CITY OF BOULDER
PLANNING BOARD STUDY SESSION AND MEETING AGENDA
DATE: September 12, 2013
TIME: 6 p.m.
PLACE: Council Chambers, 1777 Broadway

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1. **CALL TO ORDER**

2. **APPROVAL OF MINUTES**

3. **PUBLIC PARTICIPATION**

4. **DISCUSSION OF DISPOSITIONS, PLANNING BOARD CALL-UPS/CONTINUATIONS**
   - **A.** Final Plat request, case no. TEC2013-00007, to subdivide an approximately 4.76-acre site into two lots and one outlot at 6810 Winchester Circle. Expires on **September 5, 2013**.

5. **PUBLIC HEARING ITEMS**
   - **A.** Public hearing and consideration of a recommendation to City Council regarding amendment to the Benson Annexation Agreement for the 1215 and 1235 Tamarack properties (Lots 10 and 11, Block 5, Moore's Subdivision) to modify the requirements pertaining to the construction of 12 ½ Street between Upland and Tamarack Avenue.

     Applicant: Michael Marez/ TJM Investment, LLC
     Owners: TJM Investment, LLC (Lot 10: 1215 Tamarack Ave.)
     James C. Hohmann and Deborah Stabler (Lot 11: 1235 Tamarack Ave.)

   - **B.** Public hearing and consideration of a recommendation to City Council on an ordinance amending Title 9, "Land Use Code," B.R.C. 1981, to modify building setbacks and to defer payment of fees for land use applications and building permits to the earlier of Jan. 1, 2015 or the issuance of a certificate of occupancy, whichever is first to accommodate the relocation of two residential structures from 1220 and 1243 Grandview Ave. to 905 Marine St. and setting forth related details.

     Applicant/Property Owner: Christian Griffith

   - **C.** Public hearing and consideration of application no. LUR2012-00005 including the following request within the approximately 32 acre site:
     1. Annexation and Initial Zoning for approximately 18.2 acres located at 6234 Arapahoe Road and 1492 Cherryvale Road with portions to be zoned Residential Medium-1 (RM-1) and Rural Residential (RR-1);

     2. Site Review to develop the property located at 5980, 6160, 6180 and 6234 Arapahoe, and 1492 Cherryvale as the Boulder Jewish Commons, for educational activities; and

     3. Use Reviews for an adult education facility use, a daycare center use, and an indoor recreation or athletic facility use at the proposed building housing the Boulder Jewish Community Center.

6. **MATTERS FROM THE PLANNING BOARD, PLANNING DIRECTOR, AND CITY ATTORNEY**
   - **A.** Information Item: 1707 Walnut Technical Document Review

7. **DEBRIEF MEETING/CALENDAR CHECK**

8. **ADJOURNMENT**

For more information call (303) 441-1880. Board packets are available after 4 p.m. Friday prior to the meeting, online at www.bouldercolorado.gov, at the Boulder Public Main Library's Reference Desk, or at the Planning and Development Services Center, located at 1739 Broadway, third floor.

CITY OF BOULDER PLANNING BOARD
MEETING GUIDELINES

CALL TO ORDER
The Board must have a quorum (four members present) before the meeting can be called to order.

AGENDA
The Board may rearrange the order of the Agenda or delete items for good cause. The Board may not add items requiring public notice.

PUBLIC PARTICIPATION
The public is welcome to address the Board (3 minutes* maximum per speaker) during the Public Participation portion of the meeting regarding any item not scheduled for a public hearing. The only items scheduled for a public hearing are those listed under the category PUBLIC HEARING ITEMS on the Agenda. Any exhibits introduced into the record at this time must be provided in quantities of ten (10) to the Board Secretary for distribution to the Board and admission into the record.

DISCUSSION AND STUDY SESSION ITEMS
Discussion and study session items do not require motions of approval or recommendation.

PUBLIC HEARING ITEMS
A Public Hearing item requires a motion and a vote. The general format for hearing of an action item is as follows:

1. Presentations

a. Staff presentation (5 minutes maximum*)
b. Applicant presentation (15 minute maximum*). Any exhibits introduced into the record at this time must be provided in quantities of ten (10) to the Board Secretary for distribution to the Board and admission into the record.
c. Planning Board questioning of staff or applicant for information only.

2. Public Hearing

Each speaker will be allowed an oral presentation (3 minutes maximum*). All speakers wishing to pool their time must be present, and time allotted will be determined by the Chair. No pooled time presentation will be permitted to exceed ten minutes total.

- Time remaining is presented by a Green blinking light that means one minute remains, a Yellow light means 30 seconds remain, and a Red light and beep means time has expired.
- Speakers should introduce themselves, giving name and address. If officially representing a group, homeowners' association, etc., please state that for the record as well.
- Speakers are requested not to repeat items addressed by previous speakers other than to express points of agreement or disagreement. Refrain from reading long documents, and summarize comments wherever possible. Long documents may be submitted and will become a part of the official record.
- Speakers should address the Land Use Regulation criteria and, if possible, reference the rules that the Board uses to decide a case.
- Any exhibits introduced into the record at the hearing must be provided in quantities of ten (10) to the Secretary for distribution to the Board and admission into the record.
- Citizens can send a letter to the Planning staff at 1739 Broadway, Boulder, CO 80302, two weeks before the Planning Board meeting, to be included in the Board packet. Correspondence received after this time will be distributed at the Board meeting.

3. Board Action

d. Board motion. Motions may take any number of forms. With regard to a specific development proposal, the motion generally is to either approve the project (with or without conditions), to deny it, or to continue the matter to a date certain (generally in order to obtain additional information).
e. Board discussion. This is undertaken entirely by members of the Board. The applicant, members of the public or city staff participate only if called upon by the Chair.
f. Board action (the vote). An affirmative vote of at least four members of the Board is required to pass a motion approving any action. If the vote taken results in either a tie, a vote of three to two, or a vote of three to one in favor of approval, the applicant shall be automatically allowed a rehearing upon requesting the same in writing within seven days.

MATTERS FROM THE PLANNING BOARD, DIRECTOR, AND CITY ATTORNEY
Any Planning Board member, the Planning Director, or the City Attorney may introduce before the Board matters which are not included in the formal agenda.

ADJOURNMENT
The Board's goal is that regular meetings adjourn by 10:30 p.m. and that study sessions adjourn by 10:00 p.m. Agenda items will not be commenced after 10:00 p.m. except by majority vote of Board members present.

*The Chair may lengthen or shorten the time allotted as appropriate. If the allotted time is exceeded, the Chair may request that the speaker conclude his or her comments.

MEMORANDUM

TO: Planning Board
FROM: Sloane Walbert, Case Manager
DATE: August 27, 2013
SUBJECT: Call-Up Item: Final Plat request, case no. TEC2013-00007, to subdivide an approximately 4.76-acre site into two lots and one outlot. Lot 10B is proposed to be 2.47 acres and will contain the existing 35,000 square-foot building. Lot 10C is proposed to be 2.03 acres in size. The outlot will function as a shared detention pond for both lots. The call-up period expires on September 5, 2013.

Background. The project site is located south of and adjacent to Winchester Circle, in the Gunbarrel subcommunity. The property is part of the Gunbarrel Technical Center Planned Unit Development (PUD), which was created in 1979. A subdivision and modification to the PUD was approved in 2000 to convert Lots 9, 10, and 11 into two lots (9A and 10A) under Gunbarrel Technical Center Replat D. The proposed subdivision will split Lot 10A into two lots, 10B and 10C. Any future development on Lot 10C must meet the requirements of the original PUD, including setbacks, coverage, architectural intent, height, parking requirements, and maximum floor area.

The project site is zoned Industrial - Manufacturing (IM), which is defined in the land use code as *"industrial manufacturing areas primarily used for research, development, manufacturing and service industrial uses in buildings on large lots. Residential uses and other complementary uses may be allowed in appropriate locations."*

Figure 1: Vicinity Map

Proposal. The property, located at 6810 Winchester Circle, consists of one 4.76-acre lot (Lot 10A), which contains an industrial building that functions as an industrial laboratory. The proposed subdivision will split Lot 10A into two lots, Lot 10BA (2.47 acres) and Lot 10C (2.03 acres), and create an outlot. The applicant has demonstrated that the proposed outlot is adequately sized to accommodate shared drainage for existing and future development on Lots 10B and 10C.

The applicant is requesting two variations to the lot standards pursuant to section 9-12-12(a), "*Standards for Lots and Public Improvements,"* B.R.C. 1981. Per the lot standards, each lot must have at least thirty feet of frontage on a public street (section 9-12-12(a)(1)(B), B.R.C. 1981). The applicant is proposing to reduce the lot frontage on Winchester Circle for Lot 10B from the minimum required 30 feet to 0 feet. Lot 10B culminates at a point on Winchester Circle on the northeast corner of the lot. In addition, the standards state that no portion of a lot shall

be narrower than thirty feet (section 9-12-12(a)(1)(C), B.R.C. 1981). Lot 10B is proposed to be less than thirty feet where it culminates at a point on Winchester Circle. Lot 10C is proposed to be less than thirty feet in two locations, where it wraps around Outlot A. The minimum width of the lot in these locations will be 13 feet and 15 feet.

Pursuant to section 9-12-12(b), *"Waiver of Lot Standards,"* B.R.C. 1981, lot standards may be waived at the request of the subdivider, provided the subdivider show that the modification is:

A. Is necessary because of unusual physical circumstances of the subdivision; or
B. Provides an improved design of the subdivision (section 9-12-12(b), B.R.C. 1981).

Staff supports the requested modifications to the lot frontage and minimum lot width standards because the applicant has demonstrated that it provides for an improved design. The proposed design is consistent with the PUD and allows for the use of existing infrastructure to serve development on both lots. There is an existing detention pond on the northeast portion of the subject property. The proposed design will utilize the existing drainage infrastructure to function as a shared drainage for both Lot 10B and 10C. An outlot will be created with this subdivision for the pond. The location of the detention pond limits the amount of available frontage for Lot 10C and causes two sections of this lot to be less than the required thirty feet.

In addition, the Gunbarrel Technical Center PUD included shared access between lots. The proposed subdivision will include a shared access between Lot 10B and 10C. There is currently a shared access between proposed Lot 10C and the lot to the east (Lot 12 of Replat of Gunbarrel Technical Center). Due to the planned shared access points, the reduced lot frontage and lot width requested with this application will not affect the use of either lot. In addition, the portions of Lot 10C that are less than thirty feet are not within the building envelope, as defined by the PUD.

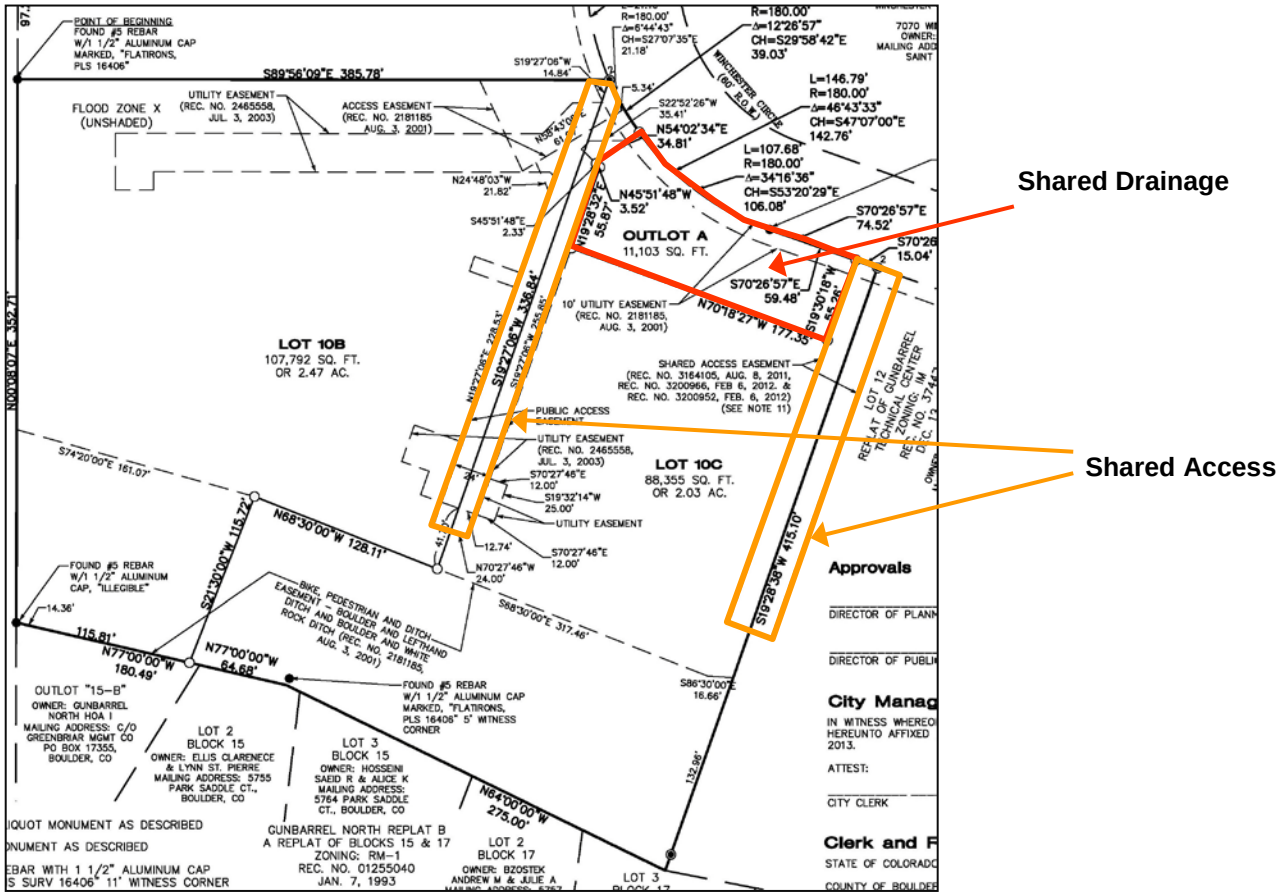


Figure 2: Proposed Plans

Refer to Attachment B for proposed final plat.

Conclusion. Staff finds that this application meets the subdivision criteria set forth in section 9-12-8, *"Final Plat,"* and the waiver of lot standards criteria set forth in section 9-12-12(b)(2), *"Waiver for lot Standards,"* B.R.C., 1981.

Public Comment. Required public notice was provided in the form of written notifications to property owners within 600 feet of the subject property. In addition, a public notice sign was posted on the property and therefore, all public notice requirements of section 9-4-3, "*Public Notice Requirements*," B.R.C. 1981 were met. No comments were received.

This application was approved by Planning and Development Services staff on August 22, 2013 and the decision may be called-up before Planning Board on or before September 5, 2013. There is no Planning Board meeting within the 14-day call-up period. Questions about the project or decision should be directed to Sloane Walbert at 303-441-4231 or via email walberts@bouldercolorado.gov.

Attachments.
Attachment A: Disposition of Approval
Attachment B: Approved Final Plat for Gunbarrel Technical Center Replat E

CITY OF BOULDER
Planning and Development Services
1739 Broadway, Third Floor • P.O. Box 791, Boulder, CO 80306-0791
phone 303-441-1880 • fax 303-441-3241 • web boulderplandevelop.net

CITY OF BOULDER PLANNING DEPARTMENT
NOTICE OF DISPOSITION

You are hereby advised that the following action was taken by the Planning Department based on the standards and criteria of the Land Use Regulations as set forth in Chapter 9-12, B.R.C. 1981, as applied to the proposed development.

DECISION:	**APPROVED**
PROJECT NAME:	**GUNBARREL TECHNICAL CENTER REPLAT E**
DESCRIPTION:	**FINAL PLAT: Request to subdivide an approximately 4.76 acre site into two lots and one outlot. Lot 10B is proposed to be 2.47 acres and will contain the existing building, which functions as an industrial laboratory. Lot 10C is proposed to be 2.03 acres in size. The outlot will function as a shared detention pond for both lots. See case number LUR2013-00003 for preliminary plat.**
LOCATION:	**6810 WINCHESTER CR.**
COOR:	**N11E04**
LEGAL DESCRIPTION:	**Lot 10A, Gunbarrel Technical Center Replat D, County of Boulder, State of Colorado**
APPLICANT/OWNER:	**John Holman, Winchester Investments, LLC**
APPLICATION:	**TEC2013-00007**
ZONING:	**Industrial - Manufacturing (IM)**
CASE MANAGER:	**Sloane Walbert**

THIS IS NOT A SITE SPECIFIC DEVELOPMENT PLAN APPROVAL AND NO VESTED PROPERTY RIGHT IS CREATED BY THIS APPROVAL.

Approved on: 8/22/13
Date

By:
David Driskell, Executive Director of Community Planning

This decision may be appealed to the Planning Board by filing an appeal letter with the Planning Department within two weeks of the decision date. If no such appeal is filed, the decision shall be deemed final fourteen days after the date above mentioned.

Appeal to Planning Board expires: 9/5/13

CONDITIONS OF APPROVAL

1. The subdivision is approved subject to the terms of the Subdivision Agreement.

Address: 6810 WINCHESTER CR.

GUNBARREL TECHNICAL CENTER REPLAT E

REPLAT OF LOT 10A, GUNBARREL TECHNICAL CENTER REPLAT D, LOCATED IN THE SOUTHEAST QUARTER OF SECTION 2, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M., CITY OF BOULDER, COUNTY OF BOULDER, STATE OF COLORADO

SHEET 1 OF 1

TOTAL AREA = 207,250 SQ FT, OR 4.76 ACRES

Dedication

KNOW ALL MEN BY THESE PRESENTS: THAT THE UNDERSIGNED, BEING THE OWNER OF THOSE PARCELS OF LAND SITUATED IN THE CITY OF BOULDER, AND BEING LOCATED AS FOLLOWS:

ALL THAT PART OF LOT 10A OF GUNBARREL TECHNICAL CENTER REPLAT D, RECEPTION NO. 2181185 DATED AUGUST 3, 2001, LOCATED IN THE SOUTHEAST QUARTER OF SECTION 2, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH PRINCIPAL MERIDIAN IN THE CITY OF BOULDER, COUNTY OF BOULDER, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE CENTER OF SAID SECTION 2, THENCE ALONG THE WEST LINE OF SOUTHEAST QUARTER OF SECTION 2 S00°08'07"W, A DISTANCE OF 745.77 FEET, TO THE SOUTHWEST CORNER OF LOT 9A OF SAID GUNBARREL TECHNICAL CENTER REPLAT D, SAID POINT ALSO BEING THE POINT OF BEGINNING; THENCE ALONG THE SOUTH LINE OF LOT 9A S89°56'09"E, A DISTANCE OF 385.78 FEET, TO A POINT OF CURVATURE TO THE LEFT, SAID POINT ALSO BEING THE WESTERLY RIGHT-OF-WAY LINE OF WINCHESTER CIRCLE;
THENCE CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY LINE OF WINCHESTER CIRCLE THE FOLLOWING TWO (2) COURSES:
1) 146.79 FEET ALONG THE ARC OF A CURVE TO THE LEFT HAVING A RADIUS OF 180.00 FEET, AN INCLUDED ANGLE OF 46°43'33" AND SUBTENDED BY A CHORD BEARING S47°07'00"E, A DISTANCE OF 142.76 FEET;
2) THENCE S70°26'57"E, 74.52 FEET TO THE NORTHWEST CORNER OF LOT 12, REPLAT OF GUNBARREL TECHNICAL CENTER, RECEPTION NO. 374474, DATED DECEMBER 12, 1979;
THENCE ALONG THE WESTERLY LINE OF SAID LOT 12 S19°28'38"W, A DISTANCE OF 415.10 FEET, TO THE SOUTHWEST CORNER OF SAID LOT 12, SAID POINT ALSO BEING A POINT ON THE NORTHERLY LINE OF GUNBARREL NORTH REPLAT "B" A REPLAT OF BLOCKS 15 & 17, RECEPTION NO. 01255040, DATED JANUARY 7, 1993;
THENCE ALONG SAID NORTHERLY LINE OF GUNBARREL NORTH REPLAT "B" A REPLAT OF BLOCKS 15 & 17 THE FOLLOWING TWO (2) COURSES:
1) N64°00'00"W, A DISTANCE OF 275.00 FEET;
2) THENCE N77°00'00"W, A DISTANCE OF 180.49 FEET, TO A POINT ON WEST LINE OF SAID SOUTHEAST QUARTER OF SECTION 2;
THENCE ALONG SAID WEST LINE OF THE SOUTHEAST QUARTER OF SECTION 2 N00°08'07"E, A DISTANCE OF 352.71 FEET TO THE POINT OF BEGINNING.

CITY OF BOULDER,
COUNTY OF BOULDER,
STATE OF COLORADO.

SAID DESCRIBED PARCEL CONTAINING 207,250 SQ.FT. OR 4.76 ACRES.

HAS CAUSED SAID PROPERTY TO BE LAID OUT, SURVEYED, SUBDIVIDED AND PLATTED UNDER THE NAME OF "GUNBARREL TECHNICAL CENTER REPLAT E". A SUBDIVISION IN THE CITY OF BOULDER, COUNTY OF BOULDER, STATE OF COLORADO, AND BY THESE PRESENTS DOES HEREBY GRANT TO THE CITY OF BOULDER THAT PORTION OF REAL PROPERTY DESIGNATED AS A "PUBLIC ACCESS EASEMENT" ON THE ACCOMPANYING PLAT AS AN EASEMENT FOR PUBLIC INGRESS AND EGRESS, AND FOR THE CONSTRUCTION, INSTALLATION, OPERATION, MAINTENANCE, REPAIR, AND REPLACEMENT OF TRANSPORTATION IMPROVEMENTS AND LANDSCAPING AND UTILITIES AND APPURTENANCES THERETO. IT IS EXPRESSLY UNDERSTOOD AND AGREED BY THE UNDERSIGNED THAT ALL EXPENSES AND COSTS INVOLVED IN CONSTRUCTING AND INSTALLING SAID IMPROVEMENTS SHALL BE GUARANTEED AND PAID FOR BY THE SUBDIVIDER OR ARRANGEMENTS MADE BY THE SUBDIVIDER THEREFORE WHICH ARE APPROVED BY THE CITY OF BOULDER, AND SUCH SUMS SHALL NOT BE PAID BY THE CITY OF BOULDER, COLORADO, SHALL BECOME THE SOLE PROPERTY OF THE CITY OF BOULDER.

THE UNDERSIGNED DOES FURTHER GRANT TO THE CITY OF BOULDER, THAT PORTION OF REAL PROPERTY DESIGNATED AS A "UTILITY EASEMENT" ON THE ACCOMPANYING PLAT AS AN EASEMENT FOR THE CONSTRUCTION, INSTALLATION, OPERATION, MAINTENANCE, REPAIR AND REPLACEMENT OF ALL SERVICES, INCLUDING WITHOUT LIMITING THE GENERALITY OF THE FORGOING: TELEPHONE AND ELECTRIC LINES, WORKS, PIPES, UNDERGROUND CABLES, GAS PIPELINES, WATER PIPELINES, SANITARY SEWER LINES, STREET LIGHTS, CULVERTS, HYDRANTS, DRAINAGE DITCHES AND DRAINS, AND ALL APPURTENANCES THERETO. IT IS EXPRESSLY UNDERSTOOD AND AGREED BY THE UNDERSIGNED THAT ALL EXPENSES AND COSTS INVOLVED IN CONSTRUCTING AND INSTALLING WATER PIPELINES AND APPURTENANCES, SANITARY SEWER WORKS AND LINES, GAS SERVICE LINES, ELECTRICAL SERVICE WORKS AND LINES, STORM SEWERS AND DRAINS, STREET LIGHTING, GRADING AND LANDSCAPING, CURBS, GUTTERS, STREET PAVEMENT, SIDEWALKS, AND OTHER SUCH UTILITIES AND SERVICES SHALL BE GUARANTEED AND PAID FOR BY THE SUBDIVIDER OR ARRANGEMENTS MADE BY THE SUBDIVIDER THEREFORE WHICH ARE APPROVED BY THE CITY OF BOULDER, AND SUCH SUMS SHALL NOT BE PAID BY THE CITY OF BOULDER, COLORADO, AND THAT ANY ITEM SO CONSTRUCTED OR INSTALLED AND ACCEPTED BY THE CITY OF BOULDER, COLORADO, SHALL BECOME THE SOLE PROPERTY OF THE CITY OF BOULDER, EXCEPT ITEMS OWNED BY MUNICIPALLY FRANCHISED FOR PERMITTED UTILITIES, WHICH ITEMS, WHEN CONSTRUCTED OR INSTALLED, SHALL REMAIN THE PROPERTY OF THE OWNER OR THE PUBLIC UTILITY, AND SHALL NOT BECOME THE PROPERTY OF THE CITY OF BOULDER.

THE UNDERSIGNED DOES FURTHER GRANT TO THE CITY OF BOULDER, THOSE PORTIONS OF REAL PROPERTY DESIGNATED AS "OUTLOT A" ON THE ACCOMPANYING PLAT AS A "STORMWATER DETENTION/WATER QUALITY AND DRAINAGE EASEMENT" AS AN EASEMENT FOR CONSTRUCTION, INSTALLATION, OPERATION, MAINTENANCE, REPAIR AND REPLACEMENT OF STORMWATER DETENTION AND WATER QUALITY FACILITIES AND ALL APPURTENANCE THERETO AND FOR VEHICULAR ACCESS BY CITY VEHICLES. IT BEING EXPRESSLY UNDERSTOOD AND AGREED BY THE UNDERSIGNED THAT ALL EXPENSES AND COSTS INVOLVED IN CONSTRUCTING AND INSTALLING THE STORMWATER DETENTION/WATER QUALITY AND DRAINAGE IMPROVEMENTS SHALL BE GUARANTEED AND PAID FOR BY THE SUBDIVIDER OR ARRANGEMENTS MADE BY THE SUBDIVIDER THEREFOR WHICH ARE APPROVED BY THE CITY, AND SUCH SUMS SHALL NOT BE PAID BY THE CITY, AND THAT ANY ITEM SO CONSTRUCTED OR INSTALLED WHEN ACCEPTED BY THE CITY SHALL REMAIN THE PROPERTY AND MAINTENANCE RESPONSIBILITY OF THE SUBDIVIDER AND THEN, WHEN CONVEYED TO THE UNIT OWNERS ASSOCIATION CREATED FOR THE SUBDIVISION, IT SHALL BECOME THE MAINTENANCE RESPONSIBILITY OF SAID UNIT OWNERS ASSOCIATION, ITS SUCCESSORS AND ASSIGNS AND SHALL NOT BECOME THE PROPERTY OF THE CITY.

FOR THE APPROVAL OF "GUNBARREL TECHNICAL CENTER REPLAT E" AND THE DEDICATIONS AND CONDITIONS WHICH APPLY THERETO THIS _____ DAY OF _____, 2013.

WINCHESTER INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY
F/K/A ARO INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY

BY: _____
JOHN R. HOLMAN, MANAGER

ACKNOWLEDGMENT

STATE OF _____)
) SS.
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 2013, BY JOHN R. HOLMAN, MANAGER OF WINCHESTER INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY, F/K/A ARO INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY.

WITNESS MY HAND AND SEAL.
MY COMMISSION EXPIRES: _____

[SEAL]

_____ _____
NOTARY PUBLIC

Lender's Consent and Subordination

THE UNDERSIGNED, A BENEFICIARY UNDER A CERTAIN DEED OF TRUST ENCUMBERING THE PROPERTY, HEREBY EXPRESSLY CONSENTS TO AND JOINS IN THE EXECUTION AND RECORDING OF THIS SUBDIVISION PLAT, DEDICATION AND EASEMENTS SHOWN HEREON AND MAKES THE DEED OF TRUST SUBORDINATE HERETO. THE UNDERSIGNED REPRESENTS THAT HE OR SHE HAS FULL POWER AND AUTHORITY TO EXECUTE THIS LENDER'S CONSENT AND SUBORDINATION ON BEHALF OF THE LENDER STATED BELOW.

WELLS FARGO BANK, NATIONAL ASSOCIATION

BY: _____
AUTHORIZED REPRESENTATIVE

ACKNOWLEDGMENT

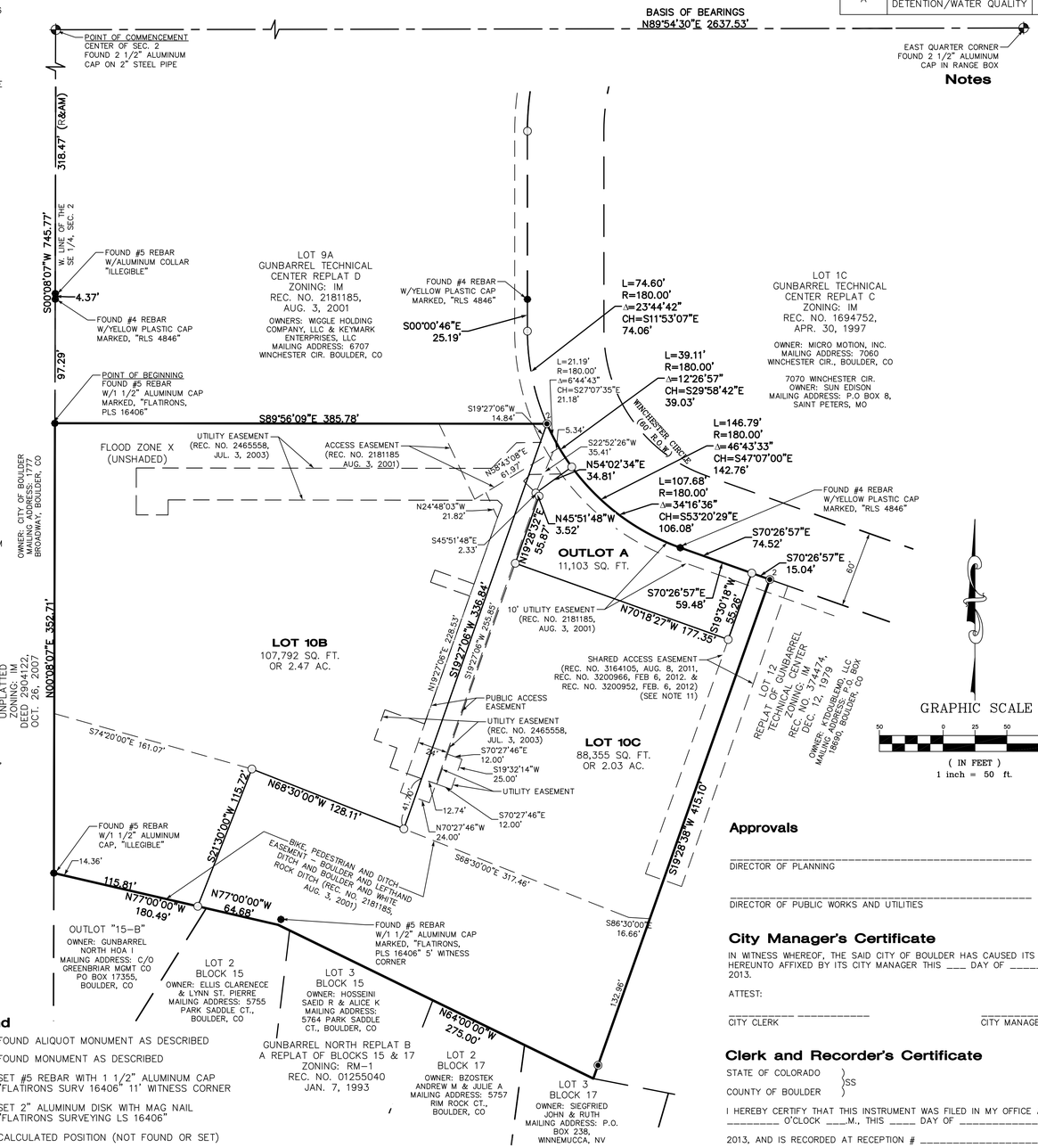
STATE OF _____)
) SS.
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 2013, BY _____, AUTHORIZED REPRESENTATIVE OF WELLS FARGO BANK, NATIONAL ASSOCIATION.

WITNESS MY HAND AND SEAL.
MY COMMISSION EXPIRES: _____

[SEAL]

_____ _____
NOTARY PUBLIC

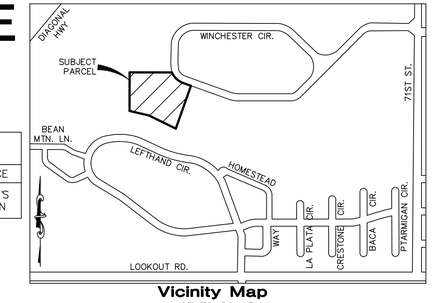


Legend

✚	FOUND ALIQUOT MONUMENT AS DESCRIBED
●	FOUND MONUMENT AS DESCRIBED
◉	SET #5 REBAR WITH 1 1/2" ALUMINUM CAP "FLATIRONS SURV 16406" 11' WITNESS CORNER
◉²	SET 2" ALUMINUM DISK WITH MAG NAIL "FLATIRONS SURVEYING LS 16406"
○	CALCULATED POSITION (NOT FOUND OR SET)
(AM)	AS MEASURED AT TIME OF SURVEY
(R)	AS PER RECORD INFORMATION
(C)	CALCULATED FROM RECORD AND AS MEASURED INFORMATION

OUTLOT TABLE

OUTLOT	USE	OWNERSHIP	MAINTENANCE
A	STORMWATER DETENTION/WATER QUALITY	UNIT OWNER'S ASSOCIATION	UNIT OWNER'S ASSOCIATION



Vicinity Map
NOT TO SCALE

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

Notes

1. FIRST COLORADO TITLE COMPANY, LLC., POLICY NUMBER A75-0540993, DATED JUNE 16, 2003 AT 8:00 A.M., AND UPDATE LETTER, DATED DECEMBER 28, 2012 WAS ENTIRELY RELIED UPON FOR RECORDED INFORMATION REGARDING RIGHTS-OF-WAY, EASEMENTS AND ENCUMBRANCES IN THE PREPARATION OF THIS SURVEY. THE PROPERTY SHOWN AND DESCRIBED HEREON IS ALL OF THE PROPERTY DESCRIBED IN SAID TITLE POLICY.
2. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.
3. A BASIS OF BEARING OF N89°54'30"E ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER OF SECTION 2 AS SHOWN ON THE PLAT OF GUNBARREL TECHNICAL CENTER REPLAT D, AS RECORDED IN BOULDER COUNTY AT REC# 2181185, BETWEEN A FOUND 2 1/2" ALUMINUM CAP ON A 2" STEEL PIPE AT THE CENTER OF SECTION 2 AND A FOUND 2 1/2" ALUMINUM CAP IN RANGE BOX AT THE EAST QUARTER CORNER OF SECTION 2 AS SHOWN HEREON. ALL BEARINGS SHOWN HEREON ARE RELATIVE THERETO.
4. ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT AND/OR BOUNDARY MONUMENT OR ACCESSORY, COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUTE C.R.S. SEC 18-4-508. WHOEVER WILLFULLY DESTROYS, DEFACES, CHANGES, OR REMOVES TO ANOTHER PLACE ANY SECTION CORNER, QUARTER-SECTION CORNER, OR MEANDER POST, ON ANY GOVERNMENT LINE OF SURVEY, OR WILLFULLY CUTS DOWN ANY WITNESS TREE OR ANY TREE BLAZED TO MARK THE LINE OF A GOVERNMENT SURVEY, OR WILLFULLY DEFACES, CHANGES, OR REMOVES ANY MONUMENT OR BENCH MARK OF ANY GOVERNMENT SURVEY, SHALL BE FINED UNDER THIS TITLE OR IMPRISONED NOT MORE THAN SIX MONTHS, OR BOTH. 18 U.S.C. § 1858 (2009).
5. THE DISTANCE MEASUREMENTS SHOWN HEREON ARE U.S. SURVEY FOOT.
6. FLOOD INFORMATION: THE SUBJECT PROPERTY IS LOCATED IN ZONE X UNSHADED, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, ACCORDING TO THE FEMA FLOOD INSURANCE RATE MAP; COMMUNITY-PANEL NO. 08013C0404J, DATED DECEMBER 18, 2012. FLOOD INFORMATION IS SUBJECT TO CHANGE.
7. THE WORD "CERTIFY" AS SHOWN AND USED HEREON MEANS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THIS SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED.
8. THE TOTAL AREA OF THE SUBJECT PROPERTY IS 207,250 SQ. FT. OR 4.76 ACRES, MORE OR LESS. AREA AS SHOWN HEREON IS A RESULTANT FACTOR, NOT A DETERMINATIVE FACTOR, AND MAY CHANGE SIGNIFICANTLY WITH MINOR VARIATIONS IN FIELD MEASUREMENTS OR THE SOFTWARE USED TO PERFORM THE CALCULATIONS. FOR THIS REASON, THE AREA IS SHOWN AS A "MORE OR LESS" FIGURE, AND IS NOT TO BE RELIED UPON AS AN ACCURATE FACTOR FOR REAL ESTATE SALES PURPOSES.
9. DATES OF FIELD WORK: DECEMBER 3, 2012
10. THE FOLLOWING DOCUMENTS ARE MENTIONED IN THE ABOVE REFERENCED TITLE POLICY AND UPDATE LETTER AND APPEAR TO AFFECT THE SUBJECT PROPERTY BUT CANNOT BE SHOWN GRAPHICALLY. THE FOLLOWING LIST CONTAINS THE TITLE COMMITMENT EXCEPTION NUMBER, DATE RECORDED, RECEPTION NUMBER AND/OR BOOK AND PAGE.

    LIST OF EXCEPTIONS-JUNE 16, 2003

#7	JUL. 19, 1979	REC. NO. 349295	MAIN EXTENSION AGREEMENT
#8	AUG. 15, 1979	REC. NO. 354177	SUBDIVISION AGREEMENT
#9	AUG. 03, 2001	REC. NO. 2181185	EASEMENT-SHOWN
#10	AUG. 03, 2001	REC. NO. 2181185	EASEMENT-SHOWN
#11	AUG. 03, 2001	REC. NO. 2181185	EASEMENT-SHOWN
#12	OCT. 09, 1979	REC. NO. 364147	REVISED DECLARATION OF COVENANTS
#13	AUG. 03, 2001	REC. NO. 2181185	EASEMENT-SHOWN
#14	AUG. 03, 2001	REC. NO. 2181184	SUBDIVISION AGREEMENT
#15	AUG. 03, 2001	REC. NO. 2181185	SHOWN
#16	JUN. 13, 2003	REC. NO. 2456000	DEED OF TRUST
	JUN. 13, 2003	REC. NO. 2456001	DEED OF TRUST
#17	JUN. 13, 2003	REC. NO. 2456002	DISBURSER'S NOTICE

    LIST OF EXCEPTIONS-DECEMBER 28, 2012

#1	MAY 19, 2010	REC. NO. 3075563	RELEASE OF DEED OF TRUST
#2	JAN. 06, 2010	REC. NO. 3051771	ARTICLES OF AMENDMENT
#3	JAN. 06, 2010	REC. NO. 3051772	DEED OF TRUST
	FEB. 03, 2010	R. NO. 3056924	AFFIDAVIT-LEGAL DESCRIPTION
#4	JAN. 06, 2010	REC. NO. 3051773	FINANCING STATEMENT
#5	JAN. 29, 2010	REC. NO. 3056049	STATEMENT OF AUTHORITY

11. THE SHARED ACCESS EASEMENT ALONG THE EAST SIDE OF LOT 10C WAS DEDICATED FOR THE BENEFIT OF LOTS 10A GUNBARREL TECHNICAL CENTER REPLAT D (NOW KNOWN AS LOT 10C OF GUNBARREL TECHNICAL CENTER REPLAT E) AND LOT 12 REPLAT OF GUNBARREL TECHNICAL CENTER.

Approvals

_____
DIRECTOR OF PLANNING

_____
DIRECTOR OF PUBLIC WORKS AND UTILITIES

City Manager's Certificate

IN WITNESS WHEREOF, THE SAID CITY OF BOULDER HAS CAUSED ITS SEAL TO BE HEREUNTO AFFIXED BY ITS CITY MANAGER THIS ___ DAY OF _____, 2013.

ATTEST:

_____ _____
CITY CLERK CITY MANAGER

Clerk and Recorder's Certificate

STATE OF COLORADO)
)SS
COUNTY OF BOULDER)

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED IN MY OFFICE AT _____ O'CLOCK ____M., THIS _____ DAY OF _____,

2013, AND IS RECORDED AT RECEPTION # _____.

FEES PAID: $_____

_____ _____
CLERK AND RECORDER DEPUTY

Surveyor's Statement

I, JOHN B. GUYTON, A REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE SURVEY OF GUNBARREL TECHNICAL CENTER REPLAT E WAS MADE BY ME OR DIRECTLY UNDER MY SUPERVISION ON FEBRUARY 15, 2013; AND THAT THE ACCOMPANYING PLAT ACCURATELY AND PROPERLY SHOWS SAID SUBDIVISION AND THE SURVEY THEREOF.

_____ _____
JOHN B. GUYTON DATE
COLORADO P.L.S. #16406 FSI JOB NO. 12-60,545
CHAIRMAN/CEO, FLATIRONS, INC.

INT:	DATE:
ED	8/12/13
ED	8/6/13
ED	7/9/13
ED	6/24/13
ED	2/12/13
ED	1/23/13
ED	1/18/13
ED	1/15/13
ED	1/11/13

REVISIONS:
CHECKED BY: WW/JZG/NV/ETB

DRAWN BY: E. DAVIS
DATE: JANUARY 14, 2013
FSI JOB NO. 12-60,545

Flatirons, Inc.
Surveying, Engineering & Geomatics
3825 IRIS AVE, STE 395
BOULDER, CO 80301
PH: (303) 443-7001
FAX: (303) 443-9830
655 FOURTH AVE
LONGMONT, CO 80501
PH: (303) 776-1733
FAX: (303) 776-4355
www.Flatironsinc.com

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C I T Y O F B O U L D E R
PLANNING BOARD AGENDA ITEM
MEETING DATE: September 12, 2013

AGENDA TITLE: Public hearing and consideration of a recommendation to City Council regarding amendment to the Benson Annexation Agreement for the 1215 and 1235 Tamarack properties (Lots 10 and 11, Block 5, Moore's Subdivision) to modify the requirements pertaining to the construction of 12 ½ Street between Upland and Tamarack Avenue. Case number: LUR2013-00036.

Applicant: Michael Marez/ TJM Investment, LLC
Owners: TJM Investment, LLC (Lot 10: 1215 Tamarack Ave.)
James C. Hohmann and Deborah Stabler (Lot 11: 1235 Tamarack Ave.)

REQUESTING DEPARTMENT:
Community Planning & Sustainability
David Driskell, Executive Director
Susan Richstone, Deputy Director
Charles Ferro, Land Use Review Manager
Chandler Van Schaack, Planner I

OBJECTIVE:
Define the steps for Planning Board consideration of this request:

1. Hear Staff and Applicant presentations
2. Hold Public Hearing
3. Planning Board discussion
4. Planning Board action to recommend approval, approval with conditions or denial

SUMMARY:

Proposal:	Proposed amendment to the Benson Annexation Agreement for the 1215 and 1235 Tamarack properties (Lots 10 and 11, Block 5, Moore's Subdivision) to modify the requirements pertaining to the construction of 12 ½ Street between Upland and Tamarack Avenues. The proposed amendment would allow for construction of 12 ½ Street between Upland and Tamarack Avenues as a standard twelve foot (12') wide residential alley at the time of any building permit for an additional dwelling unit, but would maintain the existing requirement to construct 12 ½ Street as a full twenty foot (20') wide residential access lane at the time of subdivision.
Project Name:	1215 & 1235 Tamarack Annexation Agreement Amendment
Size of Parcel:	Roughly 34,000 square feet (.78 acres)
Zoning:	Residential Low – 2 (RL-2)
Comprehensive Plan:	Low Density Residential

KEY ISSUE:
Staff has identified the following key issue regarding the proposed application request:

Is the requested annexation agreement amendment consistent with the intent of the original Crestview West Annexation package with regards to the desired land use and transportation pattern contained in the North Boulder Subcommunity Plan?

