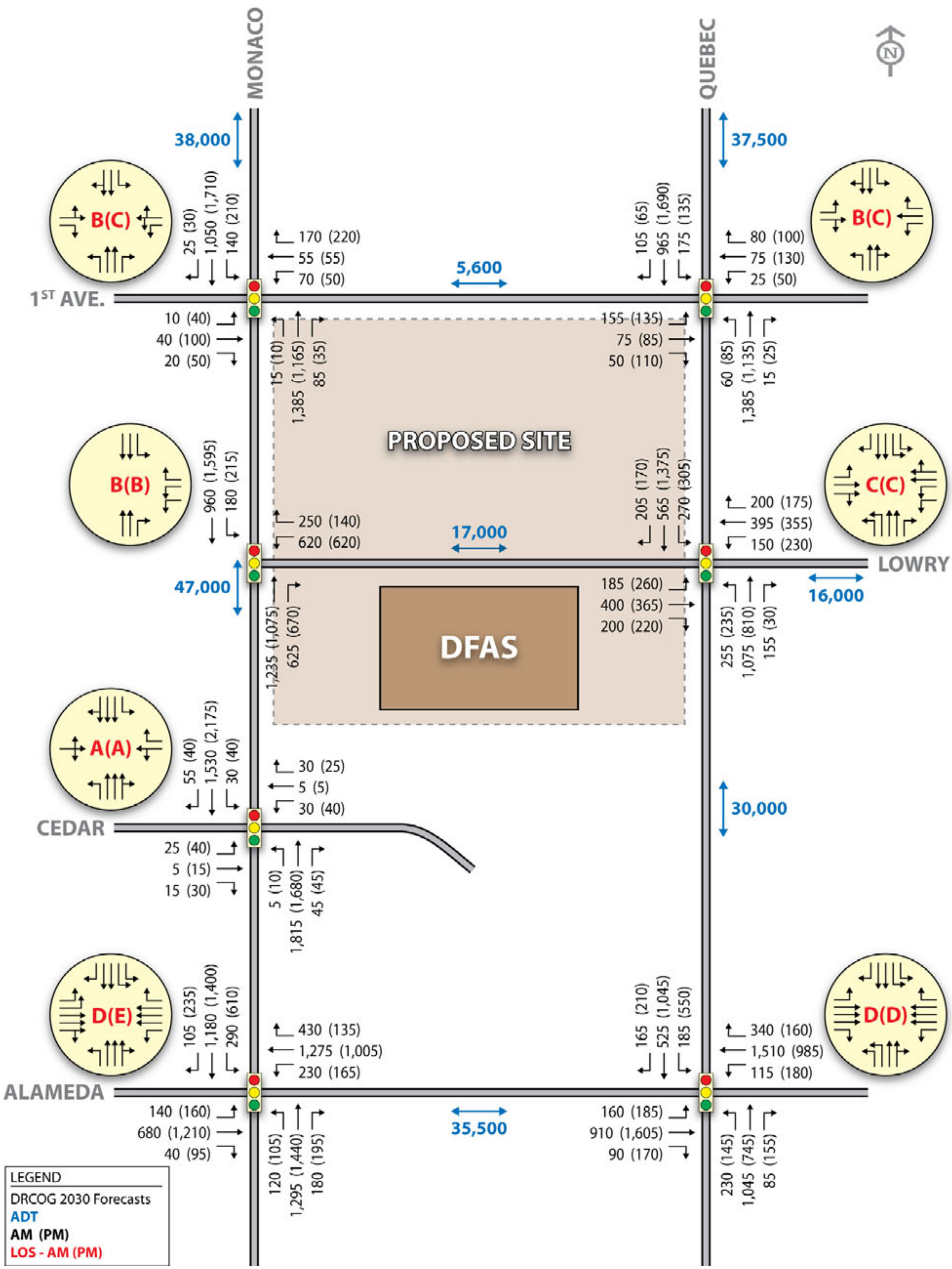


Figure FF-3
Site Access

Figure FF-4

2030 Traffic Volumes and Intersection Level of Service



Other Issues

Other transportation issues, in addition to the technical analysis conducted to analyze the basic intersection impacts have arisen through the course of developing the Buckley Annex redevelopment proposal. Some of these issues were raised by the public through the Transportation Task Force. Those issues that are relevant to transportation are discussed briefly here.

Bus Service

The project team has approached RTD staff about the possibility of re-routing the Route 6, which currently goes between the 6th/Monaco intersection and the Quebec/Lowry Boulevard intersection via 6th Avenue and then Quebec. The new routing, after this project is open, would go between the same two points via Monaco and then the Lowry Boulevard extension, thereby providing transit service through the middle of the site. RTD staff is open to the idea, and suggests the final site developers revisit the idea when more is known about the final development of the site.

Pedestrian and Bicycle Connections

The north side of the Lowry Boulevard extension is envisioned as a multi-use path that extends the existing path inside the Lowry site westward to Crestmoor Park. Additionally, pedestrian connections will be made into Buckley Annex from the residential areas to the north and south, and all of the streets within the site will have sidewalks for easy pedestrian circulation. From a connectivity and access standpoint, this will be a marked improvement over the existing site, which is bordered nearly entirely by chain-link fence topped with barbed wire. Bicycle connections to the D-14 (Alameda), D-19 (Quebec), and D-21 (High Line Canal) bike routes will be substantially enhanced by the Buckley Annex redevelopment project.

Extension of Lowry Boulevard

Most of the shift in traffic that was observed as a result of the Buckley Annex did not occur as a result of the land uses on the site, but from the extension of Lowry Boulevard as a 4-lane minor arterial through the Buckley Annex site, from its existing terminus at Quebec Street to a new "T" intersection at Monaco Parkway. Regional traffic currently uses Alameda Avenue and Lowry Boulevard, via Quebec Street, to travel between the major employment and commercial centers southwest of the site (such as Cherry Creek and Colorado Boulevard) and residential and institutional destinations to the northeast. The regional travel demand model indicates that this travel pattern appears to have an affinity for the new "extension" portion of Lowry Boulevard. As a result of the extension, the average daily traffic on Alameda between Monaco and Quebec could be expected to remain fairly stable between today's conditions and the 2030 scenario with Lowry Boulevard extended. The extension of Lowry Boulevard, in effect, would handle much of the east-west traffic growth in this area. A secondary benefit of the extension would be that east-west traffic between Monaco and Quebec that currently uses 1st Avenue, a residential collector street, would have a better alternative.

1st Avenue

First Avenue between Monaco and Quebec serves numerous residential local streets to the north, but also tends to carry a substantial amount of through traffic. This project proposes to enhance significantly the character of this street through the use of streetscape improvements, narrowing, provision for on-street parking, and the introduction of all-way stop control at one of the intersections between Monaco and Quebec (probably Oneida Street or Oneida Court). This is seen as a viable change for two reasons. First, the extension of the existing residential local street grid southward into the Buckley Annex site will create more cross-traffic. Second, the additional streetscaping improvements have strong potential to reduce the observed travel speeds along 1st Avenue, thereby making it less desirable as a through route. These two changes make it more likely for the balanced traffic flow that warrants all-way stop control to occur. Overall, 1st Avenue is expected to be a substantially improved public space, for both existing and new residents of the area, when the Buckley Annex project is complete.

Cut-Through Traffic

The public comment process associated with the redevelopment planning generated a substantial number of comments about cut-through traffic in the neighborhoods to the north of 1st Avenue. There were strongly voiced concerns that the extension of the local street grid to the south across 1st Avenue would provide an impetus for the new residents, employees, shoppers, and visitors traveling to and from the Buckley Annex site to use those local streets to attempt to bypass perceived congestion problems at intersections on Quebec Street. Given that none of these local streets connect to the next arterial to the north (6th Avenue), it is highly unlikely that many of these streets would actually be used by non-local traffic. However, one potential exception is Poplar Street, which is one block west of Quebec and provides vehicle access to the city library north of 1st Avenue between Poplar and Quebec. Poplar connects to 2nd Avenue, thereby providing a potential bypass route if a Buckley Annex-oriented traveler perceives congestion to be too great at the Quebec/1st Avenue or Quebec/Lowry Boulevard intersections. In response to this concern, the project team changed the street plan so that Poplar Street is not extended south to Lowry Boulevard.

Traffic Signal Spacing

The Lowry Boulevard extension would have intersection proposed to be signalized between Monaco and Quebec. This intersection would be located at the northeast corner of the proposed large park/green space, at the western edge of the proposed commercial district along the eastern part of the site. This signalized intersection would provide valuable retail access, as well as a protected place for pedestrians to cross Lowry Boulevard going to and from the park. For site layout reasons, it was beneficial to locate this signal as close as practical to Quebec Street. City and County of Denver staff recommended that the development team observe a commonly-used rule of thumb in locating this intersection (one eighth of a mile, or 660 feet). However, the optimal spacing for site layout appeared to be closer to about 500 feet.

The common standard generally provides enough space for each signal to have left turn lanes long enough to avoid queue spillover, in addition to providing space for a transition taper in the median of the street so that the two left turn lanes can be placed "back to back", and the street doesn't need to be any wider than necessary to accommodate them. The redevelopment team conducted a detailed queuing analysis using the specific traffic projections for this situation that indicated the proposed shorter signal spacing could accommodate the projected left turn queues relatively easily under the conditions examined.

Housing Unit Cap

The intersection traffic analysis conducted for this project was conducted while the redevelopment team and the task forces were still deliberating as to the maximum number of dwelling units that will be allowed on the Buckley Annex site. The traffic projections used for intersection analysis were based on a total housing unit count of about 1,150. The final negotiations resulted in an overall housing unit cap of 800 units, with some flexibility within individual lot groupings as to how that maximum could be reached. The estimate of 9,500 trips per day generated on the site is based on the updated housing unit cap information.