PROCESS:
Annexation agreement amendments are reviewed pursuant section 9-2-16, "*Annexation Requirements*," B.R.C. 1981. Pursuant to section 9-4-2, B.R.C. 1981, Planning Board is required to make a recommendation to City Council on applications for annexation.

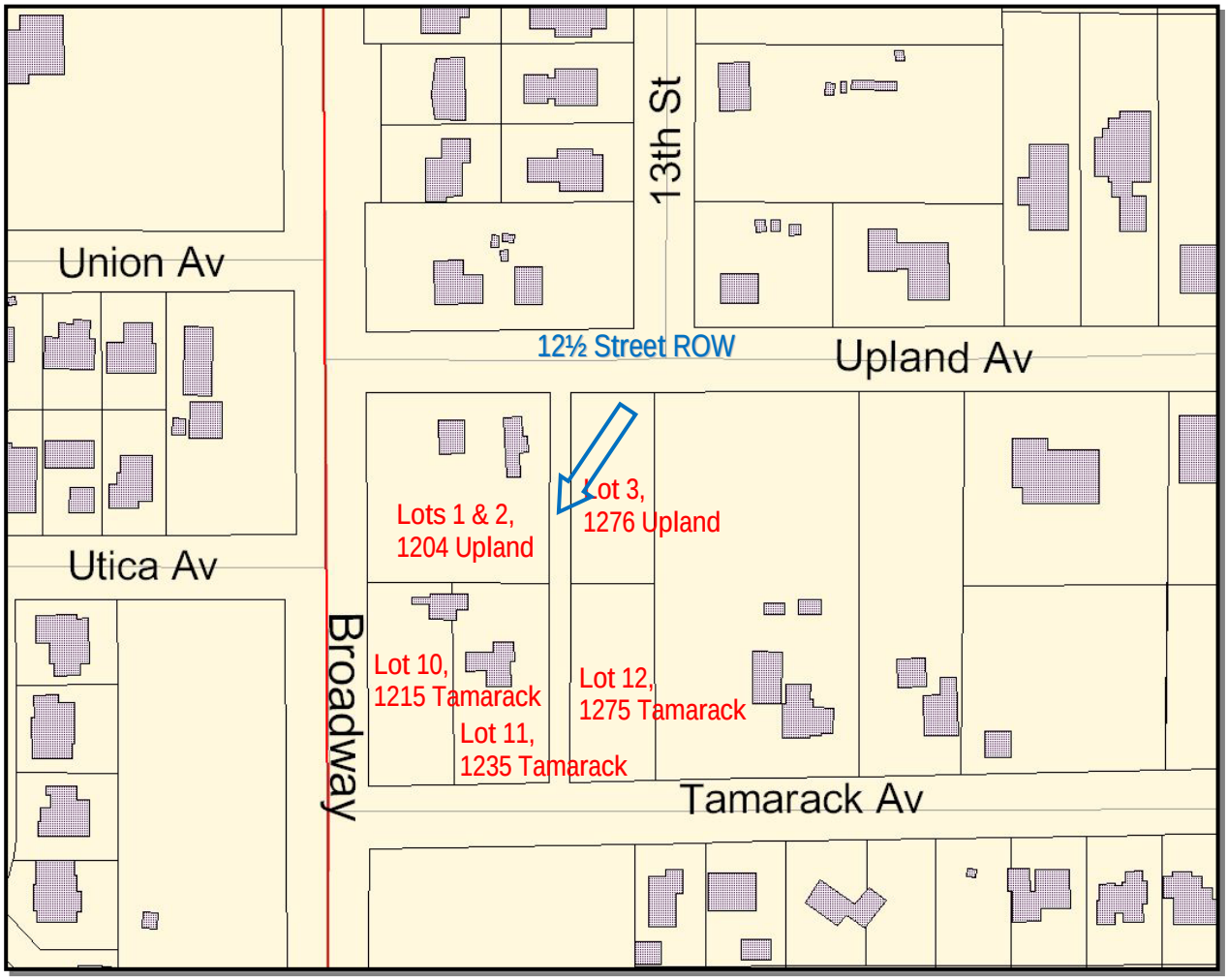

Figure 1: Vicinity Map

BACKGROUND:
The project area is located in North Boulder in the Crestview West Neighborhood (generally, the area east of Broadway, south of Violet Avenue, west of 19th Street, and north of vacated Riverside Avenue) within the Residential Low - 2 (RL-2) zone district. Please refer to Figure 1 above for a vicinity map. Lot 10

(1215 Tamarack) is currently vacant, and Lot 11 (1235 Tamarack) contains an existing single-family home. The neighboring lots to the east, Lots 3 and 12 (1276 Upland and 1275 Tamarack) are both developed with single family homes, and 12½ Street has been constructed as a twelve (12') foot wide residential alley. Below is a summary of the background on the existing annexation agreements affecting the lots east of Broadway and west of 13th Street, between Upland and Tamarack Avenues, as well as the status of the 12½ Street connection.

- The subject area is located in the Crestview West Neighborhood, which was unilaterally annexed into the City in October 1997. During the Crestview West Annexation process, a street connection for 12½ Street was required in anticipation of future higher density development on the lots east of Broadway and west of 13th Street, between Upland and Tamarack Avenues. Specifically, 12½ Street was intended to provide access to new lots if any of the lots adjacent to Broadway were to be subdivided, thereby precluding new curb cuts from being placed on Broadway (please see Figure 2 below for anticipated lot configuration and access contained in original Annexation and Initial Zoning proposal).

- Consistent with the NoBo Plan's vision for higher densities along the Broadway corridor, property owners in that area who signed an annexation agreement were given a zoning designation of RL-2. In anticipation of future subdivision, the annexation agreement signed by the owner of Lots 10 and 11 (1215 and 1235 Tamarack) at that time (see Attachment A) required the owner to construct 12½ Street as a standard twenty (20') foot access lane with a required turnaround and an eight-foot-wide pedestrian/ bicycle path extending west to Broadway at the time of development or redevelopment of the subject property (see Figure 2).

- In 1999, Lots 3 and 12 (1276 Upland and 1275 Tamarack) signed a Post-Annexation Agreement containing all applicable conditions from the 1997 annexation agreement signed by the owner of Lots 10 and 11 to the west.

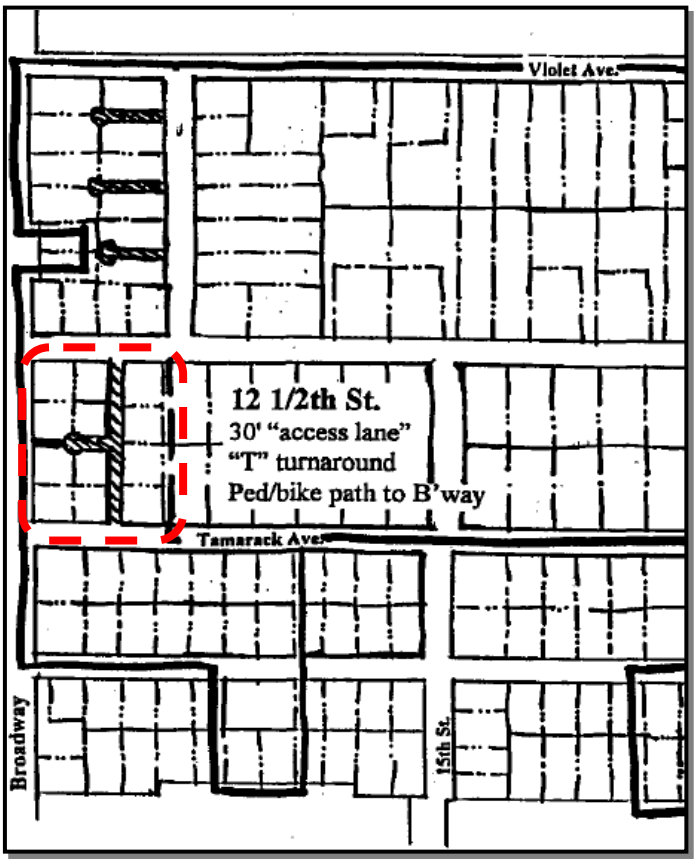

Figure 2: Original 12 ½ Street Proposal

- Later in 1999, following a new redevelopment proposal for Lots 3 and 12 (1276 Upland and 1275 Tamarack) for two duplexes (one on each lot), City Council approved an amendment to the Post-Annexation Agreement for those properties to allow the construction of a twelve (12') foot wide residential alley in place of constructing a twenty (20') foot wide residential access lane for 12½ Street (See Attachment B). Several factors were considered as part of council's approval of the amendment, including the fact that the new development proposal was still consistent with the NoBo Plan's vision for higher densities along the Broadway corridor as well as the fact that the proposal included taking direct

access from Upland and Tamarack Avenues and therefore did not require the use of 12½ Street to provide access as originally intended in the Crestview West Annexation Package.

- The proposed project to build duplexes on Lots 3 and 12 was never completed, and Lots 3 and 12 have since been developed as single family homes. As part of the redevelopment of these properties, the owners were required to construct 12 ½ Street as a twelve (12') foot wide alley, consistent with the Post-Annexation Agreement Amendment for those properties. Currently, both properties take access from the alley. Both owners have indicated that they have no intention of subdividing in the future; however, the Post-Annexation Agreement Amendment is still valid today and contains a provision requiring the full twenty (20') foot 12½ Street connection to be constructed in the event that either Lot 3 or 12 were to be subdivided in the future.

- As mentioned above, Lot 10 (1215 Tamarack) is currently vacant, and Lot 11 (1235 Tamarack) contains an existing single-family home which takes direct access from Tamarack Avenue. The original 1997 Annexation Agreement for Lots 10 and 11, which requires the owner to construct 12½ Street as a standard twenty (20') foot access lane with a required turnaround and an eight-foot-wide pedestrian/ bicycle path extending west to Broadway at the time of development or redevelopment of the subject properties is still valid.

PROPOSAL:
The purpose of the application is to request an amendment to the Annexation Agreement for 1215 and 1235 Tamarack (Lots 10 and 11, Block 5, Moore's Subdivision) to modify requirements pertaining to the construction of 12 ½ Street between Upland and Tamarack Avenues as a requirement of development or redevelopment of the subject properties. The proposed amendment would require construction of 12 ½ Street between Upland and Tamarack Avenues as a standard twelve foot (12') wide residential alley at the time of any building permit for a dwelling unit, which is consistent with the Post-Annexation Agreement Amendment for Lots 3 and 12 (1276 Upland and 1275 Tamarack). Because the twelve (12') foot wide alley has already been constructed, the proposed amendment would allow the owners of Lots 10 and 11 to obtain building permits for new dwelling units on their properties without having to construct any new right-of-way.

The proposed amendment to the subject Annexation Agreement would allow the owners of the Lots 10 and 11 to redevelop their properties without having to construct the 12½ Street right-of-way as a full twenty (20') foot wide residential access lane; however, the amended agreement would maintain the existing requirement to construct 12 ½ Street as a full twenty (20') foot wide residential access lane if either of the lots were to be subdivided in the future. See Attachment C for the proposed Annexation Agreement Amendment.

ANALYSIS:
Staff identified the following key issue for discussion regarding the proposed application request:

1. Is the requested annexation agreement amendment consistent with the intent of the original Crestview West Annexation package with regards to the desired land use and transportation pattern contained in the North Boulder Subcommunity Plan?

Staff finds the request to amend the Benson Annexation Agreement for the 1215 and 1235 Tamarack properties (Lots 10 and 11, Block 5, Moore's Subdivision) to be consistent with the intent of the original

annexation package with regards to the NoBo Plan. The specific goals for Crestview West included in the NoBo Plan that are applicable to the subject area include:

Crestview West Annexation Goals (This area was annexed subsequent to the Plan adoption, in 1997.)

- *Allow possible higher densities along the Broadway corridor to achieve affordable and diverse housing close to transit.*
- *Consider neighborhood consensus, in balance with other annexation goals.*
- *Help defray the property owners' costs of annexation.*

The proposed annexation agreement amendment is consistent with the goals listed above. The proposed amendment will not affect the existing zoning of the area which allows for higher densities, so the goal of allowing possible higher densities along the Broadway corridor will continue to be met. The RL-2 zoning designation for properties along Broadway was intended to help meet the first goal of "*allow(ing) possible higher densities along the Broadway corridor to achieve affordable and diverse housing close to transit*." The requirement to construct 12½ Street with a turnaround and a bicycle/pedestrian path to Broadway was predicated upon a redevelopment scenario in which all of the subject properties would subdivide along the east-west axis and redevelop as single family homes (refer to Figure 2 for intended lot configuration following subdivision), and would therefore require new right-of-way to take access from.

Under current RL-2 zoning standards, density is based upon open space, with a minimum of 6,000 square feet of open space required per dwelling unit. Because each of the two subject lots is large enough to accommodate up to two attached dwelling units under the current zoning standards without subdividing, they could theoretically redevelop at a higher density while keeping direct access from Tamarack Avenue. In the event that any of the lots were to be subdivided, the requirement to construct 12 ½ Street as a twenty (20') foot wide residential street would apply.

With regards to affordable housing, the proposed amendments do not affect the inclusionary housing requirements for the subject properties, so the goals and policies contained in the NoBo Plan relating to the provision of affordable housing will continue to be met. The owners of both Lots 3 and 12 are required to pay the applicable cash-in-lieu fee for the new single-family homes being constructed, and the owners of Lots 10 and 11 will be required to meet inclusionary housing requirements at the time of development or redevelopment of the subject properties.

With regards to neighborhood comments, staff has not received any comments from neighbors expressing opposition to the proposed amendments.

PUBLIC COMMENT AND PROCESS:

Required public notice was given in the form of written notification mailed to all property owners within 600 feet of the proposed development, and a sign posted on the property for at least 10 days. All notice requirements of section 9-4-2, B.R.C. 1981 have been met. No public comment was received in response to the notice.

STAFF FINDINGS AND RECOMMENDATION:

Staff recommends that Planning Board recommend to City Council approval of the Annexation Agreement Amendment as it is consistent with the overall goals and policies of the Boulder Valley Comprehensive Plan policies pertaining to annexation as well as the intent of the original Crestview West Annexation package

with regards to the desired land use and transportation pattern contained in the North Boulder Subcommunity Plan.

Approved By:

David Driskell, Executive Director
Department of Community Planning and Sustainability

ATTACHMENTS:
Attachment A: 1997 Annexation Agreement for Lots 10 & 11
Attachment B: Post-Annexation Agreement and Post Annexation Agreement Amendment for Lots 3 & 12
Attachment C: Requested Amendments to Annexation Agreement Amendments
Attachment D: Approved Technical Document plans for 12' alley with 20.25' Right-of-Way

ATTACHMENT A

ANNEXATION AGREEMENT

This Agreement, made this 19th day of September, 1997, by and between the City of Boulder, a Colorado home rule city, hereinafter referred to as "City," and Dolores M. Benson, hereinafter referred to individually or collectively as "Applicant."

WITNESSETH:

RECITALS

WHEREAS, the Applicant is the owner of Parcel #3, the real property described as:

> Lots 10 and 11, Block 5, Moore's Subdivision, recorded in the offices of the Boulder County Clerk and Recorder at Book 5, pages 92-94, County of Boulder, State of Colorado,

also known as 1235 Tamarack Avenue, which real property shall hereinafter be referred to as the "Subject Property;" and

WHEREAS, the Applicant is interested in obtaining approval from the City of the annexation of the Subject Property in order to provide adequate urban services to said area, particularly city water and sewer; and

WHEREAS, the parties anticipate that annexation, with an initial zoning designation of Low Density Residential - Developing (LR-D), will be consistent with the Boulder Valley Comprehensive Plan; and

WHEREAS, the City is interested in insuring that certain terms and conditions of annexation be met by the Applicant in order to protect the public health, safety and welfare and prevent the placement of an unreasonable burden on the physical, social, economic, or environmental resources of the City.

COVENANTS

NOW, THEREFORE, in consideration of the recitals, promises and covenants herein set forth, and other good and valuable consideration herein receipted for, the parties agree as follows:

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1. Definitions

"Redevelopment" shall be defined as the subdivision of a property to create a new lot, issuance of a building permit for a new dwelling unit, or issuance of a building permit for additional square footage or other improvement which is twenty-five percent (25%) or more of the market value of the existing structure, except where twenty-five percent (25%) is less than Twenty-Five Thousand dollars ($25,000) in which case redevelopment shall mean a building permit for a structure whose value is greater than or equal to Twenty-Five Thousand dollars ($25,000). Successive building permits will be aggregated in determining whether redevelopment has occurred and will be cumulative over any three (3) year period.

Improvements to existing structures to the extent that the improvements are necessary to comply with City's rental housing requirements will not be counted against the twenty-five percent (25%) or Twenty-Five Thousand dollars ($25,000) thresholds which define redevelopment and will not trigger payment of outstanding fees.

"Basement" shall be defined as habitable or non-habitable areas below grade enclosed by a foundation wall where no part of the foundation wall exceeds two (2) feet in height above grade, as said grade existed at the time of this agreement. If any portion of the foundation wall projects more than two (2) feet above the grade, the basement area enclosed by the foundation shall count against the total Floor Area Ratio (FAR) permitted on the site and said basement shall be considered a story for purposes of determining the number of permitted stories in a structure.

2. Water

A. Domestic water service will be constructed and paid for by the City pursuant to that agreement between the City of Boulder, the EPA and the other Potentially Responsible Parties (PRPs). Domestic water service to existing residences shall include application fees, main front footage charges, tap fees for a 3/4" tap, Plant Investment Fees (PIFs) for residential use, meter fees and any other fees for water connection to existing residences and will include the filing fee(s) for inclusion into the Northern Colorado Water Conservation District (NCWCD), if necessary, and the Municipal Subdistrict. The City will not pay the annual mill levy of NCWCD.

New units will be required to pay all normal fees and charges for water service at time of construction, except that no front foot assessment for the newly installed water mains will be collected.

B. Applicant shall connect to the City's water system immediately upon annexation.

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C. Applicant may use existing wells for irrigation purposes. Under no circumstances may existing wells be used for domestic water purposes. No person shall make any cross connections between a well and the City's municipal water supply system.

3. Sewer

A. If the Subject Property is currently served by an adequate septic system, Applicant will not be required to connect to the City's sanitary sewer system. In order to demonstrate that the septic system is adequate, the Applicant must provide to the City of Boulder confirmation of (1) a valid Boulder County ISDS Permit and (2) an inspection of the septic system confirming there is a four foot (4') separation between the absorption field and the seasonal high groundwater level. If the property does not meet these requirements, Applicant shall connect to the sanitary sewer system within 365 days of the effective date of the annexation ordinance.

B. Assessments for the costs of construction of the sanitary sewer mains shall be paid by Applicant, as a lump sum, at time of connection or redevelopment, unless a property owner applies for connection to the City's sanitary sewer system within sixty (60) days of the effective date of the annexation ordinance. If the application is made within sixty (60) days and the connection made within 365 days after application, the property owner may elect to pay the outstanding assessment in a lump sum payment or pay the prorated amount in ten (10) equal, annual installments amortized at a rate of six and a half percent (6.5%) simple interest per annum beginning on the effective date of the annexation ordinance.

If the property owner does not apply for connection within sixty (60) days of the effective date of the annexation ordinance or fails to connect within three hundred sixty-five (365) days after application, the outstanding balance will accrue interest at a rate of six and a half percent (6.5%) simple interest per annum and must be paid in full at time of connection.

C. Plant Investment Fees (PIFs) and other connection fees will be determined at time of connection based on the then applicable fee schedule.

D. Where the City is not required by an existing agreement to collect outstanding assessments for the construction of a sanitary sewer main, such prorated fees will not be collected by City.

E. Sanitary sewer main assessments and PIFs for the Subject Property must be paid for the entire property at time of redevelopment or connection to the City sanitary sewer

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system. Sanitary sewer main assessments and PIFs for individual buildable lots, will be due at the time of redevelopment of each lot.

F. Low-Income Deferral - Applicant shall be eligible for a low income deferral or payment schedule when a property is required to connect to the sanitary sewer system prior to redevelopment and the property owner meets the criteria set by the City of Boulder Housing Authority and applies in writing to the City Manager for a deferral prior to connection to the sanitary sewer system.

4. Transportation

A. At or prior to the time of subdivision or redevelopment of the Subject Property, whichever first occurs, Applicant shall sign an agreement to participate in and not to remonstrate against the establishment of a Local Improvement District (LID). Applicant acknowledges that no subdivision will be approved and no redevelopment will be permitted until said agreement to participate is signed.

In the formation of such LID, the City shall pay fifty percent (50%) of the costs to improve the existing pavement sections of the following streets to City of Boulder standards:

- Upland from Broadway to 19th Street;
- Portions of Tamarack from Broadway to Crestview School;
- 13th Street from Upland to Violet; and
- Sumac from Broadway to 19th Street.

The costs of all new improvements, including but not limited to road base, pavement, curb, gutter, sidewalks, and drainage facilities, shall be paid for one hundred percent (100%) by the properties located in the LID for the following improvements:

- 13th Street, between Upland and Violet, as a standard rural residential street with sidewalks on one side;
- 15th Street, between Upland and Tamarack Avenue, as standard rural residential street with sidewalks on one side;

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- Upland Avenue as a standard rural residential street with drainage improvements and a sidewalk on one side;

- Tamarack Avenue as a standard rural residential street with drainage improvements;

- Sumac Avenue as a standard rural residential street with drainage improvements and a sidewalk on one side; and

- 17th Street between Upland and Violet as a multi-use path for pedestrians, bicycles, and emergency access for police and fire.

Prior to the formation of any assessment district which includes the construction of 15th or 17th Street, the City will provide the opportunity for the Applicant to have input into the final designs for the street improvements to be built.

B. At the time of development or redevelopment of the Subject Property, Applicant shall be required to construct the following improvements in the location depicted on the attached Exhibit A:

- 12 ½ Street between Upland Avenue and Tamarack Avenue as a standard thirty foot (30') right-of-way access lane with the required turnaround and with an eight foot wide pedestrian/bicycle path extending west to Broadway

C. Prior to second reading of the annexation ordinance, the Applicant shall:

- Dedicate to the City of Boulder, in fee and at no cost, right-of-way for Broadway such that there is a total of forty and a half feet (40.5') from the centerline which the City agrees is the Section line.

D. The Applicant acknowledges that access to existing and proposed streets shall be limited as follows:

- No new curb cuts or direct access to Broadway will be permitted;

- Existing curb cuts on Broadway shall be closed at time of redevelopment; and

- Shared driveways and curb cuts may be permitted and may be encouraged during subdivision or redevelopment of the Subject Property where such

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combined access is consistent with the adopted zoning and infrastructure plan.

5. Flood Control and Stormwater - At time of redevelopment or sale of the Subject Property, the Applicant shall pay the Stormwater and Flood Control Plant Investment Fee (SFCPIF). If the fee is paid within two (2) years of the effective date of the Annexation Ordinance, the fee will be the amount due on the effective date of the Annexation Ordinance. If the fee is paid later than two (2) years from the effective date of the Annexation Ordinance, the fee will be the amount due at time of payment. The Applicant acknowledges the use of a modified equation for the calculation of SFCPIF that charges each property based on the developed (impervious area) of the site, as follows:

[X/7000 x (C5-0.2)/0.7 x $1094.78]
where X=Total Site Area in square feet;
C5=[0.9Y+0.2(X-Y)]/X; and
Y=Total Impervious Area in square feet

To accurately determine the SFCPIF due for the Subject Property, the Applicant shall submit an Improvement Location Certificate completed by a licensed surveyor to the Utilities Division of the Public Works Department, prior to sale or redevelopment.

6. Floodplain and Drainage

A. The City has implemented a restudy of the Fourmile Canyon Creek Floodplain and if appropriate, will amend the location of the High Hazard and Conveyance Zones and the boundaries of the Floodplain when the study is complete.

B. The City of Boulder floodplain regulations, Chapter 9-9, B.R.C., 1981, as amended, shall apply to all properties located within the regulatory One Hundred (100) Year Floodplain. Existing structures located in the floodplain of Fourmile Canyon Creek may remain, consistent with the aforementioned Section. All new structures, additions, or substantial improvements or modifications will be subject to the City's floodplain regulations.

C. Properties shall convey drainage from the site in a manner which does not negatively impact abutting properties.

D. At the time of redevelopment, Applicant acknowledges that the Subject Property shall provide drainage improvements needed to serve their property (including detention facilities and an adequate outfall to a major drainage system) in accordance

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with the City's design standards. Such detention or other drainage facilities shall be designed and constructed by property owners at time of redevelopment, if the improvements are needed in order to comply with "C" above.

E. Applicant acknowledges that existing irrigation ditches and/or laterals shall not be used as an outfall point for developed storm water runoff if the storm water discharge is of increased quantity or frequency. The City agrees that there may be certain situations where such releases to ditches or ditch laterals may be appropriate if an adequate hydraulic engineering analysis acceptable to the City Manager is provided to show that the ditch/lateral has sufficient capacity and a positive outfall at a major drainage way. In those cases, it will be necessary to obtain the consent of the ditch company to accept the storm water discharge, in a form which is acceptable to the City Attorney.

7. Silver Lake Ditch Water Release and Existing Well

A. At time of redevelopment or connection to the City's water system, the Applicant shall either offer a "First Right of Refusal", consistent with Section 11-1-19, B.R.C., 1987, for any water rights appurtenant to the Subject Property. Said right of refusal shall provide that the Applicant shall give the manager sixty (60) days' advance written notice of Applicant's desire to sell the ditch rights to the City. It is the City's desire to keep for use on the land any water or ditch rights appurtenant to property zoned ER-E and RR-E and for residential lots over 15,000 sq. ft. in size regardless of zoning.

B. Properties abutting an existing irrigation ditch or lateral shall not relocate, modify, or alter the ditch or lateral until and unless written approval is received from the appropriate ditch company.

8. Miscellaneous Fees / Taxes

A. Park Fees - For residential dwelling units existing on July 1, 1997, the Applicant may defer the payment of park fees until redevelopment or sale of the Subject Property. The Applicant agrees to pay the then current park fees at the time redevelopment or sale occurs.

B. Development Excise Tax - For buildings in existence on July 1, 1997, the Development Excise Tax (DET) that would normally be due upon annexation will be deferred until redevelopment or sale occurs. Applicant acknowledges that at the time of redevelopment or sale of the Subject Property, Applicant shall pay the DET

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for any existing building or buildings and the new building or addition at the time that a permit is requested for the new building or addition. The rates imposed for this tax will be the rates applicable at that time.

9. Northern Colorado Water Conservancy District

A. Applicants shall execute the Petition for Inclusion of Lands in the NCWCD municipal subdistrict prior to first reading of the annexation ordinance.

10. City Codes and Policies:

A. Zoning and Allowed Uses: The Applicant agrees that the following design guidelines and criteria will apply to the Subject Property after annexation:

General

- Non-residential uses such as personal services, offices, medical and dental offices or clinics, automobile parking lots as a principal use, mobile home parks, convenience stores and outlets, antique stores, and village centers shall not be permitted;

- Site Review or Subdivision (platting, lot layout, housing types) shall not be used to reduce the density below two (2) platted lots;

- All lots much have frontage on a public street; and

- Flaglots shall not be permitted.

Landscaping

- Street trees shall be selected from among the "large maturing" varieties and planted as required by the City Forester at time of redevelopment; and

- Properties shall receive credit, if approved by the City Forester, for existing "large maturing" varieties of street trees.

Fences

- Fences and landscaping berms are permitted in required front yards and side yard abutting a public street (up to the front facade of the principal building

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and the side yard building envelope) so long as either or the combination of both does not exceed forty-eight inches (48") in height. However, in no event may a berm exceed thirty-six inches (36") in height;

- For properties abutting Broadway or Violet Avenue, a fence which shall not exceed thirty-six inches (36") in height may be located on the top of the thirty-six inches (36") berm; and

- Up to 7 foot fences permitted on interior sideyard or rearyard lot lines equal to or behind the front facade of the principal building.

Buildings

- Two-story maximum above basement;

- At least one "Entry" element including but not limited to, covered and uncovered porches and front doors shall be provided on facades abutting a public street;

- Porches may encroach within a required yard abutting a street consistent with §9-3.2-15(c) and (d), B.R.C., 1981; and

- Attached and detached garages shall be setback at least 10' from the front facade of the principal building; or if side-loaded, may not project beyond the front facade of the building.

B. Floor Area Ratios (FARs)

Redevelopment shall be consistent with the following FARs which shall be defined as the total square footage of all levels within the outside walls of a building or portion thereof including attached and detached garages and detached accessory buildings, but which shall not include basements, unenclosed carports, and unenclosed porches and decks:

Lots 6500 - 15000 sq.ft.	0.30:1 FAR
Lots 15001 - 29999 sq.ft.	0.25:1 FAR
Lots >or = 30000 sq.ft.	0.20:1 FAR

Additionally, a 500 square foot increase to the total FAR is available for a detached or attached garage or a detached accessory building.

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Properties, upon redevelopment, may transfer up to forty percent (40%) of the total permitted floor area of one lot to another lot within a development in order to create greater diversity of housing types within the development.

C. Non-conforming Buildings, Uses, Animal Rights

- The City agrees that its ordinances generally are not applicable to pre-existing non-conforming structures and uses, with the exception of ordinances regarding fire and life safety hazards. This means that existing legal non-conforming uses will be allowed to continue and be modified or expanded in accordance with the City's non-conforming review provisions of the Code.

- The City acknowledges that non-standard buildings, established while under County jurisdiction, may be retained and may be modified consistent with the City's land use and other regulations.

- The City acknowledges that the application of the Uniform Building Code to Applicant's property will be the same as, and no greater than, its application to any other property in the City limits as of July 1, 1997.

- Signs which are legal under the existing County regulations as of the date of annexation may remain in place without meeting the City's amortization schedule for the removal of non-conforming signs. At the time of redevelopment of the Subject Property, signs shall meet the City Sign Code.

D. Rental Properties

Rental properties shall submit an application to the City for a rental housing license within ninety (90) days of the effective date of annexation; property owners shall comply with the immediate life safety requirements of the rental housing code within 180 days of the inspection report.

E. Design Standards

- The City shall work with utility providers such as Pubic Service Company and US West to review the design of the provision of services to the Crestview West Annexation Area. Property owners shall relocate or construct any overhead service lines consistent with a redesigned system

Unofficial Copy

upon redevelopment. The City and the respective utility companies may participate in the costs to construct the new distribution system.

- Existing fences not conforming with these guidelines may be retained until redevelopment of the Subject Property. However, new or replacement fences must conform to the standards for fences listed in this agreement.

- Non-residential uses shall be eligible for Site Review whether or not they meet the lot size or dwelling unit thresholds of the City's code.

- The City Manager may approve variances to the berm height, FARs, garage setbacks, fence standards, and the two (2) story limit upon a finding that a physical hardship or limitation exists, that the hardship or limitation was not of the Applicant's own making, that the proposed variance is the minimum necessary to reasonably utilize the property.

11. Fire and Life Safety Codes

The City's Fire and Life Safety Code is intended to be retroactive so that buildings and building occupancies or uses should meet the Code shortly after annexation. However, existing buildings and their occupancies or uses will not be required to meet the Fire and Life Safety Code until redevelopment occurs or unless the use of the building is a hazardous use. At the time of redevelopment or change of occupancy to a hazardous use, the building or portion of the building being redeveloped or changed will be required to meet the Fire and Life Safety Code. Building uses that are classified as hazardous uses include those using flammable or combustible liquids, spray paint operations, woodworking shops and similar places generating combustible dusts, and restaurants.

12. Breach of Covenants

In the event the Applicant breaches or fails to perform any required action under or fails to pay any fee specified under Covenants 1, 2, 4, or 7 of this Agreement, the Applicant acknowledges that the City may take all reasonable actions to cure the breach, including but not limited to the filing of an action for specific performance of the obligation to connect to the water and/or sewer system of the City. In the event the Applicant fails to pay any monies due under this agreement or fails to perform any affirmative obligation hereunder, the Applicant agrees that the City may collect the monies due in the manner provided for in Section 2-2-12, B.R.C. 1981, as amended, as if the said monies were due and owing pursuant to a duly adopted ordinance of the City or the City may perform the obligation on behalf of the Applicant, and collect its costs in the manner herein provided. The Applicant agrees to

Unofficial Copy

waive any rights he or she may have under Section 31-20-105, C.R.S., based on the City's lack of an enabling ordinance authorizing collection of this specific debt, or acknowledges that the adoption of the annexation ordinance is such enabling ordinance.

13. Vested Rights

The Applicant hereby waives any statutory vested rights that may have accrued under County jurisdiction, that have not been perfected as common law vested rights. The Applicant acknowledges that nothing herein may be construed as a waiver of the City's powers to zone and regulate land uses for the benefit of the citizens and residents of Boulder.

This Agreement and any documents executed pursuant hereto shall be null and void and of no consequence in the event the Subject Property is not annexed to the City of Boulder.

This Agreement and the covenant set forth herein shall run with the land and be binding upon the Applicant, her heirs, successors, and assigns and all persons who may hereafter acquire an interest in the Subject Property, or any part thereof. If it shall be determined that this Agreement contains an interest in land, that interest shall vest, if at all, within the lives of the undersigned plus twenty (20) years and 364 days.

APPLICANT:

By: Dolores M. Benson
Dolores M. Benson

Unofficial Copy

Unofficial Copy

STATE OF COLORADO)
) ss.
COUNTY OF BOULDER)

The foregoing instrument was acknowledged before me, a Notary Public, this 19th day of September, 1997, by Dolores M. Benson.

Witness my hand and official seal.

Terri L. Toll
Notary Public

My commission expires: 12/6/2000

(seal)

TERRI L. TOLL
NOTARY PUBLIC
STATE OF COLORADO
MY COMMISSION EXPIRES
DECEMBER 6, 2000

CITY OF BOULDER

By: [signature]
City Manager

Attest:

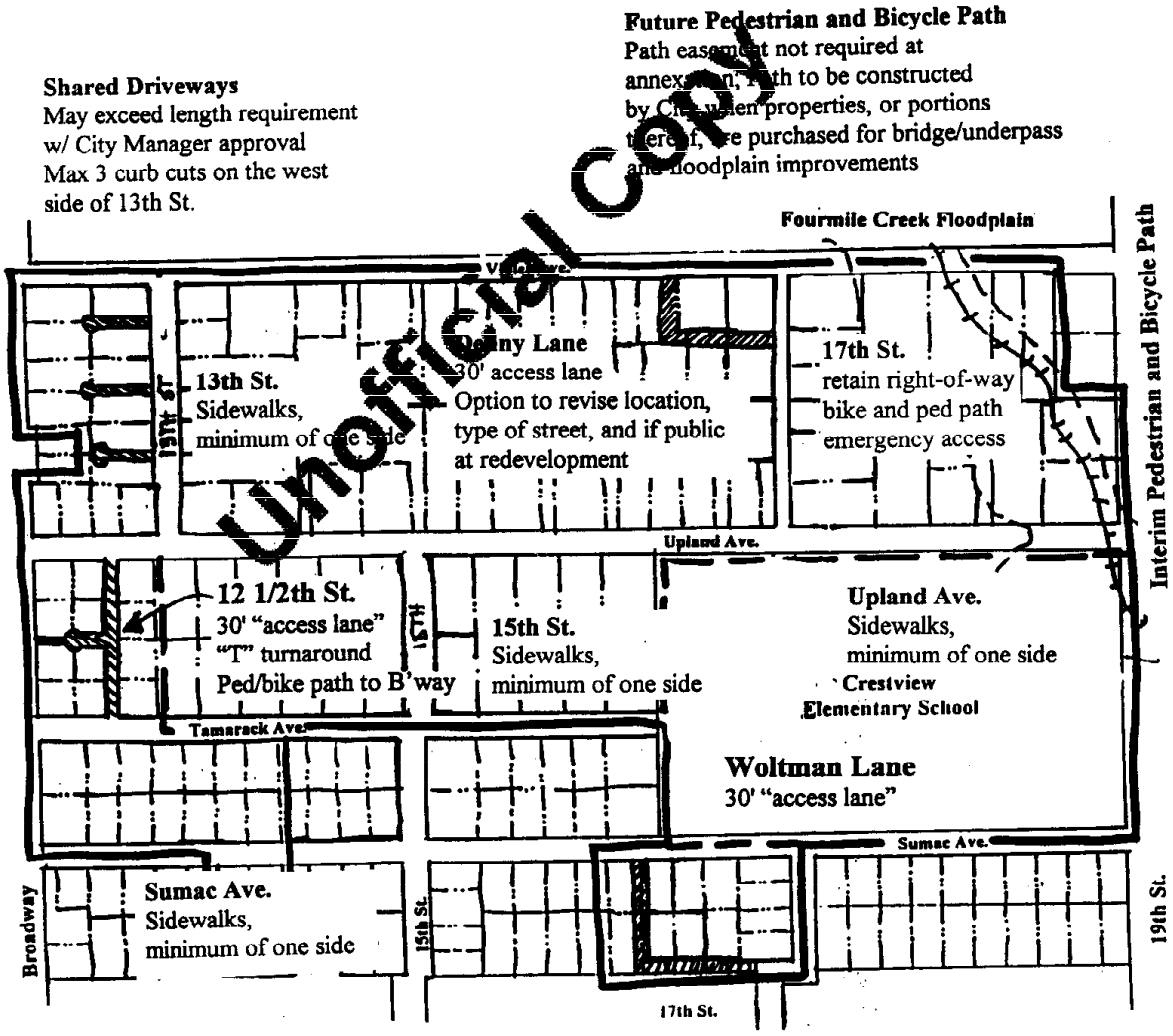
Alisa D. Lewis for
Director of Finance and Record
Ex-Officio City Clerk

Approved As To Form:

[signature]
City Attorney 11-6-97

K:\ALPHA\PL\CU\A-3.GYR

EXHIBIT A



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Boulder County Clerk, CO AMEND AGREE R 25.00 D 0.00
2001361
Page: 1 of 5
11/23/1999 10:05A

POST-ANNEXATION AGREEMENT AMENDMENT

This Agreement, made this 22nd day of ~~October~~ November, 1999, by and between the City of Boulder, a Colorado home rule city, (the "City") and Sierra Development, L.L.C., a Colorado limited liability company, (the "Owner") the owner of Property that is generally located at 1276 Upland Avenue and more fully described in Exhibit "A" attached hereto and incorporated herein by reference (the "Subject Property").

Unofficial Copy

RECITALS

WHEREAS, this Post-Annexation Agreement Amendment is intended to amend Post-Annexation Agreement between the City and Aca A. Nasalroad, dated September 9, 1999, and recorded on September 27, 1999 at Reception No. 1985022 with the Boulder County Clerk and Recorder (the "Post-Annexation Agreement"); and

WHEREAS, the Owner of the Subject Property has proposed an alternative method for constructing 12 ½ Street than was originally contemplated in the Post-Annexation Agreement; and

WHEREAS, said method proposed for the construction of 12 ½ Street meets the City standards; and

WHEREAS, the Planning Board recommended that the City Council authorize the City Manager to execute this Agreement on October 21, 1999; and

WHEREAS, the City Council authorized the City Manager to execute this agreement on November 9th, 1999.

COVENANTS

NOW, THEREFORE, in consideration of the recitals, promises and covenants herein set forth, and other good and valuable consideration herein receipted for, the parties agree as follows:

A. The Parties agree to amend the Post-Annexation Agreement by repealing and replacing Paragraphs "B" and "C" of Section 5, "Transportation," with the following:

5. Transportation

. . .

K:\PLCU\A-NASALROAD-AMDNT.GYR

10B

B. No additional dwelling units may be constructed until the Owner of the Property dedicates three feet (3') of additional right-of-way, for a total of eighteen feet (18') of right-of-way, along the west property line, to the City.

C (1). At time of application for any building permit for an additional dwelling unit on the Subject Property, Owner shall be required to construct the following improvements in the location depicted on Exhibit "B" attached to this agreement:

- 12 ½ Street between Upland Avenue and Tamarack Avenue as a standard twelve foot (12') wide residential alley placed one foot (1') from the west property line and meeting the City of Boulder's Design and Construction Standards."

C(2) Prior to, or concurrent with, subdivision of the subject Property, the Owner shall dedicate or secure the dedication of, the entire width of 12 ½ Street up to the City thirty foot (30') wide right-of-way access lane standard. The Owner shall be required to construct 12 ½ Street between Upland Avenue and Tamarack Avenue as a standard thirty (30') foot wide right-of-way with an access lane meeting the City of Boulder's "Design and Construction Standards."

C(3) The City and the Owner Agree that no further Subdivision of the Property will be permitted until 12 ½ Street has been constructed in accordance with Paragraph C(2) above.

C(4) Owner may receive reimbursement for part or all of the costs of such improvements constructed pursuant to Paragraph C(2) above, in accordance with the terms and conditions of a Public Improvement Extension Agreement that is consistent with Paragraph 9-5-9(e)(1), B.R.C. 1981.

B. The Owner agrees to pay all costs associated with the recording of this Post-Annexation Agreement Amendment.

C. The City and Owner agree that all covenants, conditions and requirements set forth in the Post-Annexation Agreement, more fully described above, except as modified herein, shall remain in full force and effect as written.

Unofficial Copy

SIGNED:

SIERRA DEVELOPMENT, L.L.C.,
a Colorado limited liability company

By: _____
Mark Young, Manager

STATE OF COLORADO)
) ss.
COUNTY OF BOULDER)

The foregoing instrument was acknowledged before me this 14 day of October, 1999, by Mark Young, Manager of Sierra Development, L.L.C., a Colorado limited liability company.

Witness my hand and official seal.
My commission expires: 04/21/02

Michelle R. Guillen
Notary Public

(SEAL)

MICHELLE R. GUILLEN
NOTARY PUBLIC
STATE OF COLORADO
My Commission Expires Apr. 21, 2002

CITY OF BOULDER, a Colorado home rule city

By: _____
Ronald A. Secrist, City Manager

Attest:

Sonya Oster for
City Clerk on behalf of the
Director of Finance and Record

Approved as to form:

_____
City Attorney

11-12-99
Date

EXHIBITS

Exhibit A - Legal description
Exhibit B - Location drawing

Unofficial Copy

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Exhibit A

Legal Description

Lots 3 and 12, Block 5, Moore's Subdivision, County of Boulder, State of Colorado, excepting therefrom the westerly 15 feet of said Lots 3 and 12, as conveyed by Aca A. Nasalroad to the City of Boulder, a Colorado home rule city, in the warranty deed recorded July 26, 1999 as reception no. 1964274. Also known by street and number as 1276 Upland Avenue, Boulder, Colorado 80304

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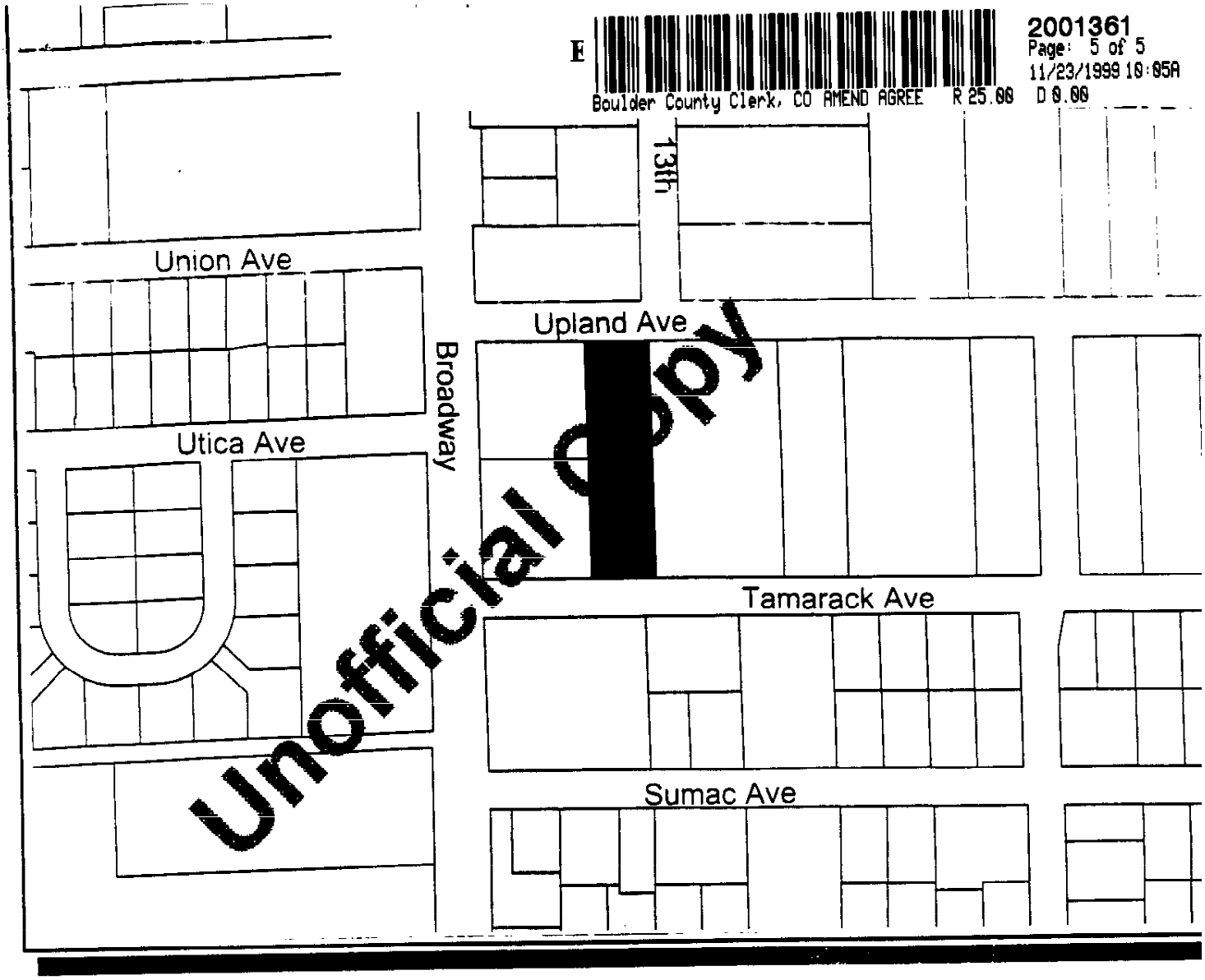

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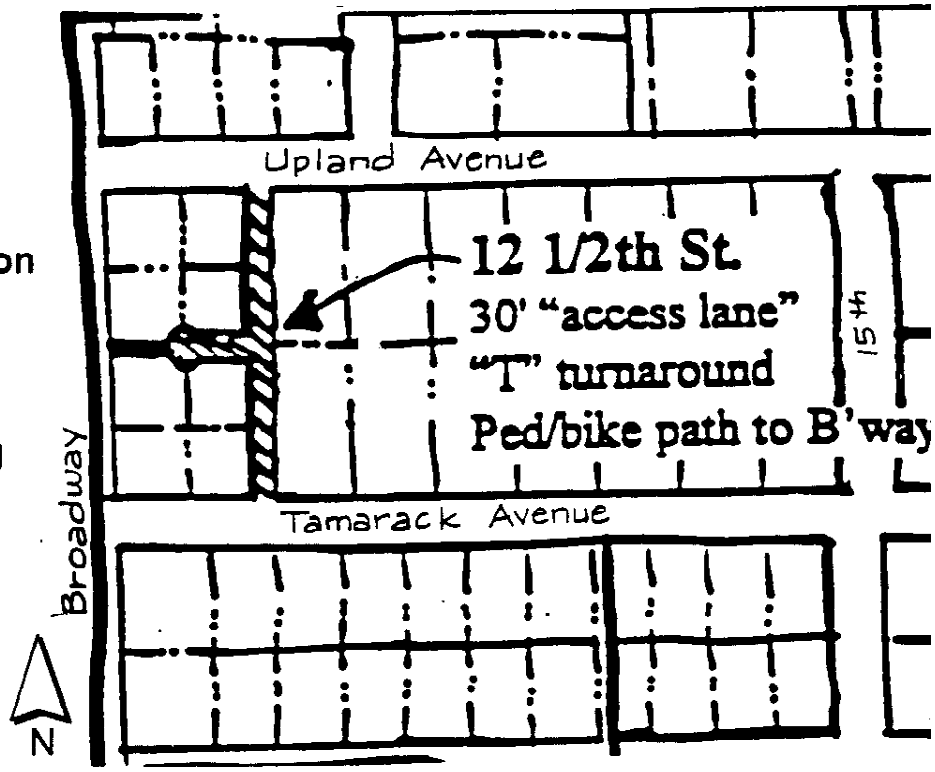
- **LOCATION:**
  1276 Upland Avenue

- **APPLICATION TYPE:**
  Amendment to Post Annexation Agreement

- **ZONING:**
  LR-D Low Density Residential Developing

- **APPLICANT:**
  Sierra Development LLC, Mark Young, manager



For Administrative Purposes Only
Address: 1215 and 1235 Tamarack
Case No. LUR2013-00036

ANNEXATION AGREEMENT AMENDMENT

This annexation agreement amendment ("Amendment") made this _____ day of _____, 2013, by and between the City of Boulder, a Colorado home rule city ("City"); TJM Investment, LLC, a Colorado limited liability company, f/k/a TJM Properties, LLC, a Colorado limited liability company ("TJM Investment"), the owner of the property generally known as 1215 Tamarack and more particularly described on Exhibit A ("1215 Tamarack Property"); and James C. Hohmann and Deborah Stabler, the owners of the property generally known as 1235 Tamarack and more particularly described on Exhibit B ("1235 Tamarack Property"). TJM Investment and James C. Hohmann and Deborah Stabler are hereafter collectively referred to as the "Applicant." The 1215 Tamarack Property and 1235 Tamarack Property and hereafter collectively referred to as "Subject Property."

RECITALS

A. The Annexation Agreement for the Subject Property was between Dolores M. Benson and the City and recorded in the records of the Boulder County Clerk and Recorder on November 18, 1997 at Reception #1748523 ("Annexation Agreement").

B. The Applicant is interested in obtaining approval from the City for this Amendment to modify the requirement set forth in Paragraph 4.B of the Annexation Agreement to construct 12 ½ Street between Upland Avenue and Tamarack Avenue as a standard thirty foot (30') right-of-way access lane with the required turnaround from the time of development or redevelopment to the time of subdivision of the Subject Property.

COVENANTS

NOW, THEREFORE, in consideration of the recitals, promises and covenants herein set forth, and other good and valuable consideration herein receipted for, the parties agree as follows:

1. The City and the Applicant agree to amend the Annexation Agreement by repealing and replacing the existing Section 4.B with the following:

    B.i. At time of application for any building permit for an additional dwelling unit on the Subject Property, the Applicant shall be required to construct the

following improvements in the location depicted on Exhibit C attached to this Amendment:

- 12½ Street between Upland Avenue and Tamarack Avenue as a standard twelve foot (12') wide residential alley placed one foot (1') from the eastern property line and meeting the City of Boulder Design and Construction Standards.

B.ii. Prior to, or concurrent with, subdivision of the Subject Property, the Applicant shall dedicate or secure the dedication of, the entire width of 12½ Street up to the City thirty foot (30') wide right-of-way access lane standard with the required turnaround and with an eight foot wide pedestrian/bicycle path extending west to Broadway. The Applicant shall be required to construct 12½ Street between Upland Avenue and Tamarack Avenue as a standard thirty foot (30') right-of-way with the required turnaround and with an eight foot wide pedestrian/bicycle path extending west to Broadway meeting the City of Boulder Design and Construction Standards.

B.iii. The City and the Applicant agree that no further Subdivision of the Property will be permitted until 12½ Street has been constructed in accordance with paragraph B.ii above.

B.iv. The Applicant may receive reimbursement for part or all of the costs of such improvements constructed pursuant to Paragraph B.ii above, in accordance with the terms and conditions of a Public Improvement Extension Agreement that is consistent with Paragraph 9-12-12(f)(1), "Public Improvement Extension Agreement," B.R.C. 1981.

2. The City and the Applicant also agree that the remaining portions of Section 4 of the Annexation Agreement not affected by this Amendment shall remain in full force and effect.

3. Prior to an application for a building permit for redevelopment of either the 1215 Tamarack Property or 1235 Tamarack Property, the Applicant shall ensure that the accessory building located on the lot line between these properties is removed.

4. This Amendment is contingent upon the approval of the Boulder City Council. If the Boulder City Council does not approve this Amendment, the parties agree that it will have no force or effect.

5. This Amendment shall be recorded in the records of the Boulder County Clerk and Recorder at the expense of the City.

CITY OF BOULDER , COLORADO

By: _____
Jane S. Brautigam, City Manager

Attest:

_____
City Clerk

Approved as to form:

_____
City Attorney's Office

_____
Date

APPLICANT

OWNER OF 1215 TAMARACK PROPERTY

TJM INVESTMENT, LLC,
a Colorado limited liability company,
f/k/a TJM PROPERTIES, LLC,
a Colorado limited liability company

By:_____
Michael Marez, Manager

STATE OF COLORADO)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this_____ day of _____, 2013, by Michael Marez as Manager of TJM Investment, LLC, a Colorado limited liability company, f/k/a TJM Properties, LLC, a Colorado limited liability company.

Witness my hand and official seal.

My commission expires:_____

[SEAL] _____
Notary Public

APPLICANT
OWNERS OF 1235 TAMARACK PROPERTY

By:_____
James C. Hohmann

STATE OF COLORADO)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this_____ day of
_____, 2013 by James C. Hohmann.

Witness my hand and official seal.
My commission expires:_____

[SEAL] _____
Notary Public

By:_____
Deborah Stabler

STATE OF COLORADO)
) ss.
COUNTY OF _____)

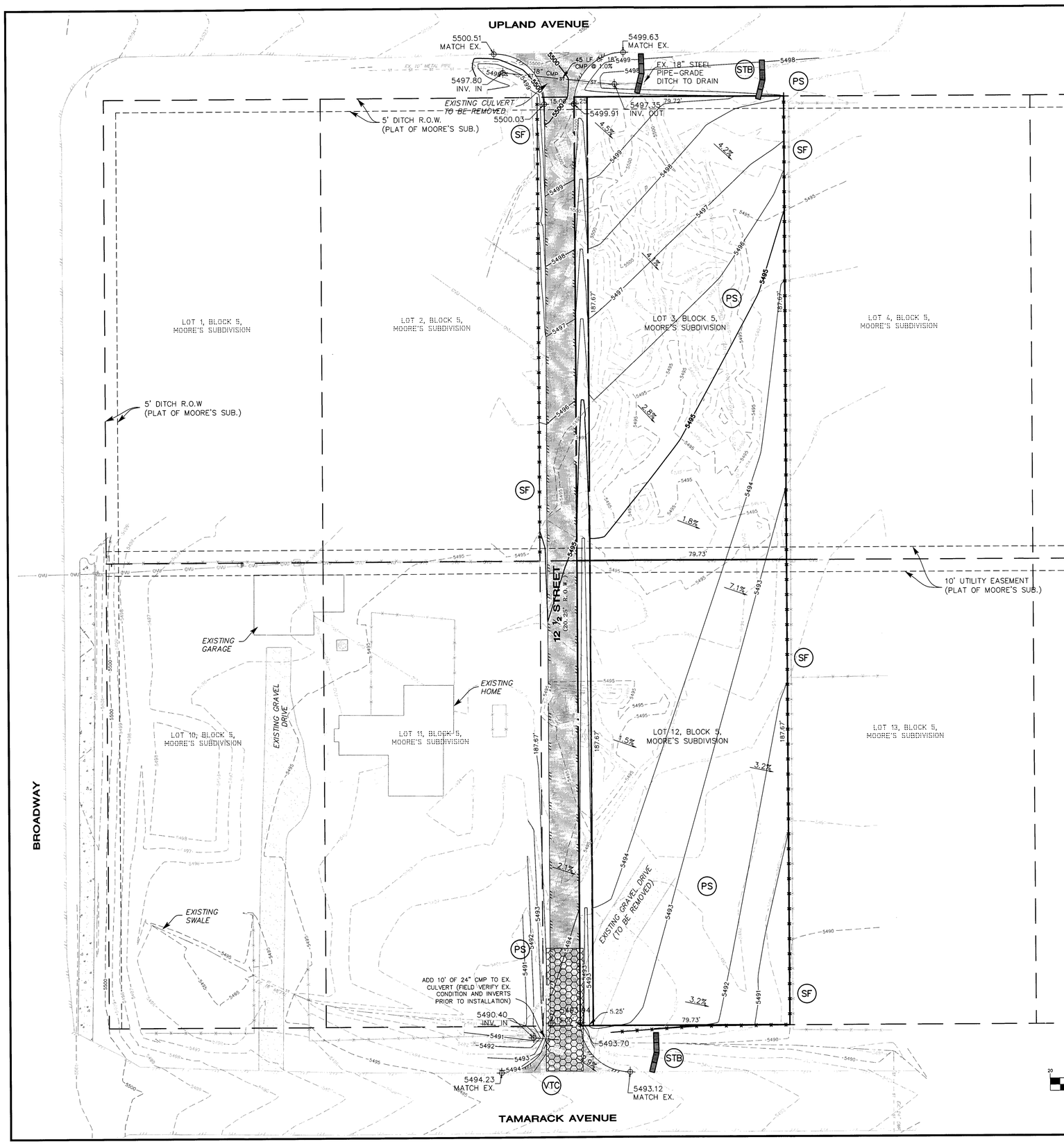
The foregoing instrument was acknowledged before me this_____ day of
_____, 2013 by Deborah Stabler.

Witness my hand and official seal.
My commission expires:_____

[SEAL] _____
Notary Public

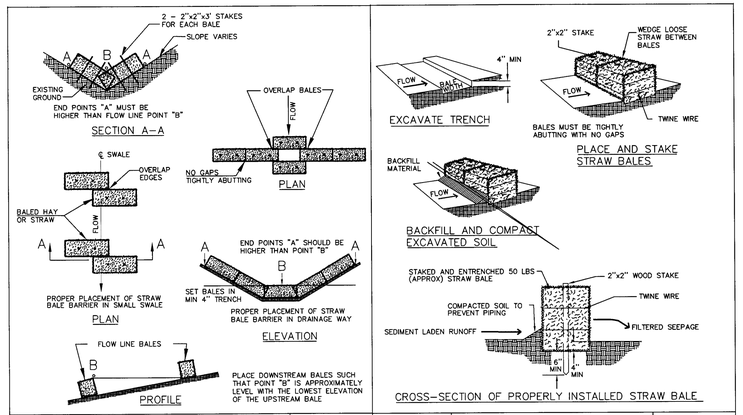
EXHIBITS

Exhibit A	Legal Description for 1215 Tamarack
Exhibit B	Legal Description for 1235 Tamarack
Exhibit C	Map of the location of the 12½ Street Improvement

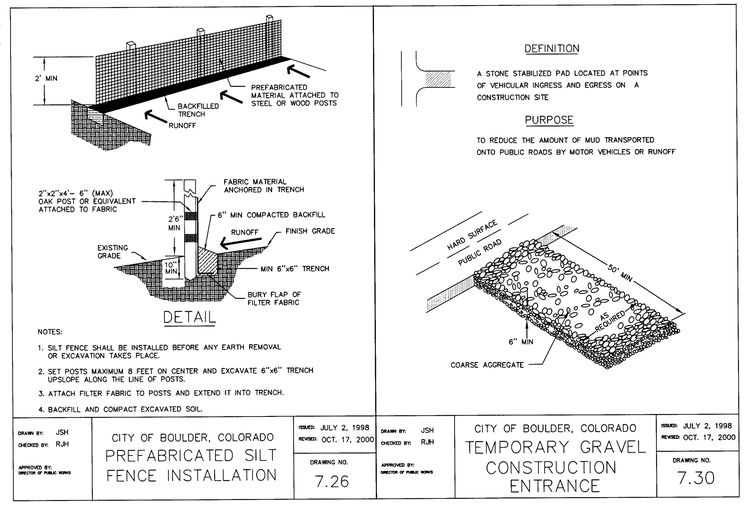


NOTES

1. SEE DRAWINGS C-1 AND N-1 FOR ADDITIONAL NOTES.



DRAWN BY: JSH CHECKED BY: RJH APPROVED BY: DIRECTOR OF PUBLIC WORKS	CITY OF BOULDER, COLORADO STRAW BALE CHECK DAMS	ISSUED: JULY 2, 1998 REVISED: OCT. 17, 2000 DRAWING NO. 7.24	DRAWN BY: JSH CHECKED BY: RJH APPROVED BY: DIRECTOR OF PUBLIC WORKS	CITY OF BOULDER, COLORADO STRAW BALE INSTALLATION	ISSUED: JULY 2, 1998 REVISED: OCT. 17, 2000 DRAWING NO. 7.25



DRAWN BY: JSH CHECKED BY: RJH APPROVED BY: DIRECTOR OF PUBLIC WORKS	CITY OF BOULDER, COLORADO PREFABRICATED SILT FENCE INSTALLATION	ISSUED: JULY 2, 1998 REVISED: OCT. 17, 2000 DRAWING NO. 7.26	DRAWN BY: JSH CHECKED BY: RJH APPROVED BY: DIRECTOR OF PUBLIC WORKS	CITY OF BOULDER, COLORADO TEMPORARY GRAVEL CONSTRUCTION ENTRANCE	ISSUED: JULY 2, 1998 REVISED: OCT. 17, 2000 DRAWING NO. 7.30

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

CITY OF BOULDER
DEPARTMENT OF PUBLIC WORKS
APPROVED
ENGINEERING CONSTRUCTION DRAWING
ENGINEERING REVIEW MANAGER — DATE 10/9/08
APPROVAL EXPIRES ONE YEAR AFTER DATE ABOVE

CITY OF BOULDER
PUBLIC WORKS DEPARTMENT
RECOMMENDATION FOR APPROVAL
WATER/SEWER 8/18
TRANSPORTATION 8/18
DRAINAGE 8/18

City of Boulder - Department of Public Works
ENGINEERING CONSTRUCTION DRAWING
"RECORD SET"

09.19.08

REVISION	DATE
1 CITY COMMENTS-ALLEYWAY DITCH	8/8/08
2 CITY COMMENTS-DRNG NOTE/PAV SEC.	9/11/08
3	
4	
5	
6	
7	

JOB NUMBER: 08-100.104
DATE: 07/21/08
DESIGNED BY: JHN
DRAWN BY: JHN
CHECKED BY: KC/DW
APPROVED BY: KC/DW

Flatirons, Inc.
Surveying, Engineering & Geomatics
3825 IRIS AVE, STE 100
BOULDER, CO 80301
PH: (303) 443-7001
FAX: (303) 443-9830
655 FOURTH AVENUE
LONGMONT, CO 80501
PH: (303) 776-1733
FAX: (303) 776-4355
www.Flatironsinc.com

12.5 STREET
CITY OF BOULDER
EROSION AND SEDIMENTATION PLAN

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

DRAWING
E-1
SHEET 3 OF 5

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C I T Y O F B O U L D E R
PLANNING BOARD AGENDA ITEM
MEETING DATE: September 12, 2013

AGENDA TITLE:
Public hearing and consideration of a recommendation to City Council for application no. LUR2012-00005 including the following requests within the approximately 32 acre site:

1. Annexation and Initial Zoning for approximately 18.2 acres located at 6234 Arapahoe Road and 1492 Cherryvale Road with portions to be zoned Residential Medium-1 (RM-1) and Rural Residential (RR-1);

2. Site Review to develop the property located at 5980, 6160, 6180 and 6234 Arapahoe, and 1492 Cherryvale as the Boulder Jewish Commons, for educational activities; and

3. Use Reviews for an adult education facility use, a daycare center use, and an indoor recreation or athletic facility use at the proposed building for the Boulder Jewish Community Center.

REQUESTING DEPARTMENT:
Community Planning & Sustainability
David Driskell, Executive Director
Susan Richstone, Deputy Director
Charles Ferro, Development Review Manager
Elaine McLaughlin, Senior Planner

OBJECTIVES:
1. Hear staff and applicant presentations
2. Hold public hearing
3. Planning Board discussion
4. Planning Board recommendations to City Council on the proposed Annexation, Initial Zoning Site Review and Use Reviews.

SUMMARY OF PROPOSED PROJECT:

Proposal: ANNEXATION, INITIAL ZONING, SITE REVIEW, USE REVIEWS: Request for related applications for an approximately 32.3 acre site that includes annexation of two properties and an area of right-of-way with initial zoning that includes Rural Residential-1 (RR-1), Residential Medium-1 (RM-1) and Public (P); Site and Use Review to permit the development of the Boulder Jewish Community Center building to house an adult education facility, a day care center and an indoor recreational or athletic facility. The approximately 63,748 square foot building proposed at 39.5 feet in height requires a request for a 4.5 foot height modification from the 35 foot by-right standard as well as a parking deferral of 10 percent. As a community benefit to annexation, the applicant has proposed to

dedicate a 4.33 acre area encompassing the Sombrero Marsh to the City of Boulder Open Space and Mountain Parks (OSMP) and an area of 4.62 acres is planned as a Conservation Easement adjacent to the open space land. Also as a community benefit for annexation, any future residential built on the property will be required to provide 40 percent as permanently affordable residential

Project Name:	Boulder Jewish Commons
Location:	5980, 6160, 6180 and 6234 Arapahoe Road; and 1492 Cherryvale Road
Size of Project Site:	Approximately 32.3 acres
City Zoning:	Requested Initial Zoning: Rural Residential Low – 1 (RR-1); Residential Medium – 1 (RM-1); and Public (P)
Comprehensive Plan:	Low Density Residential; Medium Density Residential; and Open Space - Other

KEY ISSUES

1. Are the proposed annexations consistent with State statutes and BVCP growth and annexation policies?

2. Is the proposed project consistent with the BVCP Land Use Designations and the initial zoning of Public, Residential Medium – 1, and Rural Residential–1?

3. Is the Site Review application for the Jewish Community Center consistent with BVCP policies?

4. Is the proposed project consistent with the Site Review Criteria per land use code sub-section 9-2-14(h), B.R.C. 1981 particularly related to circulation?

5. Are the proposed site design and architecture consistent with the Site Review criteria for quality and compatibility with the surrounding context?

6. Is the proposed project consistent with the Use Review Criteria per land use code sub-section 9-2-15, B.R.C. 1981?

INTRODUCTION:

The project includes the combined requests of annexation, initial zoning, site review, and use reviews. As shown in Figure 1, the project site includes an approximately 14-acre area annexed into the city as a larger 52-acre annexation of multiple properties in the 1980s. Two surrounding parcels and an area of Arapahoe Avenue right of way are currently proposed for annexation with initial zoning of Rural Residential, Medium Density Residential and Public designations respectively.

The proposed Jewish Community Center, as a part of the Boulder Jewish Commons or BJC, along with two roadways are planned within the site, and an area that encompasses a portion of the Sombrero Marsh is proposed to be dedicated to the City of Boulder as open space through the annexation process. The

Planning Board is tasked with making a recommendation to City Council on the proposed Annexation, Initial Zoning, Site Review, and Use Reviews.

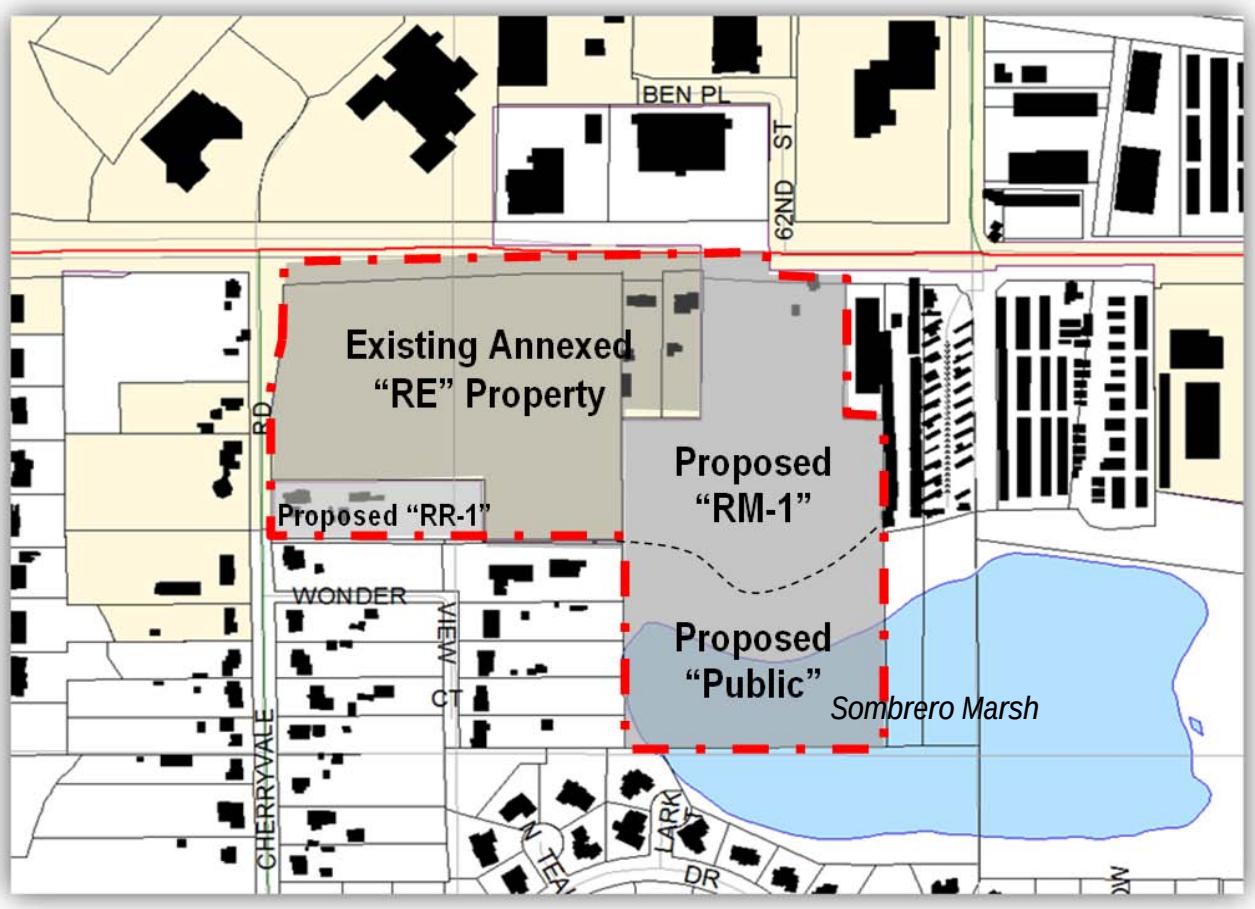


Figure 1: Existing Annexed Property and Proposed Annexation and Initial Zoning

In 2000, a Master Plan for the Boulder Jewish Commons was reviewed by the Planning Board as a Concept Plan for the property that included significantly more development than the current proposal. Under the 2000 Concept Plan, four synagogues were proposed along with a separate recreation building, a separate education building, and 49 congregate care units. Figure 2 illustrates the current proposal in comparison to the plans from 2000. At the time of the 2000 Concept Plan review, the Planning Board expressed support for the vision of the project and provided several suggestions including reducing the level of development on the site, shifting roads and parking from the south property line to internal to the site and placing the buildings near Arapahoe Avenue to protect the Sombrero Marsh.

In the years since the 2000 Concept Plan review, the property owners completed a capital campaign to construct the Jewish Community Center. While there are no plans to develop residential units at this time, the area on the northeast side of the site is proposed to be zoned with medium density residential consistent with the Boulder Valley Comprehensive Plan. Any redevelopment on that site would be subject to a Site Review Amendment at the time of redevelopment along with a provision that 40 percent of all residential be permanently affordable.

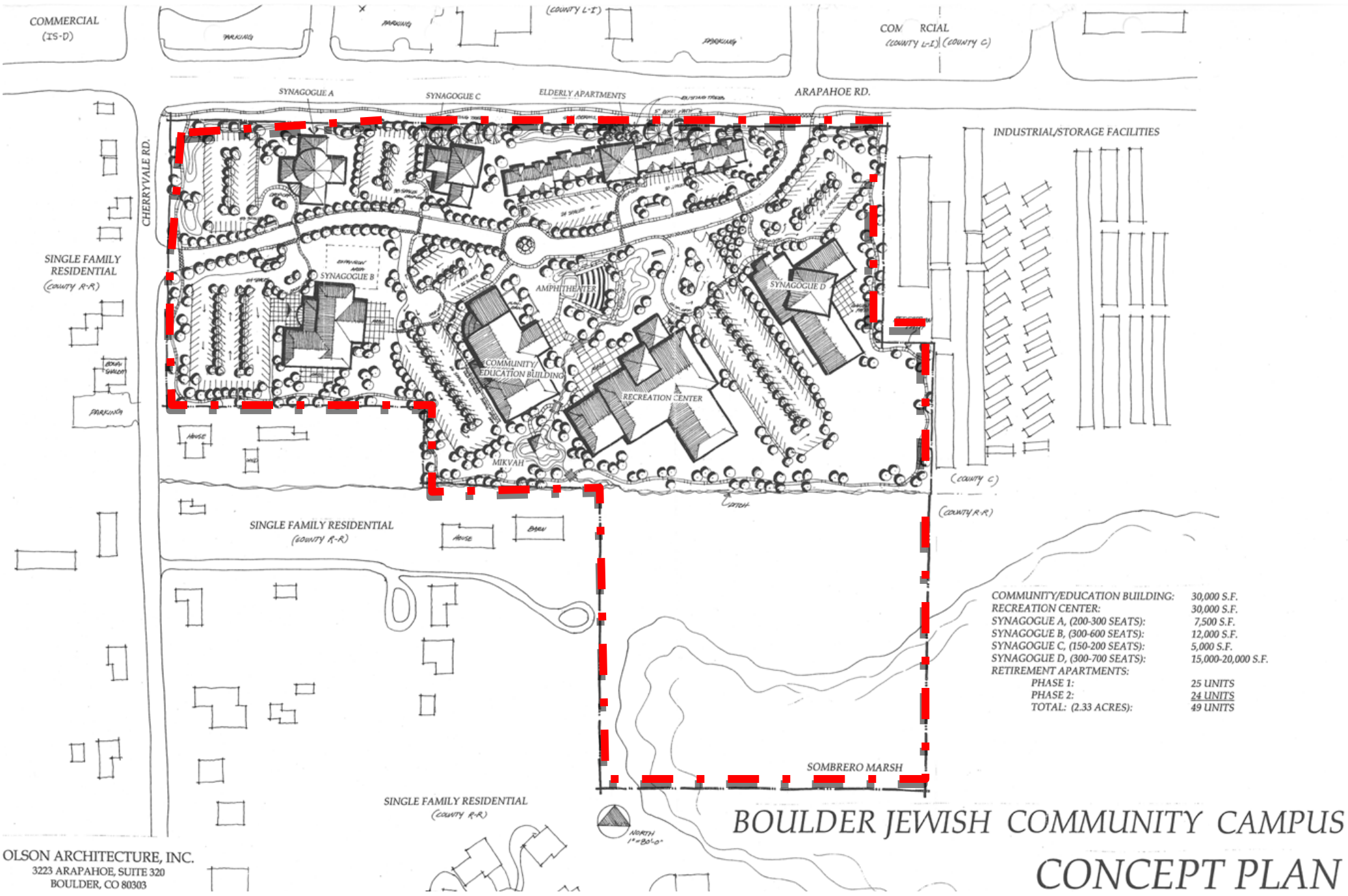
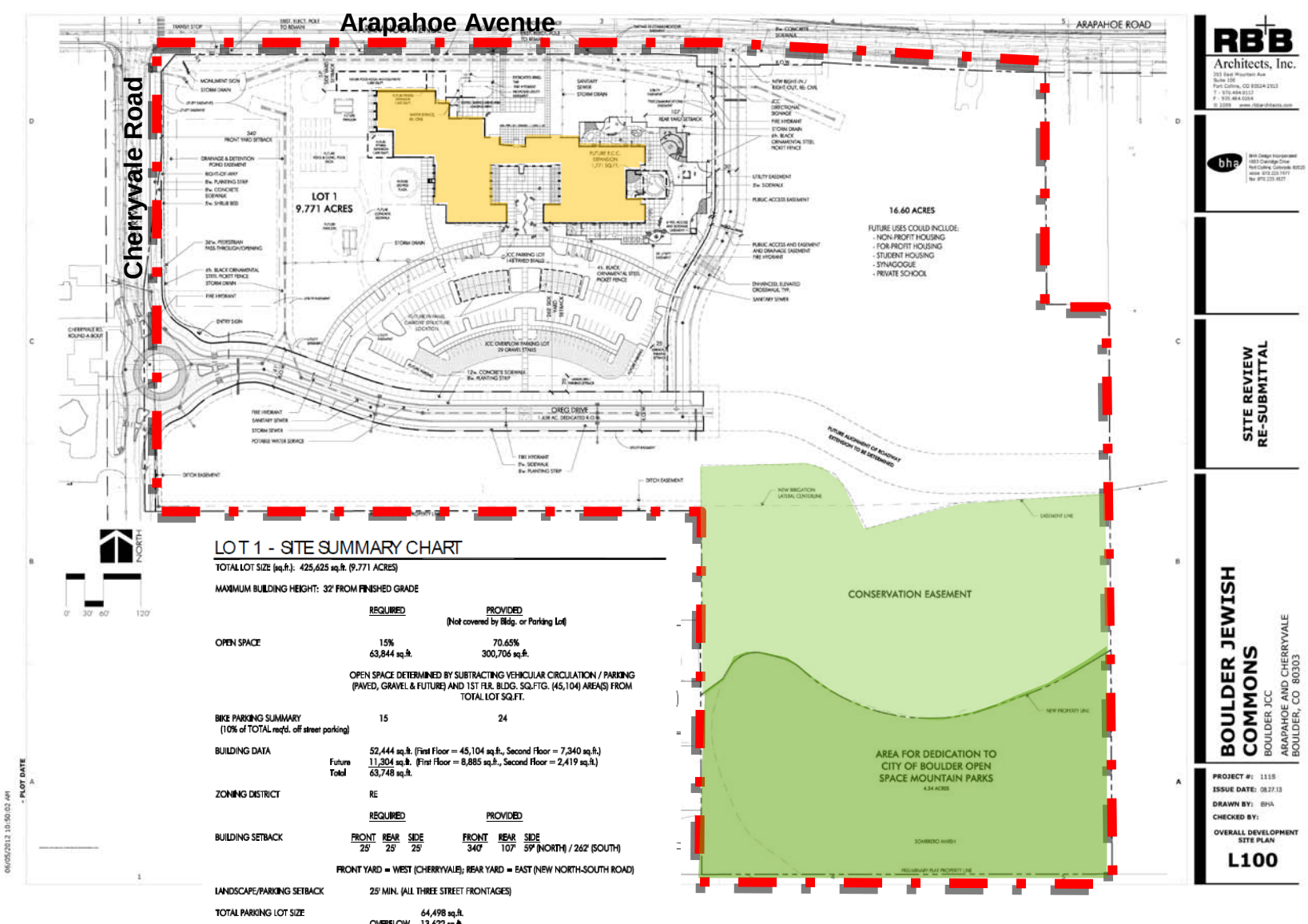


Figure 2: Comparison of Original Concept Plan (above) to the current Proposed Site Plan (below).



Existing Site. The approximately 32.3 acre project site is located north and east of the intersection of Arapahoe Avenue and Cherryvale Road. The northwestern third of the site (at 5980 Arapahoe) which was annexed into the city as part of a larger annexation in the 1980s is currently vacant with the exception of two vacant residential buildings along with small out-buildings. The 1.8 acre property at 1492 Cherryvale Road contains a vacant single family residence along with several outbuildings. The applicant has indicated that the buildings would remain upon annexation. The largest area of the project site on the east, 6234 Arapahoe, is also undeveloped and more than half of that eastern portion is not developable due to the significant habitat of Sombrero Marsh at the south end of the parcel. A ditch crosses the middle of that portion of the property and also defines the approximate break in the watershed. The majority of the property is denuded grassland with some individual trees, most of which are in a deteriorated state and/or invasive Russian Olive species planned for removal.

Sombrero Marsh. The southern part of the project site contains a portion of Sombrero Marsh. The marsh is regarded as an "exceptional ecological resource." In an excerpt from the Management Plan established for Sombrero Marsh in 2001, prepared by the City of Boulder Open Space and Mountain Parks Division, the following describes why the Marsh has considerable ecological value:

> *Sombrero Marsh is the only naturally occurring perennial open water body of its size in the Boulder Valley, totaling over 20 acres (the majority of wetlands in the Boulder Valley are less than 10 acres). Sombrero Marsh formed in a closed depression approximately 0.5 mi. east of South Boulder Creek in Boulder County, Colorado. This naturally functioning wetland contains soils, hydrology and vegetation that combine to create important habitat for many birds, mammals, amphibians, and invertebrates. The Marsh's brackish waters and seasonal salt flats support wetland plant communities that are uncommon. Sombrero Marsh's physical environment and wildlife habitat are highly unique because its waters and soils are highly alkaline, which provide a highly specialized niche for plants and animals, and the Marsh provides a locally rare combination of open water and emergent vegetation. Besides important wildlife habitat, Sombrero Marsh also provides important wetland functions of: flood storage, nutrient retention and removal, food chain support, and passive recreation / heritage value."*

Existing Roadway and Built Context in Site Surroundings. Arapahoe Avenue adjacent to the site is a four- to six-lane arterial highway under the jurisdiction of the Colorado Department of Transportation (CDOT). Recent improvements to Arapahoe Avenue include widening the roadway to provide dedicated bus/turn lanes and bike lanes as well as multi-use paths adjacent to the site. The improvements are currently being constructed consistent from the cross-section shown in Figure 4 from

.

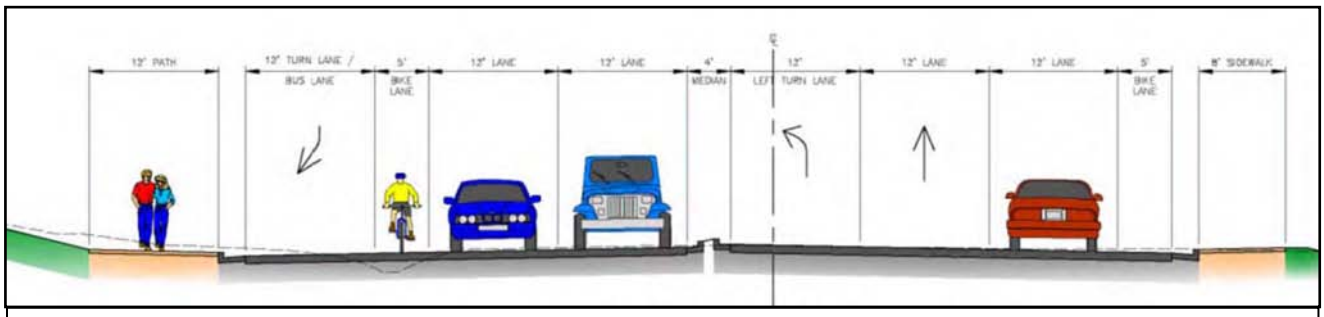


Figure 4:
Planned CDOT Improvements for Arapahoe Avenue Currently under Construction Adjacent to Site

As shown below in Figure 5, Cherryvale Road adjacent to the site is within the City's jurisdiction while the remainder of Cherryvale to the south is within County jurisdiction. The two lane roadway accommodates bicyclists and pedestrians with a widened shoulder. The context south of the project site is rural and, in keeping with the County's Transportation Master Plan, roadways such as Cherryvale Road are intended to preserve the rural character. Views of the site from the surrounding streets are shown in Figure 6, on page 7, the images help to illustrate the roadway typology and character surrounding the site.