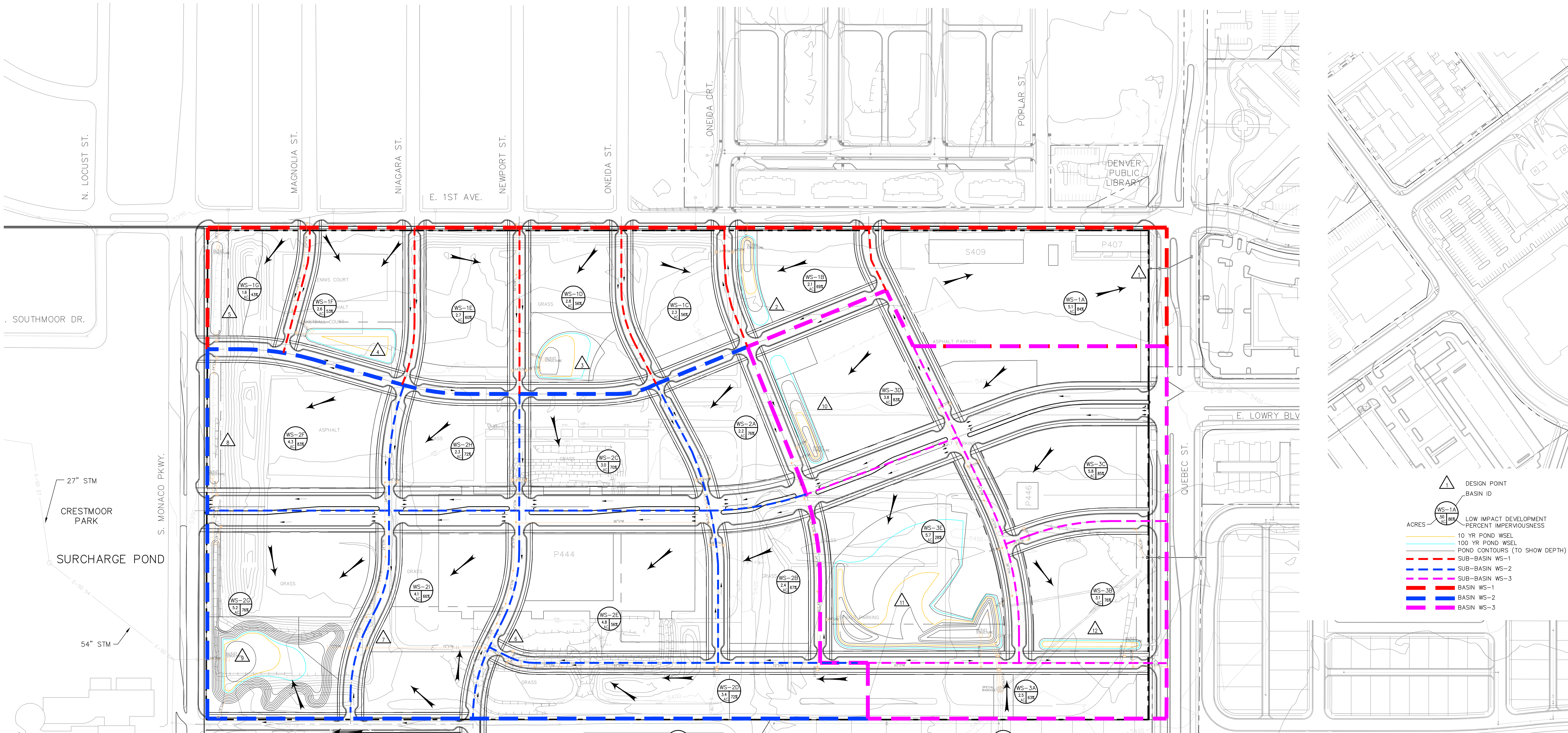
Quebec Street

Quebec Street has four lanes (two through lanes in each direction) between Alameda and 11th Avenue, but only two lanes (one lane in each direction) south of Alameda and north of 11th Avenue. The 2-lane portions of Quebec, which are fronted closely on both sides by primarily residential properties, are congested most of the time, but thus are very effective at limiting the amount of traffic that uses the 4-lane portion of Quebec. Residents all along Quebec have for many years expressed considerable concern to the LRA and the City in any forum possible about the future of Quebec. Many residents want these portions of Quebec widened to four lanes to alleviate congestion, while many others worry that such widening will increase significantly the traffic volumes all along Quebec. Both have very legitimate concerns. Through the task force process, Denver staff and council (Marcia Johnson) indicated a commitment on the City's part to fund and conduct in the near future (possibly starting late 2008) a formal study of Quebec Street that would examine the impacts and benefits of public improvements to transportation in the corridor.

Summary

The traffic analysis conducted for the Buckley Annex project indicates that the reuse of the existing site would generate noticeable traffic demands on the surrounding streets, but that those demands could be handled by the existing capacity available. The proposed development would generate about the same amount of traffic as the current site use did at its historical peak occupancy, but would distribute that traffic spatially and temporally much more efficiently than the existing site use does. The extension of Lowry Boulevard, 1st Avenue improvements, and the pedestrian and bicycle connections provided by the project will represent a significant net benefit to the area from a transportation standpoint.

Appendix F.2: Proposed Drainage & Detention



Buckely Annex Detention Plus WQCV Summary

Basin ID	Design Pt	Basin Area	Traditional 10-yr Detention + WQCV	Traditional 100-yr Detention + 1/2* WQCV	Low Impact 10-yr Detention	Low Impact 100-yr Detention	Low Impact WQCV	Pond Area	*Traditional Pond Depth	*Low Impact Pond Depth
		ac	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac	ft	ft
WS-1A		5.10	0.60	0.86	0.40	0.75	0.18			
	1	**5.10**	**0.60**	**0.86**	**0.40**	**0.75**	**0.18**	**0.00**	**Lowry Storm Sewer**	
WS-1B		2.10	0.21	0.32	0.13	0.26	0.06			
WS-1C		2.30	0.20	0.29	0.12	0.23	0.05			
	2	**4.40**	**0.41**	**0.61**	**0.25**	**0.49**	**0.11**	**0.22**	**2.77**	**2.21**
WS-1D		2.80	0.24	0.36	0.14	0.28	0.06			
WS-1E		2.70	0.24	0.36	0.15	0.29	0.06			
	3	**5.50**	**0.48**	**0.72**	**0.29**	**0.57**	**0.13**	**0.40**	**1.80**	**1.42**
WS-1F		2.60	0.21	0.32	0.12	0.24	0.06			
	4	**2.60**	**0.21**	**0.32**	**0.12**	**0.24**	**0.06**	**0.34**	**0.94**	**0.72**
WS-1G		1.60	0.12	0.17	0.06	0.12	0.03			
	5	**1.60**	**0.12**	**0.17**	**0.06**	**0.12**	**0.03**	**0.14**	**1.25**	**0.88**
WS-2A		2.20	0.24	0.34	0.15	0.29	0.07			
WS-2B		2.40	0.23	0.34	0.15	0.28	0.06			
WS-2C		3.00	0.29	0.43	0.18	0.35	0.08			
WS-2D		3.40	0.35	0.52	0.23	0.43	0.10			
WS-2E		4.80	0.41	0.61	0.25	0.48	0.11			
3.1a	*Offsite	13.33	1.17	1.75	0.70	1.35	0.30			
	***6**	**29.13**	**2.69**	**4.00**	**1.65**	**3.19**	**0.71**	**0.00**	**No Detention**	
WS-2H		2.30	0.24	0.35	0.15	0.29	0.07			
WS-2I		4.10	0.40	0.59	0.25	0.48	0.11			
	7	**6.40**	**0.64**	**0.94**	**0.40**	**0.77**	**0.17**	**0.00**	**No Detention**	
WS-2F		4.30	0.49	0.71	0.33	0.62	0.15			
	8	**4.30**	**0.49**	**0.71**	**0.33**	**0.62**	**0.15**	**0.14**	**5.04**	**4.45**
WS-2G		5.20	0.56	0.82	0.37	0.69	0.16			
	9	**5.20**	**0.56**	**0.82**	**0.37**	**0.69**	**0.16**	**1.44**	**0.57**	**0.48**
3.1b	*Offsite	27.07	2.37	3.55	1.65	3.16	0.70			
WS-3A	11	2.50	0.23	0.34	0.14	0.28	0.06			
WS-3B	12	3.10	0.34	0.49	0.22	0.41	0.09	**0.17**	**2.89**	**2.43**
WS-3C	11	5.80	0.69	0.99	0.46	0.86	0.21			
WS-3D	10	3.80	0.43	0.62	0.29	0.55	0.13	**0.29**	**2.15**	**1.90**
WS-3E	11	5.70	0.31	0.46	0.14	0.28	0.08			
	11 Total	**41.07**	**3.60**	**5.34**	**2.39**	**4.59**	**1.05**	**2.74**	**1.95**	**1.67**
9 Total=6,7,8,9,10,11		**89.90**	**8.41**	**12.44**	**5.43**	**10.41**	**2.38**	**1.44**	**8.64**	**7.23**
TOTAL =		**112.20**	**10.56**	**15.62**	**6.78**	**13.00**	**2.97**	**5.88**		

* No Freeboard or Forebay added
1/3 of Filing 2 (3.1 basin = 40.4 acres) conveyed to Design Pt 6
2/3 of Filing 2 (3.1 basin = 40.4 acres) conveyed to Design Pt 11
Low impact Development wqcv treated outside of detention ponds

REFERENCE DRAWINGS
LYGIS–TR
LYRFBL01
LYRFPV01
lyrfac05
LYRFAC01
BA01RFU1
Q1RFSD01
BA01RFR1
BA01RFD1

NO.	DATE	DESCRIPTION	BY

REVISIONS

COMPUTER FILE MANAGEMENT
FILE NAME: L:\22239278_Buckley_Annex\Cadd\Exhibit\BA01DR02.dwg
PCP FILE: Plot–Half.ctb, Hp8000.ctb or Plot–Full.ctb
PLOT DATE: Jul 19, 2007 8:23am
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.

N

100 0 50 100 200
ORIGINAL FULL SCALE 1"=100'

URS 8181 E. TUFTS AVE. DENVER, CO 80237 Tel: 303–740–2600 Fax: 303–694–3946

FOR AND ON BEHALF OF URS, CORP.

LOWRY REDEVELOPMENT AUTHORITY

BUCKLEY ANNEX

DRAINAGE / DETENTION MAP

DESIGNED BY: BJL
DRAWN BY: BJL
CHECKED BY: JCR

SCALE
HORIZ: 1"=100'
VERT. N/A

DR02

Appendix G

Public Benefit Conveyances & Affordable Housing

Rcd 3/2/07

UNITED STATES DEPARTMENT OF EDUCATION

OFFICE OF MANAGEMENT

E-mail: Barbara.Shawyer@ed.gov

February 22, 2007

Ms. Letty Icolari
Interim Director of Administrative Services
Denver Public Library
10 W. 14th Avenue Parkway
Denver, CO 80204

Dear Ms. Icolari:

We have received the information dated February 6, 2007 regarding the Buckley Annex vacant property in Denver, Colorado that the City and County of Denver on behalf of the Denver Public Library ("Library") wishes to obtain.

Even though there are some technical issues with the submitted application that needs to be resolved, including proper signatures and resolutions, it is evident from the documents provided that the Schlessman Family Branch ("Branch") is in need of parking facilities. However, conveyance of property through the U.S. Department of Education's ("Department") Federal Real Property Assistance Program solely for parking lot uses may be more costly and restrictive for the Library system than it would initially appear.

Upon researching the location of the vacant lot requested in conjunction to the Branch's site, it appears that there is a very real potential for the remainder of the property to be developed by others even if one to two acres were conveyed to the Library as requested. Additionally, because of the nearby residential housing, the possibility exists that other than library patrons may park in this lot. Federal regulations require that 100 percent of the conveyed property be used solely and continuously by the applicant only for the approved program for the next thirty (30) years and for no other purposes. In particular, the Department has experienced serious compliance problems with parking areas with past conveyances that resolved in several million dollars in required abrogation payments.

Before we can proceed with your request, we will need your agreement to amend the application to provide for construction of site improvements upon the property to ensure that there will be no encroachments. Specifically, we must request that appropriate signage be erected to advise the public that only library patrons may use the parking lot. Further, that some variety of barriers (i.e. fence, land berm, raised landscaping plots, etc.) be constructed around the perimeter of the property to prevent unauthorized parking. Before amending your application to commit to those improvements, I would strongly suggest that you have qualified companies provide you with estimates of the costs that will be involved because it is possible that these expenditures may exceed the value of the property the Library is requesting.

400 MARYLAND AVE., S.W., WASHINGTON, DC 20202-4500
www.ed.gov

As I indicated above, if the U.S. Department of Education conveys this property to the Library for use as a parking lot, it will form a 30-year commitment. While it may be possible to address other potential uses for the conveyed property in the future, the Library needs to ensure that they are willing to abide by all the terms and conditions that this conveyance will impose upon the property as well as the Library system for that same term. Most importantly, the Library must fully utilize 100 percent of the conveyed property for library purposes at all times. Some of the other restrictions include, but are not limited to, that no part of the property be sold, leased or otherwise encumbered or disposed of without the prior written authorization of the Department, and that yearly utilization reports on the status of the property be submitted. It is additionally possible that environmental restrictions could be imposed upon the land by the Air Force that could further limit how the Library could use the site in the future.

As I'm sure you are already aware, the Library's proposed use of this vacant property must be in accordance with the Lowry Economic Redevelopment Authority's ("LERA") master plan. To that effect, we will need written confirmation from the LERA confirming inclusion of your proposed program for this parcel in their master redevelopment plan, which must then also be approved and agreed upon by other federal representatives.

If the Denver Public Library believes that the cost of acquisition under Public Benefit Conveyance authorities outweighs the advantages, I ask that you notify us that you are withdrawing your interest in the requested property. However, if you still wish to pursue this avenue of purchasing the property, please respond to those areas noted above no later than March 23, 2007.

Please feel free to contact me via e-mail or at (202) 401-0044 if you have any questions.

Sincerely,

Barbara Shawyer

Barbara L. Shawyer
Federal Real Property Assistance Program

cc: Lowry Economic Redevelopment Authority

K:\SHARED\FRPA\Barbara\FRPA\2007\Denver Public Library.doc

BY AUTHORITY

RESOLUTION NO. 47
SERIES OF 2007

COMMITTEE OF REFERENCE
Public Amenities

A RESOLUTION

Approving and supporting an application by Denver Public Library to U.S. Department of Education to acquire acreage at the Buckley Annex at Lowry for a parking lot to serve the Schlessman Family Branch Library

WHEREAS, certain real property owned by the United States of America, located in the County of Denver, State of Colorado, has been declared surplus to the needs of the Federal government and is subject to assignment for disposal for educational purposes by the Secretary of Education, under the provisions of Section 203(k)(1)(a) of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377) (Act), as amended, and rules and regulations promulgated pursuant thereto, more particularly described as follows:

1.5 acres of land in as close proximity to 100 Poplar St. (1^{st} Avenue & Quebec St.) as possible

WHEREAS, the City and County of Denver and the Denver Public Library needs and can utilize said property for educational purposes in accordance with the requirements of said Act and the rules and regulations promulgated thereunder of which the City and the Library is fully informed, including commitments regarding use and time within such use shall commence.

NOW, THEREFORE, BE IT RESOLVED, that Denver Public Library, shall make application to the Secretary of Education for, and secure the transfer to it of, the above-mentioned property for said use upon and subject to such exceptions, reservations, terms, covenants, agreements, conditions and restrictions as the Secretary of Education, or his authorized representative may require in connection with the disposal of said property under said Act and rules and regulations issued thereto; and

BE IT FURTHER RESOLVED, that the City and County of Denver and the Denver Public Library have legal authority and are willing and in a position financially and otherwise to assume immediate care and maintenance of the property, and that the City and County of Denver has the authority, subject to compliance with the Colorado Constitution, its Charter and ordinances, to do and perform any and all acts and things which may be necessary to carry out the foregoing resolution including the preparing, making and filing of plans, applications, reports and other documents; the execution, acceptance, delivery and recordation of agreements, deeds and other instruments pertaining to the transfer of said property; and the payment of any and all sums necessary on account of the purchase price thereof including fees or costs incurred in connection with the transfer of said property for surveys, titles searches, real estate appraisals, recordation of instruments or costs associated with escrow arrangements; together with any payments necessary by virtue of nonuse or deferral of the use of the property. If the applicant is unable to place the property into use (or determines that a deferral of use should occur), IT IS UNDERSTOOD AND AGREED that the City and County of Denver and the Denver Public Library will pay to the United States Department of Education for each month of nonuse beginning twelve (12) months after the date of the deed, or thirty-six (36) months where construction or major renovation is contemplated, the sum of $1/360^{th}$ of the then current fair market value of the property for each month of nonuse.

If submission of the Application for Public Benefit Allowance Acquisition of Surplus Federal Real Property for Educational Purposes is approved, a copy of the application and standard deed conditions will be filed with the permanent records of the City and County of Denver.

C:\Documents and Settings\lechmsa\Local Settings\Temporary Internet Files\OLK42\Dept of Education Resolution (2).doc

COMMITTEE APPROVAL DATE: N/A

MAYOR-COUNCIL DATE: March 6, 2007

PASSED BY THE COUNCIL March 19 2007

- PRESIDENT

APPROVED: - MAYOR March 20, 2007

ATTEST: - CLERK AND RECORDER, EX-OFFICIO CLERK OF THE CITY AND COUNTY OF DENVER

PREPARED BY: Patrick A. Wheeler, Assistant City Attorney DATE: March 13, 2007

Pursuant to section 13-12, D.R.M.C., this proposed resolution has been reviewed by the office of the City Attorney. We find no irregularity as to form, and have no legal objection to the proposed resolution. The proposed resolution **is not** submitted to the City Council for approval pursuant to §3.2.6 of the Charter.

Arlene Dykstra, City Attorney

BY: ______________________, Asst City Attorney

DATE: March 15 2007

CERTIFICATION

I, Stephanie Y.O'Malley hereby certify that I am the ________ Clerk and Recorder and *ex officio* City Clerk of the City and County of Denver, Colorado, and that the foregoing resolution is a true and correct copy of the resolution adopted by a majority of the members of the Denver City Council and approved by the Mayor of the City and County of Denver in the manner and on the dates indicated in the signature block above.

Clerk and Recorder and *ex officio* City Clerk
For the City and County of Denver, Colorado

Jean Lindholm

From: Monty Force
Sent: Tuesday, April 17, 2007 5:00 PM
To: Phil Workman; 'AMendenhall@designworkshop.com'
Cc: Jean Lindholm
Subject: FW: Buckley Annex and Schlessman Family Branch Library

-----Original Message-----
From: Letty Icolari [mailto:LIcolari@denverlibrary.org]
Sent: Tuesday, April 17, 2007 4:28 PM
To: Monty Force
Cc: Gwendolyn Crenshaw; Jennifer Hartman
Subject: Re: Buckley Annex and Schlessman Family Branch Library

We did respond to the Shawyer letter and will forward a copy to you. We can fax or email it to you as an attachment. Which do you prefer?

Our attorney has advised that we move forward with the DoEd process. In discussion with the Shirley Amore, city librarian, we are less than hopeful that the DoEd process will work out. We have, however, included in our long range capital improvement plan estimates to purchase land and construct said lot. Having said this, we are definitely interested in continuing conversations with LRA about joint use and shared space. Gwendolyn Crenshaw the manager of the Schlessman Family Branch will be attending the April 19 meeting. I have copied her on this correspondence.

Letty H. Icolari
Interim Director of Administrative Services Denver Public Library 720-865-2070
LIcolari@denverlibrary.org

>>> "Monty Force" <monty.force@lowry.org> 4/17/2007 9:16 AM >>>
Ms. Icolari,

I noted in the letter to you from Ms. Shawyer dated February 22, 2007 that you were to provide additional information to the Department of Education (DoEd) regarding your request for property to construct parking for the Schlessman Family Branch Library. This additional information was due by March 23, 2007. I have not seen any correspondence to this effect. At the March 12 Task Force Redevelopment planning meeting you indicated a willingness to work on a shared parking arrangement, but it appears from the DoEd letter that shared parking is not acceptable under Public Benefit Conveyance regulations. Is the library still interested in obtaining property through the DoEd for this purpose? We intend to discuss this matter at the April 19th Task Force meeting so any information you can share prior to that meeting will be appreciated.

Montgomery C. Force

Deputy Director

Lowry Redevelopment Authority

555 Uinta Way

Denver, CO 80230

303-343-0276

303-343-9135 (fax)

Monty Force

From:	Wheeler, Patrick A. - Department of Law [Patrick.Wheeler@ci.denver.co.us]
Sent:	Tuesday, April 24, 2007 1:57 PM
To:	Icolari, Letty - Denver Public Library; Jennifer Hartman
Cc:	Lumley, Lisa A. - Facilities Planning & Management; Amore, Shirley - Denver Public Library
Subject:	RE: Dept of Ed letter received today

Ms. Shawyer's February certainly looked like an effort to dampen the Library's enthusiasm about a PBC deal, especially by including requirements for "assurances", confirmations from the LRA, and "appointments" of persons with absolute authority which DOE knew were not likely to be forthcoming from a governmental entity.

I would suggest talking this situation over with Monty Force before totally giving up on the DOE. The LRA may want you to pursue the PBC in conjunction with the LRA's master planning process, or the LRA may not care and would prefer the Library to just join in on the master planning process.

Patrick A. Wheeler
Assistant City Attorney
City and County of Denver
(720) 865-8753 (direct)
(720) 913-3180 (fax)
patrick.wheeler@ci.denver.co.us

-----Original Message-----
From: Letty Icolari [mailto:LIcolari@denverlibrary.org]
Sent: Tuesday, April 24, 2007 12:39 PM
To: Wheeler, Patrick A. - Department of Law; Jennifer Hartman
Cc: Lumley, Lisa A. - Facilities Planning & Management; Amore, Shirley - Denver Public Library
Subject: RE: Dept of Ed letter received today

Do you think that given all their requirements that we can not commit to or provide with any certainty at this time that we should withdraw the request? I think it is a long shot in any case - both with DOE and LRA.

Letty H. Icolari
Interim Director of Administrative Services Denver Public Library
720-865-2070 LIcolari@denverlibrary.org

>>> "Wheeler, Patrick A. - Department of Law"
>>> <Patrick.Wheeler@ci.denver.co.us> 4/24/2007 12:05 PM >>>
Jennifer & Letty:
I assume you have a copy of the February 22, 2007, letter Barbara Shawyer is referring to. In that letter, Ms. Shawyer states "we will need your agreement to amend the application to provide for construction of site improvements upon the property to ensure that there will be no encroachments." She goes on to talk about signage restricting lot to library patrons and barriers to prevent unauthorized parking. The only commitment the Library could make, at this point in time, is to include

1

signage and barriers in the design of the parking lot and to seek funding, upon agreement by Education to make the Public Benefit Conveyance, for the purpose of building the parking lot and installing the signage and barriers. Otherwise, there is no clear means to commit funds for constructing improvements on property that the City has no idea whether it will own in the future.

In her February 22, 2007, letter, Ms. Shawyer also wants "written confirmation from the LERA confirming inclusion of your proposed program for this parcel in their master redevelopment plan." I'm not certain how this could be done at this point in time when the LERA is still working on its master plan. You might talk with Monty Force about this.

As for the "appointment" of one individual to represent the City on this PBC proposal, certainly one individual from the Library can be appointed by the City Librarian and/or Library Commission to represent the Library and the City before the Department of Education, but, depending on the circumstances, approvals by the Mayor/Auditor/Library Commission and possibly even City Council may be required to complete a property transfer.