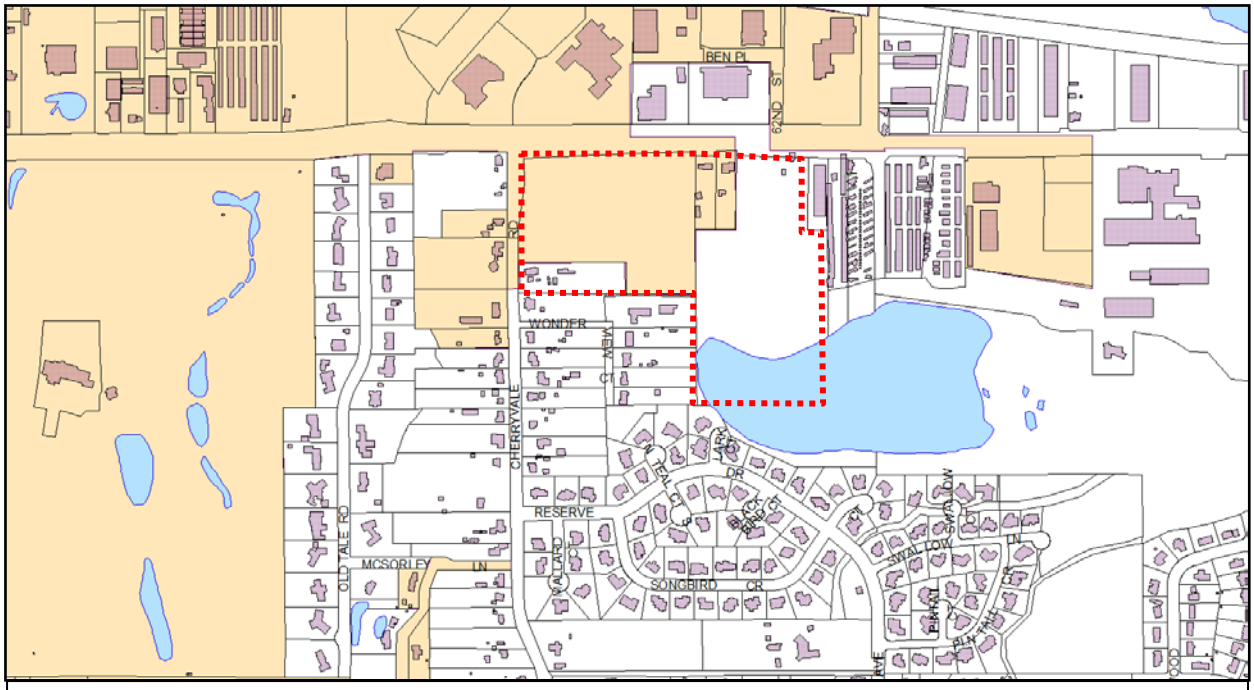


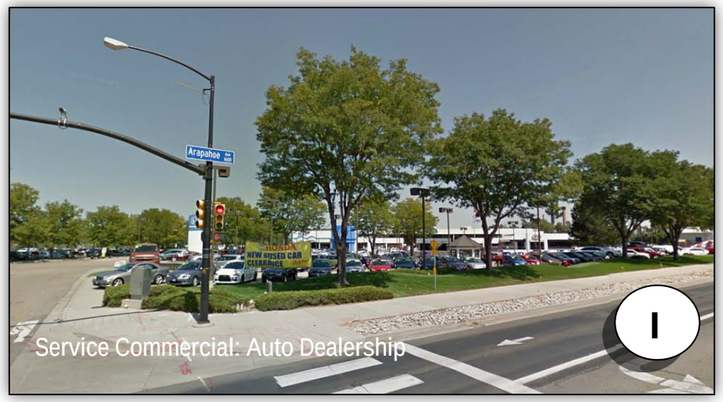
Figure 5: Jurisdictional Boundaries on Cherryvale Road adjacent to Project Site

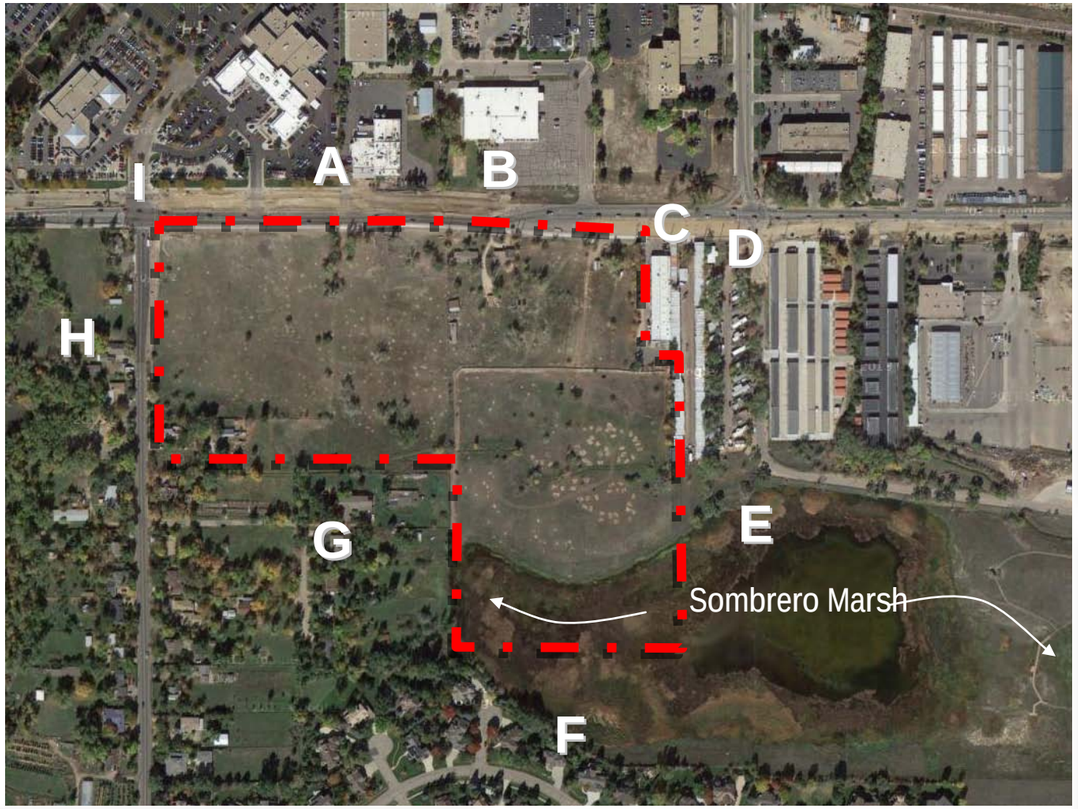
There are a variety of land uses in the area surrounding the project site, as shown in Figure 7 on page 8. On the south side, a portion of Sombrero Marsh exists within the property boundary and extends further to the south and east. Also south of the site are rural residential properties within Boulder County jurisdiction ranging in size from one to 1.5 acres. Further to the south is the low density county subdivision of The Reserve at Cherryvale with one quarter to one half acre lots.

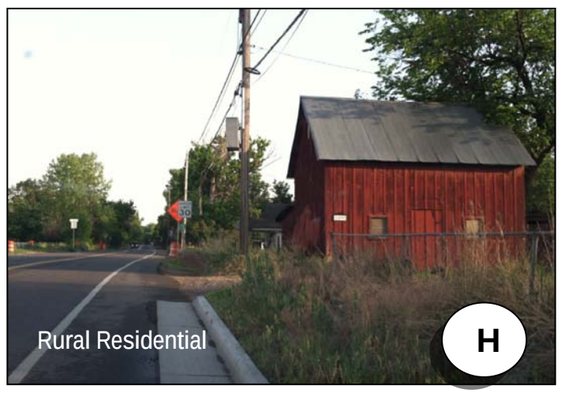
Directly across Cherryvale Road to the west are two rural residential properties recently annexed into the city along with the Congregation Bonai Shalom synagogue property, annexed into the city in 1987. Directly north across Arapahoe Avenue from the project site are a variety of industrial service uses including auto dealerships, auto repair, roofing companies, loom manufacturers, and the annex for Naropa University. To the east of the site is a moving and storage company, along with a storage facility. Further to the east, at the corner of 63rd and Arapahoe are a county mobile home park, a storage facility, and a light industrial/ service industrial facility. To the northeast of this intersection is Xcel Valmont Electrical Generation facility with the large smoke stacks visible from the subject property.

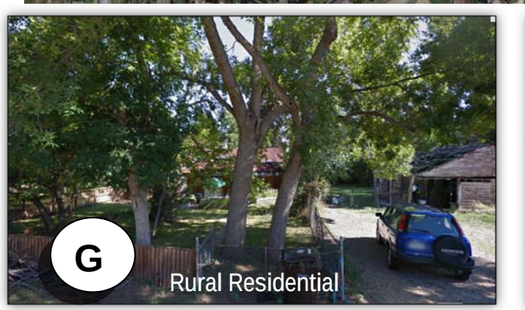
Figure 6:

Views of Site From Adjacent Streets Surrounding the Property Site









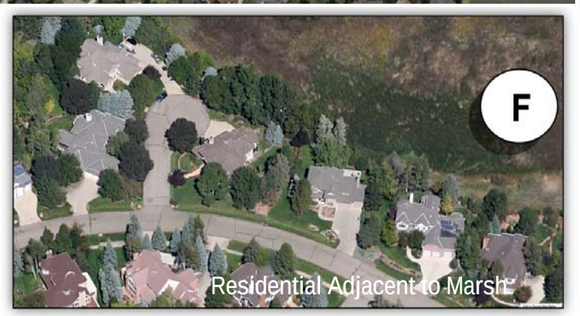


Figure 7 Surroundings of Subject Property keyed to Aerial

Existing Land Use per Boulder Valley Comprehensive Plan (BVCP). The mixed character of the built environment is reflective of the BVCP land use designations shown in Figure 8. Within the project site, there are four different land use designations for the property, including: Very Low Density Residential, Low Density Residential, Medium Density Residential and Open Space. Under the BVCP, residential densities are defined as follows: Very Low Density, two units or less per acre; Low Density, two to six units per acre; and Medium Density, six to 14 units per acre. Open Space – Other is defined as

> *"other public and private land designated prior to 1981 that the city and county would like to preserve through various preservation methods including but not limited to intergovernmental agreements, dedications or acquisitions."*

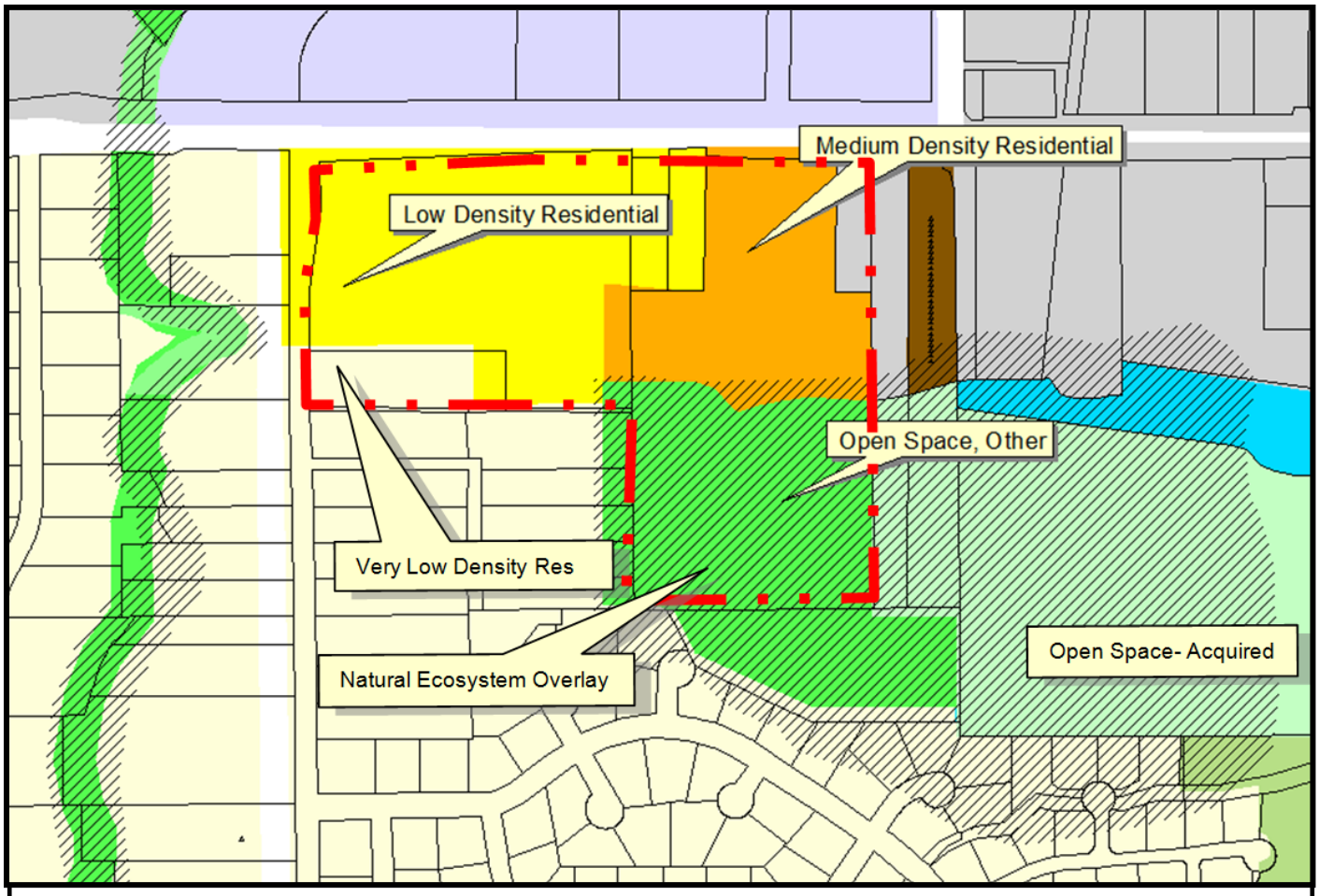


Figure 8: Boulder Valley Comprehensive Land Use Designations

PROJECT DESCRIPTION:

The applicant's written description of the project and full set of project plans are found within Attachment D and E. The project includes:

- Proposed annexation of approximately 18 acres total into the City of Boulder with initial zoning of Rural Residential - 1 (RR-1) for the 1.94 acre property located at 1492 Cherryvale Road; and a split zoning of Residential Medium – 1 (RM-1) for the northern 2/3 and of Public (P) for the southern 1/3 of the approximately 16 acre property located at 6234 Arapahoe. Refer to Figure 9 that illustrates the zoning and land dedication area.

- Land to be dedicated to City of Boulder OSMP that currently contains a portion of the Sombrero Marsh along with land placed under a Conservation Easement adjacent to deeded land.

- While no residential units are currently proposed as part of the project, the RM-1 zoning will allow for future clustered residential units of which 40 percent would have to be permanently affordable residential units as a condition of annexation.

- Construction of a new roundabout on Cherryvale Road, along with a new east-west roadway from Cherryvale east into the property, referred to as Oreg Drive, to be dedicated as public right-of-way.

- Site Review for the approximately 63,750 square foot Jewish Community Center with a focus on all-age education and culture (plan view illustrated in Figure 10 and west elevation illustrated in Figure 11) that includes:

    - Classroom and assembly space for adult education and youth camps;
    - Day care center for up to 150 children;
    - Library space
    - Fitness room and basketball court
    - Outdoor playfields
    - Support offices

    There are two requested modifications: building height up to 39.5 feet where 35 feet is standard and a parking deferral of 10 percent.

- Use Reviews to permit the following uses:
    - Daycare Center with ≥ 50 children
    - Adult Education Facility ≥ 20,000 square feet
    - Indoor Recreational or Athletic Facility

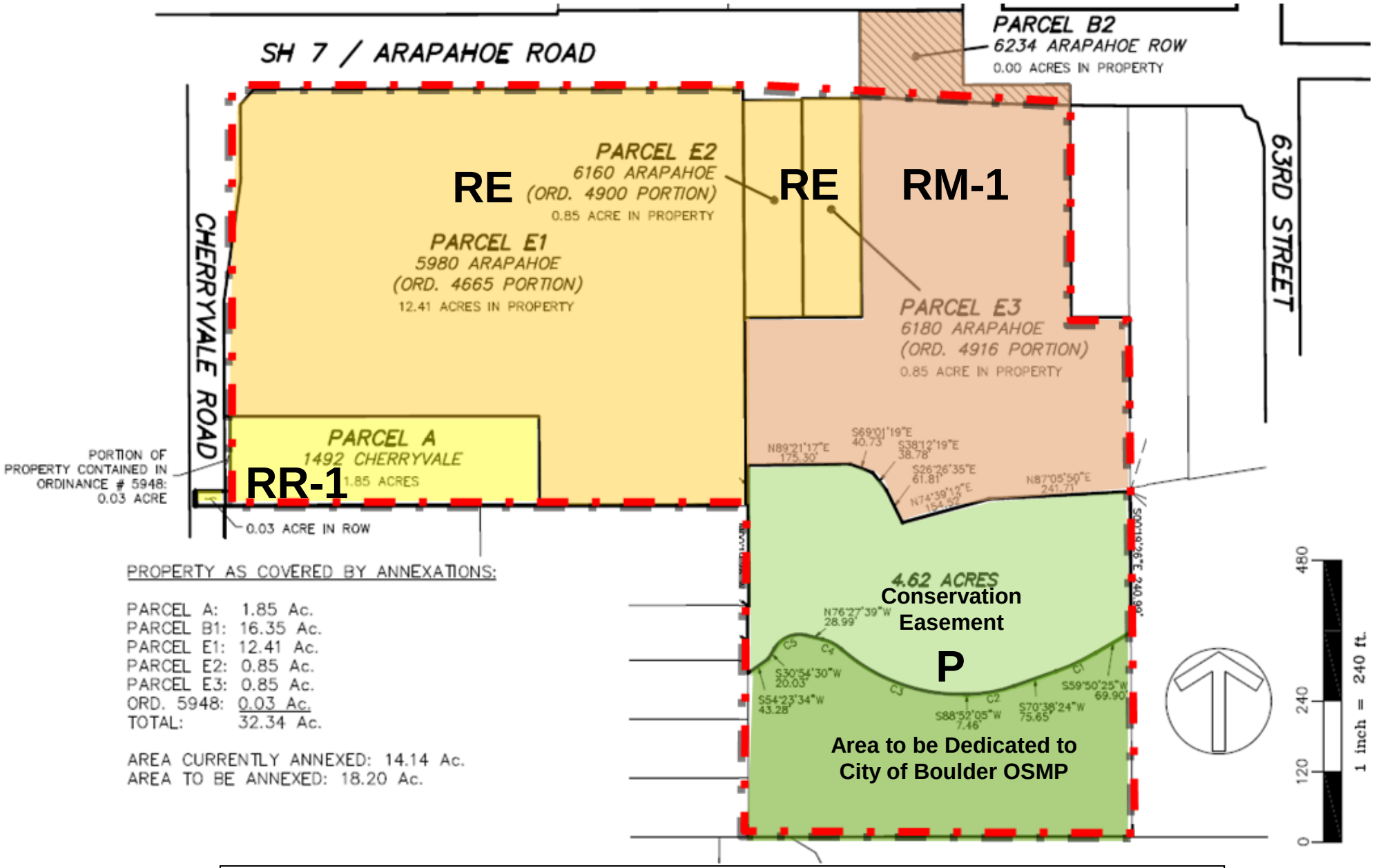


Figure 9: Zoning and Land Dedication Area

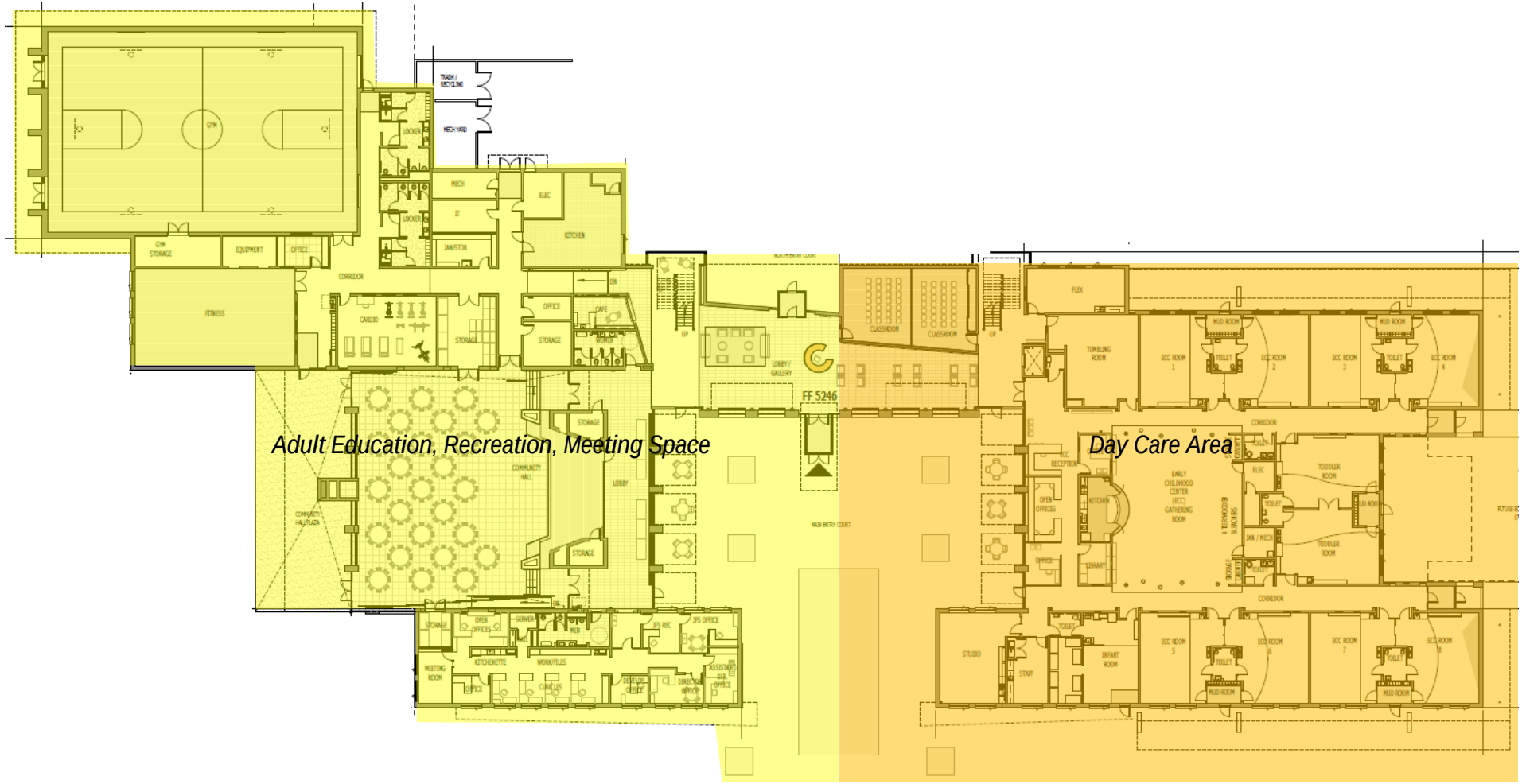


Figure 10: Enlarged view of building with the rough proportion of use on each side of the building

Figure 11: West Elevation of Proposed Building

KEY ISSUES ANALYSIS

1. Are the proposed annexations consistent with State statutes and BVCP growth and annexation policies?

Annexations must comply with Colorado Revised Statutes (C.R.S.) 31-12-101 et seq. Staff has reviewed the annexation petition for compliance with C.R.S. 31-12-104 and C.R.S. 31-12-105, and finds that the application is consistent with those sections, as affirmed by the criteria below:

- Landowners of more than 50 percent of the property have petitioned to annex;
- The petition was filed with the City Clerk;
- There is a community interest between the property proposed for annexation and the city of Boulder;
- The subject property is not included in another annexation proceeding involving a city other than the city of Boulder;
- The annexation would not remove the property from one school district and add it to another; and
- The property has at least one-sixth contiguity with the perimeter of the city of Boulder.

Policy 1.18: This policy is titled "Adapting to Limits on Physical Expansion" and within Policy 1.18 is following statement, "*as the community expands to its planned physical boundaries, the city and county will increasingly emphasize preservation and enhancement of the physical, social and economic assets of the community*."

In this regard, the dedication of the Sombrero Marsh portion of the property to the city will help to ensure the preservation and enhancement through Open Space and Mountain Parks management of this valuable resource.

Annexation Policy 1.24: Specific to Annexation, BVCP Policy 1.24, is a seven part policy ('a' through 'g'). Complete staff findings regarding this policy are found under Attachment A. Staff finds the subject property consistent with Policy 1.24. In particular, policy 1.24(d) states,

> *d) In order to reduce the negative impacts of new development in the Boulder Valley, the city will annex Area II land with significant development or redevelopment potential only if the annexation provides a special opportunity or benefit to the city. For annexation considerations, emphasis will be given to the benefits achieved from the creation of permanently affordable housing. Provision of the following may also be considered a special opportunity or benefit: receiving sites for transferable development rights (TDRs), reduction of future employment projections, land and/or facilities for public purposes over and above that required by the city's land use regulations, environmental preservation, or other amenities determined by the city to be a special opportunity or benefit. Parcels that are proposed for annexation that are already developed and which are seeking no greater density or building size would not be required to assume and provide that same level of community benefit as vacant parcels unless and until such time as an application for greater development is submitted.*

Policy 1.24(d): Community Benefits and Special Opportunities. The proposed annexation of the Area II property at 6234 Arapahoe (specifically, the northeastern portion of the project site with an initial zoning of RM-1) will create additional development potential. To offset negative impacts, the applicant has offered several special opportunities and community benefits as described in the following:

- Dedication in-fee of a 4.33 acre area encompassing a portion of Sombrero Marsh to the City of Boulder. As noted, the marsh is considered a significant ecological resource and the dedication to the city will allow for preservation and comprehensive management of the resource.

- In addition to the dedication in-fee, a 4.62 acre area of land will be dedicated as a Conservation Easement.

- Construction of a roundabout to calm traffic speeds on Cherryvale Road.

- Construction of a new east/west roadway into the property, and reservation and potential future dedication of additional right of way to the east to create connectivity and a finer grain grid of streets for this area of the city.

- Provision of a new educational and cultural facility with additional provision of high quality child care available to all community members.

- Creation of 40 percent of any future housing as permanently affordable housing.

Staff concludes that the applicant has met the criteria for community benefit and special opportunity.

2. Is the proposed project consistent with the BVCP Land Use Designations and the initial zoning of Public, Residential Medium – 1, and Rural Residential–1?

Consistency of Zoning and BVCP Land Use Designations. The proposed area planned to be zoned Public is consistent with the Land Use designation of "Open Space, Other" and "Ecosystem Overlay" in that the city would like to preserve the property and because the property is considered a significant ecological resource. Under the Public zoning, the site will be managed by the city's Open Space and Mountain Parks.

The proposed area planned to be zoned RM-1, a portion of which includes an area of a conservation easement, is consistent with the BVCP land use designation of "Medium Density Residential" and the small area containing a single family residence and outbuilding with the designation of Very Low Density Residential will be have an initial zoning of Rural Residential – 1 consistent with that designation.

3. Is the Site Review application for the BJC consistent with BVCP policies?

Staff finds that the proposed project Is a well-designed educational and cultural facility that upholds and implements a number of BVCP policies including the following:

1.04 Principles of Social Sustainability
2.05 Design of Community Edges and Entryways
2.07 Design of Major Entryways
2.17 Variety of Activity Centers
2.19 Compatibility of Adjacent Land Uses
2.31 Design of Newly-Developing Areas
2.32 Physical Design for People
2.33 Environmentally Sensitive Urban Design
2.37 Enhanced Design for Private Sector Projects
3.01 Incorporating Ecological Systems into Planning
3.04 Ecosystem Connections and Buffers
4.05 Energy-Efficient Building Design
5.09 Role of Arts and Cultural Programs
6.10 Managing Parking Supply
6.12 Neighborhood Streets Connectivity
8.05 Diversity
8.07 Physical Health
8.10 Support for Community Facilities
8.16 Education Resource
8.18 The Arts

Through comprehensive planning of the site, in conjunction with open space land dedications, the proposed building and any future development will be clustered away from the Sombrero Marsh. Because of this, the city's goals for environmental sustainability through preserving an important ecological resource can be realized. Similarly, with the building proposed along Arapahoe Avenue the project can provide educational and cultural opportunities in the East Arapahoe Avenue corridor and the city's goals and policies related to social sustainability can be met.

4. Is the proposed project consistent with the Site Review Criteria per land use code sub-section 9-2-14(h), B.R.C. 1981 particularly related to circulation?

The consistency analysis of the proposed project with the Site Criteria is found in Attachment A. There are specific criteria that staff notes are particularly relevant to the proposed project's success, including planned roadway improvements and how they address site review criteria related to traffic and circulation.

As described in the background section on page 6, Cherryvale Road is a two lane collector that is predominately located within the county's jurisdiction, except adjacent to the project site where it is within the city's jurisdiction. The roadway has no dedicated bike lanes or walkways but has a shoulder used by pedestrians and bicyclists. During both the Concept Plan review and as a part of discussion with residents on Cherryvale Road, the issue of traffic speeds on the roadway was identified.

To provide access from Cherryvale Road into the site, several at-grade intersection alternatives were explored including a three-way stop sign and a traffic signal. Through discussions between the applicant, the county transportation staff and the city's transportation staff, along with area residents, the applicant proposed a roundabout solution to access the site. The roundabout is intended to efficiently facilitate the flow of traffic into the site off Cherryvale Road while also slowing or "calming" the thru-traffic traveling along Cherryvale Road. Roundabouts have been demonstrated to be safer than other forms of at-grade intersections due to slower speeds and the elimination of left-turns.

As illustrated in Figure 12, within the proposed roundabout, crosswalks will be provided to facilitate the movement of pedestrians through the roundabout. Bicyclists will have the option of either traveling through the roundabout or using bicycle ramps to access the sidewalks and crosswalks. Staff worked with the applicant and County Transportation Staff who also worked with area residents to identify the best placement and alignment of the roundabout to reduce traffic speeds along Cherryvale Road. Attachment F provides the detailed traffic studies.

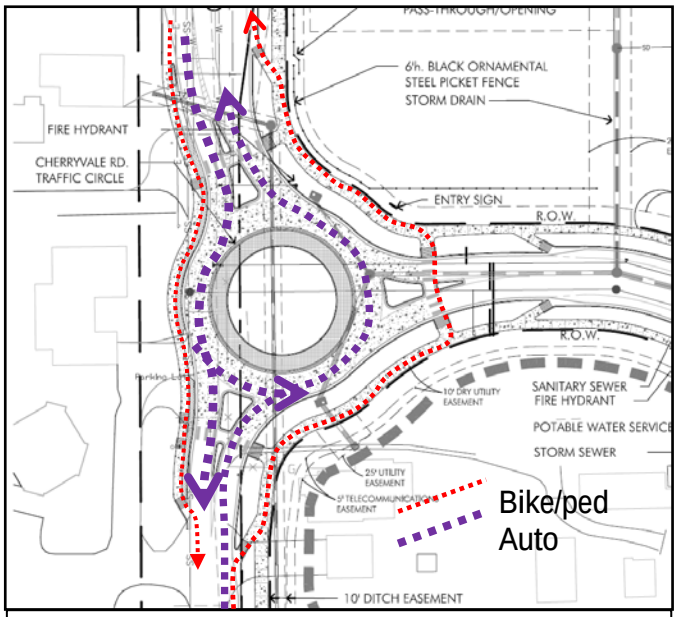


Figure 12: Focused view of the planned multi modal roundabout.

The traffic calming element of the roundabout along with the enhanced landscape aesthetics are considered to be of benefit to the community and responds to Site Review criteria related to traffic and circulation safety including discouraging high speeds; minimizing vehicle conflicts; and provision of safe and convenient connections.

5. Are the proposed site design and architecture consistent with the Site Review criteria for quality and compatibility with the surrounding context?

Site Design:

The site plan is consistent with Site Review criteria for open space and the preservation of wetlands, riparian areas and protection of sensitive environmental features. Similarly, the site plan is consistent with BVCP policies that seek to ensure urban environmental quality by dedicating open space, establishing additional conservation easement and by locating the proposed building and the future development well away from the sensitive Sombrero Marsh portion of the property. This site design approach is consistent with environmental quality policy 3.09, which indicates the city's intent to promote wildlife and land use management practices to minimize conflicts with urban land uses and preserve habitat.

With placement of the building away from the Sombrero Marsh habitat area, the building is also placed toward Arapahoe Avenue, with fenestration provided along the north elevation. Primary access into the building is proposed from the south elevation nearest the parking area. On-street parking is not planned by CDOT given the highway status of the four to six lane roadway and the 45 mile per hour speed limits adjacent to the site. Figure 2 on page 4 illustrates the site layout with the building away from the marsh and near Arapahoe Ave.

Primary entrance from the parking lot on the interior of the site is practical given the need for safety and separation of pedestrians, particularly young children and parents accessing the day care portion of the building. However, the building-forward configuration to the street does present a "well designed face to the public realm" as recommended in BVCP policy 2.37(b) and the building is easily accessed by pedestrians or bicyclists from Arapahoe Avenue via the multi-use path and nearby bus stop.

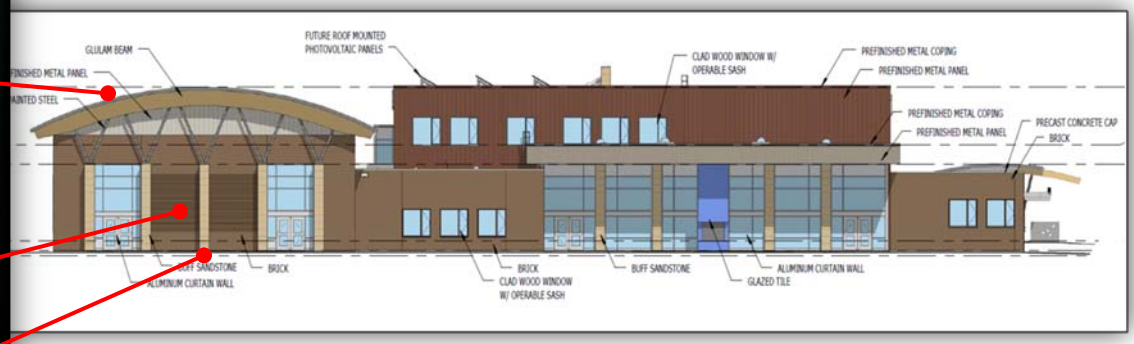
Figure 13:
Perspective Sketch of the North Side of the Proposed Building as Viewed from Arapahoe Avenue.

Building Design.

The site review criteria for building design emphasizes compatibility of the proposed building to the existing character and context, the provision of pedestrian interest, and the use of authentic materials. Attachment A. presents a discussion of all of the site review criteria related to building design.

As noted in the Background section on page 6, the existing character of the area is varied and the primary characteristics are the relatively large floor plates of the nearby industrial and auto dealership buildings. Like the nearby buildings, the proposed Jewish Community Center building has a large building footprint. However, in keeping with Site Review criteria for building design, the proposed project will enhance the existing setting and will help establish a new aesthetic standard for the area. Utilizing high quality, durable materials that include stone, brick, wood beams forming a barrel roof, and metal panels as shown in Figure 14.

Figure 14:
Proposed use of high quality finish materials on building: Materials keyed to the building elevation



In addition, the proposed elevation facing Arapahoe Avenue has strong fenestration: repeating window patterns and emphasized entryways augmented with landscape shrub massings and rows of ornamental trees to establish a strong pedestrian orientation.

Similarly, the building when viewed from Cherryvale (west elevation shown above, Figure 11) has ample fenestration and varied building forms that will provide interest. In all, the proposed site design and architecture are consistent with the Site Review criteria for quality and compatibility with the surrounding context and will help to lead a new aesthetic for the East Arapahoe context.

6. Is the proposed project consistent with the Use Review Criteria per land use code sub-section 9-2-15, B.R.C. 1981?

As found within the Use Review criteria analysis in Attachment A, the proposed project elements (including adult education, day care and indoor recreation) meet the Use Review Criteria. The proposed building is predominately an education facility with child day care, day camps and adult education. A portion of the facility includes fitness classes and indoor recreation. As a master planned site, the facility is primarily located within the already annexed Estate Residential area where educational uses require a consistency analysis under the Use Review criteria. Specifically, under the Land Use Code, Table 9-6-1, B.R.C. 1981, "*Schedule of Permitted Uses*," the two primary uses determined from the management plan provided by the applicant and through the architectural plans are: daycare centers for 50 or more children and adult education facilities greater than 20,000 square feet (refer to Figure 10 on page 11). The definition of Adult Education Facility per section 9-16, B.R.C. 1981 is as follows:

> *"Adult education facility" means an academic educational use serving a clientele at least fifty percent of which are individuals who are eighteen years of age or older.*

Under the Residential Estate zoning, these uses require a consistency analysis with the Use Review criteria of section 9-2-15, B.R.C. 1981.

A portion of the northwest corner of the building is proposed to be a fitness area. Staff reviewed this component of the building initially as an accessory use, based on the Land Use Code definitions of section 9-16, B.R.C. 1981

> *"Accessory use" means a use located on the same lot as the principal building, structure, or use to which it is related and that:*
>
> *(1) Is subordinate to and customarily found with the principal use of the land; and*
>
> *(2) Is operated and maintained for the benefit or convenience of the occupants, employees, and customers of or visitors to the premises with the principal use.*

Because fitness is customarily found with the educational principal use of the site, and the fitness component would be operated and maintained for the benefit or convenience of the customers or visitors to the premises with the principal use it could qualify as a accessory use. However, in further understanding the fitness use of the proposed project through conversations with the applicant, staff understands that it is intended by the applicant that a visitor could use the fitness facility independent of the adult education aspects. Because of this distinction, and because a fitness center as a "stand alone" primary use is not permitted under the Residential Estate zoning, staff determined that if the analysis of the fitness use under Use Review criteria concluded with findings of approval, the legal mechanism to permit the fitness use as a third primary use on the site would be through ordinance. Given that the annexation ordinance is intended to establish the site as the Boulder Jewish Commons, the terms of the fitness aspect had been established through the annexation agreement.

Therefore, for all three identified primary uses: day care; adult education; and indoor recreation, Use Review criteria findings have been made and are found in Attachment A. Given that the hours of operation for the entire facility and all of the uses are the same, and that the overall parking management plan includes all of the uses, staff finds the uses planned on the site to meet the Use Review criteria.

PUBLIC COMMENT AND PROCESS:

Required public notice was given in the form of written notification mailed to all property owners within 600 feet of the subject site and a sign posted on the property for at least 10 days. All notice requirements of section 9-4-3, B.R.C. 1981 have been met. Two separate neighbor meetings were held. The first was held on Dec. 3, 2007 and a second on Oct. 4, 2011 with concerns articulated being primarily related to traffic calming and parking. A summary of the meetings IS provided along with comment letters received in Attachment B primarily from the adjacent property owner enquiring about the project status.

STAFF RECOMMENDATION:

Staff recommends that the Planning Board make the following motions:

1) Recommend approval of the proposed annexation of the subject properties subject to the annexation conditions recommended in the staff memorandum with initial zoning of RR-1, RM-1, and P respectively;

2) Recommend approval of the Site Review and Use Review applications of case no. LUR2012-00005 for the project located at 5980, 6160, 6180 and 6234 Arapahoe Avenue, and 1492 Cherryvale Road, incorporating the staff memorandum and the attached criteria checklists as findings of fact and subject to the conditions of approval for the site review and use reviews proposed in the staff memorandum.

RECOMMENDED CONDITIONS OF APPROVAL:

Recitals to Annexation Agreement will describe the properties found within Attachment C which the Applicant owns and are affected by this Agreement as follows:

"Parcel A" (1492 Cherryvale Rd) – Exhibit A
"Parcel B1" (6234 Arapahoe Rd) – Exhibit B
"Parcel B2" (Right-of-way adjacent to 6234 Arapahoe Rd) – Exhibit C
"Parcel C" (Conservation Easement area) - Exhibit D
"Parcel D" (Land to be conveyed as easement, but later dedicated in fee to the City) – Exhibit E
"Parcel E1" (Land already annexed at 5980 Arapahoe Rd) – Exhibit F
"Parcel E2" (Land already annexed at 6160 Arapahoe Rd) – Exhibit G
"Parcel E3" (Land already annexed at 6180 Arapahoe Rd) – Exhibit H

Annexation Conditions (Note: These conditions apply to Parcels A, B1, B2, C, and D. However, conditions #5 and #6 also apply to Parcels E1, E2, E3 which are the already annexed parcels.)

1. Requirements Prior to First Reading of the Annexation Ordinance. Prior to first reading of the annexation ordinance before City Council, the Applicant shall do the following:

    a. Provide an updated title commitment current within 30 days of signing the Annexation Agreement.

b. Sign and file petitions for the inclusion in the Northern Colorado Water Conservancy District and the Boulder Municipal Subdistrict and pay all applicable fees on land and improvements for inclusion in such districts.

c. Pay a Storm Water and Flood Management Utility Plant Investment Fee of $7,741.80 for Parcel A and $990.00 for Parcel B1 in accordance with Section 11-5-7, B.R.C. 1981, based upon impervious areas of 3,910 square feet and 500 square feet.

d. Pay the Housing Excise tax of $598.00 for Parcel A.

e. Pay the following assessments for utility main reimbursements:

i. $1,007.77 (357.48 linear feet times $2.8191 per linear foot) for the 8" VCP sanitary sewer main in Arapahoe Road.

ii. $1,381.41 (357.48 linear feet times $3.8643 per linear foot) for the 12" CIP water main in Arapahoe Road.

2. Requirements related to Conveyances for Environmental Preservation.

a. Prior to first reading of the annexation ordinance before City Council, the Applicant shall do the following:

i. Provide a Baseline Documentation Report for Parcel C to the City, at no cost to the City, in a form which is subject to the approval of the City Manager.

ii. Convey a conservation easement that includes land management and conservation practices that will be administered by the City over Parcels C and D to the City, at no cost to the City, in a form which is subject to the approval of the City Manager.

b. Prior to a building permit application for any building, the Applicant shall convey Parcel D in fee to the City, at no cost to the City, in a form which is subject to the approval of the City Manager.

3. Water Connection Requirement. The Applicant shall connect to City water and sewer within 180 days of the effective date of the annexation ordinance unless the existing residence on Parcel A has been demolished prior to that time.

4. Disconnection of Septic System. Within 180 days of any wastewater service line connection on the Property, the Applicant shall abandon the existing septic system on Parcel A in accordance with Boulder County Health Department and State of Colorado regulations.

5. Zoning. Parcels A, B1, B2, C, and D shall be annexed to the City with the following initial zoning classifications and, except as set forth herein, shall be subject to all of the rights and restrictions associated with that zoning.

Parcel A (1492 Cherryvale Rd): Rural Residential-1 (RR-1);
Parcel B1 (6234 Arapahoe Rd): Medium Density Residential (RM-1);
Parcel B2 (Right-of-way adjacent to 6234 Arapahoe Rd): Medium Density Residential (RM-1);
Parcel C (Conservation Easement area described on Exhibit D): Public (P); and
Parcel D (Land dedicated in fee to the City described on Exhibit E): Public (P).

6. City Council Has Final Decision Authority for Site and Use Reviews. The parties agree that the City Council has final decision authority for the initial site and use review applications pending with the annexation request. The site review and use review applications will be referred to the City Council for hearing and final decision concurrent with the hearing for annexation. Any subsequent amendments or modifications to these site and use review approvals shall be processed and reviewed by the approval authority designated in and in compliance with the requirements of the Boulder Revised Code.

7. Development Progress. The City agrees that Applicant may complete the site review in three development phases, as shown on the approved plans dated July 1, 2013 and on file with the City. Each development phase shall begin at the time of this approval. The Applicant shall begin and substantially complete each development stage within five, ten, and fifteen years, as applicable pursuant to the approved plans, from the time of approval. The Applicant may begin a phase early upon the completion of the prior phase. Compliance with and requests for extensions of each development stage shall be processed and reviewed in compliance with the requirements of Section 9-2-12, "Development Progress Required," B.R.C. 1981.

8. Indoor Recreational or Athletic Facility Use in RE Zone. The City agrees, to allow indoor recreational or athletic facility uses on Parcel E-1 as a use allowed pursuant to a use review approved concurrent with this annexation and as may be modified or amended in the future in accordance with the procedures and criteria established in Section 9-2-15, "Use Review," B.R.C. 1981.