Patrick A. Wheeler
Assistant City Attorney
City and County of Denver
(720) 865-8753 (direct)
(720) 913-3180 (fax)
patrick.wheeler@ci.denver.co.us

-----Original Message-----
From: Jennifer Hartman [mailto:JHartman@denverlibrary.org]
Sent: Tuesday, April 24, 2007 11:02 AM
To: Wheeler, Patrick A. - Department of Law; Icolari, Letty - Denver Public Library
Cc: Lumley, Lisa A. - Facilities Planning & Management
Subject: Dept of Ed letter received today

Patrick,

Hi. I am attaching the letter we received today from Barbara Shawyer, Dept of Ed. Could you please let Letty and I know what you think about what she is asking for? I am also copying Lisa Lumley on this email, it just so happens she asked me this morning if we had heard anything new.
Thanks for your help with the interpretation.

Jennifer

~~~~~~~~~~~~~~~~~
Jennifer Hartman
Financial Assistant
Tel: 720-865-1218
Fax: 720-865-2087
jhartman@denver.lib.co.us
~~~~~~~~~~~~~~~~~

The Denver Public Library
http://denverlibrary.org

UNITED STATES DEPARTMENT OF EDUCATION

OFFICE OF MANAGEMENT

E-mail: Barbara.Shawyer@ed.gov

April 18, 2007

Ms. Letty Icolari
Interim Director of Administrative Services
Denver Public Library
10 W. 14th Avenue Parkway
Denver, CO 80204

Dear Ms. Icolari:

By letter dated February 22, 2007, the U.S. Department of Education ("Department") requested further information regarding the application received from the City and County of Denver on behalf of the Denver Public Library ("Library") pertaining to the Buckley Annex property in Denver, Colorado.

In that letter certain confirmations were requested to be made and submitted back to the Department no later than March 23, 2007. To date, we have not received those assurances. Further, the resolution forwarded via e-mail from Jennifer Hartman today does not name a specific individual to act upon the behalf of the City and County of Denver on behalf of the Denver Public Library.

If the Library remains interested in the pursuit of this property through a possible educational Public Benefit Conveyance, we will need satisfactory responses to those areas raised in the February 22nd letter no later than **May 18, 2007**. If we have not received your response by that date, we will inform the Lowry Economic Redevelopment Authority to withdraw our interest in the property.

Please feel free to contact me via e-mail or at (202) 401-0044 if you have any questions.

Sincerely,

Barbara Shawyer

Barbara L. Shawyer
Federal Real Property Assistance Program

cc: Lowry Economic Redevelopment Authority

K:\SHARED\FRPA\Barbara\FRPA\2007\Denver Public Library follow up.doc

400 MARYLAND AVE., S.W., WASHINGTON, DC 20202-4500
www.ed.gov

Monty Force

From:	Monty Force
Sent:	Monday, May 07, 2007 8:01 AM
To:	Letty Icolari
Cc:	Monty Force; Jean Lindholm; AMendenhall@designworkshop.com; Phil Workman
Subject:	RE: [BULK] Denver Public Library and LRA

Letty,
We have had many discussions amongst the consultant team and community task force members about how to best proceed. It certainly appears that obtaining a PBC from DoE will be problematic. On the one hand the PBC restrictions would require a single use parking lot at a prime real estate corner, which is obviously not the best land use. On the other hand I'm not sure how we could bind a future purchaser/developer to work with the library on a shared parking scheme even though that would be most desirable. In the past the LRA controlled the development and could more easily have accommodated this need, but with the transfer directly to a developer we don't have that latitude. I think all we can do is strongly suggest in the Redevelopment Plan that a future developer work with the Library to develop joint parking. I have meetings with AF folks in DC this week. Perhaps I can get some guidance from them on what they might accept in the form of a restriction or requirement regarding parking in the transfer of the land to a developer.
Monty

-----Original Message-----
From: Letty Icolari [mailto:LIcolari@denverlibrary.org]
Sent: Friday, May 04, 2007 4:17 PM
To: Monty Force
Cc: Jennifer Hartman
Subject: [BULK] Denver Public Library and LRA
Importance: Low

What are your thoughts about the Library continuing with the LRA and abandoning the DOE?

Please look at the attached trail of emails between the Library and the City Attorney's office regarding the DOE. Our attorney, Patrick Wheeler suggested that we chat with you about our concerns with the DOE requirements and whether we should continue along that path. Is this a concern for you? Would withdrawing from the DOE process effect our ability to move forward with LRA to develop a possible joint use space? Let me know your thoughts.

Letty H. Icolari
Interim Director of Administrative Services Denver Public Library
720-865-2070 LIcolari@denverlibrary.org

1

THE DENVER PUBLIC LIBRARY

LETTY ICOLARI
Director of Human Resources

SHIRLEY AMORE
City Librarian

May 14, 2007

Barbara Shawyer
Federal Real Property Assistance Program
FRPA, 2E115
Washington, DC 20202-4553

Ms. Shawyer,

Denver Public Library would like to continue the possibility of being awarded a public benefit allowance for a small portion of land at the Buckley Annex. However, there are a few pertinent items still under consideration.

First, and foremost, we did contact Monty Force with the LRA but he was not able to assure the Library inclusion in the master plan. He states that the PBA through the DOE is problematic because it gives the Library a single-use lot at a prime real estate corner that he says is obviously not the best use of the land. However, neither can he assure the Library a binding agreement with the developer because this, unlike other Lowry development plans, is not at the sole discretion of the LRA. He says that all we can do is strongly suggest in the Redevelopment Plan that a future developer work with the Library to develop joint parking. To that effect, no written confirmation from the LRA can be obtained, nor would it validate anything.

Mr. Force had meetings in DC this last week with the Air Force representatives involved in the Buckley Annex redevelopment project and was looking for guidance from them on how to approach the parking dilemma and the possibility of a restriction or requirement regarding parking included in the transfer of the land from the Air Force to the selected developer.

Ms. Shawyer it is unfortunate that the DOE is unable to offer any sort of flexibility on the requirements placed on the application process for the Denver Public Library. It is possible that an individual could be appointed to represent the Library and the City and County of Denver but depending on the circumstances, approvals by the Mayor/Auditor/Library Commission and possibly City Council may be required to complete a property transfer. Without the possibility of receiving a break on the land cost, which is currently $696,960 per acre, the Library will have to hope that the AF and the developer find it beneficial to the local area to add parking that could be shared with the Library.

10 WEST FOURTEENTH AVENUE PARKWAY | DENVER, COLORADO 80204-2731 | 720-865-1111 | www.denverlibrary.org

The Library is fully aware of the 30-year term, 100% utilization requirement, and would be willing to furnish the DOE with an amended application to include an estimate of a perimeter barrier as well as signage, however, at this juncture it does not appear that we have much support or flexibility from the LRA or the DOE. City Councilwoman Marcia Johnson will be available to meet with us regarding the issues surrounding our application but not until Monday, May 21, 2007. Three days after our deadline of May 18, 2007.

Any suggestions or comments regarding this matter are much appreciated.

Thank you,

Letty Icolari
~~Interim Director of Administrative Services~~
Denver Public Library
720-865-2070
Licolari@denverlibrary.org

CC: Marcia Johnson, Denver City Councilwoman
Patrick Wheeler, Assistant City Attorney

UNITED STATES DEPARTMENT OF EDUCATION

OFFICE OF MANAGEMENT

received
5-29-07

E-mail: Barbara.Shawyer@ed.gov

May 22, 2007

Ms. Letty Icolari
Interim Director of Administrative Services
The Denver Public Library
10 W. 14th Avenue Parkway
Denver, CO 80204-2731

Dear Ms. Icolari:

We have received and reviewed your May 14, 2007 letter regarding the Buckley Annex property in Denver, Colorado that the City and County of Denver on behalf of the Denver Public Library ("Library") wishes to acquire via an educational Public Benefit Conveyance.

It's unfortunate that the Lowry Economic Redevelopment Authority ("LERA") does not appear to support the Library's desire to acquire the property for parking purposes. A mandatory requirement of the Base Realignment and Closure (BRAC) regulations set forth at 32 CFR 92 is that Public Benefit Conveyance applications and requests for property must be consistent with the local redevelopment authority's reuse plan. Without the support of the LERA and the inclusion of the parking lot for the Library in the redevelopment plan, the U.S. Department of Education is unable to further assist you in the acquisition of this property unless those circumstances change in the future.

As I have explained in prior correspondence, in order for the Library to qualify to receive this property at a 100 percent discount, the sole use of the parking lot must be by library patrons and staff as our federal regulations require. Without that commitment and use, we would be violating federal law.

You may also wish to know that some of the military services have advised other local redevelopment authorities that they will give strong consideration to the highest and best use of the property as recommended in redevelopment plans but the preferred methods of disposing of property during the 2005 round of BRAC are through the exchange of military construction ("Milcon") rights with developers or for the outright sale of the property. Gaining the support of the LRA is one step in the process but the final decisions on disposition of the Buckley Annex and other BRAC 2005 installations ultimately rest with the military services.

I regret that we do not have more flexibility but I trust that you understand the Department cannot violate federal laws and regulations. Please feel free to contact me via e-mail or at (202) 401-0044 if you have any questions.

Sincerely,

Barbara Shawyer

Barbara L. Shawyer
Federal Real Property Assistance Program

cc: Lowry Economic Redevelopment Authority
K:\SHARED\FRPA\Barbara\FRPA\2007\Denver Public Library 2.doc

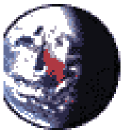
400 MARYLAND AVE., S.W., WASHINGTON, DC 20202-4500
www.ed.gov

Jean Lindholm

From:	Jean Lindholm
Sent:	Wednesday, May 30, 2007 12:13 PM
To:	'Garrityknisely@aol.com'
Cc:	TJohnson@designworkshop.com; 'AMendenhall@designworkshop.com'; dennisdonald@earthlink.net; johnhuyler@earthlink.net; dennis_arbogast@urscorp.com; 'jason_rutt@urscorp.com'; dguimond@epsdenver.com; nlayman@epsdenver.com
Subject:	Buckley Annex library request
Attachments:	Buckley Annex DOE 5-22-07.pdf

Attached is a letter from DoE to Letty Icolari regarding the request for property for a PBC. Monty asked that I let you know that the LRA has given no indication of support or non-support at this point since all options are still open in the plan considerations. You can get in touch with him if you want to discuss.

Jean Lindholm
Lowry Redevelopment Authority
Executive Administrative Assistant
Office Manager
303-343-0276
303-343-9135 Fax



"Letty Icolari"
<licolari@denverlibrary.org>

01/22/2008 01:01 PM

To LKessel@DesignWorkshop.com

cc

bcc

Subject Re: Lowry Buckley Annex - Draft Redevelopment Plan Document

History: This message has been replied to and forwarded.

Laura - Thanks so much for sharing this information. I believe this proposal creates the best scenario to accomplish the Library's and community's desire to alleviate parking congestion around the Library branch. I am interested in the possibility of some kind of pedestrian crossing at 1st and Poplar as indicated on figure F3.

Letty H. Icolari
Director of Administrative Services
Denver Public Library
720-865-2070
LIcolari@denverlibrary.org

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>>> <LKessel@DesignWorkshop.com> 1/22/2008 11:06 AM >>>

Ms. Icolari:
As you may know, we've been working to create the redevelopment plan document for the Lowry Buckley Annex that reflects the work that the task forces and the planning team have done over the last year. We are putting the finishing touches on the document and would like to offer you the opportunity to review the sections of the current draft related to the library parking. The attached Chapter F, Redevelopment Plan, discusses the library parking requirement on page F.45 (F.32 in the pdf page numbering). Additionally, the attached Chapter G discusses the library's public benefit conveyance request.

If you have feedback, please send the comments back to me either via hard copy or email by noon on Friday, January 25. In addition, if you are willing to write any letters of support or endorsement of the library parking recommendation, we would include the endorsement with the document submitted to the Air Force.

Feel free to call with any questions.

Thank you,

Laura Kessel
DESIGNWORKSHOP
1390 Lawrence Street, Suite 200

Design Workshop, along with the LRA staff, the Housing Task Force, and other members of the consulting team, evaluated the homeless provider and PBC applications submitted to the LRA in December 2006. This appendix provides an overview of the components of the homeless housing applications and an evaluation of the applications in terms of financial and operational feasibility and the demonstrated needs for homeless housing in various categories in the areas around the Buckley Annex and in the City and County of Denver at large.

Background: Homelessness in Denver

Under the direction of Mayor John Hickenlooper, the City of Denver completed a "Ten Year Plan to End Homelessness" in 2003. At that time, the city identified a short-term goal of reducing chronic homelessness by 75 percent within five years, and a long-term goal of ending homelessness entirely in Denver. At the time of the study an average of 1,968 households were considered homeless in the city, comprising 2,811 individuals. The mayor's plan called for over 3,000 permanent or transitional housing units serving homeless persons over a ten year period, as outlined in **Table GG-1**.

Table GG-1

Goals of Ten Year Plan to End Homeless: Permanent and Trans tional Housing (City/County of Denver, 2003)

Category Served	Number of Units	Type of Housing Opportunity
Chronic Homeless	942	Permanent supportive housing
Episodic Homeless	171	Transitional housing with services
Transitional (1st time) Homeless	2,080	Permanently Affordable Units (serving households earning 30% of AMI or less)
TOTAL --->	3,193	

The mayor's Ten Year Plan emphasizes increased funding for services designed to prevent homelessness (including one-time eviction and foreclosure assistance and improved discharge policies from public institutions) and increased services such as mental health assistance, substance abuse treatment and medical care to prevent homelessness. The plan also calls for additional resources to improve public safety and outreach initiatives to homeless populations and to provide education, workforce training and employment to homeless individuals. The mayor's plan also calls for reforms of zoning and land use codes to facilitate the construction of additional housing units for homeless persons in Denver.

The Ten Year Plan to End Homelessness involves moving from a homelessness strategy focusing on providing emergency shelters to one emphasizing community services and providing transitional and permanent housing to end the cycle of homelessness. According to the Plan, "studies have shown an annual savings between $12,000 and $16,282 for each unit of service-enriched, supportive housing built in place of emergency shelter beds".[1] This approach dovetails with the "Housing First" model put forth by the Department of Housing and Urban Development ("HUD") over the last few years. Housing First calls for care, an emphasis on short-term interim housing designed to move people into permanent housing as soon as possible, an adequate supply of long term housing, and a range of supportive services for homeless persons and families.

Summary of Homeless Provider Applications

On December 26, 2006, the LRA received a packaged application from the Buckley Annex Homeless Consortium, Inc. (the "Consortium") requesting a total of 298 housing units, incorporating a total of 15 acres, at the Buckley site. The Consortium's application includes housing for various groups of people, including families, seniors, veterans, and homeless individuals, as outlined in **Table GG-2** below.

Table GG-2

Summary of Buckley Annex Homeless Consortium, Inc. Request

Category	Developer	Owner / Operator	Units	Acres Requested
Families (Transitional)	Denver Housing Authority	Warren Village	50	3
Families (Permanent)	Archdiocesan Housing	Archdiocesan Housing	50	3
Seniors	Denver Housing Authority	Volunteers of America	50	1.5
Veterans	Aurora Housing Authority	Aurora Housing Authority	48	2.5
Individuals	Denver Housing Authority	Colorado Coalition for the Homeless	100	5
		TOTALS --->	**298**	**15**

[1] *"Ten Year Plan to End Homelessness", City and County of Denver, 2003.*

Several of the components of the Consortium's request designate different parties serving as developer and operator of particular housing programs. Developing housing units involves different skills than the day-to-day operation of housing units for the homeless. The Consortium has designated operators it believes best serve particular segments of the homeless population.

The following provides additional programmatic details concerning the components of the Consortium's application:

Housing for Veterans

The Consortium's application notes that, because Lowry Air Force Base was a primary military facility in the Denver metro area for over fifty years, "housing for veterans should be given priority consideration".[2] The Consortium requested two 24-unit buildings containing one-bedroom units for men and women. The application notes the proximity of the Buckley Annex to the new VA medical center at the Fitzsimons campus in Aurora, and suggests that the proceeds of land sales at Buckley Annex could be used to purchase land for similar facilities in Aurora near Fitzsimons.

Housing for Families

The Consortium requested primarily two and three-bedroom units, and notes that an on-site day care facility managed by Warren Village will complement the housing component at the Buckley Annex. The application notes that family housing would be constructed in two fifty-unit buildings. One building would be owned and managed by Warren Village as transitional housing for homeless families that are single-headed households with children. The second building of fifty units would provide permanent housing for homeless families graduating from metro Denver transitional units and for families currently occupying housing in residential motels along Colfax Avenue. Catholic Charities would offer residents of the permanent family units support services. Mile High United Way would work with these families to achieve homeownership within a five year period.

Housing for Seniors and Persons with Disabilities:

This component of the Consortium's request would include a fifty-unit building for seniors and persons with disabilities. Volunteers of America would provide management services, and this organization boasts a 40-year track record of property management in Colorado.

Housing for Individuals:

This component of the application calls for a 100-unit building on five acres providing permanent housing for homeless individuals. The Consortium plans a mixture of units serving individuals earning various levels of income (calculated as a percentage of area median income, or AMI). The building would also provide a small number of two-bedroom units.

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[2] *Application submitted by Buckley Annex Housing Consortium, December 26, 2006.*

Financial and Operational Analysis: Homeless Provider Applications

The application packet submitted by the Consortium in December 2006 provides proforma projections for each section of the proposal (transitional housing for families, permanent housing for families, seniors, veterans, and individuals). Specifically, the Consortium outlined proformas regarding:

1) the anticipated development costs for each part of the application;
2) operating proforma for the first year of operations;
3) ten-year operating proforma; and
4) anticipated sources of funding for development and construction costs (including loans and grants).

Design Workshop reviewed the proformas and met with a representative of the Consortium, Pat Coyle of the Denver Department of Human Services, to examine discrepancies and resolve questions regarding the proformas.

The following analysis does not outline and describe every line item within the proformas. Instead, the objective of this appendix is to examine the "big ticket" items which could adversely affect the financial viability of the applications. This analysis provides an overview of the funding mechanisms and feasibility of each component of the Consortium's application and identifies aspects of the applications which may be vulnerable to unforeseen financial or operational risks. For reference, **Tables GG-3 and GG-4** contain two summary spreadsheets illustrating 1) the development costs of each component of the application, and 2) the anticipated proforma for the first year of operations for each application.

Table GG-3

Anticipated Development Costs

Comparison of Development Costs										
Category / Phase	**Families (Transitional Housing)**		**Families (Permanent Housing)**		**Seniors**		**Veterans**		**Individuals**	
Operator	**Warren Village**		**Archdiocesan Housing**		**Volunteers of America**		**Aurora Housing Authority**		**Colo. Coalition for the Homeless**	
Total Units	50		50		50		48		100	
		Per Unit		Per Unit		Per Unit		Per Unit		Per Unit
Acquisition Costs	$36,500	$730	$36,500	$730	$409,444	$8,189	$27,000	$563	$72,000	$720
Construction Costs	$5,855,505	$117,110	$5,855,505	$117,110	$2,971,418	$59,428	$7,306,200	$152,213	$10,630,100	$106,301
Design Fees	$429,587	$8,592	$429,587	$8,592	$300,000	$6,000	$440,000	$9,167	$350,000	$3,500
Interim Costs	$337,698	$6,754	$337,698	$6,754	$31,000	$620	$120,000	$2,500	$325,419	$3,254
Permanent Financing Fees	$1,181,503	$23,630	$1,181,503	$23,630	$300,000	$6,000	$887,800	$18,496	$1,461,897	$14,619
Tenant Relocation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Project Management	$25,000	$500	$25,000	$500	$0	$0	$19,000	$396	$0	$0
Total Development Expenses	**$7,865,793**	**$157,316**	**$7,865,793**	**$157,316**	**$4,011,862**	**$80,237**	**$8,800,000**	**$183,333**	**$12,839,416**	**$128,394**
Hard Costs / SF	**$118.89**		**$118.89**		**$125.22**		**$182.66**		**$98.79**	
Soft Costs / SF	**$40.82**		**$40.82**		**$23.37**		**$37.35**		**$20.53**	

Table GG-4

Proforma Comparison: 1st Year Stabilized Income

Comparison of 1st Year Stabilized Income						
Category / Phase	Families (Transitional Housing)	Families (Permanent Housing)	Seniors	Veterans	Individuals	
Operator	Warren Village	Archdiocesan Housing	Volunteers of America	Aurora Housing Authority	Colo. Coalition for the Homeless	
Total Units	50	50	50	48	100	
Total Rent Income	$244,500	$252,600	$183,600	$374,400	$452,640	
Other Income	$2,000	$2,000	($18,360)	$513,511	$2,400	
Total Income	$246,500	$254,650	$165,240	$887,911	$455,040	
Total Income / Unit	**$4,930**	**$5,093**	**$3,305**	**$18,498**	**$4,550**	
Less Vacancy	($12,325)	($17,811)	($16,524)	($62,154)	($22,752)	
Vacancy Rate	5.0%	7.0%	10.0%	7.0%	5.0%	
Effective Gross Income	**$234,175**	**$236,839**	**$148,716**	**$825,757**	**$432,288**	
Debt Service	$0	$0	$56,622	$50,224	$0	
Administrative Expenses	$113,500	$113,750	$77,000	$523,600	$206,241	
Operating Expenses	$64,875	$64,875	$94,000	$173,000	$95,000	
Operating Reserve	$0	$0	$0	$9,600	$0	
Maintenance Expenses	$27,500	$27,500	$40,000	$45,000	$90,000	
Replacement Reserve	$15,000	$15,000	$0	$16,800	$30,000	
Real Estate Taxes	$0	$0	$0	$0	$15,000	
Total Annual Expenses	**$220,875**	**$221,125**	**$211,000**	**$768,000**	**$436,241**	
Net Operating Income	**$13,300**	**$15,714**	**($62,284)**	**$57,757**	**($3,953)**	
P.U.P.A. Expenses	**$4,418**	**$4,423**	**$4,220**	**$16,000**	**$4,362**	
P.U.P.A. = Per Unit Per Annum Expenses						
Calculated as (Total Annual Expenses / Number of Units)						

Financial Analysis: Transitional Housing for Families

The Consortium anticipates total development costs for this 50-unit facility of just under $7.9 million. The majority of this total would be funded through $6.19 million in Low Income Tax Credit ("LIHTC") proceeds over a ten year period ($619,000 per year). The maximum proceeds from LIHTC allowed under Colorado Housing Finance Authority guidelines is $1.1 million per year. Therefore, the Consortium believes the proceeds from LIHTC earmarked for transitional family housing is very secure. The remainder of the development costs is funded through grants from the Colorado Department of Housing ($400,000), federal grants through the City of Denver ($500,000), and a grant from the Federal Home Loan Bank of Topeka ("FHLB") ($450,000). The City of Denver and the State of Colorado have made housing projects for families a priority, and therefore the grants from those two sources are fairly secure. The only source of funding the Consortium believes is somewhat insecure is the grant from the FHLB. However, this organization has made financing of projects serving populations earning less than 30 percent of AMI a priority. Because a majority of the transitional units for families in the Consortium's application are earmarked for households earning at or below 30 percent of AMI, the Consortium believes its chances of securing funding from the FHLB are very good. Owner equity, in the form of a deferred development fee of $325,000, represents the final portion of financing for development costs. This structure provides an incentive to reduce development costs and improve efficiency. Any cost savings in terms of development costs increase the development fee available upfront to the owner. Deferred developer fees are paid out of cash flow in Year 10. These fees serve as a contingency and are paid out last, after all other obligations of the development are met. This arrangement means that developer fees are usually not paid by individual projects.