9. Affordable Housing. The parties agree that this Agreement is a voluntary agreement between the City and the Applicant that may limit rents on dwelling units on the Property to insure that they are constructed and maintained as affordable housing. The Applicant agrees that forty percent (40%) of any dwelling units on the Property shall be permanently affordable and shall meet the requirements provided below as units that are owned by individual home owners or rented to tenants. Permanently affordable deed restricting covenants to secure the affordability of dwelling units shall be signed and recorded with the Boulder County Clerk and Recorder prior to application for any residential building permit.

    a. Permanently Affordable – Low to Moderate Income. The Applicant agrees to provide fifty percent (50%) of any permanently affordable units to be affordable for low or moderate income households consistent with Chapter 9-13, "Inclusionary Housing," B.R.C. 1981. The total number of required low to moderate income permanently affordable units shall be rounded down to the nearest whole number if a fractional number results from the calculations.

    b. Permanently Affordable – Middle Income. The Applicant agrees to provide fifty percent (50%) of any permanently affordable units to be affordable for middle income households.

i. The total number of required middle income permanently affordable units shall be rounded up to the nearest whole number if a fractional number results from the calculations.

ii. Affordable middle income buyer household income shall not exceed thirty-five percent (35%) above the HUD Low Income Limit applicable to the City.

iii. The maximum price shall be affordable to a household whose income does not exceed the HUD Low Income Limit applicable to the City by more than twenty-five percent (25%).

c. Final Unit Pricing. Affordable for-sale unit pricing shall be based on the unit's type (attached or detached), size, and number of bedrooms and bathrooms, and on the HUD income limits described above when either the interim affordable covenant or final affordable covenant is executed, whichever is first.

d. Consistency with Chapter 9-13, "Inclusionary Housing," B.R.C. 1981. The Applicant agrees that with the exception of the specific requirements listed in this Agreement, implementation will be consistent with Chapter 9-13, "Inclusionary Housing," B.R.C. 1981 including but not limited to:
   i. Affordable rental unit pricing;
   ii. Proportionality for the affordable units to the type (for example, detached, duplex, and four-plex), and number of bedrooms and bathrooms to the market rate units on the property;
   iii. Unfinished floor area substitution for finished floor area; and
   iv. Covenants and deed restriction requirements prior to a building permit application for any new unit.

e. Affordable Unit Size. The minimum size of each permanently affordable detached unit shall be:

   i. One bedroom units – 900 square feet
   ii. Two bedroom units – 1,100 square feet
   iii. Three bedroom units – 1,300 square feet
   iv. Four bedroom units – 1,500 square feet

   The minimum size of each permanently affordable attached unit shall be:

   i. One bedroom units – 700 square feet
   ii. Two bedroom units – 900 square feet
   iii. Three bedroom units – 1,100 square feet
   iv. Four bedroom units – 1,300 square feet

f. Concurrency. The permanently affordable units must be provided concurrently with the market units such that for each building permit issued for one market rate unit one building permit must have been issued for an affordable unit.

g. Floor Plan Approval. Prior to signing the affordable covenant and no later than a building permit submittal for any permanently affordable units, the Applicant shall submit and obtain approval

from the City Manager for documentation, including, but not limited to, floor plans and finish specifications, demonstrating that the permanently affordable units meet the requirements of Chapter 9-13, "Inclusionary Housing," B.R.C. 1981, and are consistent with the City's Livability Guidelines and Standards for Permanently Affordable Housing.

h. Agreement to Abide by Restrictions. The Applicant agrees to construct, restrict, and sell permanently affordable units as described and required by this Agreement. The Applicant agrees that no dwelling units shall be established unless the requirements of this paragraph have been met. The Applicant further agrees that the City may withhold any approval affecting the Property, including, without limitation, a building permit, administrative review, use review, site review, and subdivision, until the requirements of this paragraph have been complied with.

10. Conveyance of Drainage. The Applicant shall convey drainage from the Property in a historic manner that does not materially and adversely affect abutting property owners.

11. Existing Wells. The City agrees that it will not prohibit the Applicant from using existing wells for irrigation purposes. Under no circumstances may existing wells be used for domestic water purposes. No person shall make any cross connections to the City's municipal water supply system from any well on the Property.

12. New Construction. All new construction commenced on the Property after annexation shall comply with all City laws, taxes, and fees, except as modified by this Agreement.

13. Laws, Rules, Guidelines and Indexes. Except as provided in this Agreement, the Parties intend to apply the law, rules and guidelines that are effective at the time of development or the issuance building permits. In the event that any such laws, rules, or guidelines are not in place, the City Manager will create similar standards for the purposes of implementing this Agreement. In the event that any indexes including without limitation the HUD Low Income Limit applicable to the City that are used in this Agreement are not in place at the time of development or the issuance of building permits, the City Manager will select or create a similar index for the purpose of implementing the requirements of this Agreement.

14. Original Instruments. Prior to the first reading of the annexation ordinance, the Applicant shall provide an original of this Agreement signed by the Applicant, along with any instruments required in this Agreement. The City agrees to hold such documents until after final legislative action on the annexation of this Property has occurred. Final legislative action by the City Council shall constitute acceptance of such documents by the City. In the event that the City does not annex the Property, the City agrees that it will return all such original documents to the Applicant. The Applicant agrees that it will not encumber or in any way take any action that compromises the quality of such documents while they are being held by the City.

15. Additional Right-of-Way. The Applicant shall reserve and not place any structure on a strip of land approximately 61 feet in width and running west to east through Parcel B1, as shown on the approved plans dated July 1, 2013. Prior to any building permit application for any building on Lot 2, the Applicant shall dedicate in fee to the City, the property shown on the approved plans dated July 1, 2013 and construct and complete the street, curbs, gutters, sidewalks, utilities and any other right of way public improvements necessary to serve Lot 2 that meets the City of Boulder Design and Construction

Standards, as part of a Technical Document Review application, the form and final location of which shall be subject to the approval of the City Manager.

16. Right to Withdraw. The Applicant retains the right to withdraw from this Agreement up until the time that final legislative action has been taken on the ordinance that will cause the Property to be annexed into the City. The final legislative action will be the vote of the City Council after the final reading of the annexation ordinance. The Applicant's right to withdraw shall terminate upon the City Council's final legislative action approving the annexation. In the event that the Applicant withdraws from this Agreement in the manner described above, this Agreement shall be null and will have no effect.

Site Review Conditions:

(The following conditions apply to 1492 Cherryvale Road, 5980, 6160, 6180 and 6234 Arapahoe Road:

1. The Applicant shall be responsible for ensuring that the development shall be in compliance with all approved plans dated July 1, 2013 on file in the City of Boulder Planning Department, except to the extent that the development may be modified by the conditions of approval.

2. Prior to a building permit application, the Applicant shall submit a Technical Document Review application for the following items, subject to approval of the City Manager:

   a. Final architectural plans, including materials and colors, to insure compliance with the intent of this approval and the architectural intent shown on the elevation plans dated July 1, 2013.

   b. A final site plan showing the corrections and additions requested by this approval, including building setbacks on fully dimensioned plans. A signed survey drawing should also be submitted.

   c. A final utility plan meeting the City of Boulder Design and Construction Standards.

   d. A final storm water report and plan meeting the City of Boulder Design and Construction Standards, which include information regarding the groundwater conditions (geotechnical report, soil borings, etc.) on the Property, and all discharge points for perimeter drainage systems.

   e. Final transportation plans meeting the City of Boulder Design and Construction Standards and CDOT Access Code Standards, for all transportation improvements. These plans must include, but are not limited to: street plan and profile drawings, street cross-sectional drawings, signage and striping plans in conformance with Manual on Uniform Traffic Control Devices (MUTCD) standards, transportation details drawings, geotechnical soils report and pavement analysis.

   f. A detailed landscape plan, including size, quantity, and type of plants existing and proposed; type and quality of non-living landscaping materials; any site grading proposed; and any irrigation system proposed, to insure compliance with this approval and the city's landscaping requirements. Removal of trees must receive prior approval of the Planning Department. Removal of any tree in city right-of-way must also receive prior approval of the City Forester.

g. A **detailed lighting plan** showing location, size, and intensity of illumination units.

h. **CDOT access permits** meeting the CDOT Access Code Standards for all transportation improvements within the CDOT right-of-way, including, but not limited to the following: two new right-in / right-out curb cuts on Arapahoe Road (State Route 7) as shown on the approved plans.

3. Prior to a building permit application, the Applicant shall submit a subdivision application, including a **revised Preliminary Plat and Final Plat**, subject to the review and approval of the City Manager, and execute a **subdivision agreement** meeting the requirements of Chapter 9-12, "Subdivision," B.R.C. 1981, which provide, without limitation and at no cost to the City, for the following:

   a. The dedication, to the City, of all right-of-way and easements necessary to serve the development, including, but not limited to, those shown on the approved plans dated July 1, 2013 on file in the City of Boulder Planning Department, in a final configuration and location acceptable to the City Manager, and generally described as follows:

      i. Right-of-way shown as "Oreg Drive";
      ii. A portion of Cherryvale Road right-of-way;
      iii. Public Access easement for private road north of Oreg Drive between Lot 1 and 2;
      iv. Utility easements;
      v. Drainage and Detention Pond easements; and
      vi. Ditch easement.

   b. The construction of all public improvements necessary to serve the development, including, but not limited to, the following:

      i. Cherryvale Road roundabout, curb-and-gutter and sidewalk: and
      ii. A 2nd northbound left-turn lane on northbound Cherryvale Road;
      iii. Reconstruction of the raised medians at the Arapahoe Avenue and Cherryvale Road/Private Drive intersection;
      iv. Transit stop improvements on eastbound Arapahoe Avenue;
      v. Construction of Oreg Drive;
      vi. Installation of street lighting at the roundabout crosswalks;
      vii. All water, wastewater, and storm sewer facilities.

   c. A financial guarantee, in a form acceptable to the Director of Public Works, in an amount equal to the cost of constructing all public improvements necessary to serve the development.

   d. The removal of the existing structures on 1492 Cherryvale Road as well as 6160 and 6180 Arapahoe Road.

4. Prior to building permit application, the Applicant shall submit a **financial guarantee**, in a form acceptable to the Director of Public Works, in an amount equal to the cost of providing eco-

passes to the employees of the development for three years after the issuance of a certificate of occupancy as proposed in the Applicant's Transportation Demand Management (TDM) plan.

5. The building permit application for the building addition shall show that the building meets the energy efficiency requirements of the 2012 IECC as locally amended. Should the 2012 IECC not have been adopted at the time of building permit application, the building permit application for each building shall show that (1) the building exceeds the energy efficiency requirements of ANSI/ASHRAE/IESNA Standard 90.1 – 2010 Energy Standard for Buildings Except for Low-Rise Residential Buildings by at least 20 percent or (2) the building is designed to meet a set of prescriptive requirements, subject to review and approval of the city manager, that result in a building that is at least 20 percent more energy efficient than the 2012 IECC requires.

6. Prior to application for any building permits on Parcels A, B1, E2, and E3, the Applicant shall submit a Land Use Review application for a Site Review, subject to the approval of the City Manager.

Use Review Conditions: The following conditions apply to the Use Reviews for 5980 Arapahoe Road for approval of a Daycare Center with ≥ 50 children, an Adult Education Facility ≥ 20,000 square feet, and an Indoor Recreational or Athletic Facility.

1. The Applicant shall ensure that the development shall be in compliance with all approved plans dated July 1, 2013 on file in the City of Boulder Planning Department, except to the extent that the development may be modified by the conditions of this approval. Further, the Applicant shall ensure that the approved use is operated in compliance with the following restrictions:

   a. The Applicant shall operate the business in accordance with the written statement dated July 1, 2013, and management plan dated September 3, 2012 which is attached to this Notice of Disposition.

   b. The approved use shall be closed from 11:00 p.m. to 6:00 a.m. seven days per week.

2. The Applicant shall not expand or modify the approved use, except pursuant to Subsection 9-2-15(h), B.R.C. 1981.

Approved By:

David Driskell, Executive Director
Department of Community Planning and Sustainability

ATTACHMENTS:

Attachment A: Consistency Analysis with Review Criteria
Attachment B: Neighborhood comments and summary of meetings
Attachment C: Annexation Exhibits

Attachment D: Project Plans
Attachment E: Written Statement and Management Plan
Attachment F: Traffic and Parking Studies

Boulder Valley Comprehensive Plan Analysis

1.04 Principles of Social Sustainability

The city and county will strive to promote a healthy community and address social and cultural inequities by:

a) Respecting and valuing cultural and social diversity;

b) Ensuring the basic health and safety needs of all residents are met; and

c) Providing infrastructure and services that will encourage culturally and socially diverse communities to both prosper within and connect to the larger community.

1.16 Adapting to Limits on Physical Expansion

As the community expands to its planned physical boundaries, the city and county will increasingly emphasize preservation and enhancement of the physical, social and economic assets of the community. Cooperative efforts and resources will be focused on maintaining and improving the quality of life within defined physical boundaries, with only limited expansion of the city.

1.18 Growth Requirements

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

1.24 Annexation

The policies in regard to annexation to be pursued by the city are:

a) Annexation will be required before adequate facilities and services are furnished.

b) The city will actively pursue annexation of county enclaves, Area II properties along the western boundary, and other fully developed Area II properties. County enclave means an unincorporated area of land entirely contained within the outer boundary of the city. Terms of annexation will be based on the amount of development potential as described in (c), (d), and (e) of this policy. Applications made to the county for development of enclaves and Area II lands in lieu of annexation will be referred to the city for review and comment. The county will attach great weight to the city's response and may require that the landowner conform to one or more of the city's development standards so that any future annexation into the city will be consistent and compatible with the city's requirements.

c) Annexation of existing substantially developed areas will be offered in a manner and on terms and conditions that respect existing lifestyles and densities. The city will expect these areas to be brought to city standards only where necessary to protect the health and safety of the residents of the subject area or of the city. The city, in developing annexation plans of reasonable cost, may phase new facilities and services. The county, which now has jurisdiction over these areas, will be a supportive partner with the city in annexation efforts to the extent the county supports the terms and conditions being proposed.

d) In order to reduce the negative impacts of new development in the Boulder Valley, the city will annex Area II land with significant development or redevelopment potential only if the annexation provides a special opportunity or benefit to the city. For annexation considerations, emphasis will be given to the benefits achieved from the creation of permanently affordable housing. Provision of the following may also be considered a special opportunity or benefit: receiving sites for transferable development rights (TDRs), reduction of future employment projections, land and/or facilities for public purposes over and above that required by the city's land use regulations, environmental preservation, or other amenities determined by the city to be a special opportunity or benefit. Parcels that are proposed for annexation that are already developed and which are seeking no greater density or building size would not be required to assume and provide that same level of community benefit as vacant parcels unless and until such time as an application for greater development is submitted.

e) Annexation of substantially developed properties that allows for some additional residential units or commercial square footage will be required to demonstrate community benefit commensurate with their impacts. Further, annexations that resolve an issue of public health without creating additional development impacts should be encouraged.

f) There will be no annexation of areas outside the boundaries of the Boulder Valley Planning Area, with the possible exception of

annexation of acquired open space.

g) Publicly owned property located in Area III and intended to remain in Area III may be annexed to the city if the property requires less than a full range of urban services or requires inclusion under city jurisdiction for health, welfare and safety reasons.

h) The Gunbarrel Subcommunity is unique because the majority of residents live in the unincorporated area and because of the shared jurisdiction for planning and service provision among the county, the city, the Gunbarrel Public Improvement District and other special districts. Although interest in voluntary annexation has been limited, the city and county continue to support the eventual annexation of Gunbarrel. If resident interest in annexation does occur in the future, the city and county will negotiate new terms of annexation with the residents.

2.03 Compact Development Pattern

The city and county will, by implementing the Boulder Valley Comprehensive Plan, ensure that development will take place in an orderly fashion, take advantage of existing urban services, and avoid, insofar as possible, patterns of leapfrog, noncontiguous, scattered development within the Boulder Valley. The city prefers redevelopment and infill as compared to development in an expanded Service Area in order to prevent urban sprawl and create a compact community.

2.04 Open Space Preservation

The city and county will permanently preserve lands with open space values by purchasing or accepting donations of fee simple interests, conservation easements or development rights and other measures as appropriate and financially feasible. Open space values include use of land for urban shaping and preservation of natural areas, environmental and cultural resources, critical ecosystems, water resources, agricultural land, scenic vistas and land for passive recreational use.

2.05 Design of Community Edges and Entryways

Well-defined edges and entryways for the city are important because they support an understanding and appreciation of the city's image, emphasize and preserve its natural setting, and create a clear sense of arrival and departure. Natural features are most effective as edges, but public open land, major roadways or heavy tree planting can also function as community edges. As new areas are developed, the definition of a community edge will be a design priority. Major entryways into the Boulder Valley will be identified, protected and enhanced.

2.10 Preservation and Support for Residential Neighborhoods

The city will work with neighborhoods to protect and enhance neighborhood character and livability and preserve the relative affordability of existing housing stock. The city will seek appropriate building scale and compatible character in new development or redevelopment, appropriately sized and sensitively designed streets and desired public facilities and mixed commercial uses. The city will also encourage neighborhood schools and safe routes to school.

2.13 Protection of Residential Neighborhoods Adjacent to Non-residential Zones

The city and county will take appropriate actions to ensure that the character and livability of established residential neighborhoods will not be undermined by spill-over impacts from adjacent regional or community business zones or by incremental expansion of business activities into residential areas. The city and county will protect residential neighborhoods from intrusion of non-residential uses by protecting edges and regulating the impacts of these uses on neighborhoods.

2.14 Mix of Complementary Land Uses

The city and county will strongly encourage, consistent with other land use policies, a variety of land uses in new developments. In existing neighborhoods, a mix of land use types, housing sizes and lot sizes may be possible if properly mitigated and respectful of neighborhood character. Wherever land uses are mixed, careful design will be required to ensure compatibility, accessibility and appropriate transitions between land uses that vary in intensity and scale.

2.15 Compatibility of Adjacent Land Uses

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

2.21 Commitment to a Walkable and Accessible City

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

public spaces and amenities. The city will consider additional neighborhood-serving commercial areas where appropriate and supported by the neighbors they would serve.

2.22 Improve Mobility Grid

The walkability, bikeability and transit access should be improved in parts of the city that need better connectivity and mobility, for example, in East Boulder. This should be achieved by coordinating and integrating land use and transportation planning and will occur through both public investment and private development.

2.23 Trail Corridors/Linkages

In the process of considering development proposals, the city and county will encourage the development of paths and trails where appropriate for recreation and transportation, such as walking, hiking, bicycling or horseback riding.. Implementation will be achieved through the coordinated efforts of the private and public sectors.

2.30 Sensitive Infill and Redevelopment

With little vacant land remaining in the city, most new development will occur through redevelopment. The city will gear subcommunity and area planning and other efforts toward defining the acceptable amount of infill and redevelopment and standards and performance measures for design quality to avoid or adequately mitigate negative impacts and enhance the benefits of infill and redevelopment to the community and individual neighborhoods. The city will also develop tools, such as neighborhood design guidelines, to promote sensitive infill and redevelopment.

2.32 Physical Design for People

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

2.33 Environmentally Sensitive Urban Design

For capital improvements and private development, the city and county will strive to ensure that buildings, streets, utilities and other infrastructure are located and designed to protect natural systems, minimize energy use, urban heat island effects and air and water pollution, and support clean energy generation.

2.37 Enhanced Design for Private Sector Projects

Through its policies and programs, the city will encourage or require quality architecture and urban design in private sector development that encourages alternative modes of transportation, provides a livable environment and addresses the elements listed below.

a) The context. Projects should become a coherent part of the neighborhood in which they are placed. They should be preserved and enhanced where the surroundings have a distinctive character. Where there is a desire to improve the character of the surroundings, a new character and positive identity as established through area planning or a community involvement process should be created for the area. Special attention will be given to protecting and enhancing the quality of established residential areas that are adjacent to business areas.

b) Relationship to the public realm. Projects should relate positively to public streets, plazas, sidewalks, paths, ditches and natural features. Buildings and landscaped areas—not parking lots—should present a well-designed face to the public realm, should not block access to sunlight, and should be sensitive to important public view corridors. Future strip commercial development will be discouraged.

c) Transportation connections. Projects should provide a complete network of vehicular, bicycle and pedestrian connections both internal to the project and connecting to adjacent properties, streets and paths, including dedication of public rights-of-way and easements where required.

d) Human scale. Projects should provide pedestrian interest along streets, paths and public spaces.

e) Permeability. Projects should provide multiple opportunities to walk from the street into projects, thus presenting a street face that is permeable. Where appropriate, they should provide opportunities for visual permeability into a site to create pedestrian interest.

f) On-site open spaces. Projects should incorporate well-designed functional open spaces with quality landscaping, access to sunlight and places to sit comfortably. Where public parks or open spaces are not within close proximity, shared open spaces for a variety of activities should also be provided within developments.

g) Buildings. Buildings should be designed with a cohesive design that is comfortable to the pedestrian, with inviting entries that are visible from public rights of way. Design innovation and the use of high quality building materials are encouraged.

3.03 Natural Ecosystems

The city and county will protect and restore significant native ecosystems on public and private lands through land use planning, development review, conservation easements, acquisition and public land management practices. The protection and enhancement of biological diversity and habitat for federal endangered and threatened species and state, county and local species of concern will be emphasized. Degraded habitat may be restored and selected extirpated species may be reintroduced as a means of enhancing native flora and fauna in the Boulder Valley.

3.04 Ecosystem Connections and Buffers

The city and county recognize the importance of preserving large areas of unfragmented habitat in supporting the biodiversity of its natural lands and viable habitat for native species. The city and county will work together to preserve, enhance, restore and maintain undeveloped lands critical for providing ecosystem connections and buffers for joining significant ecosystems.

3.06 Wetland and Riparian Protection

Natural and human-made wetlands and riparian areas are valuable for their ecological and, where appropriate, recreational functions, including their ability to enhance water and air quality. Wetlands and riparian areas also function as important wildlife habitat, especially for rare, threatened and endangered plants, fish and wildlife. The city and county will continue to develop programs to protect and enhance wetlands and riparian areas in the Boulder Valley. The city will strive for no net loss of wetlands and riparian areas by discouraging their destruction or requiring
the creation and restoration of wetland and riparian areas in the rare cases when development is permitted and the filling of wetlands or destruction of riparian areas cannot be avoided.

3.10 Urban Environmental Quality

To the extent possible, the city and county will seek to protect the environmental quality of areas under significant human influence such as agricultural and urban lands and will balance human needs and public safety with environmental protection. The city will develop community wide programs and standards for new development and redevelopment so that negative environmental impacts will be mitigated and overall environmental quality of the urban environment will not worsen and may improve.

6.08 Transportation Impact

Traffic impacts from a proposed development that cause unacceptable community or environmental impacts or unacceptable reduction in level of service will be mitigated. All development will be designed and built to be multimodal, pedestrian-oriented and include strategies to reduce the vehicle miles traveled generated by the development. New development will provide continuous pedestrian, bike and transit systems through the development and connect these systems to those surrounding the development. The city and county will provide tools and resources to help businesses manage employee access and mobility and support public private partnerships, such as transportation management organizations, to facilitate these efforts.

6.12 Neighborhood Streets Connectivity

Neighborhood streets and alleys will be developed in a well connected and fine grained pattern to facilitate public access, to effectively disperse and distribute vehicle traffic and promote bike and pedestrian travel.

8.05 Diversity

The community values diversity as a source of strength and opportunity. The city and county will support the integration of diverse cultures and socio-economic groups in the physical, social, cultural and economic environments; promote opportunities for community engagement of diverse community members; and promote formal and informal representation of diverse community members in civic affairs.

1.27 ANNEXATION

VI. CITY CODE CRITERIA CHECKLIST

The policies in regard to annexation to be pursued by the city are:

a) Annexation will be required before adequate facilities and services are furnished.

The site is currently undeveloped and has no connections to city systems.

b) The city will actively pursue annexation of county enclaves, Area II properties along the western boundary, and other fully developed Area II properties. County enclave means an unincorporated area of land entirely contained within the outer boundary of the city. Terms of annexation will be based on the amount of development potential as described in (c), (d), and (e) of this policy. Applications made to the county for development of enclaves and Area II lands in lieu of annexation will be referred to the city for review and comment. The county will attach great weight to the city's response and may require that the landowner conform to one or more of the city's development standards so that any future annexation into the city will be consistent and compatible with the city's requirements.

c) Annexation of existing substantially developed areas will be offered in a manner and on terms and conditions that respect existing lifestyles and densities. The city will expect these areas to be brought to city standards only where necessary to protect the health and safety of the residents of the subject area or of the city. The city, in developing annexation plans of reasonable cost, may phase new facilities and services. The county, which now has jurisdiction over these areas, will be a supportive partner with the city in annexation efforts to the extent the county supports the terms and conditions being proposed.

Not applicable; the property is vacant and not substantially developed.

d) In order to reduce the negative impacts of new development in the Boulder Valley, the city will annex Area II land with significant development or redevelopment potential only if the annexation provides a special opportunity or benefit to the city. For annexation considerations, emphasis will be given to the benefits achieved from the creation of permanently affordable housing. Provision of the following may also be considered a special opportunity or benefit: receiving sites for transferable development rights (TDRs), reduction of future employment projections, land and/or facilities for public purposes over and above that required by the city's land use regulations, environmental preservation, or other amenities determined by the city to be a special opportunity or benefit. Parcels that are proposed for annexation that are already developed and which are seeking no greater density or building size would not be required to assume and provide that same level of community benefit as vacant parcels unless and until such time as an application for greater development is submitted.

e) Annexation of substantially developed properties that allows for some additional residential units or commercial square footage will be required to demonstrate community benefit commensurate with their impacts. Further, annexations that resolve an issue of public health without creating additional development impacts should be encouraged.

Not applicable; the property is vacant and not substantially developed.

f) There will be no annexation of areas outside the boundaries of the Boulder Valley Planning Area, with the possible exception of annexation of acquired open space.

The property is within Area II of the Boulder Valley Planning Area.

g) Publicly owned property located in Area III and intended to remain in Area III may be annexed to the city if the property requires less than a full range of urban services or requires inclusion under city jurisdiction for health, welfare and safety reasons.

The property is within Area II of the Boulder Valley Planning Area.

h) The Gunbarrel Subcommunity is unique because the majority of residents live in the unincorporated area and because of the shared jurisdiction for planning and service provision among the county, the city, the Gunbarrel Public Improvement District and other special districts. Although interest in voluntary annexation has been limited, the city and county continue to support the eventual annexation of Gunbarrel. If resident interest in annexation does occur in the future, the city and county will negotiate new terms of annexation with the residents.

Not applicable; the property is not within the Gunbarrel Subcommunity.

CRITERIA FOR SITE REVIEW

No site review application shall be approved unless the approving agency finds that:

(1) Boulder Valley Comprehensive Plan:

_√_(A) The proposed site plan is consistent with the purposes and policies of the Boulder Valley Comprehensive Plan.

There are a number of policies that are supported by the proposed project, particularly those related to social sustainability and education, including:

1.04 Principles of Social Sustainability
2.05 Design of Community Edges and Entryways
2.07 Design of Major Entryways
2.17 Variety of Activity Centers
2.19 Compatibility of Adjacent Land Uses
2.31 Design of Newly-Developing Areas
2.32 Physical Design for People
2.33 Environmentally Sensitive Urban Design
2.37 Enhanced Design for Private Sector Projects
3.01 Incorporating Ecological Systems into Planning
3.04 Ecosystem Connections and Buffers
4.05 Energy-Efficient Building Design
5.09 Role of Arts and Cultural Programs
6.10 Managing Parking Supply
6.12 Neighborhood Streets Connectivity
8.05 Diversity
8.07 Physical Health
8.10 Support for Community Facilities
8.16 Education Resource
8.18 The Arts

_n/a_(B) The proposed development shall not exceed the maximum density associated if the density of existing residential development within a three hundred-foot area surrounding the site is at or exceeds the density permitted in the Boulder Valley Comprehensive Plan, then the maximum density permitted on the site shall not exceed the lesser of:

> _n/a_(i) The density permitted in the Boulder Valley Comprehensive Plan, or,
>
> _n/a_(ii) The maximum number of units that could be placed on the site without waiving or varying any of the requirements of Chapter 9-8, "Intensity Standards," B.R.C. 1981.
>
> *Not applicable; no residential units are proposed.*

_√_(C) The proposed development's success in meeting the broad range of BVCP policies considers the economic feasibility of implementation techniques required to meet other site review criteria.

There are no specific Site Review criteria that, when implemented through the project, would render the project economically unfeasible.

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

_√_(A) Open Space: Open space, including, without limitation, parks, recreation areas, and playgrounds:

_√_(i) Useable open space is arranged to be accessible and functional;
Open space is arranged to be accessible and function for all residents and will serve both active and passive recreational activities through the provision of recreational activities with a combination of open play areas, formal and informal planting areas.

_n/a_(ii) Private open space is provided for each detached residential unit;

Not applicable, the proposed development will not incorporate detached residential units.

_√_(iii) The project provides for the preservation of or mitigation of adverse impacts to natural features, including, without limitation, healthy long-lived trees, significant plant communities, ground and surface water, wetlands, riparian areas, drainage areas, and species on the federal Endangered Species List, "Species of Special Concern in Boulder County" designated by Boulder County, or prairie dogs (Cynomys ludiovicianus) which is a species of local concern, and their habitat;

There are no environmentally sensitive species or habitats on the proposed Boulder Jewish Commons building site. Although some mature trees will be removed, the proposed landscaping will be a great improvement over what exists today and will provide for a significant increase in the amount of trees on-site. In addition, the development is intentionally clustered well away from the Sombrero Marsh, with the marsh being preserved in perpetuity.

_√_(iv) The open space provides a relief to the density, both within the project and from surrounding development;

The proposed project is clustered toward Arapahoe Avenue consistent with the development pattern of East Arapahoe. The open space around the building site will provide a visual and physical relief to density; as will the perpetual preservation of the Sombrero Marsh.

_√_(v) Open space designed for active recreational purposes is of a size that it will be functionally useable and located in a safe and convenient proximity to the uses to which it is meant to serve;

There are "active" play fields proposed on the west side of the site. They will have ornamental steel picket fencing to keep the playfields safe and allow convenience to the building, while still being far removed from the sensitive Marsh area.

_√_(vi) The open space provides a buffer to protect sensitive environmental features and natural areas; and

The open space adjacent to the building will be far removed from the Sombrero Marsh, but the Marsh itself is planned to be protected by a conservation easement that will have restrictions on use near the marsh at a ridge line that moves natural drainage flows toward the marsh.

_n/a_(vii) If possible, open space is linked to an area-or city-wide system.

Not applicable. There is no established area-wide or city-wide open space system in the area with the

exception of the multi-use path constructed on Arapahoe Avenue that connect to other paths.

_n/a_ (B) *Open Space in Mixed Use Developments (Developments that contain a mix of residential and non-residential uses)*

_√_ (C) *Landscaping*

_√_ (i) The project provides for aesthetic enhancement and a variety of plant and hard surface materials, and the selection of materials provides for a variety of colors and contrasts and the preservation or use of local native vegetation where appropriate;

The proposed landscape and streetscape will enhance the existing degraded field by creating clusters and rows of shade trees along with a variety of plant materials. There are also other landscape accents and surface materials proposed throughout the developed portion of the project to add variety and color.

_√_ (ii) Landscape design attempts to avoid, minimize, or mitigate impacts to important native species, plant communities of special concern, threatened and endangered species and habitat by integrating the existing natural environment into the project;

The Sombrero Marsh will be protected through annexation, and thus the development considered for this Site Review application is clustered far away from the Marsh to preserve this important ecological resource.

_√_ (iii) The project provides significant amounts of plant material sized in excess of the landscaping requirements of Section 9-9-10, "Landscaping and Screening Standards" and Section 9-9-11, "Streetscape Design Standards," B.R.C. 1981; and

The proposed landscape and streetscape plans will contain appropriately sized materials in excess of applicable landscape requirements and will be verified at the time of Technical Document Review.

_√_ (iv) The setbacks, yards, and useable open space along public rights-of-way are landscaped to provide attractive streetscapes, to enhance architectural features, and to contribute to the development of an attractive site plan.

The proposed landscape and streetscape plans will be a significant improvement over what currently exists on-site and will provide for a variety of plant and hard surface materials to provide a pleasant pedestrian environment both along Arapahoe Avenue and Cherryvale Road; as well as the new roadway connection through the site.

_√_ (D) *Circulation:* Circulation, including, without limitation, the transportation system that serves the property, whether public or private and whether constructed by the developer or not:

_√_ (i) High speeds are discouraged or a physical separation between streets and the project is provided;

Among the traffic calming proposals within the application is the plan for a traffic circle along Cherryvale Road. The intent in this traffic circle is to discourage high speeds both existing and as part of the

additional traffic that may occur with the proposed project. In addition, once into the site, the applicant has proposed rows of street trees along the new roadway of Oreg Drive which will also help to calm traffic by creating a framed street with an alee of trees that is known to slow vehicular traffic.

_√_ (ii) Potential conflicts with pedestrians and vehicles are minimized;

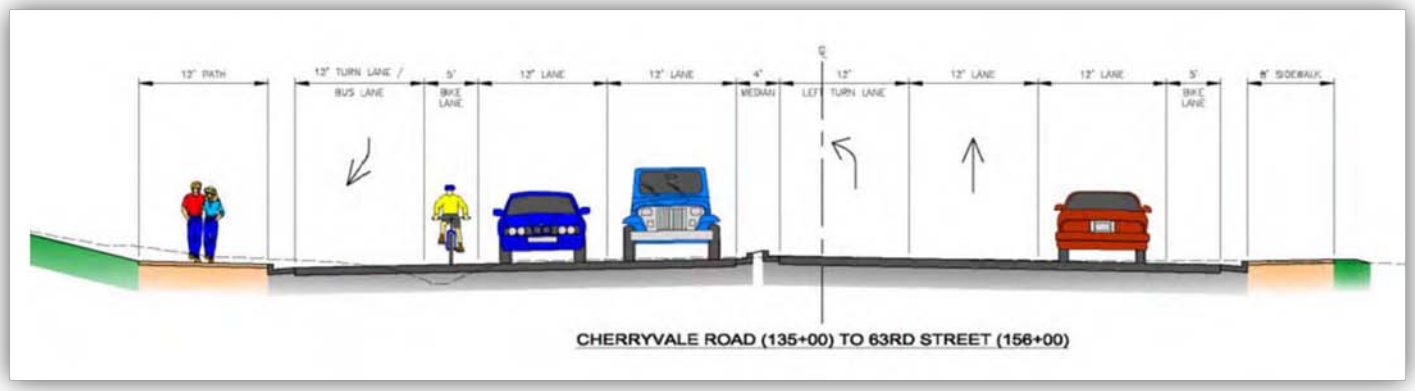
A detached sidewalk is planned along Cherryvale Road (where none exists today) and along the newly planned Oreg Drive which will inherently move the pedestrians away from moving vehicles.

_√_(iii) Safe and convenient connections accessible to the public within the project and between the project and existing and proposed transportation systems are provided, including, without limitation, streets, bikeways, pedestrian ways and trails;

Connections to transportation systems, streets, bikeways, pedestrian ways and trails are safe, convenient, and accessible through the site through a series of interconnected walkways out to Cherryvale Road and Arapahoe Avenue which both connect to the wider street network of East Boulder.

_√_(iv) Alternatives to the automobile are promoted by incorporating site design techniques, land use patterns, and supporting infrastructure that supports and encourages walking, biking, and other alternatives to the single-occupant vehicle;

A new transit stop is planned on the southeast corner of Arapahoe Avenue and Cherryvale Road that will provide a convenient stop for the Jump bus that travels along Arapahoe Avenue. In addition, the recently implemented improvements to Arapahoe Avenue by the Colorado Department of Transportation (CDOT) were planned to augment alternatives to SOVs as shown below as the Preferred Alternative from the CDOT.



_√_(v) Where practical and beneficial, a significant shift away from single-occupant vehicle use to alternate modes is promoted through the use of travel demand management techniques;

The proposed TDM will provide a shift away from single-occupant vehicle use to alternate modes with the installation of bike racks and the provision of Eco Passes to encourage alternate modes of transit.

_√_(vi) On-site facilities for external linkage are provided with other modes of transportation, where applicable;

Visitor bike racks are planned on site to encourage external pedestrian and bicycle linkages.

_√_(vii) The amount of land devoted to the street system is minimized; and

There is no significant street system within the project, only the addition of a roadway that is intended to establish greater connectivity and break up super blocks in East Boulder.

_√_(viii) The project is designed for the types of traffic expected, including, without limitation, automobiles, bicycles, and pedestrians, and provides safety, separation from living areas, and control of noise and exhaust.

The site has been well-designed for the expected traffic needs. The access into the site will also provide broader traffic calming for Cherryvale Road, slowing traffic while not requiring stop and go travel. Bicyclists will be accommodated by a dedicated bike lane along Arapahoe and can enter the site from the less traveled north south street. Bike racks are provided in excess of the requirement on site. The site itself has detached walkways along the interior site streets with street trees to augment the separation to pedestrians.

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_√_(E) *Parking*

_√_(i) The project incorporates into the design of parking areas measures to provide safety, convenience, and separation of pedestrian movements from vehicular movements;

The parking layout includes walkways that are intended to direct pedestrian traffic through the parking lots.

_√_(ii) The design of parking areas makes efficient use of the land and uses the minimum amount of land necessary to meet the parking needs of the project;

The applicant provided a parking management plan that defined the types of uses anticipated and the parking needs to provide a realistic definition of the area needed for parking. In addition, there will be alternating times when the parking lot is utilized given the various uses that would occur during the hours of operation.

_√_(iii) Parking areas and lighting are designed to reduce the visual impact on the project, adjacent properties, and adjacent streets; and

The parking is designed to be internal to the site, thus not visible from Arapahoe Avenue and minimally visible from Cherryvale Road. Lighting will be evaluated through the Technical Document Review processes, a condition of approval for the Site Review.

_√_(iv) Parking areas utilize landscaping materials to provide shade in excess of the requirements

in Subsection 9-9-6(d), "Parking Area Design Standards," and Section 9-9-12, “Parking Lot Landscaping Standards,” B.R.C. 1981.

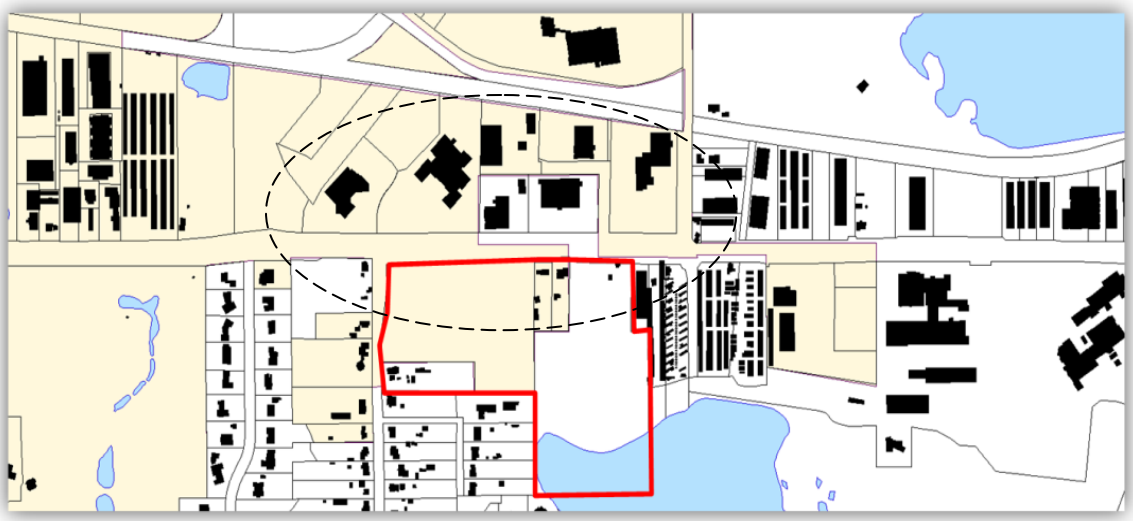
Trees are placed with a 25 to 30 foot on-center spacing within the parking area that will create a solid canopy in several years; shrubs are also provided within parking lot islands, along with double plantings of trees on the islands to help reduce the heat island effect.

__√__(F) *Building Design, Livability, and Relationship to the Existing or Proposed Surrounding Area*

__√__(i) The building height, mass, scale, orientation, and configuration are compatible with the existing character of the area or the character established by an adopted plan for the area;

As can be seen in the figure ground map comparison below of the existing versus proposed, the building would be located in an area along east Arapahoe Avenue where there are existing large floor plate buildings including several auto dealerships, along with light industrial manufacturing.

Existing



Proposed

√ (ii) The height of buildings is in general proportion to the height of existing buildings and the proposed or projected heights of approved buildings or approved plans for the immediate area;

The proposed one- to two-story building is compatible in the context where one- and two-story buildings exist today. The building relates more to Arapahoe Avenue rather than the residential located across the site to the south and west, and the building is more than a football field's length from the nearest residential. Therefore, the building relates well to the existing buildings in the immediate context.

√ (iii) The orientation of buildings minimizes shadows on and blocking of views from adjacent properties;

The building is located close to Arapahoe Avenue, adjacent properties to the east of the building are all under common ownership of the Boulder Jewish Commons and part of the entry from Arapahoe Avenue. The buildings across Arapahoe Avenue are located approximately200 feet away from the building, thus allowing ample solar access and views.

√ (iv) If the character of the area is identifiable, the project is made compatible by the appropriate use of color, materials, landscaping, signs, and lighting;

The character of the East Arapahoe Avenue area is eclectic. The primary characteristic that is consistent in the area is the relatively large floor plates of the nearby industrial buildings. However, the building's exterior is proposed with high quality, durable materials that include stone, brick, Glulam wood beams on a barrel roof and metal panels.

√ (v) Buildings present an attractive streetscape, incorporate architectural and site design elements appropriate to a pedestrian scale, and provide for the safety and convenience of pedestrians;

The proposed elevation facing Arapahoe Avenue has windows and a primary entryway facing the street. Similarly, the building when viewed from Cherryvale (west elevation shown above) has ample fenestration. Site design elements include walkways from the public realm into the building augmented with landscape shrub massings and rows of ornamental trees.

√ (vi) To the extent practical, the project provides public amenities and planned public facilities;

The applicant is constructing a traffic circle on Cherryvale Road for traffic calming to benefit the public. In addition, the project is an educational and cultural facility open to member of the public.

_n/a_(vii) For residential projects, the project assists the community in producing a variety of housing types, such as multi-family, townhouses, and detached single-family units as well as mixed lot sizes, number of bedrooms, and sizes of units;

_n/a_(viii) For residential projects, noise is minimized between units, between buildings, and from either on-site or off-site external sources through spacing, landscaping, and building materials;

_√_ (ix) A lighting plan is provided which augments security, energy conservation, safety, and aesthetics;

To be provided through the Technical Document Review application process as a condition of Site Review approval.

_√_ (x) The project incorporates the natural environment into the design and avoids, minimizes, or mitigates impacts to natural systems;

The intent in clustering the development of the site toward Arapahoe Avenue and away from Sombrero Marsh, with a Conservation Easement proposed over the area of the property that contains the marsh is entirely to minimize and avoid impacts to the marsh.

_√_ (xi) Cut and fill are minimized on the site, the design of buildings conforms to the natural contours of the land, and the site design minimizes erosion, slope instability, landslide, mudflow or subsidence, and minimizes the potential threat to property caused by geological hazards.

There is no significant grading cut or fill proposed on the site. Similarly, there are no known geologic hazards on the site.

_√_ (xi) Buildings minimize or mitigate energy use; support on-site renewable energy generation and/or energy management systems; construction wastes are minimized; the project mitigates urban heat island effects; and the project reasonably mitigates or minimizes water use and impacts on water quality.

As a condition of site review approval, the applicant is required to comply with IECC (International Energy Conservation Code) 2012 standards plus 20 percent.

_√_ (xii) Exteriors of buildings present a sense of permanence through the use of authentic materials such as stone, brick, wood, metal or similar products and building material detailing;

As noted in "(v)" above, the buildings utilize authentic materials including stone, brick wood and metal.

_√_ (xiii) Cut and fill are minimized on the site, the design of buildings conforms to the natural contours of the land, and the site design minimizes erosion, slope instability, landslide, mudflow

or subsidence, and minimizes the potential threat to property caused by geological hazards;

See criterion "(x)" above. It is also important to note that the site is essentially flat, with a very slight cross slope from northwest to southeast. However, within the southeast quadrant of the site, there is a slight ridgeline that creates a separation in drainage trends with drainage on the south side of the ridge (and far away from the developed portion of the site) moving toward the Marsh.

_n/a_(xiv) In the urbanizing areas along the Boulder Valley Comprehensive Plan boundaries between Area II and Area III, the building and site design provide for a well-defined urban edge; and

Not applicable to this property, far removed from Area III, and with the majority of the development envelope within Area I as shown below.

_n/a_(xv) In the urbanizing areas located on the major streets shown on the map in Appendix A of this title near the Boulder Valley Comprehensive Plan boundaries between Area II and Area III, the buildings and site design establish a sense of entry and arrival to the City by creating a defined urban edge and a transition between rural and urban areas

Not applicable to an Area I property.

_√_(G) *Solar Siting and Construction:* For the purpose of ensuring the maximum potential for utilization of solar energy in the city, all applicants for residential site reviews shall place streets, lots, open spaces,

and buildings so as to maximize the potential for the use of solar energy in accordance with the following solar siting criteria:

_√_(i) *Placement of Open Space and Streets:* Open space areas are located wherever practical to protect buildings from shading by other buildings within the development or from buildings on adjacent properties.

The lot in which the building is proposed is nearly 10 acres in size. Given the size of the site, and the distance from any potentially impacted buildings, this criteria is met.

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

The proposed building configuration places the longest part of the building walls facing south to maximize passive solar access.

_√_(iii) *Building Form:* The shapes of buildings are designed to maximize utilization of solar energy. Buildings shall meet the solar access protection and solar siting requirements of Section 9-9-17, "Solar Access," B.R.C. 1981.

The building roof top will provide ample opportunity for roof top solar collection. The roof structure will be designed to accommodate roof top equipment per the solar access ordinance.

_√_(iv) *Landscaping:* The shading effects of proposed landscaping on adjacent buildings are minimized.

Street and landscape trees along the planned walkway and within the open space are deciduous. Therefore, during the winter months when solar gain is desired they are denuded of leaves, while during the summer months, they have a leafy canopy that provides much needed shade, reducing the heat island effect.

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

_n/a_(I) *Land Use Intensity Modifications*

_n/a_(J) *Additional Criteria for Floor Area Ratio Increase for Buildings in the BR-1 District*

CRITERIA FOR USE REVIEW: Adult Education Facility **≥ 20,000 square feet**

USE REVIEW Criteria, Section 9-2-15(e). No use review application will be approved unless the approving agency finds all of the following:

__√____ (1) Consistency with Zoning and Non-Conformity: The use is consistent with the purpose of the zoning district as set forth in Section 9-5-2(c), "Zoning Districts Purposes," B.R.C. 1981, except in the case of a non-conforming use;

The intent of the Residential Estate is for low density residential uses. Under section 9-6-1, B.R.C. 1981, "Schedule of Permitted Land Uses" an Adult educational facility with ≥ 20,000 square feet of floor area are allowed through Use Review.

__√____ (2) Rationale: The use either:

__√____ (A) Provides direct service or convenience to or reduces adverse impacts to the surrounding uses or neighborhood;

Because the facility is open to the general public, access to the educational and cultural activities are available both to the residents living within the county and within the city's limits.

__n/a___ (B) Provides a compatible transition between higher intensity and lower intensity uses;

__n/a___ (C) Is necessary to foster a specific city policy, as expressed in the Boulder Valley Comprehensive Plan, including, without limitation, historic preservation, moderate income housing, residential and non-residential mixed uses in appropriate locations, and group living arrangements for special populations; or

__n/a___ (D) Is an existing legal non-conforming use or a change thereto that is permitted under subsection (e) of this section;

__√____ 3) Compatibility: The location, size, design, and operating characteristics of the proposed development or change to an existing development are such that the use will be reasonably compatible with and have minimal negative impact on the use of nearby properties or for residential uses in industrial zoning districts, the proposed *development reasonably mitigates the potential negative impacts from nearby properties;*

The location of the building is approximately 350 feet (or 100 yards) from the nearest residential building. As such any impacts from the size or operating characteristics from the proposed development will have minimal negative impact on the use of the nearby properties. The proposed traffic circle reasonably mitigates the potential negative impacts that could be associated with the development's traffic, and the distance away from the residential mitigates any potential for noise.

__√____ (4) Infrastructure: As compared to development permitted under Section 9-6-1, "Schedule of Permitted Uses of Land," B.R.C. 1981, in the zone, or as compared to the existing level of impact of a non-conforming use, the proposed development will not significantly adversely affect the infrastructure of the surrounding area, including, without limitation, water, wastewater, and storm drainage utilities and streets;

The proposed project will be adequately served by utilities through the annexation of the adjacent parcels.

__√____ (5) Character of Area: The use will not change the predominant character of the surrounding area;

The predominant character of the surrounding area is eclectic. The location of the building oriented toward Arapahoe Avenue relates to surrounding development directly across Arapahoe where large floor plate auto dealerships and other light industrial buildings are located and surrounded by large parking areas. The addition of the attractively designed building will enhance the existing character of the area.

__n/a___ (6) Conversion of Dwelling Units to Non-Residential Uses: There shall be a presumption against approving the conversion of dwelling units in the residential zoning districts set forth in Subsection 9-5-2(c)(1)(a), B.R.C. 1981, to non-residential uses that are allowed pursuant to a use review, or through the change of one non-conforming use to another non-conforming use. The presumption against such a conversion may be overcome by a finding that the use to be approved serves another compelling social, human services, governmental, or recreational need in the community including, without limitation, a use for a day care center, park, religious assembly, social service use, benevolent organization use, art or craft studio space, museum, or an educational use.

There are no existing residential uses on the site that would be converted to non-residential uses.

CRITERIA FOR USE REVIEW: Daycare Center with **≥ 50 children**

USE REVIEW Criteria, Section 9-2-15(e). No use review application will be approved unless the approving agency finds all of the following:

__√____ (1) Consistency with Zoning and Non-Conformity: The use is consistent with the purpose of the zoning district as set forth in Section 9-5-2(c), "Zoning Districts Purposes," B.R.C. 1981, except in the case of a non-conforming use;

The intent of the Residential Estate is for low density residential uses. Under section 9-6-1, B.R.C. 1981, "Schedule of Permitted Land Uses" a Daycare Center with ≥ 50 children is permitted through Use Review.

__√____ (2) Rationale: The use either:

__√____ (A) Provides direct service or convenience to or reduces adverse impacts to the surrounding uses or neighborhood;

Because the daycare center will be open to the general public, access to a high quality daycare facility will be enhanced for residents in both East Boulder as well as the county residents.

__n/a___ (B) Provides a compatible transition between higher intensity and lower intensity uses;

__n/a___ (C) Is necessary to foster a specific city policy, as expressed in the Boulder Valley Comprehensive Plan, including, without limitation, historic preservation, moderate income housing, residential and non-residential mixed uses in appropriate locations, and group living arrangements for special populations; or

__n/a___ (D) Is an existing legal non-conforming use or a change thereto that is permitted under subsection (e) of this section;

__√____ 3) Compatibility: The location, size, design, and operating characteristics of the proposed development or change to an existing development are such that the use will be reasonably compatible with and have minimal negative impact on the use of nearby properties or for residential uses in industrial zoning districts, the proposed *development reasonably mitigates the potential negative impacts from nearby properties;*

The location of the building is approximately 350 feet (or 100 yards) from the nearest residential building. As such any impacts from the size or operating characteristics from the proposed development will have minimal negative impact on the use of the nearby properties. The proposed traffic circle reasonably mitigates the potential negative impacts that could be associated with the development's traffic, and the distance away from the residential mitigates any potential for noise.

__√____ (4) Infrastructure: As compared to development permitted under Section 9-6-1, "Schedule of Permitted Uses of Land," B.R.C. 1981, in the zone, or as compared to the existing level of impact of a non-conforming use, the proposed development will not significantly adversely affect the infrastructure of the surrounding area, including, without limitation, water, wastewater, and storm drainage utilities and streets;

The proposed project will be adequately served by utilities through the annexation of the adjacent parcels.

__√____ (5) Character of Area: The use will not change the predominant character of the surrounding area;

The predominant character of the surrounding area is eclectic. The location of the building oriented toward Arapahoe Avenue relates to surrounding development directly across Arapahoe where large floor plate auto dealerships and other light industrial buildings are located and surrounded by large parking areas. The addition of the attractively designed building will enhance the existing character of the area.

__n/a___ (6) Conversion of Dwelling Units to Non-Residential Uses: There shall be a presumption against approving the conversion of dwelling units in the residential zoning districts set forth in Subsection 9-5-2(c)(1)(a), B.R.C. 1981, to non-residential uses that are allowed pursuant to a use review, or through the change of one non-conforming use to another non-conforming use. The presumption against such a conversion may be overcome by a finding that the use to be approved serves another compelling social, human services, governmental, or recreational need in the community including, without limitation, a use for a day care center, park, religious assembly, social service use, benevolent organization use, art or craft studio space, museum, or an educational use.

There are no existing residential uses on the site that would be converted to non-residential uses. It is important to note, however, that use for a day care center is among the "compelling social needs" that would permit conversion.

CRITERIA FOR USE REVIEW: Indoor Recreation or Athletic Facility

USE REVIEW Criteria, Section 9-2-15(e). No use review application will be approved unless the approving agency finds all of the following:

__√____ (1) Consistency with Zoning and Non-Conformity: The use is consistent with the purpose of the zoning district as set forth in Section 9-5-2(c), "Zoning Districts Purposes," B.R.C. 1981, except in the case of a non-conforming use;

Parcel E1 is annexed and zoned Residential--Estate (RE). An indoor recreational or athletic facility use is not permitted within the RE zoning district under Table 6-1: Use Table, of Section 9-6-1, "Schedule of Permitted Uses," B.R.C. 1981. However, the City finds that allowing an indoor recreational or athletic facility use on Parcel E1 as a use is consistent with the Boulder Valley Comprehensive Plan land use map which allows in certain residential areas limited small neighborhood shopping facilities, offices or services through special review and finds that such use on Parcel E1 would provide a community benefit. The City, therefore, agrees, subject to City Council approval by ordinance, to allow indoor recreational or athletic facility uses on Parcel E-1 as an allowed use.

__√____ (2) Rationale: The use either:

__√____ (A) Provides direct service or convenience to or reduces adverse impacts to the surrounding uses or neighborhood;

Consistent with the BVCP land use map which allows in certain residential areas offices or services through special review, staff finds that such use on Parcel E1 would provide a community benefit. In addition, a fitness facility as is proposed is typically an accessory use to educational facilities. In that regard, the facility provides a direct service or convenience to the surrounding JCC u ses.

__n/a___ (B) Provides a compatible transition between higher intensity and lower intensity uses;

__n/a___ (C) Is necessary to foster a specific city policy, as expressed in the Boulder Valley Comprehensive Plan, including, without limitation, historic preservation, moderate income housing, residential and non-residential mixed uses in appropriate locations, and group living arrangements for special populations; or

__n/a___ (D) Is an existing legal non-conforming use or a change thereto that is permitted under subsection (e) of this section;

__√____ 3) Compatibility: The location, size, design, and operating characteristics of the proposed development or change to an existing development are such that the use will be reasonably compatible with and have minimal negative impact on the use of nearby properties or for residential uses in industrial zoning districts, the proposed *development reasonably mitigates the potential negative impacts from nearby properties;*

The location of the building is approximately 350 feet (or 100 yards) from the nearest residential building. As such any impacts from the size or operating characteristics from the proposed development will have minimal negative impact on the use of the nearby properties. The proposed traffic circle reasonably mitigates the potential negative impacts that could be associated with the development's traffic, and the distance away from the residential mitigates any potential for noise.

__√____ (4) Infrastructure: As compared to development permitted under Section 9-6-1, "Schedule of Permitted Uses of Land," B.R.C. 1981, in the zone, or as compared to the existing level of impact of a non-conforming use, the proposed development will not significantly adversely affect the infrastructure of the surrounding area, including, without limitation, water, wastewater, and storm drainage utilities and streets;

The proposed project will be adequately served by utilities through the annexation of the adjacent parcels.

__√____ (5) Character of Area: The use will not change the predominant character of the surrounding area;

The predominant character of the surrounding area is eclectic. The location of the building oriented toward Arapahoe Avenue relates to surrounding development directly across Arapahoe where large floor plate auto dealerships and other light industrial buildings are located and surrounded by large parking areas. The addition of the attractively designed building will enhance the existing character of the area.

__n/a____ (6) Conversion of Dwelling Units to Non-Residential Uses: There shall be a presumption against approving the conversion of dwelling units in the residential zoning districts set forth in Subsection 9-5-2(c)(1)(a), B.R.C. 1981, to non-residential uses that are allowed pursuant to a use review, or through the change of one non-conforming use to another non-conforming use. The presumption against such a conversion may be overcome by a finding that the use to be approved serves another compelling social, human services, governmental, or recreational need in the community including, without limitation, a use for a day care center, park, religious assembly, social service use, benevolent organization use, art or craft studio space, museum, or an educational use.

There are no existing residential uses on the site that would be converted to non-residential uses. It is important to note, however, that use for a day care center is among the "compelling social needs" that would permit conversion.

Boulder Jewish Commons Neighborhood Meetings

On Monday, December 3, 2007 a neighborhood meeting was held at Naropa
Neighbors in attendance: Judy Renfroe, Carol Riordan, Ernie Oram, Barry Schacht, Warren and Diana Smadbach, Bev Nelson, Sidway McKay, Dan Goldberg, Bethann and Jim Myers

The site plan was presented to the neighbors present by site plan architect, David Barrett. Attention was drawn to the changes to the site plan that were based upon feedback received at a neighborhood meeting in 2005. The site design now has the JCC further removed from the neighbors, up against Arapahoe. Questions and points raised by the public at the meeting focused primarily on traffic. Will there be a speed limit on the property? Will there be traffic calming devices on the internal road? What are the hours of operation for the different uses on the site? What about security on the site? You can feel the warmth and spirit of the project through the presentation.

On October 4, 2011 a meeting was held at Bonai Shalom, 1527 Cherryvale.
Neighbors in attendance: Anne Larson, Judy Renfroe, Warren Smadbeck, Morris and Barbara Miller

Butch Weaver offered opening comments about the status of the project. The current site plan was presented by Angie Milewski from BHA design, landscape architect/site plan designer. Architectural renderings of the JCC building were shown by Rebbeca Spears, lead architect. The neighbors comments included: The building design is quite attractive. The amount of land that has to be used for parking seems large.

From: Judrenfroe@aol.com [mailto:Judrenfroe@aol.com]
Sent: Tuesday, March 13, 2012 1:58 PM
To: Guiler, Karl
Subject: Re: BJC Status?

Karl,
Thanks.
There was an error in downloading some of it and I got a message that it could not be decompressed, although I could open two of the files, site plan and preliminary plat.

I did not see anything in the attachment part that I could open re the staff's response. Could you send that portion of it again. Thanks in advance.

I'm studying the site plan and preliminary plat you sent. Are there changes from the original that are not obvious?

I do have more questions.

1) First, re my question about the open space/environmental preserve area: As I recall, on the BVCP, the line between that and the Medium density was the existing large irrigation ditch. That is roughly 70 feet north of the NE corner of our property. Everything south of that ditch is part of the drainage area into the marsh and is a part of water runoff to the marsh. The site plan proposes that the outlot for preservation of the marsh be moved about 170 to 200 feet south of that. Not good.

Also, the aquatic vegetation line and the usual water level line is considerably larger than what is shown. What is shown is pretty much the low water mark.

And, doesn't moving that line to the south involve a change in the BVCP?

2) I was unable to figure out how deep the utility trenches would be. If they are into our groundwater, and are not properly plugged, that will be a huge problem.

3) Why does the City want a public street? How would that affect its design?

If it is not to be used as a cut through, but only to serve this development, why would it need to be public? Why would the City want to pay for the maintenance?

I can also understand the need for it to be closed if there are security threats. That can't happen if it is public. Not only does their security affect us as well, making it public will make it more difficult to deal with trespassers into the undeveloped parts, the marsh, and the neighborhood properties (namely, us).

4) Re the raised cross walk, one of our neighborhood was told that the County had planned one, and even begun the installation of the approaches which you can see along Cherryvale, but the City didn't want it. If that is true, I'd like to ask the City to reconsider.

5) A connection to 63rd? What would the alignment for that be? Would it add more cut through traffic?

It appears to me (from daily trips per sq ft of building used by the developers traffic analysis) that traffic at build out, not counting the undeveloped lots, and not considering cut through traffic, would approximate half of existing Cherryvale traffic. That is unconscionable, if it is correct.

6) At the neighborhood meeting, we were told that the initial traffic count (2013 initial phase) would be about 1100 plus trips per day. The traffic study it seems to say that it would be about 1500 plus at the 2013 stage. Of the 1100 plus, about 650 were predicted to go past our house on the north side. I assume that would not be about 900 initially along the north side of our house with the new numbers.

I'm not asking that you respond to these traffic issues in detail. I'm just raising the issues.

There are times I wonder if a combination low/medium density residential development would be less damaging than the way this appears to be heading.

Thanks again.

Judy Renfroe

In a message dated 3/13/2012 9:29:26 A.M. Mountain Daylight Time, GuilerK@bouldercolorado.gov writes:

Judy,

I've provided answers to your questions below. I have also attached the applicant's plans and city's review comments for your review. Please let me know if you have any additional questions.

Karl

Karl Guiler, AICP
Planner II
City of Boulder Department of Community Planning & Sustainability
Planning & Development Services Center
1739 Broadway, 3rd Floor
Boulder, CO 80306-0791Phone: 303.441.4236 Fax: 303.441.3241
Email: guilerk@bouldercolorado.gov

From: Judrenfroe@aol.com [mailto:Judrenfroe@aol.com]
Sent: Monday, March 12, 2012 6:12 PM
To: Guiler, Karl
Subject: BJC Status?

Karl,
Can you tell me the current status of the BJC application? Also a couple of other questions:

1. Has there been any discussion of changing the "beltway" road design?

Yes. The city is looking to have the roadway be a public right-of-way which would change the design. In our discussion with the applicant yesterday, they were looking to move the street northward.

2. Are there any more detailed plans from which we could determine the elevation of the road, and what the purpose of the retaining wall is? Is the road elevated? Is there ANY berm between the road and the property to the south?

I don't believe there is a berm proposed nor is the roadway elevated. Please see the attached plans.

3. Also is there any discussion re the boundary for land set aside for the marsh being so much farther south than it is on the BVCP?

The applicant is proposing to preserve the marsh in an outlot. The city is requested that it be deeded to the city fee simple. Please clarify your question regarding the boundary.

4. What happened to the possibility that the main entrance might be on Arapahoe Road, not Cherryvale?

The applicant is having difficulties with CDOT along Arapahoe with restricted turn movements. They are looking to make the Cherryvale entry the main entry. The city is also looking into the possibility of providing a connection from 63rd into the site as an alternative access point.

5. Is there any possibility of a raised crosswalk across Cherryvale? It would serve two purposes. I would connect the Synagogue for safer access, and it would be a safer connection for people using the new walking path to get to the bus stop on Arapahoe.

I don't believe the applicant is looking to do a raised crosswalk nor do I believe the county would approve a raised crosswalk along Cherryvale. I will have to check with our transportation division on this.

6. In terms of the two lots and an outlot, is there any issue re parts of the undeveloped lots having different zonings?

It is possible that different zoning districts would be applied based on the fact that different BVCP land uses apply to the site (i.e., Low Density and Medium Density Residential). The eastern parts of the site could be zoned Medium Density Residential to be consistent with the BVCP.

7. It appears that the zoning requested in the public notice has changed. Has it?

Upon initial submittal, the applicant was unclear about the requested zoning. See the city reviewer comments.

8. I would like to request that 1492 be annexed under RR-1 Zoning to be consistent with the Comprehensive Plan, and the rest of Cherryvale other than the already annexed corner property. I am very concerned that it is the intent to annex the rest of Cherryvale under RE zoning.

Staff agrees that RR zoning should be applied to 1492 Cherryvale and this is reflected in the reviewer comments. I don't believe the applicant is opposed to this. If they were to propose RE zoning, it would require a change to the BVCP land use map which is a more involved process.

Please advise whether or not that is the intent.

Judy Renfroe

From: Judrenfroe@aol.com [mailto:Judrenfroe@aol.com]
Sent: Wednesday, February 22, 2012 4:15 PM
To: Guiler, Karl
Cc: sps851@comcast.net
Subject: Re: Comments on BJC proposal

I forgot to mention that my last email addressed our concerns, and does not reflect the many things we like about this plan and the effort of the BJC to put the buildings and intensive uses on Arapahoe. That is very much appreciated, and I apologize if my prior email did not adequately reflect that. I was in a hurry to get it written and sent.

Please be sure to forward this follow up to the BJC as well as my concerns.

Judy Renfroe

PARCEL A

ANNEXATION PORTION DESCRIPTION:

A PORTION OF A FUTURE ANNEXATION PARCEL LOCATED IN THE NORTHEAST QUARTER OF SECTION 34, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 34, FROM WHENCE THE NORTH QUARTER CORNER LIES S89°56'35"W, 2,620.17 FEET;

THENCE S00°19'26"E, 30.00 FEET;

THENCE S89°56'35"W, 1,766.96 FEET;

THENCE S00°19'26"E, 573.14 FEET TO A POINT ON THE SOUTHERLY LINE OF AN ANNEXATION TO THE CITY OF BOULDER (ORDINANCE NUMBER 4665, RECORDED 05/11/1982 AT RECEPTION NO. 494072);

THENCE ALONG SAID SOUTHERLY ANNEXATION LINE N89°56'35"E, 9.46 FEET TO THE POINT OF BEGINNING;

THENCE CONTINUING ALONG SOUTHERLY AND WESTERLY ANNEXATION LINE OF ORDINANCE 4665 THE FOLLOWING TWO COURSES:

1) N89°56'35"E 527.54 FEET;
2) S00°19'26"E, 152.24 FEET TO THE NORTHEASTERLY CORNER OF A PARCEL DESCRIBED IN A DEED RECORDED 06/02/2008 AT RECEPTION NO. 2933717;

THENCE S89°56'35"W, 537.00 FEET ALONG THE NORTHERLY LINES OF SAID PARCEL AND PARCEL DESCRIBED IN A DEED RECORDED 06/02/2008 AT RECEPTION NO. 2933716 EXTENDED WESTERLY TO THE EASTERLY RIGHT OF WAY LINE OF CHERRYVALE ROAD (AS OF DECEMBER, 2011);

THENCE N00°20'12"W, 25.33 FEET ALONG SAID EASTERLY RIGHT OF WAY LINE TO A POINT ON THE SOUTHERLY LINE OF AN ANNEXATION TO THE CITY OF BOULDER (ORDINANCE NUMBER 5028, RECORDED 01/30/1987 AT RECEPTION NO. 1754291;

THENCE ALONG THE SOUTHERLY AND EASTERLY ANNEXATION LINES OF ORDINANCE 5028 THE FOLLOWING TWO COURSES:

1) N89°39'48"E, 9.49 FEET;
2) N00°20'12"W, 126.86 FEET TO THE POINT OF BEGINNING.

NOTE: THIS DESCRIPTION IS NOT TO BE USED FOR ANY TYPE OF CONVEYANCE OR LEGAL PURPOSE. IT IS ONLY INTENDED TO REPRESENT THE AREA OF "BOULDER JEWISH COMMONS" CONTAINED WITHIN CITED ANNEXATION.

PORTION OF FUTURE 1492 CHERRYVALE ROAD ANNEXATION IN BOULDER JEWISH COMMONS

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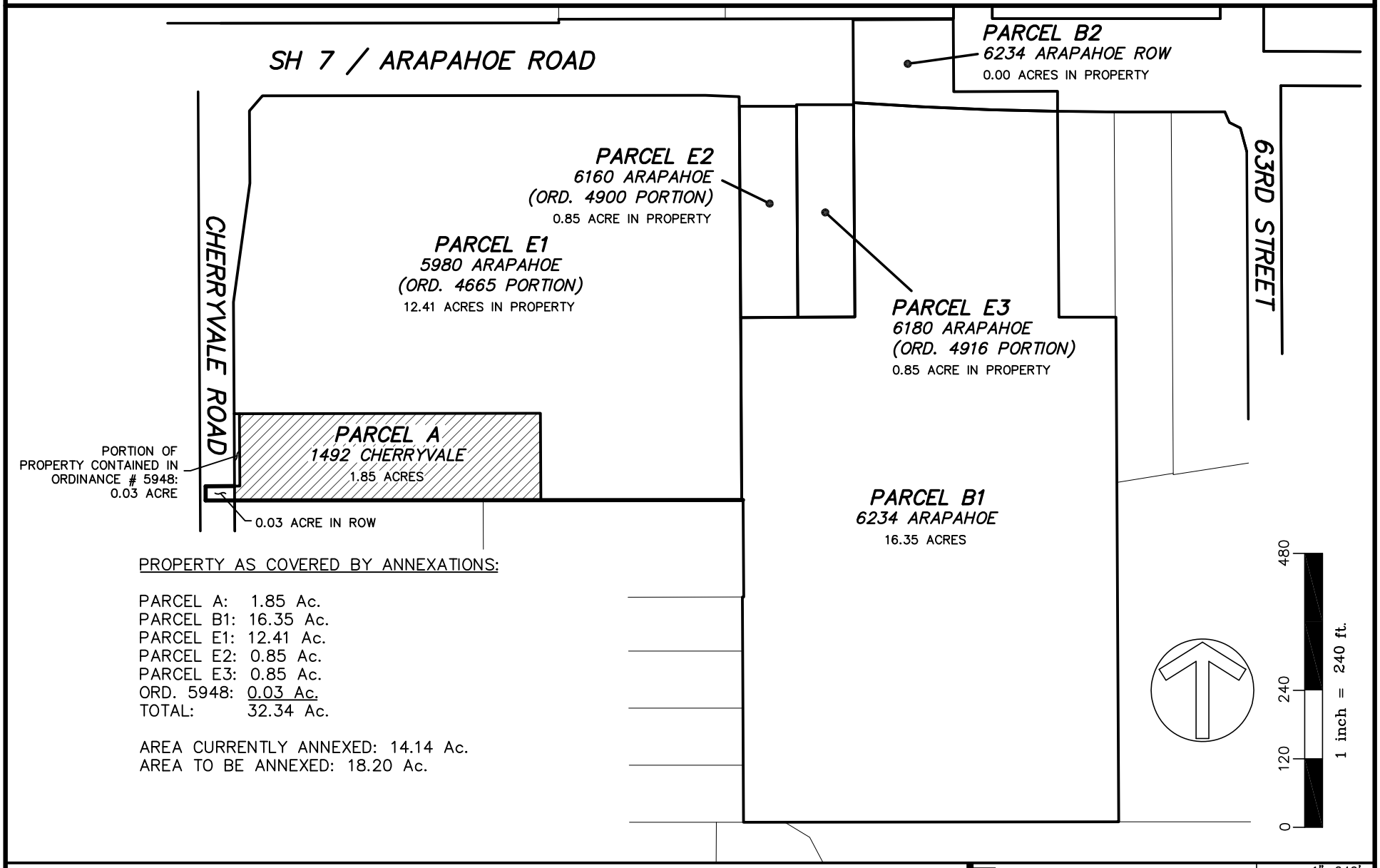
SCALE	HOR. N/A VERT. N/A
DESIGN/APPR.	
DRAWN BY	BO
DATE	08/29/13
SHEET	1 OF 2

FILE G:\23121\SURVEY\BJC EXISTING ANNEXATION AREAS IN BJC

PARCEL A



PROPERTY AS COVERED BY ANNEXATIONS:

PARCEL A:	1.85 Ac.
PARCEL B1:	16.35 Ac.
PARCEL E1:	12.41 Ac.
PARCEL E2:	0.85 Ac.
PARCEL E3:	0.85 Ac.
ORD. 5948:	0.03 Ac.
TOTAL:	32.34 Ac.

AREA CURRENTLY ANNEXED: 14.14 Ac.
AREA TO BE ANNEXED: 18.20 Ac.

PORTION OF FUTURE 1492 CHERRYVALE ROAD ANNEXATION IN BOULDER JEWISH COMMONS

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DATE	08/29/13
SHEET	2 OF 2

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PARCEL B1

ANNEXATION DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE NORTHEAST QUARTER OF SECTION 34, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 34;
THENCE N90°00'00"W, 331.00 FEET ALONG THE NORTHERLY LINE OF THE NORTHEAST QUARTER OF SECTION 34 TO THE NORTHEASTERLY CORNER OF A PARCEL OF LAND CONVEYED TO THE COLORADO DEPARTMENT OF HIGHWAYS IN A DOCUMENT RECORDED 07/22/1966 AT RECEPTION NO. 821786;
THENCE S00°00'00"E, 74.95 FEET ALONG THE EASTERLY LINE OF SAID PARCEL TO THE SOUTHEASTERLY CORNER OF PARCEL "254B" AS DESCRIBED IN DOCUMENT RECORDED AT RECEPTION NO. 3145809 (RIGHT OF WAY DEDICATED TO THE COLORADO DEPARTMENT OF TRANSPORTATION) AND THE POINT OF BEGINNING;

THENCE CONTINUING S00°00'00"E 360.65 FEET;
THENCE N90°00'00"E, 100.00 FEET;
THENCE S00°00'00"E, 884.40 FEET;
THENCE S90°00'00"W, 657.48 FEET;
THENCE N00°00'00"W, 394.62 FEET TO THE SOUTHWESTERLY CORNER OF A PARCEL DESCRIBED IN A DEED RECORDED 06/02/2008 AT RECEPTION NO. 2399717;
THENCE ALONG THE PERIMETER OF SAID PARCEL THE FOLLOWING THREE COURSES:
1) N90°00'00"E, 2.50 FEET;
2) N00°00'00"W, 169.98 FEET;
3) N89°43'59"W, 2.50 FEET TO A POINT ON THE EASTERLY LINE OF AN ANNEXATION TO THE CITY OF BOULDER (ORDINANCE NUMBER 4665, RECORDED 05/11/1982 AT RECEPTION NO. 494072);
THENCE N00°00'00"W, 319.78 FEET ALONG SAID EASTERLY ANNEXATION LINE TO THE SOUTHWESTERLY CORNER OF AN ANNEXATION TO THE CITY OF BOULDER (ORDINANCE NUMBER 4900, RECORDED 05/23/1985 AT RECEPTION NO. 689989);
THENCE N90°00'00"E, 100.00 FEET ALONG THE SOUTHERLY ANNEXATION LINE TO THE SOUTHWESTERLY CORNER OF AN ANNEXATION TO THE CITY OF BOULDER (ORDINANCE NUMBER 4916, RECORDED 07/23/1985 AT RECEPTION NO. 701439);
THENCE ALONG THE SOUTHERLY AND EASTERLY LINES OF SAID ANNEXATION THE FOLLOWING TWO COURSES:
1) N90°00'00"E, 100.00;
2) N00°00'00"W, 378.13 FEET TO THE SOUTHWESTERLY CORNER OF PARCEL "254B" AS DESCRIBED IN DOCUMENT RECORDED AT RECEPTION NO. 3145809 (RIGHT OF WAY DEDICATED TO THE COLORADO DEPARTMENT OF TRANSPORTATION);
THENCE ALONG THE SOUTHERLY LINE OF SAID PARCEL "254B: THE FOLLOWING COURSE:
357.94 FEET ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 6,735.00 FEET, A CENTRAL ANGLE OF 03°02'42", AND A CHORD BEARING S87°12'02"E, 357.90 FEET TO THE POINT OF BEGINNING.

FUTURE 6234 ARAPAHOE
ANNEXATION IN BOULDER JEWISH COMMONS

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VERT.	N/A
DESIGN/APPR.	
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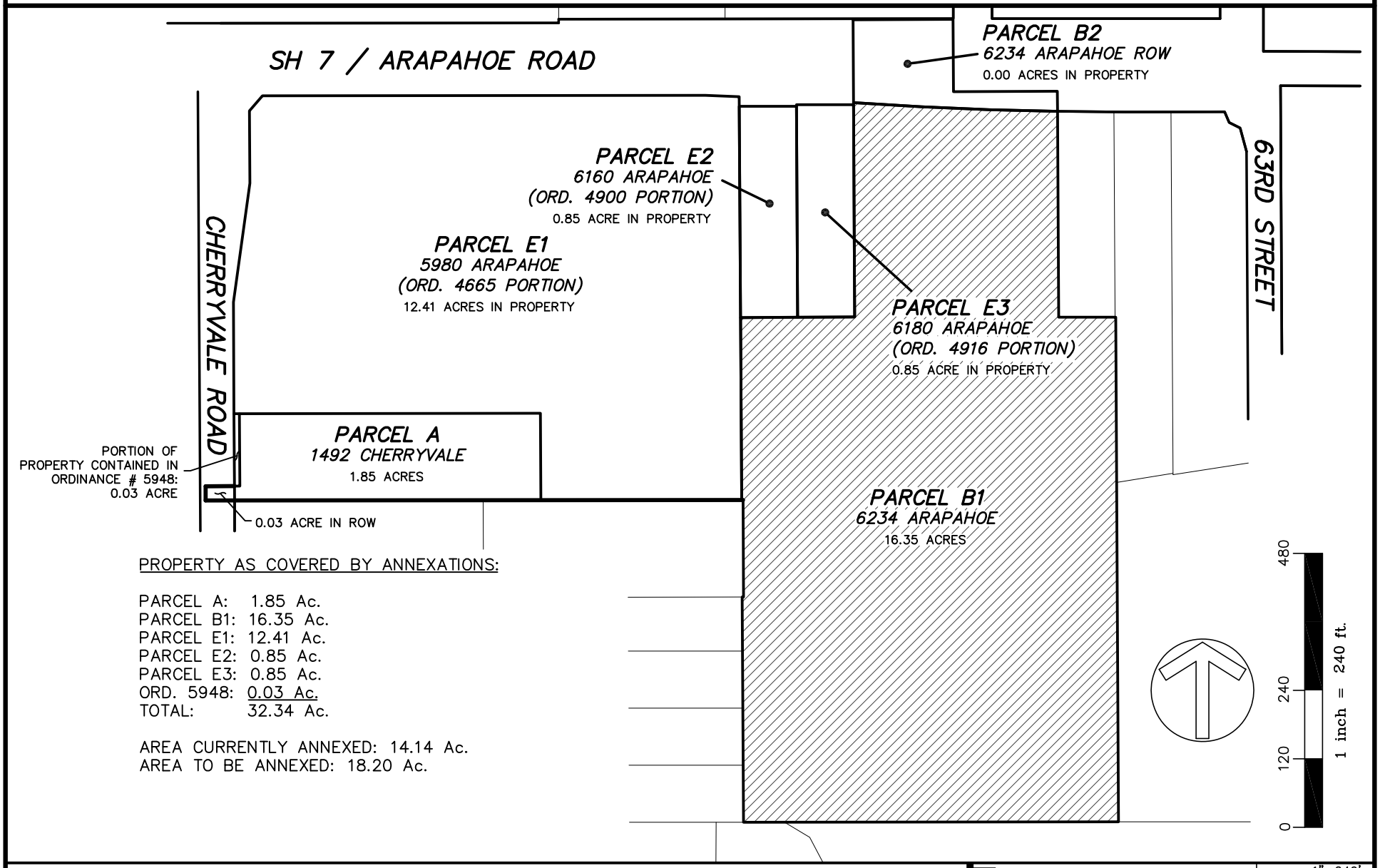
DATE	08/29/13
SHEET	1 OF 2

FILE G:\23121\SURVEY\BJC EXISTING ANNEXATION AREAS IN BJC

PARCEL B1



PROPERTY AS COVERED BY ANNEXATIONS:

PARCEL A:	1.85 Ac.
PARCEL B1:	16.35 Ac.
PARCEL E1:	12.41 Ac.
PARCEL E2:	0.85 Ac.
PARCEL E3:	0.85 Ac.
ORD. 5948:	0.03 Ac.
TOTAL:	32.34 Ac.

AREA CURRENTLY ANNEXED: 14.14 Ac.
AREA TO BE ANNEXED: 18.20 Ac.

FUTURE 6234 ARAPAHOE ANNEXATION IN BOULDER JEWISH COMMONS

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DATE	08/29/13
SHEET	2 OF 2

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PARCEL B2

ANNEXATION DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 27 AND THE NORTHEAST QUARTER OF SECTION 34, BOTH IN TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 34;
THENCE N90°00'00"W, 513.01 FEET ALONG THE NORTHERLY LINE OF THE NORTHEAST QUARTER OF SECTION 34 (BASIS OF BEARINGS) TO THE WESTERLY LINE OF AN ANNEXATION TO THE CITY OF BOULDER (ORDINANCE NUMBER 7810, RECORDED 10/24/2011 AT RECEPTION NO. 3178758) AND THE POINT OF BEGINNING;

THENCE ALONG THE WESTERLY AND SOUTHERLY LINES OF SAID ANNEXATION THE FOLLOWING TWO COURSES:

1) S00°00'00"E, 39.40 FEET;
2) S90°00'00"E, 182.01 FEET

THENCE S00°00'00"E, 35.55 FEET TO THE SOUTHWESTERLY CORNER OF PARCEL "254B" AS DESCRIBED IN DOCUMENT RECORDED AT RECEPTION NO. 3145809 (RIGHT OF WAY DEDICATED TO THE COLORADO DEPARTMENT OF TRANSPORTATION);

THENCE ALONG THE SOUTHERLY LINE OF SAID PARCEL "254B": THE FOLLOWING COURSE:
357.94 FEET ALONG THE ARC OF A NON-TANGENT CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 6,735.00 FEET, A CENTRAL ANGLE OF 03°02'42", AND A CHORD BEARING N87°12'02"W, 357.90 FEET TO THE EASTERLY LINE OF AN ANNEXATION TO THE CITY OF BOULDER (ORDINANCE NUMBER 4916, RECORDED 07/23/1985 AT RECEPTION NO. 701439)

THENCE N90°00'00"W, 139.72 FEET ALONG SAID EASTERLY ANNEXATION LINE TO THE NORTHEASTERLY CORNER OF ANNEXATION;

THENCE CONTINUING N90°00'00"W, 5.25 FEET TO THE A POINT 87.50 FEET NORTH OF THE SOUTHERLY LINE OF THE SOUTHEAST QUARTER OF SECTION 27;

THENCE ALONG A LINE PARALLEL WITH AND 87.50 FEET NORTH OF SAID SOUTHERLY LINE OF THE SOUTHEAST QUARTER OF SECTION 27 TO THE NORTHWESTERLY CORNER OF THE ANNEXATION TO THE CITY OF BOULDER (ORDINANCE NUMBER 7810, RECORDED 10/24/2011 AT RECEPTION NO. 3178758);

THENCE ALONG THE WESTERLY LINE OF SAID ANNEXATION S00°00'00"E, 87.50 FEET TO THE POINT OF BEGINNING.

FUTURE 6234 ARAPAHOE ROW ANNEXATION

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DESIGN/APPR.	
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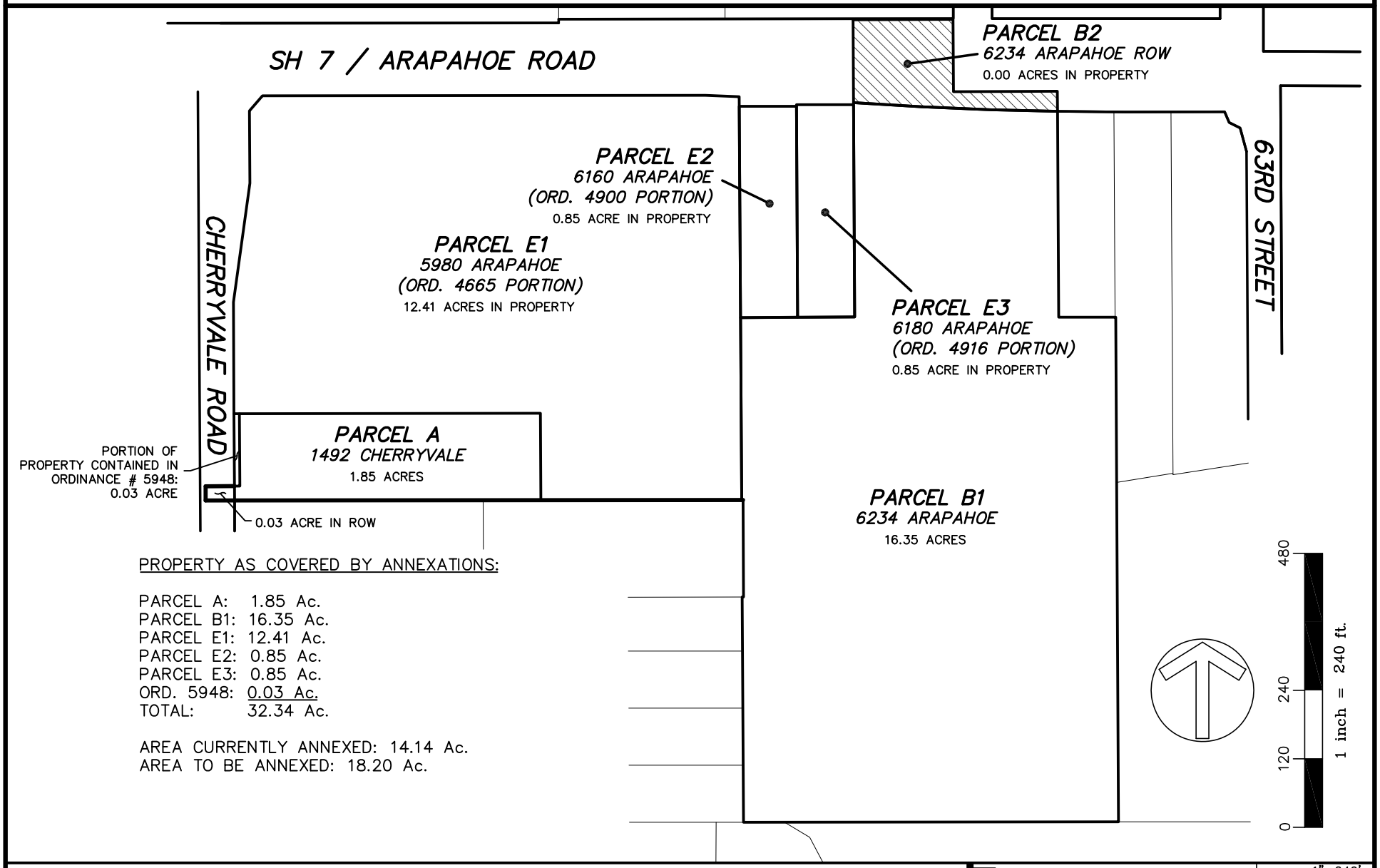
DATE	08/29/13
SHEET	1 OF 2

FILE G:\23121\SURVEY\BJC EXISTING ANNEXATION AREAS IN BJC

PARCEL B2



PROPERTY AS COVERED BY ANNEXATIONS:

PARCEL A:	1.85 Ac.
PARCEL B1:	16.35 Ac.
PARCEL E1:	12.41 Ac.
PARCEL E2:	0.85 Ac.
PARCEL E3:	0.85 Ac.
ORD. 5948:	0.03 Ac.
TOTAL:	32.34 Ac.

AREA CURRENTLY ANNEXED: 14.14 Ac.
AREA TO BE ANNEXED: 18.20 Ac.