Importantly, because development costs are funded entirely through the proceeds of LIHTC, grants and deferred developer fees, the transitional housing project for families will incur zero debt. The absence of leverage will allow Warren Village to more effectively provide housing units for families at below-market rates and demonstrate positive cash flow each year.

As illustrated in **Table GG-4**, Warren Village projects positive net operating income for the first year of operations of $13,300. Monthly rents ranging from $300 to $600 produce total rent income of $244,500. Assuming a vacancy rate of five percent, the project produces effective gross income of $234,000 annually. Administrative expenses total $133,500 in the first year, and maintenance related charges total $27,500. The first-year proforma demonstrates a per unit, per annum ("PUPA") of $4,418. Providers of homeless housing usually judge the efficiency of a given program based upon the anticipated or demonstrated PUPA. Based upon discussions with Pat Coyle, the projected PUPA for the transitional housing part of the application appears in line with industry standards.

Financial Analysis: Permanent Housing for Families

Because the permanent housing for families component operates in a very similar fashion as the transitional housing program for families, the financial projections for this part of the application are very similar as well. The Consortium projects identical development costs of $7.9 million, funded by proceeds from LIHTC of $619,000, grants from the State of Colorado of $400,000, federal grants from Denver of $500,000, and grants from the FHLB of $450,000. Again, deferred developer fees of $325,000 round out the funding package for the anticipated development of the 50-unit complex.

The first year proforma for the permanent housing for families is virtually identical to the projections for transitional housing as well. Subsidized rents ranging from $300 to $600 monthly produce annual rent income of $253,000. The only material difference between the two proformas is that the Consortium anticipates a slightly higher vacancy rate of seven percent for the permanent housing for families. The group projects administrative expenses of $114,000, operating expenses of $65,000, and maintenance costs of $18,000. The Consortium's proforma anticipates a net operating income for the first year of just under $16,000 and a PUPA of $4,423.

Importantly, HUD will provide an operating subsidy to the operators of the permanent housing, Archdiocesan Housing, equal to the difference between the rent charged to participants and the market rate exhibited in the local market. This potential subsidy helps to buffer operators from any adverse events, such as increases in expenses or vacancy rates.

Operational Considerations: Housing for Families

Warren Village was established in 1974 as the nation's first federally subsidized transitional housing program for single-parent families. In terms of experience, Warren Village has provided services for homeless populations in a 10-story structure in the vicinity of Cheesman Park that is not discernable to the greater community as "homeless housing". In addition, Warren Village provides blue-chip day care services at the Cheesman location to homeless clients, as well as the larger community in this part of Denver. Day care services provided by Warren Village at the Buckley Annex could represent an attractive amenity serving working families as well as members of higher income brackets. Over 30-plus years, Warren Village has helped more than 3,000 single-parent families move towards self-sufficiency through increased income and improved job skills. The organization's Family Services Program provides a wide range of vocational training services and classes covering topics such as parenting and budgeting. Warren Village proposes similar services at the Buckley Annex, including family services and child care for individuals age six weeks to six years. A before and after school program will provide transportation to and from school, breakfast and snacks for school-age children and a full day program during school vacations.

Archdiocesan Housing has been providing housing services in Denver since 1968 and currently operates over 20 properties in the metro area, on the Western Slope, and in Wyoming for families and seniors. Examples of Archdiocesan properties serving homeless and very low income populations in Denver include Courtyard Commons, a 33-unit apartment community serving homeless veterans, and Mt. Loretto, a 70-unit apartment community serving families.

Financial Analysis: Senior Housing

The HUD 202 program provides substantial financial support to the senior housing application. Under these programs, HUD will provide up to $10 million to construct a given building. Although the application shows debt service for this property, in reality the operators of the senior housing (Volunteers of America) face zero debt service going forward. Technically, the construction of the building is financed through a note serviced by HUD. This note will become payable from VOA only if the property is no longer rented as affordable housing. This provision provides tremendous pressure for VOA and other operators to maintain housing properties as "affordable" for homeless persons. In addition, as an operator VOA will receive the proceeds from normal operations, and HUD will make up the difference between operating costs and revenues.

This significant support from HUD provides greater assurance that the senior housing component will remain financially viable going forward. HUD conducts audits and adjustments of operators and their financial records on a regular basis and therefore provides a higher level of oversight over the senior housing program. Denver is allocated 50 to 100 units for HUD 202 financing in a given year. According to Pat Coyle, this application for senior housing at Buckley Annex would represent the only application from within the city in a given year. Therefore, the chances of obtaining the HUD 202 funding would be very high.

Specifically, the senior housing component projects development costs of just over $4 million. The proposal calls for 50 units rented to individuals earning 30 percent of AMI at a rate of $306 per month. Total rent income is projected at nearly $184,000. PUPA of $4,220 is in line with traditional standards for homeless and affordable housing.

Operational Considerations: Senior Housing

The VOA, according to Pat Coyle, is the dominant operator of senior homeless housing in the United States. The organization is currently involved with four properties in the vicinity of 20th and Larimer in Downtown Denver. The VOA regularly conducts audits of its operations and holds warranties on equipment servicing its facilities. In addition to audits, private real estate consultants conduct site reviews of properties every year. These provisions, coupled with the VOA's national reputation, will provide greater assurance regarding the operational proficiency of VOA going forward.

Financial Analysis: Veterans Housing

The Consortium's proforma assumes that veterans housing would be developed off-site in Aurora, with part of the necessary funding coming from the sale of 2.5 acres at Buckley Annex (corresponding to the acreage necessary to construct veterans housing at Buckley Annex). The Consortium projects total development costs of $8.8 million for the 48 veterans housing units. This total is higher on a per unit basis as compared to housing for families and seniors given higher tap fees in the City of Aurora (over $1 million) and higher costs of construction for veterans' units. Over $8 million of the total is funded by proceeds from LIHTC. The remainder of the development funding comes from the state's Division of Housing ($144,000), HUD funding obtained by the City of Aurora ($82,000), the sale of LRA land ($248,000, or $99,200 per acre), and $144,000 from a companion program under the Veterans Administration. The FHLB of Topeka would fund the final $99,000 of development costs for veterans housing.

The first year proforma for veterans housing indicates total rent income of $374,000, representing monthly rent of $650 for the 48 units in the complex. This rent projection represents the "market rate" rent for these units. "Other Income" on the proforma represents a per diem grant from the Veterans Administration of $29.31 (soon to increase to $31 per day) to fund the higher operational costs of providing veterans housing. Veterans in homeless housing often suffer from tremendous post traumatic stress disorder ("PTSD") issues. Significant additional on-site care is necessary to service the Veterans population, thereby driving up operational costs. For example, the annual budget for the 48-unit complex anticipates on-site payroll of $350,000, including a significant case management burden. Overall, PUPA of $16,000 is significantly higher than the normal range for homeless housing of $4,000 to $5,000. Despite these higher costs, the significant VA per diem allowance should produce net operating income of $58,000 in the first year of operations.

Operational Considerations: Veterans Housing

As mentioned, due to PTSD issues, homeless veterans often require a community of support to successfully move back into the mainstream of society. Ideally, homeless veterans are housed in groups of at least 12 individuals, but not more than 25. Ultimately, the ideal setting for homeless veterans would be a campus situation. Homeless veterans face considerable challenges, and many actually return to shelters after trying to integrate back into society.

Examples of housing for homeless veterans include the Courtyard Commons project at 11th and Pennsylvania and a new 15-unit facility at 46th and Pennsylvania.

Financial Analysis: Housing for Individuals

The development financing model for this section of the Consortium's request is very similar to that for veterans housing. The application anticipates total development costs of $12.8 million for 100 units at the Buckley Annex. Proceeds from the sale of LIHTC would fund the vast majority ($10.67 million) of this amount. The remainder of funding would come from the FHLB of Topeka ($450,000), state funding of $400,000, funding through the City of Denver of $600,000, and HUD funding of $400,000. Deferred development fees of $319,000 would provide the final portion of development cost funding. Again, if the developer of this portion of the homeless housing produces greater efficiencies and cost savings than expected, it is able to keep the cost savings as a developer fee.

Section 8 HUD funding provides support for the ongoing operation of individual homeless housing. Section 8 pays operators the difference between the rent charged to residents and the fair market rent. This subsidy helps protect against cost overruns or operational challenges (such as evictions or slow pays). According to Pat Coyle, the Denver Housing Authority has Section 8 vouchers available to assign to this property. The development program anticipates a greater number of one bedroom units as compared to two-bedroom facilities in order to serve a greater number of people at the bottom of the economic spectrum. The Consortium anticipates total rent income during the first year of operations of nearly $453,000 and vacancy of five percent. The property will produce negative net operating income going forward, but again the HUD Section 8 subsidy should cover this shortfall. The PUPA for the housing for individuals is projected to be $4,362, or lower than for other components of the Consortium's request.

Operational Considerations: Housing for Individuals

According to Pat Coyle, the Denver Housing Authority develops housing units quite well, but is less known for its operational record. The DHA is considered a "hard manager", in that it lacks experience in managing the unique problems facing homeless populations. In addition, HUD does not want Section 8 funding going to DHA properties. As a result, the DHA routinely pairs with third party operators.

The Colorado Coalition for the Homeless would operate the housing units for homeless individuals at the Buckley Annex. The CCH provides a variety of services for homeless individuals, including a medical clinic that can provide all services except for surgery, as well as dental and optometry services. In the case of the Buckley Annex, the CCH would transport individuals to a centralized location downtown for these services. The CCH has a new property serving homeless populations at I-25 and Park Avenue. This facility is located in close proximity to a great deal of redevelopment in the Platte Valley and River North. The CCH is also currently closing on a new building at Colfax and Pearl in central Denver. The CCH has over fifteen years of experience in the acquisition, rehabilitation and operation of housing and supportive services for families and individuals.