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DRAWN BY	BO
DATE	08/29/13
SHEET	2 OF 2

FILE G:\23121\SURVEY\BJC EXISTING ANNEXATION AREAS IN BJC

PARCEL C

PARCEL DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE NORTHEAST QUARTER OF SECTION 34, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 34 (BEING A 2.5" BRASS CAP IN RANGE BOX, LS 24959 1994) FROM WHENCE THE NORTH QUARTER CORNER OF SECTION 34 (BEING A 2.5" ALUMINUM CAP IN RANGE BOX, DREXEL, LS 2149) BEARS S89°56'35"W, 2,620.17 FEET;
THENCE S17°14'10"W, 765.67 FEET TO A POINT ON THE WESTERLY LINE OF A PARCEL OF LAND DESCRIBED IN INSTRUMENT RECORDED AT RECEPTPTION NO. 1047614, BEING THE POINT OF BEGINNING;

THENCE S00°19'26"E, 240.99 FEET ALONG SAID WESTERLY LINE;
THENCE S59°50'25"W, 69.90 FEET;
THENCE 75.40 FEET ALONG THE ARC OF A TANGENT CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 400.00 FEET, A CENTRAL ANGLE OF 10°47'59", AND A CHORD BEARING S65°14'25"W, 75.28 FEET;
THENCE S70°38'24"W, 75.65 FEET;
THENCE 79.53 FEET ALONG THE ARC OF A TANGENT CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 250.00 FEET, A CENTRAL ANGLE OF 18°13'41", AND A CHORD BEARING S79°45'14"W, 79.20 FEET;
THENCE S88°52'05"W, 7.46 FEET;
THENCE 230.21 FEET ALONG THE ARC OF A TANGENT CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 310.00 FEET, A CENTRAL ANGLE OF 42°32'52", AND A CHORD BEARING N69°51'30"W, 224.95 FEET;
THENCE 36.49 FEET ALONG THE ARC OF A REVERSE CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 75.00 FEET, A CENTRAL ANGLE OF 27°52'35", AND A CHORD BEARING N62°31'21"W, 36.13 FEET;
THENCE N76°27'39"W, 28.99 FEET;
THENCE 63.38 FEET ALONG THE ARC OF A TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 50.00 FEET, A CENTRAL ANGLE OF 72°37'51", AND A CHORD BEARING S67°13'26"W, 59.22 FEET;
THENCE S30°54'30"W, 20.03 FEET;
THENCE S54°23'34"W, 43.28 FEET;
THENCE N00°19'26"W, 116.38 FEET TO THE SOUTHWESTERLY CORNER OF A PARCEL OF LAND RECORDED AT RECEPTION NO. 2933717;
THENCE ALONG THE SOUTHERLY AND EASTERLY LINES OF SAID PARCEL OF LAND RECORDED AT RECEPTION NO. 2933717 THE FOLLOWING TWO COURSES:
1) N89°40'34"E, 2.50 FEET;
2) N00°19'26"W, 169.98 FEET;
THENCE CONTINUING N00°19'26"W 70.25 FEET;
THENCE N89°21'17"E, 175.30 FEET;
THENCE S69°01'19"E, 40.73 FEET;
THENCE S38°12'19"E, 38.78 FEET;
THENCE S26°26'35"E, 61.81 FEET;
THENCE N74°39'12"E, 154.52 FEET;
THENCE N87°05'50"E, 241.71 FEET TO THE POINT OF BEGINNING, CONTAINING 4.62 ACRES, MORE OR LESS.

DESCRIPTION PREPARED BY:
BO BAIZE, COLORADO PLS 37990
FOR AND ON BEHALF OF HURST & ASSOCIATES, INC.
2500 BROADWAY, SUITE B
BOULDER, CO. 80304

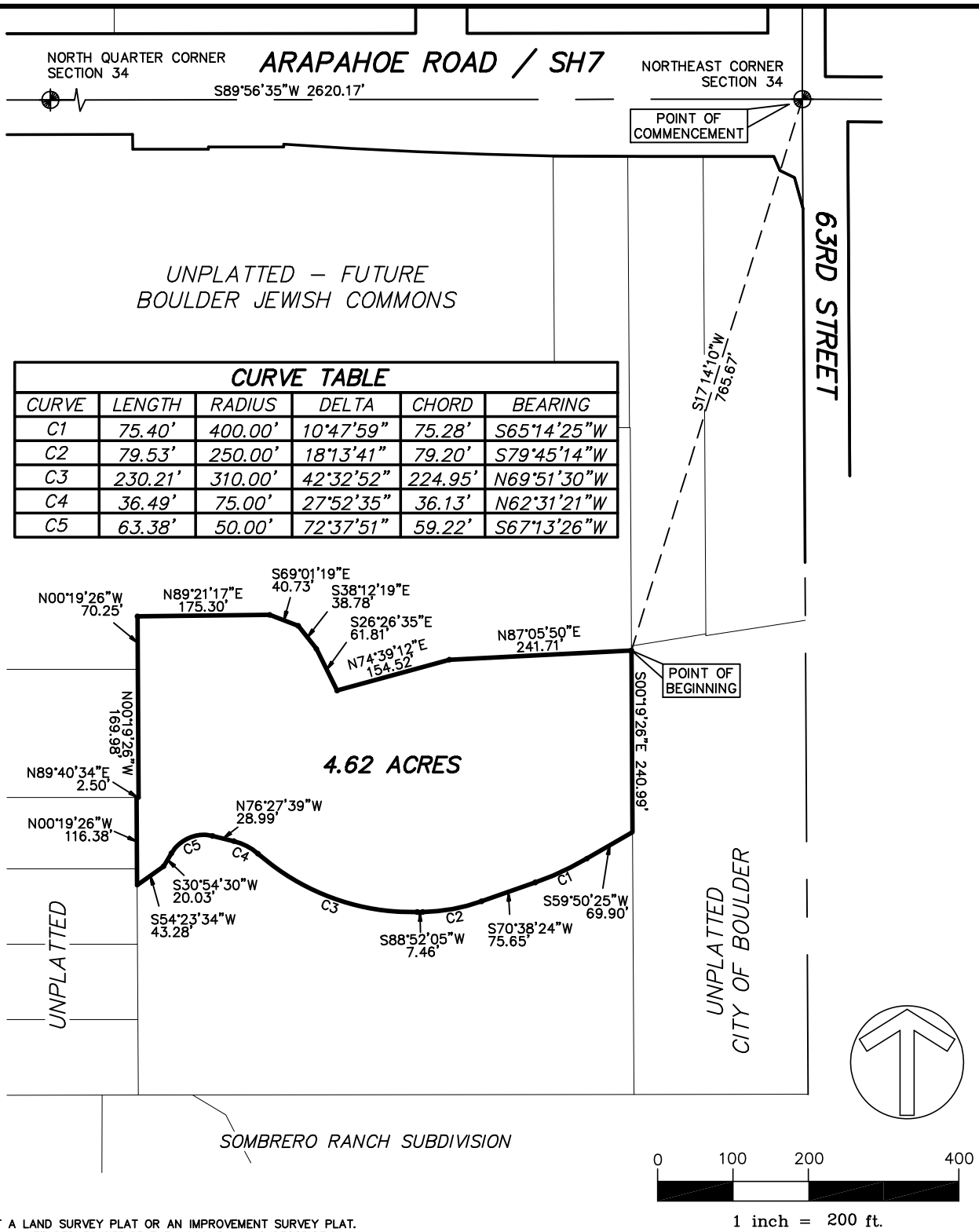
CONSERVATION EASEMENT
NE 1/4 SECTION 34, T1N, R70W OF 6TH P.M.
BOULDER COUNTY, COLORADO

HURST
CIVIL ENGINEERING
PLANNING
SURVEYING
2500 Broadway, Suite B
Boulder, CO 80304
303.449.9105
www.hurst-assoc.com

SCALE	HOR. N/A VERT. N/A
DESIGN/APPR.	
DRAWN BY	BO
DATE	08/21/13
SHEET	1 OF 2

FILE G:\2123\SURVEY\LEGAL\BJC CONSERVATION ESMT AND IN FEE AREA

PARCEL C



CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C1	75.40'	400.00'	10°47'59"	75.28'	S65°14'25"W
C2	79.53'	250.00'	18°13'41"	79.20'	S79°45'14"W
C3	230.21'	310.00'	42°32'52"	224.95'	N69°51'30"W
C4	36.49'	75.00'	27°52'35"	36.13'	N62°31'21"W
C5	63.38'	50.00'	72°37'51"	59.22'	S67°13'26"W

NOTE: THIS IS NOT A LAND SURVEY PLAT OR AN IMPROVEMENT SURVEY PLAT.
THIS EXHIBIT IS ONLY INTENDED TO DEPICT THE ACCOMPANYING DESCRIPTION.

CONSERVATION EASEMENT
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BOULDER COUNTY, COLORADO

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SCALE	HOR. 1"=200' VERT. N/A
DESIGN/APPR.	
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DATE	08/21/13
SHEET	2 OF 2

FILE G:\2123\SURVEY\LEGAL\BJC CONSERVATION ESMT AND IN FEE AREA

PARCEL D

PARCEL DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE NORTHEAST QUARTER OF SECTION 34, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 34 (BEING A 2.5" BRASS CAP IN RANGE BOX, LS 24959 1994) FROM WHENCE THE NORTH QUARTER CORNER OF SECTION 34 (BEING A 2.5" ALUMINUM CAP IN RANGE BOX, DREXEL, LS 2149) BEARS S89°56'35"W, 2,620.17 FEET;
THENCE S13°03'31"W, 998.08 FEET TO A POINT ON THE WESTERLY LINE OF A PARCEL OF LAND DESCRIBED IN INSTRUMENT RECORDED AT RECEPTPTION NO. 1047614, BEING THE POINT OF BEGINNING;

THENCE S00°19'26"E, 347.95 FEET ALONG SAID WESTERLY LINE TO THE NORTHERLY LINE OF "SOMBERERO RANCH";
THENCE S89°56'35"W, 657.48 FEET ALOND SAID NORTHERLY LINE;
THENCE N00°19'26"W, 278.25 FEET;
THENCE N54°23'34"E, 43.28 FEET;
THENCE N30°54'30"E, 20.03 FEET;
THENCE 63.38 FEET ALONG THE ARC OF A TANGENT CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 50.00 FEET, A CENTRAL ANGLE OF 72°37'51", AND A CHORD BEARING N67°13'26"E, 59.22 FEET;
THENCE S76°27'39"E, 28.99 FEET;
THENCE 36.49 FEET ALONG THE ARC OF A TANGENT CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 75.00 FEET, A CENTRAL ANGLE OF 27°52'35", AND A CHORD BEARING S62°31'21"E, 36.13 FEET;
THENCE 230.21 FEET ALONG THE ARC OF A REVERSE CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 310.00 FEET, A CENTRAL ANGLE OF 42°32'52", AND A CHORD BEARING S69°51'30"E, 224.95 FEET;
THENCE N88°52'05"E, 7.46 FEET;
THENCE 79.53 FEET ALONG THE ARC OF A TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 250.00 FEET, A CENTRAL ANGLE OF 18°13'41", AND A CHORD BEARING N79°45'14"E, 79.20 FEET;
THENCE N70°38'24"E, 75.65 FEET;
THENCE 75.40 FEET ALONG THE ARC OF A TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 400.00 FEET, A CENTRAL ANGLE OF 10°47'59", AND A CHORD BEARING N65°14'25"E, 75.28 FEET;
THENCE N59°50'25"E, 69.90 FEET TO THE POINT OF BEGINNING, CONTAINING 4.34 ACRES, MORE OR LESS.

DESCRIPTION PREPARED BY:
BO BAIZE, COLORADO PLS 37990
FOR AND ON BEHALF OF HURST & ASSOCIATES, INC.
2500 BROADWAY, SUITE B
BOULDER, CO. 80304

FUTURE CITY OF BOULDER PARCEL
NE 1/4 SECTION 34, T1N, R70W OF 6TH P.M.
BOULDER COUNTY, COLORADO

HURST
CIVIL ENGINEERING
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2500 Broadway, Suite B
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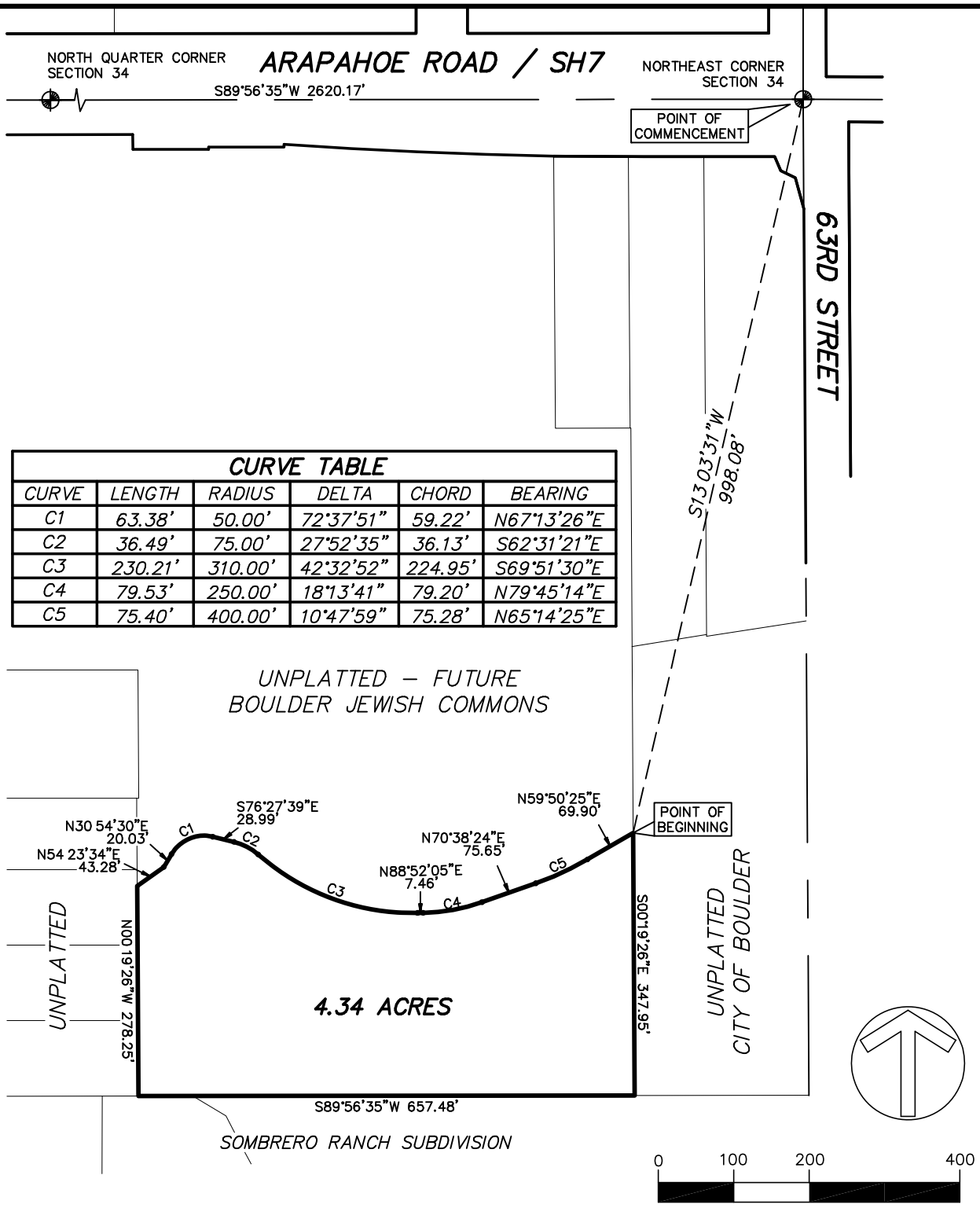
DATE	08/21/13
SHEET	1 OF 2

FILE G:\2123\SURVEY\LEGAL\BJC CONSERVATION ESMT AND IN FEE AREA

PARCEL D



CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C1	63.38'	50.00'	72°37'51"	59.22'	N67°13'26"E
C2	36.49'	75.00'	27°52'35"	36.13'	S62°31'21"E
C3	230.21'	310.00'	42°32'52"	224.95'	S69°51'30"E
C4	79.53'	250.00'	18°13'41"	79.20'	N79°45'14"E
C5	75.40'	400.00'	10°47'59"	75.28'	N65°14'25"E

NOTE: THIS IS NOT A LAND SURVEY PLAT OR AN IMPROVEMENT SURVEY PLAT.
THIS EXHIBIT IS ONLY INTENDED TO DEPICT THE ACCOMPANYING DESCRIPTION.

FUTURE CITY OF BOULDER PARCEL
NE 1/4 SECTION 34, T1N, R70W OF 6TH P.M.
BOULDER COUNTY, COLORADO

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SCALE	HOR. 1"=200' VERT. N/A
DESIGN/APPR.	
DRAWN BY	BO
DATE	08/21/13
SHEET	2 OF 2

FILE G:\2123\SURVEY\LEGAL\BJC CONSERVATION ESMT AND IN FEE AREA

PARCEL E1

ANNEXATION PORTION DESCRIPTION:

A PORTION OF THE ANNEXATION TO THE CITY OF BOULDER BY ORDINANCE NUMBER 4665 LOCATED IN THE NORTHEAST QUARTER OF SECTION 34, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M., CITY OF BOULDER, COUNTY OF BOULDER, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF SECTION 34;

THENCE S89°56'35"W, 888.58 FEET ALONG THE NORTHERLY LINE OF SAID NORTHEAST QUARTER (BASIS OF BEARINGS);

THENCE S00°03'25"E, 48.69 FEET TO AN ANGLE POINT OF THE SOUTHERLY RIGHT OF WAY OF STATE HIGHWAY 7 (AS OF DECEMBER 2011) AND THE POINT OF BEGINNING;

THENCE S00°19'26"E, 16.81 FEET ALONG THE WESTERLY RIGHT OF WAY LINE OF STATE HIGHWAY 7;

THENCE S00°21'01"E, 689.88 FEET;

THENCE S89°56'35"W, 351.80 FEET;

THENCE N00°19'26"W, 152.24 FEET;

THENCE S89°56'35"W, 537.00 FEET TO A POINT ON THE EASTERLY RIGHT OF WAY LINE OF CHERRYVALE ROAD (AS OF DECEMBER, 2011);

THENCE ALONG THE EASTERLY RIGHT OF WAY LINE OF CHERRYVALE ROAD AND THE SOUTHERLY RIGHT OF WAY LINE OF STATE HIGHWAY 7 (AS OF DECEMBER, 2011) THE FOLLOWING SIX COURSES:

1) N00°19'26"W, 195.45 FEET;
2) N07°52'55"E, 210.19 FEET;
3) N00°19'26"W, 127.11 FEET;
4) N40°36'21"E, 34.78 FEET;
5) N89°56'35"E, 776.52 FEET;
6) S87°28'06"E, 59.24 FEET TO THE POINT OF BEGINNING.

NOTE: THIS DESCRIPTION IS NOT TO BE USED FOR ANY TYPE OF CONVEYANCE OR LEGAL PURPOSE. IT IS ONLY INTENDED TO REPRESENT THE AREA OF "BOULDER JEWISH COMMONS" CONTAINED WITHIN CITED ANNEXATION.

PORTION OF ORDINANCE 4665 (5980 ARAPAHOE) IN BOULDER JEWISH COMMONS

HURST
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2500 Broadway, Suite B
Boulder, CO 80304
303.449.9105
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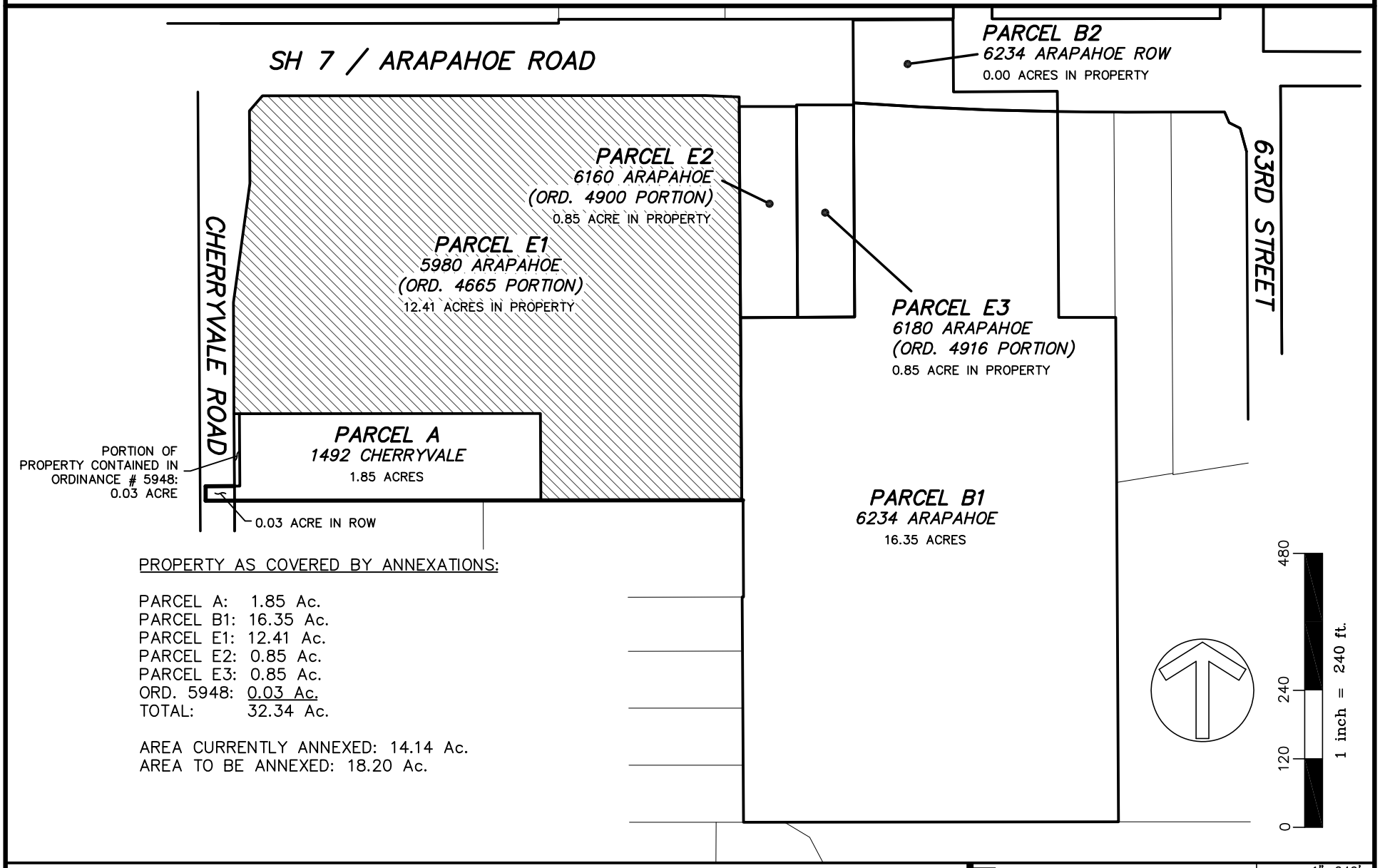
SCALE	HOR. N/A VERT. N/A
DESIGN/APPR.	
DRAWN BY	BO
DATE	08/29/13
SHEET	1 OF 2

FILE G:\23121\SURVEY\BJC EXISTING ANNEXATION AREAS IN BJC

PARCEL E1



PROPERTY AS COVERED BY ANNEXATIONS:

PARCEL A:	1.85 Ac.
PARCEL B1:	16.35 Ac.
PARCEL E1:	12.41 Ac.
PARCEL E2:	0.85 Ac.
PARCEL E3:	0.85 Ac.
ORD. 5948:	0.03 Ac.
TOTAL:	32.34 Ac.

AREA CURRENTLY ANNEXED: 14.14 Ac.
AREA TO BE ANNEXED: 18.20 Ac.

PORTION OF ORDINANCE 4665 (5980 ARAPAHOE) IN BOULDER JEWISH COMMONS

HURST
CIVIL ENGINEERING
PLANNING
SURVEYING
2500 Broadway, Suite B
Boulder, CO 80304
303.449.9105
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SCALE	HOR. 1"=240' VERT. N/A
DESIGN/APPR.	
DRAWN BY	BO
DATE	08/29/13
SHEET	2 OF 2

FILE G:\23121\SURVEY\BJC EXISTING ANNEXATION AREAS IN BJC

PARCEL E2

ANNEXATION PORTION DESCRIPTION:

A PORTION OF THE ANNEXATION TO THE CITY OF BOULDER BY ORDINANCE NUMBER 4900 LOCATED IN THE NORTHEAST QUARTER OF SECTION 34, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M., CITY OF BOULDER, COUNTY OF BOULDER, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF SECTION 34;

THENCE S89°56'35"W, 788.18 FEET ALONG THE NORTHERLY LINE OF SAID NORTHEAST QUARTER (BASIS OF BEARINGS);

THENCE S00°03'25"E, 65.50 FEET TO AN ANGLE POINT OF THE SOUTHERLY RIGHT OF WAY OF STATE HIGHWAY 7 (AS OF DECEMBER 2011) AND THE POINT OF BEGINNING;

THENCE S00°19'25"E, 369.63 FEET;

THENCE S89°40'34"W, 100.00 FEET;

THENCE N00°22'23"W, 370.10 FEET;

THENCE N89°56'35"E, 100.32 FEET ALONG THE SOUTHERLY RIGHT OF WAY OF STATE HIGHWAY 7 TO THE POINT OF BEGINNING.

NOTE: THIS DESCRIPTION IS NOT TO BE USED FOR ANY TYPE OF CONVEYANCE OR LEGAL PURPOSE. IT IS ONLY INTENDED TO REPRESENT THE AREA OF "BOULDER JEWISH COMMONS" CONTAINED WITHIN CITED ANNEXATION.

PORTION OF ORDINANCE 4900 (6160 ARAPAHOE) IN BOULDER JEWISH COMMONS

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CIVIL ENGINEERING
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2500 Broadway, Suite B
Boulder, CO 80304
303.449.9105
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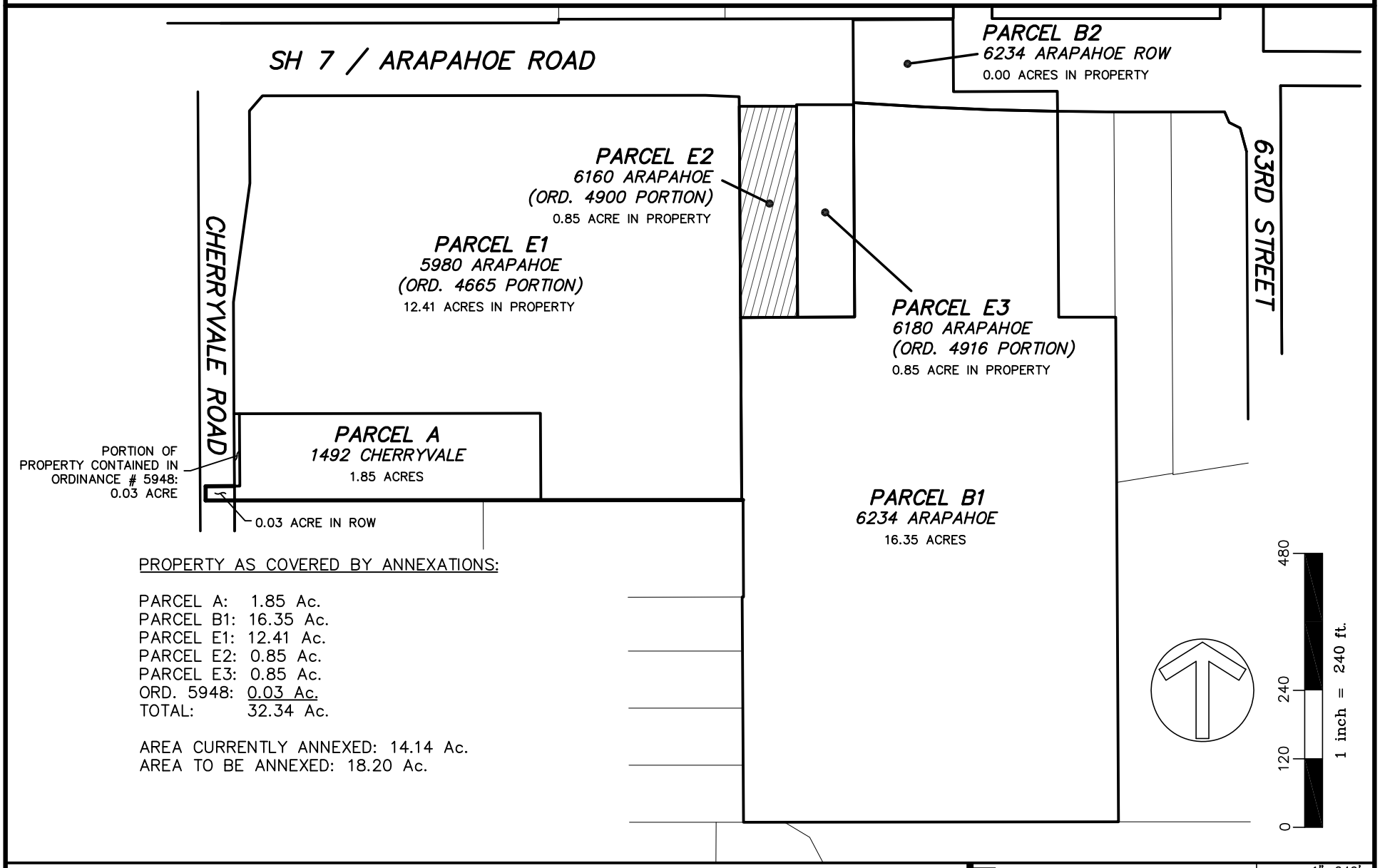
SCALE	HOR. N/A VERT. N/A
DESIGN/APPR.	
DRAWN BY	BO
DATE	08/29/13
SHEET	1 OF 2

FILE G:\23121\SURVEY\BJC EXISTING ANNEXATION AREAS IN BJC

PARCEL E2



PROPERTY AS COVERED BY ANNEXATIONS:

PARCEL A:	1.85 Ac.
PARCEL B1:	16.35 Ac.
PARCEL E1:	12.41 Ac.
PARCEL E2:	0.85 Ac.
PARCEL E3:	0.85 Ac.
ORD. 5948:	0.03 Ac.
TOTAL:	32.34 Ac.

AREA CURRENTLY ANNEXED: 14.14 Ac.
AREA TO BE ANNEXED: 18.20 Ac.

PORTION OF ORDINANCE 4900 (6160 ARAPAHOE) IN BOULDER JEWISH COMMONS

HURST
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SCALE	HOR. 1"=240' VERT. N/A
DESIGN/APPR.	
DRAWN BY	BO
DATE	08/29/13
SHEET	2 OF 2

FILE G:\23121\SURVEY\BJC EXISTING ANNEXATION AREAS IN BJC

PARCEL E3

ANNEXATION PORTION DESCRIPTION:

A PORTION OF THE ANNEXATION TO THE CITY OF BOULDER BY ORDINANCE NUMBER 4916 LOCATED IN THE NORTHEAST QUARTER OF SECTION 34, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M., CITY OF BOULDER, COUNTY OF BOULDER, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF SECTION 34;

THENCE S89°56'35"W, 688.20 FEET ALONG THE NORTHERLY LINE OF SAID NORTHEAST QUARTER (BASIS OF BEARINGS);

THENCE S00°03'25"E, 62.80 FEET TO AN ANGLE POINT OF THE SOUTHERLY RIGHT OF WAY OF STATE HIGHWAY 7 (AS OF DECEMBER 2011) AND THE POINT OF BEGINNING;

THENCE S00°19'26"E, 371.87 FEET;

THENCE S89°40'34"W, 100.00 FEET;

THENCE N00°19'25"W, 372.36 FEET;

THENCE N89°57'35"E, 100.00 FEET ALONG THE SOUTHERLY RIGHT OF WAY LINE OF STATE HIGHWAY 7 TO THE POINT OF BEGINNING.

NOTE: THIS DESCRIPTION IS NOT TO BE USED FOR ANY TYPE OF CONVEYANCE OR LEGAL PURPOSE. IT IS ONLY INTENDED TO REPRESENT THE AREA OF "BOULDER JEWISH COMMONS" CONTAINED WITHIN CITED ANNEXATION.

PORTION OF ORDINANCE 4916 (6180 ARAPAHOE) IN BOULDER JEWISH COMMONS

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Boulder, CO 80304
303.449.9105
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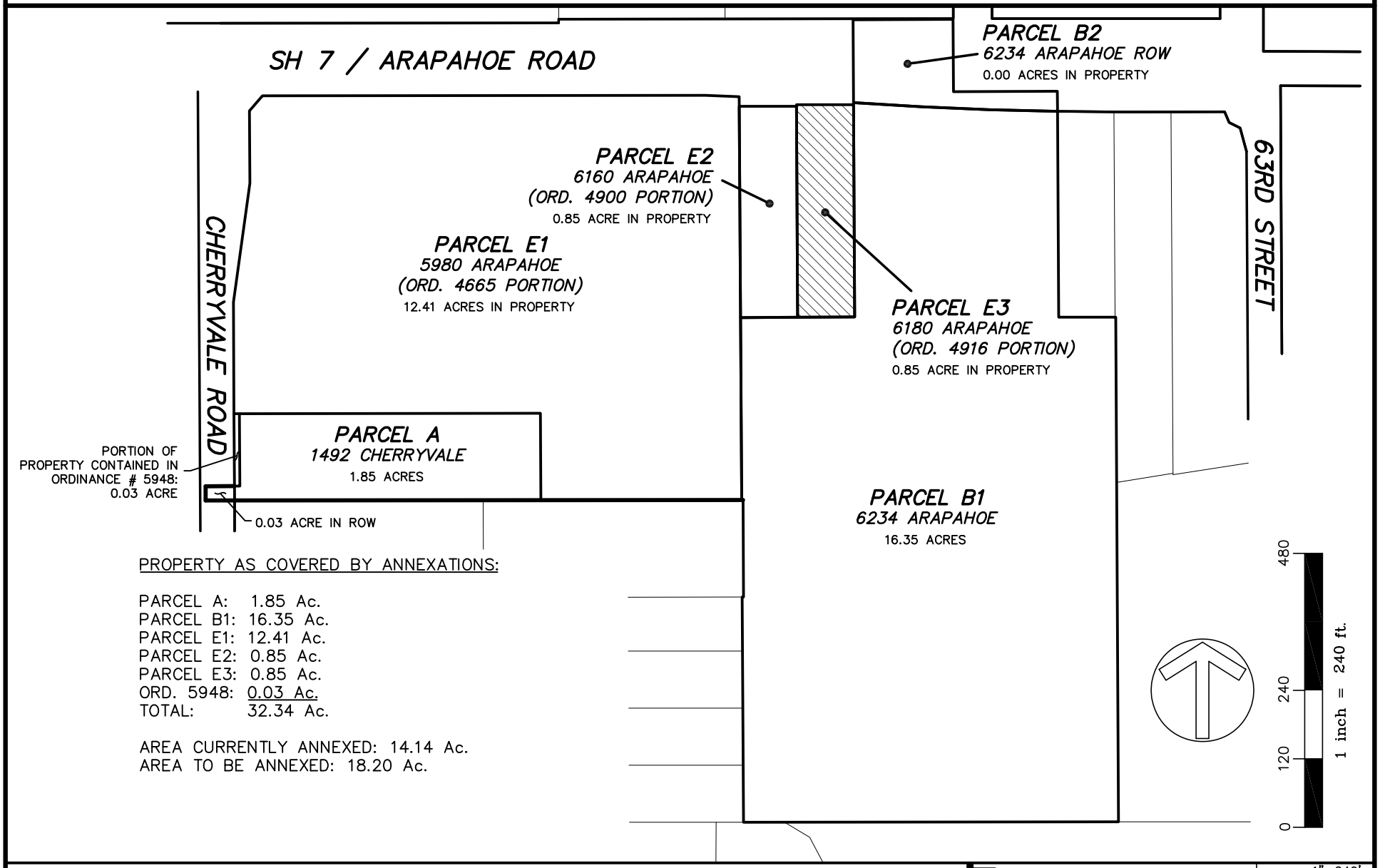
SCALE	HOR. N/A VERT. N/A
DESIGN/APPR.	
DRAWN BY	BO
DATE	08/29/13
SHEET	1 OF 2

FILE G:\23121\SURVEY\BJC EXISTING ANNEXATION AREAS IN BJC

PARCEL E3



PROPERTY AS COVERED BY ANNEXATIONS:

PARCEL A:	1.85 Ac.
PARCEL B1:	16.35 Ac.
PARCEL E1:	12.41 Ac.
PARCEL E2:	0.85 Ac.
PARCEL E3:	0.85 Ac.
ORD. 5948:	0.03 Ac.
TOTAL:	32.34 Ac.

AREA CURRENTLY ANNEXED: 14.14 Ac.
AREA TO BE ANNEXED: 18.20 Ac.

PORTION OF ORDINANCE 4916 (6180 ARAPAHOE) IN BOULDER JEWISH COMMONS

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DESIGN/APPR.	
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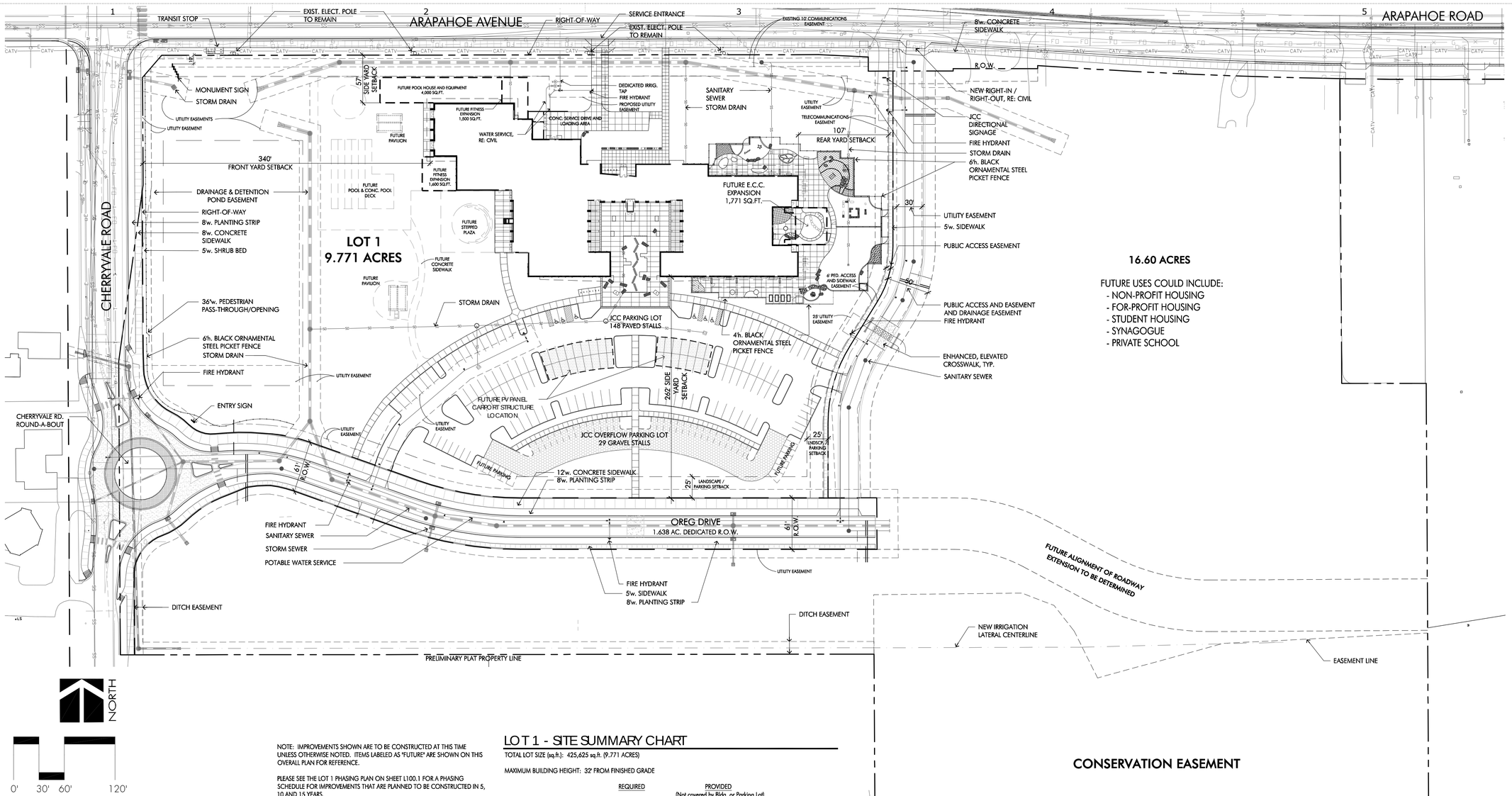
DATE	08/29/13
SHEET	2 OF 2

FILE G:\23121\SURVEY\BJC EXISTING ANNEXATION AREAS IN BJC



NOTE: IMPROVEMENTS SHOWN ARE TO BE CONSTRUCTED AT THIS TIME UNLESS OTHERWISE NOTED. ITEMS LABELED AS "FUTURE" ARE SHOWN ON THIS OVERALL PLAN FOR REFERENCE.

PLEASE SEE THE LOT 1 PHASING PLAN ON SHEET L100.1 FOR A PHASING SCHEDULE FOR IMPROVEMENTS THAT ARE PLANNED TO BE CONSTRUCTED IN 5, 10 AND 15 YEARS.

LOT 1 - SITE SUMMARY CHART

TOTAL LOT SIZE (sq.ft.): 425,625 sq.ft. (9.771 ACRES)

MAXIMUM BUILDING HEIGHT: 32' FROM FINISHED GRADE

	REQUIRED	PROVIDED (Not covered by Bldg. or Parking Lot)
OPEN SPACE	15% 63,844 sq.ft.	70.65% 300,706 sq.ft.

OPEN SPACE DETERMINED BY SUBTRACTING VEHICULAR CIRCULATION / PARKING (PAVED, GRAVEL & FUTURE) AND 1ST FLR. BLDG. SQ.FTG. (45,104) AREA(S) FROM TOTAL LOT SQ.FT.

BIKE PARKING SUMMARY (10% of TOTAL req'd. off street parking)	15	24

BUILDING DATA		52,444 sq.ft. (First Floor = 45,104 sq.ft., Second Floor = 7,340 sq.ft.)
	Future	11,304 sq.ft. (First Floor = 8,885 sq.ft., Second Floor = 2,419 sq.ft.)
	Total	63,748 sq.ft.
ZONING DISTRICT		RE

	REQUIRED			PROVIDED		
	FRONT	REAR	SIDE	FRONT	REAR	SIDE
BUILDING SETBACK	25'	25'	25'	340'	107'	59' (NORTH) / 262' (SOUTH)

FRONT YARD = WEST (CHERRYVALE); REAR YARD = EAST (NEW NORTH-SOUTH ROAD)

LANDSCAPE/PARKING SETBACK 25' MIN. (ALL THREE STREET FRONTAGES)

TOTAL PARKING LOT SIZE		64,498 sq.ft.
	OVERFLOW	13,622 sq.ft.
	FUTURE	1,695 sq.ft.
		79,815 sq.ft. Combined Total

	REQUIRED	PROVIDED
INITIAL CONST. PAVED PARKING STALLS	148	148 (133 stand. stalls = 90%, 15 small stalls = 10%)
TOTAL NUMBER OF GRAVEL (OVERFLOW) PARKING STALLS	-	29 (29 small stalls = 100%)
FUTURE PARKING STALLS	-	14 (small cars = 100%)
PARKING STALL SUMMARY	148	191 (133 stand. stalls = 70%, 55 small stalls = 30%)
ACCESSIBLE PARKING (included within 191 "full build out" identified above)	6	6

06/05/2012 10:50:02 AM

- PLOT DATE

Know what's below. Call before you dig.