Gap Analysis: Lowry Buckley Vicinity

Design Workshop examined the need for homeless housing for various categories in the areas surrounding the Buckley Annex facility. As indicated in the **Tables GG-5 and GG-6**, the vacancy rate for units below $500 is very low for all market areas surrounding Lowry. The housing need is most acute for homeless families. Families with children require housing units with at least two bedrooms. Data from the Denver Metro Multifamily Vacancy Survey for the 4th quarter of 2006 indicate that only eight two-bedroom units in the five market areas within seven miles of Lowry currently rent for below $500 per month. This price range typically includes efficiency units (such as studios) or one-bedroom units. In addition, a survey of select units for applicants earning 30 percent of AMI or less indicates that homeless families face the longest waiting lists to secure housing. The data, covering units managed by the VOA, Mercy Housing, Archdiocesan Housing, and Warren Village, reveal that waiting lists for senior housing are considerably shorter. In one Archdiocesan housing complex, 556 families are currently on waiting lists for homeless housing. The need for homeless housing for seniors is less acute.

Table GG-5

Vacancy Rates, Market Areas Surrounding Lowry Buckley

Market Rate Units Available Below $500 / Month								
Fourth Quarter, 2006 Denver Metro Multifamily Vacancy Survey								
Total Number of Units / Total Number of Vacancies								
Market Areas Within 6 Miles of Lowry Buckley								
	Efficiency		**One Bedroom**		**Two Bed / One Bath**		**Two Bed / Two Bath**	
	Units	**Vacant**	**Units**	**Vacant**	**Units**	**Vacant**	**Units**	**Vacant**
Denver East Central	3	1	20	4	0	0	0	0
Denver Southeast	2	0	5	0	0	0	0	0
Denver Central	519	20	193	10	0	0	0	0
Aurora Central Northwest	6	1	618	47	0	0	0	0
Aurora Central Southwest	50	4	354	20	0	0	0	0
Total Vacancies	580	26	1,190	81	0	0	0	0
Vacancy Rate		4.48%		6.81%		0.00%		0.00%

Table GG-6

Waiting Lists for Select Homeless Housing Complexes, Lowry Vicinity

Thirty Percent AMI Units				
Lowry Buckley Vicinity				
	Number	**Vacant**	**Wait List**	**Population Served**
VOA Property # 1	50	0	0	Senior
VOA Property # 2	100	0	3	Senior
VOA Property # 3	100	0	20	Senior
Mercy Property # 1	15	0	0	Family
Archdiocesan # 1	10	0	52	Veterans
Archdiocesan # 2	15	0	556	Family
Archdiocesan # 3	50	1	32	Senior
Warren Village	93	0	30	Family
Courtesy: Pat Coyle				

In addition to the data outlined above, Pat Coyle indicates that the need for housing for homeless veterans will increase in the coming years, as disabled veterans return from Iraq and other foreign wars. Many veterans have tremendous problems with post traumatic stress disorder that make it very difficult for them to integrate back into civilian society and can lead to a spiral into homelessness. These difficulties may mean that providing housing for homeless veterans in a location closer to the VA Hospital in Aurora may be more feasible than providing housing within the Buckley Annex redevelopment.

Conclusions

This analysis revealed that the funding structures for the components of the application put forth by the Consortium are viable and the feasibility of the application is relatively sound based on the information provided. Governmental entities are providing a great deal of support to the applications, through low income tax credit programs, per diems from the government (in the case of veterans housing), and funding from federal sources, including HUD. The operators of the components of the application appear to have considerable experience in managing properties serving the homeless population in metro Denver. The members of the Buckley Annex Homeless Consortium have many years of experience in developing and managing properties in Colorado. This track record would indicate that the Consortium members are well positioned to carry out a program of housing and services for the homeless population in the vicinity of the Buckley Annex.

The "gap analysis" of specific needs for homeless housing in the vicinity of the Buckley Annex reveals that families with children face the most severe shortages of suitable housing. Many families are crowding into units of one bedroom or smaller or are residing in residential hotels in the area. Very few opportunities to occupy affordable two bedroom units exist in the Lowry area, and wait lists for housing units for families are very long.

Based upon input from the Buckley Annex Housing Task Force and the Consortium, the redevelopment plan requires a total of 20 rental units for homeless families.. This represents a total of three percent of the proposed 800 residential units in the Buckley Annex Redevelopment Plan. This allocation is based on the historic ratio of housing for the homeless in the Lowry community. Lowry's current allocation represents two percent of all housing (including for-rent and for-sale units). In addition, the Housing Task Force agreed that a significantly larger provision of homeless housing, such as the 298 units proposed by the Consortium, would be difficult to integrate in a total plan containing a maximum of 800 residential units.

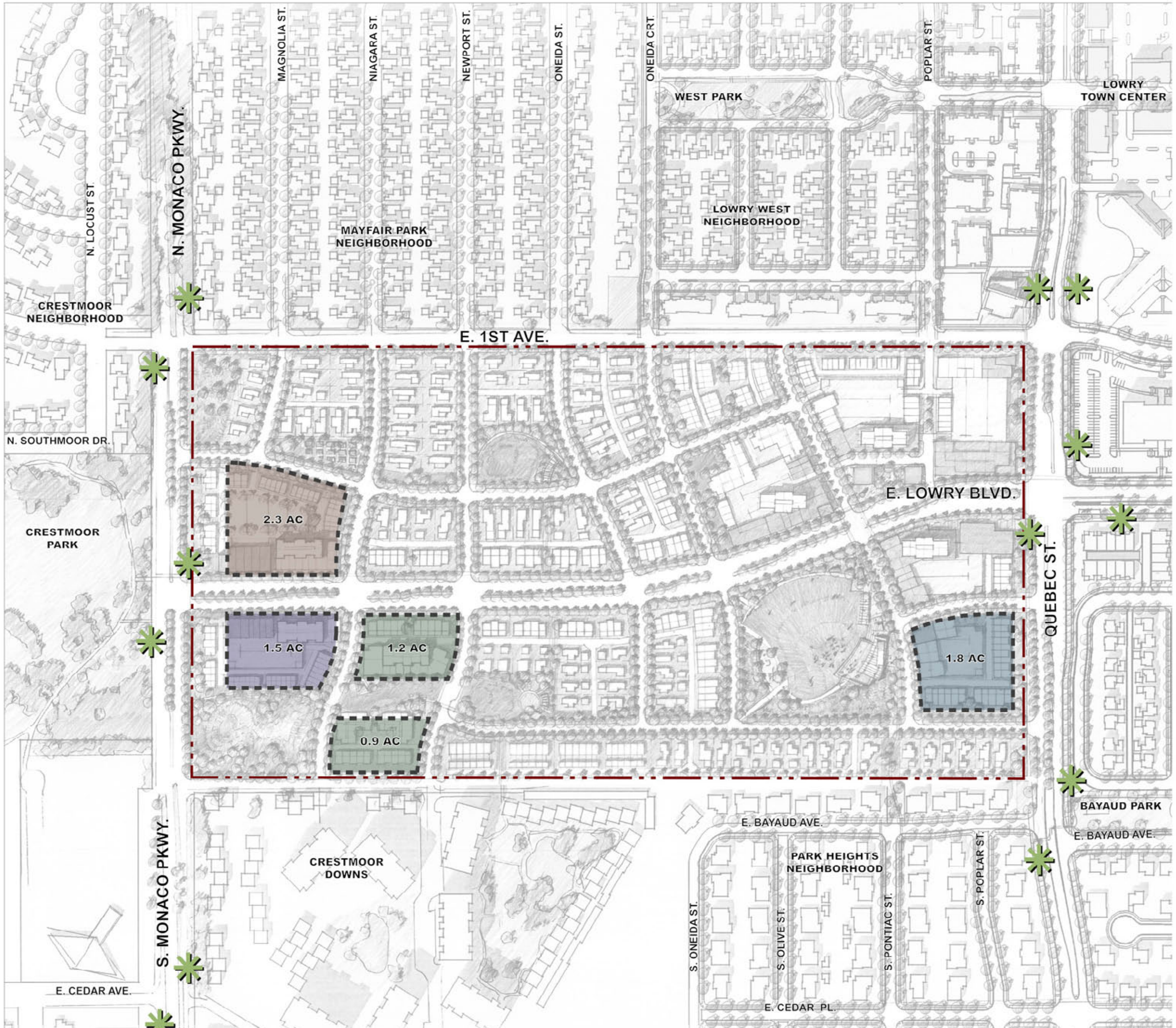
The final redevelopment plan does not outline a specific block within the Buckley Annex development designated for inclusion of the homeless housing program. Instead, the plan requires the developer of the Buckley Annex site to convey a 1.5 acre site to the Consortium for the development of 20 units of housing for homeless families as part of a mixed-income development (enforced through a legally binding agreement with the LRA). The 1.5 acre site may have up to 80 total residential units including the 20 units of affordable housing for homeless families.

The planning team encourages the developer to spread the 20 units for homeless families throughout the 1.5 acre parcel in order to avoid income segregation and increase the overall marketability of the development. Confining homeless families to a block of units would highlight the status of the residents as homeless individuals and potentially decrease the marketability of the overall project to market-rate buyers and renters. Dispersing the homeless housing units increases the integration of the homeless families into the mainstream of the community.

With the guidance of the Housing Task Force and public input, the planning team identified four potential locations for the 1.5 acre mixed-income development (See **Figure GG-1**). These locations were identified based on the following factors:

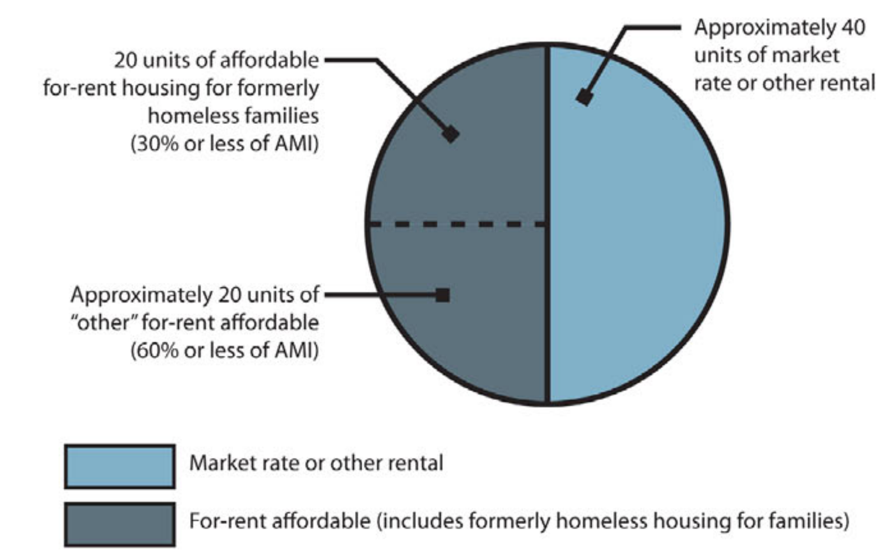
- Access to transit
- Access to retail and services
- Consistency of proposed land use with a mixed-income development

Figure GG-1



LEGEND

- POTENTIAL MIXED-INCOME HOUSING LOCATION (INCLUDING 20 HOMELESS HOUSING UNITS)
- SITE BOUNDARY
- EXISTING & PROPOSED BUS STOPS



MIXED-INCOME RENTAL PROGRAM ON 1.5 ACRE PARCEL

Note: This housing program assumes the total unit count of the parcel is 80 units.

Hypothetical Residential Development Program

Description	No. of Units	Per. of Total
For-Sale		
Market Rate	432	54%
Affordable[1]	48	6%
Subtotal	**480**	**60%**
For-Rent		
Market Rate	288	36%
Affordable	12	2%
Affordable for Formerly Homeless Families[2]	20	3%
Subtotal	**320**	**40%**
Total Residential	**800**	**100%**

[1] Percent of for-sale affordable units is based on the City and County of Denver's Inclusionary Housing Ordinance definitions.

[2] Percent of formerly homeless units is based on the historic provision of formerly homeless housing at Lowry. Lowry is currently providing homeless housing at a rate of 4.4% of total rental units, but 2% of all housing (combined for-sale and for-rent).

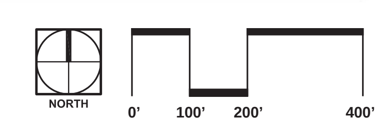
Notes:

Total number of units is based on the 800 residential unit maximum for the site.

The current for-sale to for-rent ratio at Lowry is 58% for-sale units and 42% for-rent units.

A for-sale affordable housing unit will be available at 80% or less of AMI.

A for-rent affordable housing unit will be available at 60% or less of AMI.



Appendix H

Economic Impact & Finacial Analysis

Appendix H.1: Infrastructure Cost Analysis

Opinions provided by URS regarding probable project and/or construction costs are made on the basis of information currently available to URS and on the basis of URS' qualifications and professional engineering experience. Due to factors beyond its control, however, URS cannot and does not guarantee that proposals, bids, or actual project or construction cost will not vary from the opinions URS prepares.

Table HH-1

Development Cost Summary Buckley Annex

HARD COSTS

COMPONENT	Offsite Development Cost	Onsite Development Cost
ROADWAY TOTAL	$ -	$ 5,588,647
ROADWAY TOTAL	**$ -**	**$ 5,588,647**
EARTHWORK TOTAL	$ -	$ 793,018
EARTHWORK TOTAL	**$ -**	**$ 793,018**
DRAINAGE TOTAL	$ -	$ 1,176,188
DRAINAGE TOTAL	**$ -**	**$ 1,176,188**
SANITARY TOTAL	$ -	$ 637,616
SANITARY TOTAL	**$ -**	**$ 637,616**
WATER TOTAL	$ -	$ 1,315,085
WATER TOTAL	**$ -**	**$ 1,315,085**
DRY UTILITY TOTAL	$ -	$ 566,500
DRY UTILITY TOTAL	**$ -**	**$ 566,500**
LANDSCAPE & PARKS TOTAL	$ -	$ 3,467,170
LANDSCAPE & PARKS TOTAL	**$ -**	**$ 3,467,170**
DEMOLITION TOTAL	$ -	$ 3,002,617
DEMOLITION TOTAL	**$ -**	**$ 3,002,617**
SUBTOTAL HARD COST	$ -	$ 16,546,841
HARD COST CONTINGENCY (15%)	$ -	$ 2,482,026
TOTAL HARD COST	**$ -**	**$ 19,028,867**

SOFT COSTS

25% SOFT COST	$ -	$ 4,006,563
TOTAL SOFT COST	**$ -**	**$ 4,006,563**

PROJECT TOTAL	**$23,035,430**

Note: Calculation of the soft costs do not include the hard cost for demolition

Table HH-2

Development Cost

*On-site and Off-site Development Cost**

BUCKLEY ANNEX

COMPONENT	OFFSITE DEVELOPMENT COST	ONSITE DEVELOPMENT COST	TOTAL DEVELOPMENT COST	
ROADWAY	$ -	$ 5,588,647	$ 5,588,647	
EARTHWORK	$ -	$ 793,018	$ 793,018	
DRAINAGE	$ -	$ 1,176,188	$ 1,176,188	
SANITARY	$ -	$ 637,616	$ 637,616	
WATER	$ -	$ 1,315,085	$ 1,315,085	
DRY UTILITIES	$ -	$ 566,500	$ 566,500	
LANDSCAPE / PARKS	$ -	$ 3,467,170	$ 3,467,170	
DEMOLITION	$ -	$ 3,002,617	$ 3,002,617	
TOTAL COST	**$ -**	**$ 16,546,841**	**$ 16,546,841**	*

Definitions:
Offsite - Infrastucture off BUCKLEY ANNEX that brings primary service to the BUCKLEY ANNEX Boundary.
* Hard cost subtotal without contingencies

Table HH-3

Development Cost

*On-site and Off-site Development Cost**

COMPONENT	ITEM NO. / CROSS SECTION TYPE	SEGMENT DESCRIPTION	FUNDING SOURCE	SIZE (IN) OR (FT)	QUANTITY	UNIT COST	UNIT	ONSITE COST	OFFSITE COST	TOTAL COST
ROADWAY										
	A-A	LOWRY BLVD. (COMMERCIAL)			1,393	$ 604.77	LF	$ 842,366	$ -	$ 842,366
	B-B	LOWRY BLVD. (RESIDENTIAL)			1,080	$ 635.62	LF	$ 686,387	$ -	$ 686,387
	C-C	COMMERCIAL LOCAL			111	$ 188.46	LF	$ 20,975	$ -	$ 20,975
	D-D	1ST AVE. COLLECTOR (HALF SECTION)			2,425	$ 145.75	LF	$ 353,404	$ -	$ 353,404
	E-E	RESIDENTIAL LOCAL			3,045	$ 167.06	LF	$ 508,646	$ -	$ 508,646
	F-F	RESIDENTIAL LOCAL (3-STORY)			5,829	$ 194.25	LF	$ 1,132,274	$ -	$ 1,132,274
	ALLEY	RESIDENTIAL ALLEY			6,161	$ 53.35	LF	$ 328,670	$ -	$ 328,670
								$ -	$ -	$ -
		MAJOR INTERSECTION SIGNAL			2	$ 400,000.00	EA	$ 800,000	$ -	$ 800,000
		MINOR INTERSECTION SIGNAL			3	$ 300,000.00	EA	$ 900,000	$ -	$ 900,000
		RECONSTRUCT MONACO C&G			825	$ 13.00	LF	$ 10,725	$ -	$ 10,725
		MONACO MEDIAN (3/4 INT.)			400	$ 13.00	LF	$ 5,200	$ -	$ 5,200
								$ -	$ -	$ -
								$ -	$ -	$ -
								$ -	$ -	$ -
						SUBTOTAL:		$ 5,588,647	$ -	$ 5,588,647
EARTHWORK										
	EW	CUT TO FILL (2' OVER ENTIRE			232,320	$ 2.00	CY	$ 464,640	$ -	$ 464,640
	EW	BERM (WEST SIDE) CUT TO FILL			31,745	$ 2.00	CY	$ 63,490	$ -	$ 63,490
	EW	BERM (NORTH SIDE) CUT TO FILL			66,222	$ 2.00	CY	$ 132,444	$ -	$ 132,444
								$ 132,444	$ -	$ 132,444
								$ -	$ -	$ -
						SUBTOTAL:		$ 793,018	$ -	$ 793,018
DRAINAGE										
	SD18	18-INCH STORM SEWER			404	$ 81.00	LF	$ 32,684	$ -	$ 32,684
	SD24	24-INCH STORM SEWER			2,877	$ 108.00	LF	$ 310,721	$ -	$ 310,721
	SD36	36-INCH STORM SEWER			1,036	$ 162.00	LF	$ 167,832	$ -	$ 167,832
	SD60	60-INCH STORM SEWER			489	$ 270.00	LF	$ 132,081	$ -	$ 132,081
	SD72	72-INCH STORM SEWER			1,286	$ 324.00	LF	$ 416,690	$ -	$ 416,690
	OUTFALL	OUTFALL STRUCTURE			9	$ 10,000.00	EA	$ 90,000	$ -	$ 90,000
	RCBC35	3' X 5' BOX CULVERT			113	$ 231.11	LF	$ 26,180	$ -	$ 26,180
						SUBTOTAL:		$ 1,176,188	$ -	$ 1,176,188
SANITARY										
	SS8	8-INCH SANITARY			10,862	$ 48.00	LF	$ 521,393	$ -	$ 521,393
	SS10	10-INCH SANITARY			628	$ 60.00	LF	$ 37,707	$ -	$ 37,707
	SS12	12-INCH SANITARY			322	$ 72.00	LF	$ 23,164	$ -	$ 23,164
	SS15	15-INCH SANITARY			615	$ 90.00	LF	$ 55,353	$ -	$ 55,353
								$ -	$ -	$ -
								$ -	$ -	$ -
						SUBTOTAL:		$ 637,616	$ -	$ 637,616
WATER										
	WT8	8-INCH WATER			6,294	$ 60.00	LF	$ 377,623	$ -	$ 377,623
	WT12	12-INCH WATER			9,861	$ 90.00	LF	$ 887,462	$ -	$ 887,462
	WTC	CONNECT TO CONDUIT 28			1	$ 50,000.00	EA	$ 50,000	$ -	$ 50,000
								$ -	$ -	$ -
								$ -	$ -	$ -
								$ -	$ -	$ -
						SUBTOTAL:		$ 1,315,085	$ -	$ 1,315,085
LANDSCAPE & PARKS										
	PARK1	General Park Landscaping			224,780	$ 7.00	SF	$ 1,573,460	$ -	$ 1,573,460
	PARK2	Community Park Landscaping			181,976	$ 10.00	SF	$ 1,819,760	$ -	$ 1,819,760
	TREE	Transplant Existing Trees			174	$ 425.00	EA	$ 73,950	$ -	$ 73,950
								$ -	$ -	$ -
								$ -	$ -	$ -
						SUBTOTAL:		$ 3,467,170	$ -	$ 3,467,170
DRY UTILITIES										
	DU	DRY UTILITY			72	$ 4,500.00	AC	$ 324,000	$ -	$ 324,000
	DU-1	O/H ELECTRIC TO UNDERGROUND			2,425	$ 100.00	LF	$ 242,500	$ -	$ 242,500
						SUBTOTAL:		$ 566,500	$ -	$ 566,500
DEMOLITION										
	DM444	Demo Building 444			600,000	$ 3.33	SF	$ 2,000,000	$ -	$ 2,000,000
	DM446	Demo Building 446			4,200	$ 3.33	SF	$ 14,000	$ -	$ 14,000
	DM409	Demo Building 409			14,700	$ 3.33	SF	$ 49,000	$ -	$ 49,000
	DM407	Demo Building 407			11,400	$ 3.33	SF	$ 38,000	$ -	$ 38,000
	DMP	Demo Parking Lot (12" Avg Depth)			1,082,620	$ 0.35	SF	$ 378,917	$ -	$ 378,917
	DMF	Demo Perimeter Fencing			7,358	$ 2.75	LF	$ 20,235	$ -	$ 20,235
	DMCG	Demo C&G (Monaco Pkwy.)			825	$ 18.00	LF	$ 14,850	$ -	$ 14,850
	DMAC	Pkwy.)			9,900	$ 0.25	SF	$ 2,475	$ -	$ 2,475
	DMU	Demo Existing Underground Utility			24,257	$ 20.00	LF	$ 485,140	$ -	$ 485,140
						SUBTOTAL:		$ 3,002,617	$ -	$ 3,002,617
						TOTAL:		$ 16,546,841	$ -	$ 16,546,841

Notes:

1. Infrastructure components shown are based on concepts developed for the Buckley Annex Redevelopment Plan dated 12/07.
   Alternative development plans may change infrastructure requirements and the associated cost.

Appendix I

Implementation Strategy

(No Appendices for this Chapter)