RB+B Architects, Inc.
315 East Mountain Ave
Suite 100
Fort Collins, CO 80524-2913
T - 970.484.0117
F - 970.484.0264
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bha
BHA Design Incorporated
1603 Oakridge Drive
Fort Collins, Colorado 80525
voice: 970.223.7577
fax: 970.223.1827

SITE REVIEW RE-SUBMITTAL

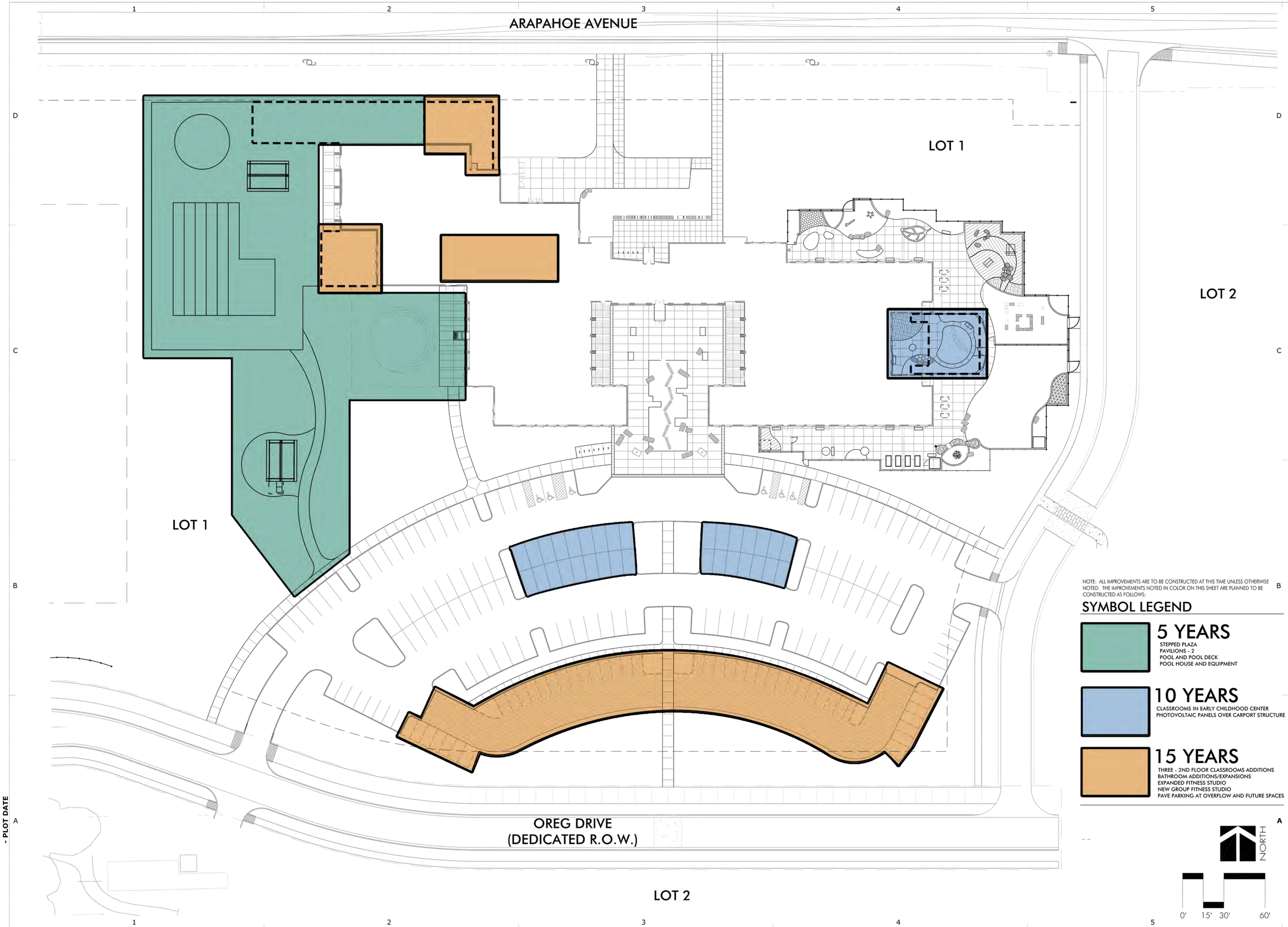
BOULDER JEWISH COMMONS

BOULDER JCC
ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

PROJECT #: 1118
ISSUE DATE: 07.01.13
DRAWN BY: BHA
CHECKED BY:

OVERALL DEVELOPMENT SITE PLAN

L100



NOTE: ALL IMPROVEMENTS ARE TO BE CONSTRUCTED AT THIS TIME UNLESS OTHERWISE NOTED. THE IMPROVEMENTS NOTED IN COLOR ON THIS SHEET ARE PLANNED TO BE CONSTRUCTED AS FOLLOWS:

SYMBOL LEGEND

5 YEARS
STEPPED PLAZA
PAVILIONS - 2
POOL AND POOL DECK
POOL HOUSE AND EQUIPMENT

10 YEARS
CLASSROOMS IN EARLY CHILDHOOD CENTER
PHOTOVOLTAIC PANELS OVER CARPORT STRUCTURE

15 YEARS
THREE - 2ND FLOOR CLASSROOMS ADDITIONS
BATHROOM ADDITIONS/EXPANSIONS
EXPANDED FITNESS STUDIO
NEW GROUP FITNESS STUDIO
PAVE PARKING AT OVERFLOW AND FUTURE SPACES

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SITE REVIEW
RE-SUBMITTAL

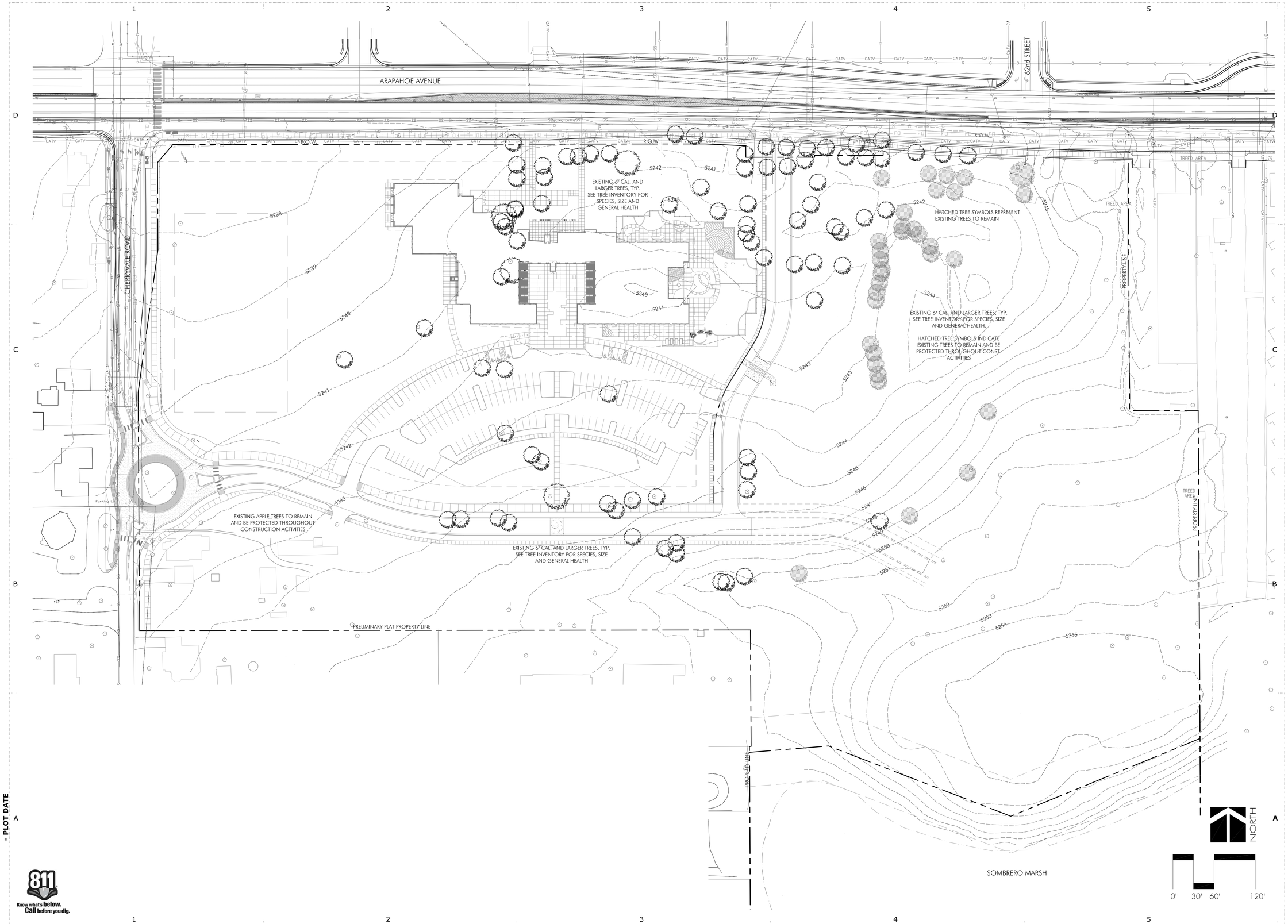
BOULDER JEWISH COMMONS
BOULDER JCC
ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

PROJECT #: 1118
ISSUE DATE: 07/01/13
DRAWN BY: BHA
CHECKED BY:

PHASING PLAN

L100.1

06/05/2012 10:50:02 AM - PLOT DATE



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SITE REVIEW RE-SUBMITTAL

BOULDER JEWISH COMMONS

BOULDER JCC

ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

PROJECT #: 1118
ISSUE DATE: 07/01/13
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EXISTING TOPOGRAPHIC CHARACTER / TREES - 6" CAL. AND LARGER

L101

- PLOT DATE
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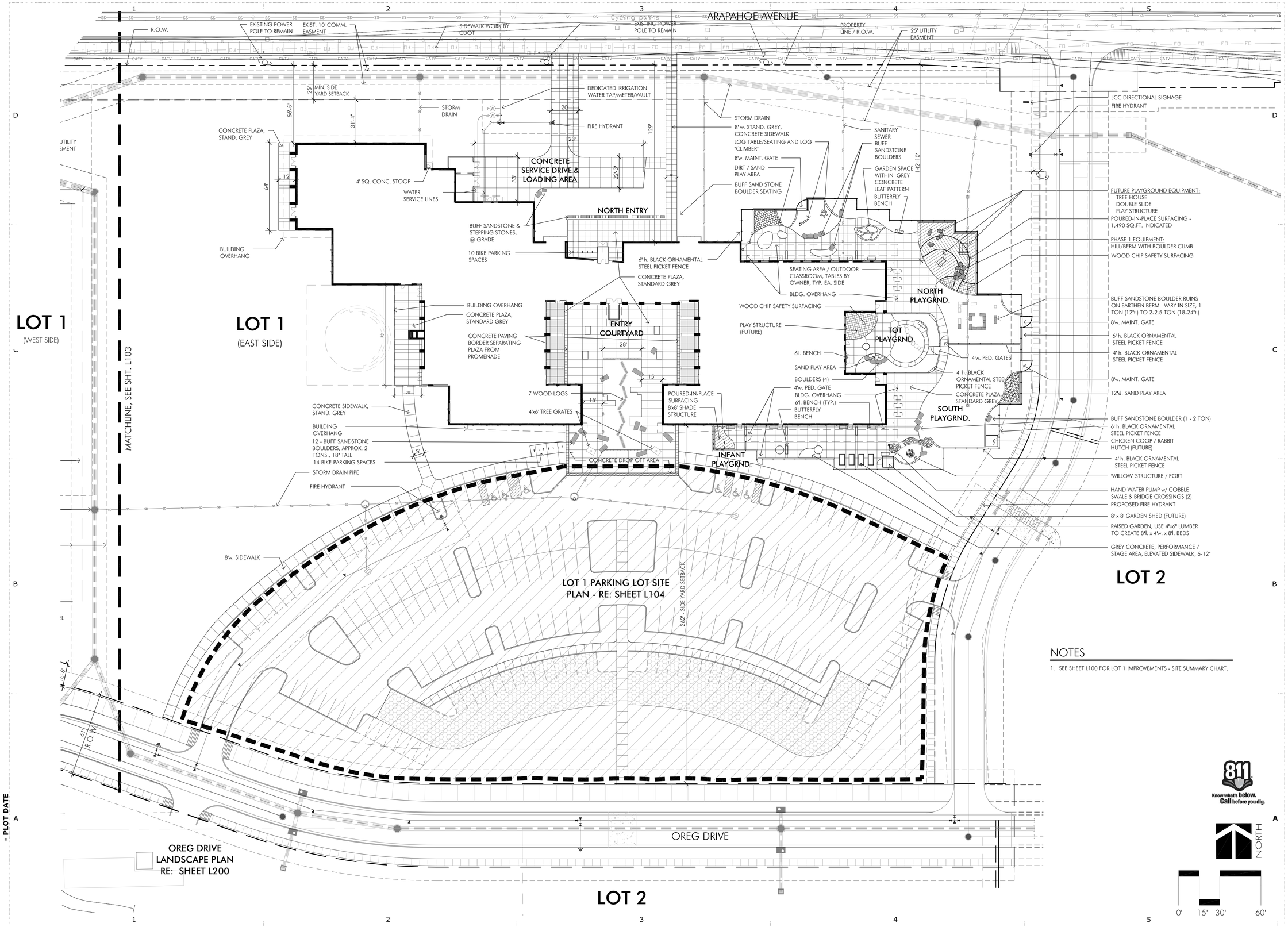

NOTES

1. SEE SHEET L100 FOR LOT 1 IMPROVEMENTS - SITE SUMMARY CHART.

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SITE REVIEW RE-SUBMITTAL

BOULDER JEWISH COMMONS

BOULDER JCC

ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

PROJECT #: 1118
ISSUE DATE: 07/01/13
DRAWN BY: BHA
CHECKED BY:

LOT 1 SITE PLAN - EAST SIDE

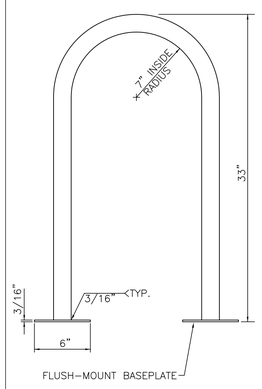
L102

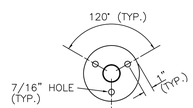
06/05/2012 10:50:02 AM - PLOT DATE

Know what's below. Call before you dig.

NOTES:
DIMENSIONS:
1. HEIGHT–33" FROM THE GROUND
2. CONTINUOUS BEND INSIDE RADIUS=7"

MATERIALS AND CONSTRUCTION:
1. MINIMUM OR 1 1/4" SCHEDULE 40 STEEL PIPE (1 5/8" OUTSIDE DIAMETER)
2. MAXIMUM 1 1/2" SCHEDULE 40 STEEL PIPE (2" OUTSIDE DIAMETER)
3. SOLID ONE–PIECE CONSTRUCTION; CONTINUOUS BEND; LEGS 14"–18" APART
4. GALVANIZED WITH BLACK POWDER COAT FINISH
5. FLUSH MOUNTED WITH WELDED BASE PLATES (6" DIAMETER, 3/16" THICK BASE PLATE). HIDDEN OR VANDAL–RESISTANT FASTENERS (SCREWS OR EXPANSION BOLTS)

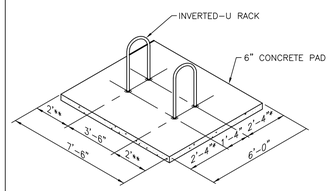




BASEPLATE DETAIL

NOTES:

EXPOSED CONCRETE SURFACE TO BE BROOM FINISHED. PAD SIZE MAY VARY AS DIRECTED BY THE ENGINEER. PAD IS TO BE CONSTRUCTED WITH CLASS B CONCRETE. EXCAVATION AND/OR EMBANKMENT REQUIRED FOR PAD CONSTRUCTION WILL NOT BE PAID FOR SEPERATELY, BUT SHALL BE INCLUDED IN THE COST OF THE PAD. CONCRETE SHALL BE SLOPED AT 2% TO DRAIN.

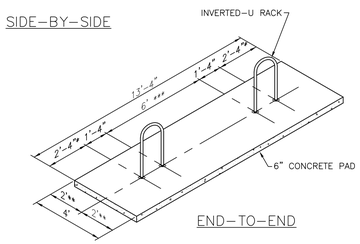


SIDE–BY–SIDE

* 3'–4" MINIMUM WHEN INSTALLED PERPENDICULAR TO A WALL OR CURB.

** 3' MINIMUM WHEN INSTALLED PARALLEL TO A WALL OR CURB. 5' MINIMUM SEPARATION FROM CURB FACE WHEN INSTALLED ADJACENT TO A CURB WITH "HEAD–IN" AUTOMOBILE PARKING.

*** 10' MINIMUM IF MORE THAN TWO "U" RACKS IN A SERIES.



END–TO–END

DRAWN BY: JSH CHECKED BY: RJH APPROVED BY: DIRECTOR OF PUBLIC WORKS	CITY OF BOULDER, COLORADO INVERTED "U" BICYCLE RACKS	ISSUED: JULY 2, 1998 REVISED: OCT 6, 2009 DRAWING NO. 2.52.A

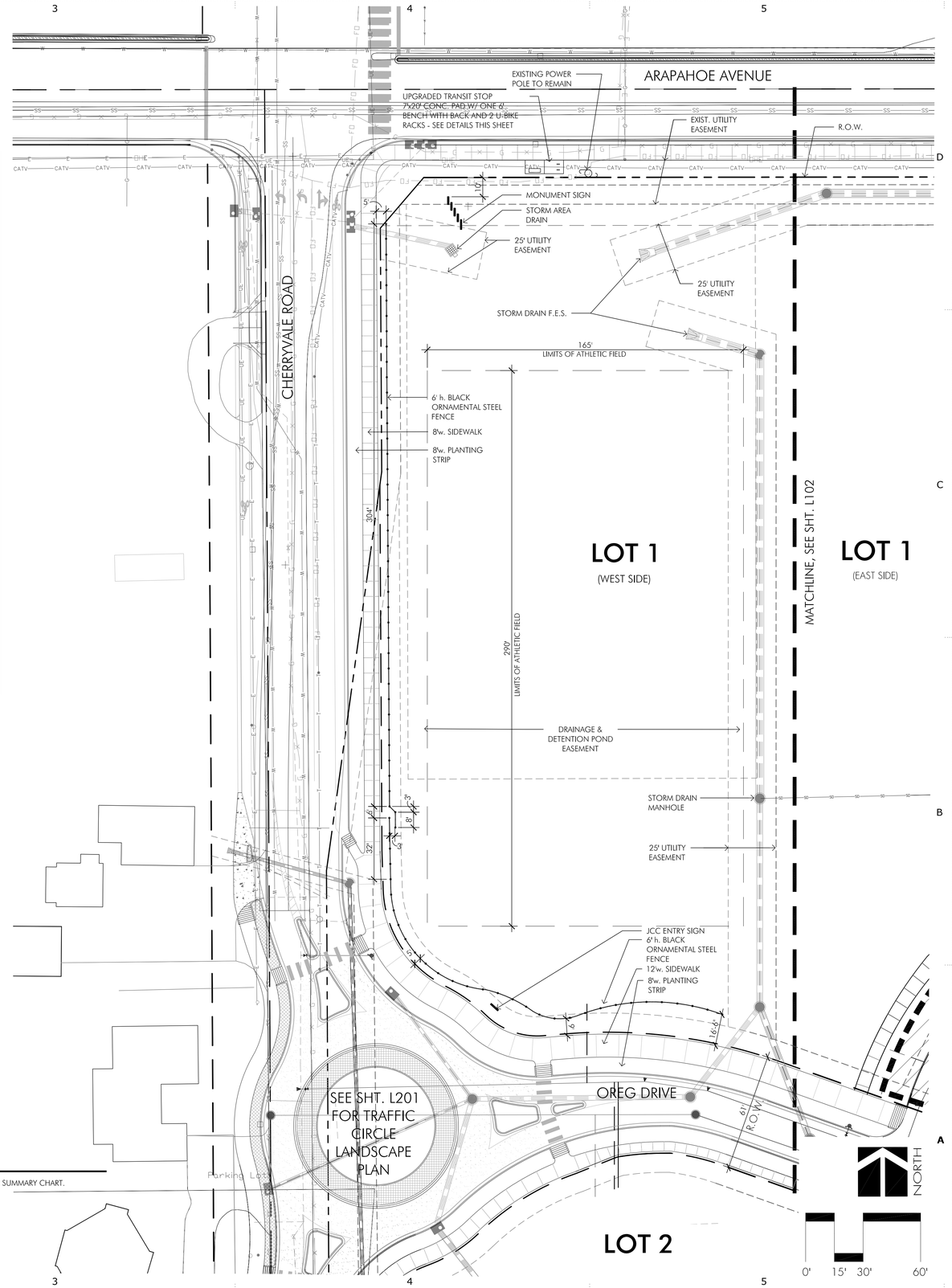
DRAWN BY: JSH CHECKED BY: RJH APPROVED BY: DIRECTOR OF PUBLIC WORKS	CITY OF BOULDER, COLORADO INVERTED "U" BICYCLE RACKS	ISSUED: JULY 2, 1998 REVISED: OCT 6, 2009 DRAWING NO. 2.52.B

POWDERCOATED STEEL BIKE RACK

POWDERCOATED 'FAUX WOOD' STEEL BENCH, 6'l.

4'h. and 6'h. BLACK ORNAMENTAL STEEL FENCE

SANDSTONE BOULDERS, BUFF IN COLOR



NOTES

1. SEE SHEET L100 FOR LOT 1 IMPROVEMENTS - SITE SUMMARY CHART.

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SITE REVIEW
RE-SUBMITTAL

BOULDER JEWISH COMMONS
BOULDER JCC
ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

PROJECT #: 1118
ISSUE DATE: 07/01/13
DRAWN BY: BHA
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LOT 1 SITE PLAN - WEST SIDE

L103

06/05/2012 10:50:02 AM
- PLOT DATE

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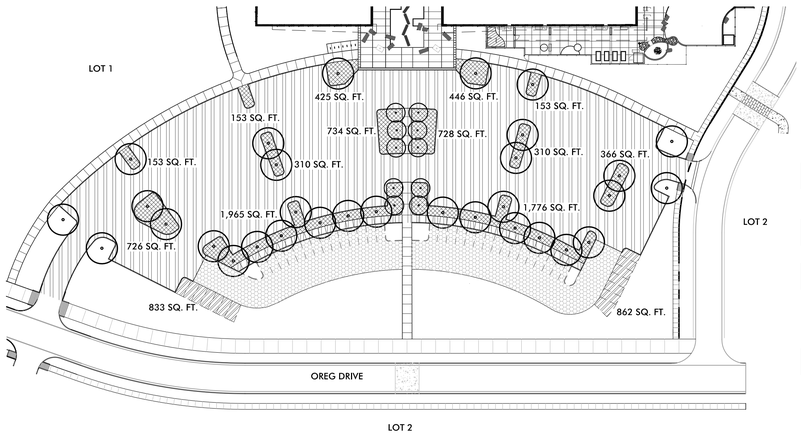


LOT 1 PARKING LOT AREA DIAGRAM

SCALE: 1" = 60'-0"

PARKING AREA SUMMARY

PAVED PARKING LOT = 64,498 SQ.FT.
15 SMALL (7.75'x15') CAR
133 STANDARD (9'x19') CAR and ADA
148 TOTAL PARKING STALLS (INCLUDES 6 ADA)

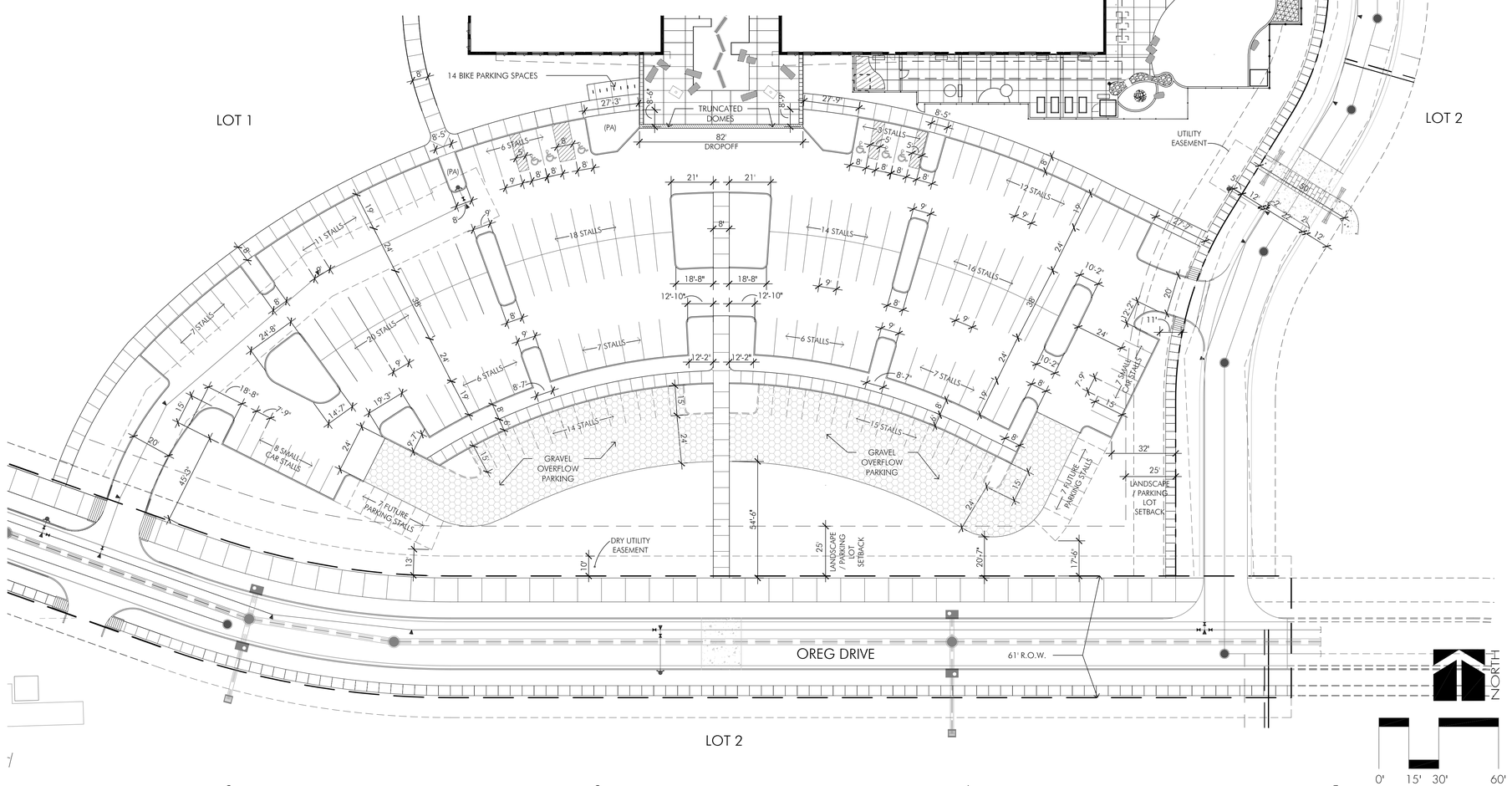
GRAVEL OVERFLOW PARKING LOT = 13,622 SQ.FT.
29 SMALL (7.75'x15') CAR
29 TOTAL PARKING STALLS

FUTURE PARKING LOT = 1,695 SQ.FT.
14 SMALL (7.75x15) CAR

TOTAL PARKING STALLS PROVIDE, = 191 (132% of req'd. parking)
TOTAL PARKING LOT = 79,815 SQ.FT.
TOTAL PARKING LOT INTERIOR LANDSCAPING REQUIRED (10%) = 7,982 SQ.FT.

INTERIOR PARKING LOT INTERIOR LANDSCAPING PROVIDED = 8,245 SQ.FT.

8,245 SQ.FT./ 200 SQ.FT. = 41 TREES REQ'D.
41 TREES PROVIDED (INITIAL CONSTRUCTION)



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BOULDER JEWISH COMMONS

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ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

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LOT 1 PARKING LOT ENLARGEMENT & AREA DIAGRAM

L104

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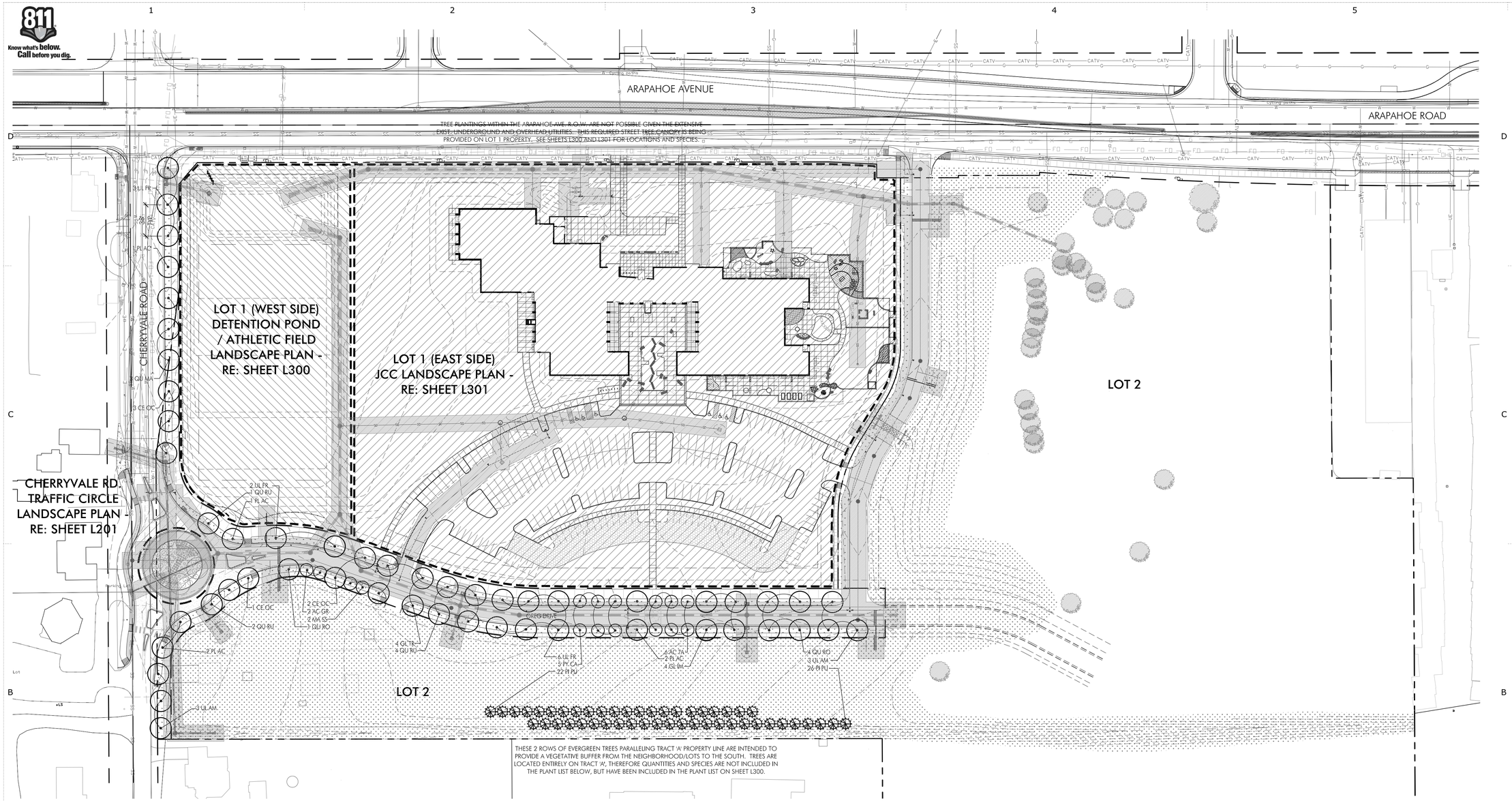

LANDSCAPING TABLE - CHERRYVALE ROAD, ARAPAHOE AVENUE & OREG DRIVE

TOTAL QUANTITY OF LANDSCAPE PLANT MATERIALS (CHERRYVALE TRAFFIC CIRCLE ONLY):

	REQUIRED	PROVIDED	
TREES	N/A	3	
SHRUBS	N/A	66	
ORNAMENTAL GRASSES/PERENNIALS	N/A	117	

TOTAL NUMBER OF STREET TREES:

ARAPAHOE AVENUE FRONTAGE = 895 lin. ft. / 40' per tree (See Sheets L300 and L301 for Street Tree locations and species. These trees are NOT located within the ROW, therefore NOT indicated on this ROW Landscape Plan)	23	24	(All trees located on JCC property and south of the public R.O.W., given the existing and proposed underground utility conflicts and the existing overhead utility lines)
CHERRYVALE ROAD FRONTAGE = 800 lin.ft. / 40' per tree	20	20	(Does not include the 3 trees located within traffic circle)
NEW OREG DRIVE R.O.W. FRONTAGE			
North Side = 750 lin. ft. / 40' per tree	19	22	
South Side = 750 lin. ft. / 40' per tree	19	26	

LEGEND

- DECIDUOUS SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- ROLL-TOP STEEL EDGING
- SHRUBS
- ORNAMENTAL GRASSES
- IRRIGATED THERMAL BLUEGRASS SOD (LOWER WATER USE TURF)
- NATIVE SEED - TYPE 1 SEE 'NOTES' FOR SEED MIX
- UTILITY OFFSET - NO TREE PLANTING ALLOWED

NOTES

1. ROTOR AND SPRAY IRRIGATION HEADS SHALL BE USED IN THERMAL BLUEGRASS (LOWER WATER TURF) SOD AREAS.
2. NATIVE SEEDED AREAS WILL NOT BE IRRIGATED.
3. R.O.W. AREAS WILL BE IRRIGATED WITH SPRAY (OVERHEAD) IRRIGATION AND ZONED SEPARATELY FROM ADJACENT LOTS.
4. WOOD MULCH SHALL BE USED IN SHRUB, PERENNIAL, ORNAMENTAL GRASS, AND TREE RING AREAS.TYPE 1 NATIVE SEED MIX:

PAWNEE BUTTES SEED, INC.
FOOTHILLS NATIVE MIX - 25 LBS. / ACRE

10% INDIAN RICEGRASS
10% LITTLE BLUESTEM
5% BLUEGRAMA
7.5% YELLOW INDIANGRASS
15% SWITCHGRASS
10% ARIZONA / IDAHO FESCUE
10% SIDEOATS GRAMA
10% BLUEBUNCH WHEATGRASS
10% THICKSPIKE WHEATGRASS
2.5% SAND DROPSEED

PLANT LIST (INCLUDES COMBINED: ROW's, CHERRYVALE TRAFFIC CIRCLE))

Symbol	Key	Botanical name	Common Name	Initial Planting Size	Root	Quantity	Size in Feet
DECIDUOUS CANOPY TREES							
	CE OC	Celtis occidentalis	Western Hackberry	2" Cal.	BB	9	50'-60'h. x 40'-50"w.
	GL TR	Gleditsia triacanthos inermis 'Shademaster'	Shademaster Honeylocust	2" Cal.	BB	4	45'h. x 35'w.
	GL IM	Gleditsia triacanthos inermis 'Imperial'	Imperial Honeylocust	2" Cal.	BB	4	35'h. x 35'w.
	PL AC	Platanus x acerifolia	London Planetree	2" Cal.	BB	5	70'h. x 50'w.
	QU MA	Quercus macrocarpa	Bur Oak	2" Cal.	BB	3	50'-80'h. x 50'-80'w.
	QU RO	Quercus robur	English Oak	2" Cal.	BB	5	40'-60'h. x 30'-40'w.
	QU RU	Quercus rubra	Northern Red Oak	2" Cal.	BB	6	40'-60'h. x 40'-60'w.
	UL AM	Ulmus americana 'Valley Forge'	Valley Forge Elm	2" Cal.	BB	6	60'h. x 60'w.
	UL FR	Ulmus 'Frontier'	Frontier Elm	2" Cal.	BB	10	30'h. x 20'w.
					TOTAL =	52	
ORNAMENTAL TREES							
	AC GR	Acer grandidentatum	Wasatch Maple	2" Cal.	BB	2	20'-30'h. x 20'-30'w.
	AC TA	Acer tataricum	Tatarian Maple	2" Cal.	BB	6	15'-20'h. x 15'-20'w.
	MA SS	Malus 'Spring Snow' (White Flowers)	Spring Snow Crabapple	2" Cal.	BB	2	20'-25'h. x 20'-25'w.
	PY CA	Pyrus calleryana 'Chanticleer'	Chanticleer Pear	2" Cal.	BB	6	20'-30'h x 15'-20'w.
					TOTAL =	16	
DECIDUOUS and EVERGREEN SHRUBS							
	ER NAN	Ericameria nauseosus nauseosus nauseosus	Dwarf Blue Rabbitbrush	5 Gal.	Cont.	16	36"x36"
	PH OP	Physocarpus opulifolius 'Little Devil'	Little Devil Ninebark	5 Gal.	Cont.	12	36"x36"
	PI MU	Pinus mugo 'Mops'	Mineature Mugo Pine	5 Gal.	Cont.	20	2'-3'h.x2'-3'w.
	PR PB	Prunus besseyi 'Pawnee Buttes'	Creeping Western Sandcherry	5 Gal.	Cont.	18	18"-24"h.x6'
ORNAMENTAL GRASSES							
	SC SC	Schizachyrium scoparium 'Blaze'	Little Bluestem Grass	1 Gal.	Cont.	37	24"-36"h.
	PE AL	Pennisetum alopecuroides 'Hamlin'	Dwarf Fountain Grass	1 Gal.	Cont.	80	12"-24"h.

NORTH

0' 30' 60' 120'

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ARAPAHOE AND CHERRYVALE
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CHECKED BY:

ROW STREET TREE & LANDSCAPE PLAN AND LOT 2 LANDSCAPE BUFFER

L200

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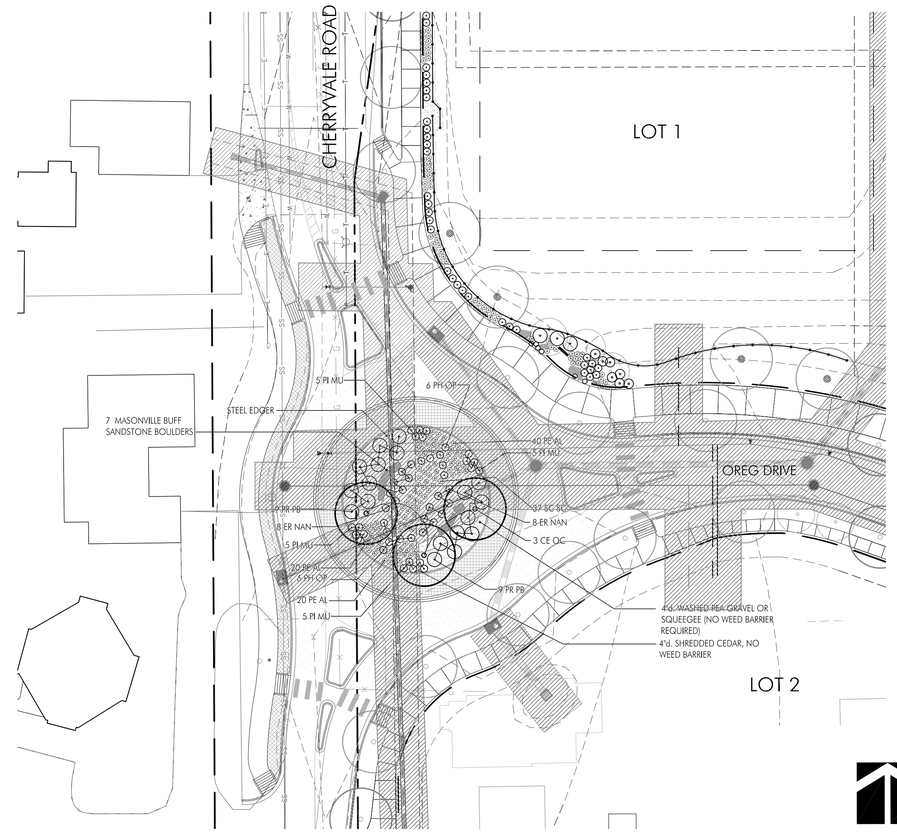
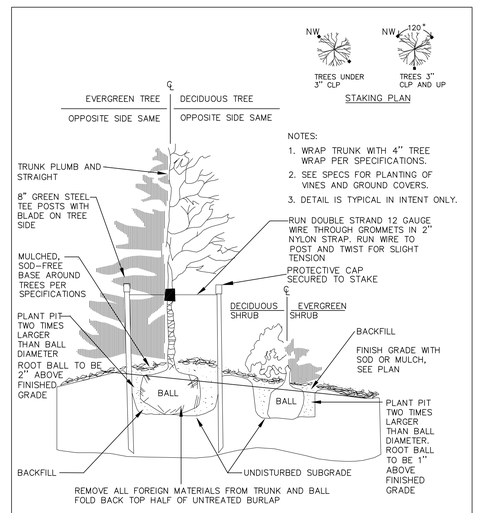
SYMBOL LEGEND

- 3"d. WASHED PEA GRAVEL OR SQUEEGEE (NO WEED BARRIER)
- ROLL-TOP STEEL EDGING
- SHRUBS
- ORNAMENTAL GRASSES
- PERENNIALS
- MASONVILLE "BUFF" SANDSTONE BOULDERS - SIZE RANGE: 1 TON to 1.5 TON EA.
- UTILITY OFFSET - NO TREE PLANTING ALLOWED

NOTES

1. TREES, SHRUBS, ORNAMENTAL GRASSES, AND PERENNIALS WITHIN TRAFFIC CIRCLE SHALL BE INDIVIDUALLY DRIP IRRIGATED BY AUTOMATIC SPRINKLER SYSTEM.
2. WOOD MULCH SHALL BE USED IN SHRUB, PERENNIAL, ORNAMENTAL GRASS, AND TREE RING AREAS, UNLESS OTHERWISE INDICATED IN THE SYMBOL LEGEND ABOVE.
3. SEE SHEET L200 FOR THE CHERRYVALE TRAFFIC CIRCLE PLANT LIST





NOTES:
1. WRAP TRUNK WITH 4" TREE WRAP PER SPECIFICATIONS.
2. SEE SPECS FOR PLANTING OF VINES AND GROUND COVERS.
3. DETAIL IS TYPICAL IN INTENT ONLY.

DRAWN BY: JSH CHECKED BY: SRW APPROVED BY: DIRECTOR OF PUBLIC WORKS	CITY OF BOULDER, COLORADO TREES AND SHRUBS PLANTING DETAIL	ISSUED: JULY 2, 1998 REVISED: OCT. 17, 2000 DRAWING NO. 3.02

CHERRYVALE TRAFFIC CIRCLE LANDSCAPE PLAN

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SITE REVIEW
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BOULDER JEWISH COMMONS
BOULDER JCC
ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

PROJECT #: 1118
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CHERRYVALE ROAD TRAFFIC CIRCLE LANDSCAPE PLAN

L201

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PLANT LIST - LOT 1

Symbol	Key	Botanical name	Common Name	Size at Planting	Root	Quantity	Size in Feet
DECIDUOUS CANOPY TREES							
	AC GR	Acer grandidentatum	Wasatch Maple	2" Cal.	BB	15	15'-25'h x 25'-30'w
	AC PL	Acer platanoides 'Emerald Queen'	Emerald Queen Norway Maple	2" Cal.	BB	2	40'
	CA SP	Catalpa speciosa	Western Catalpa	2" Cal.	BB	6	40'-60'
	CE OC	Celtis occidentalis	Western Hackberry	2" Cal.	BB	2	50'-60'h. x 40'-50'w.
	FR AM	Fraxinus americana 'Autumn Purple	Autumn Purple Ash	2" Cal.	BB	4	50'h. x 45'w.
	FR CI	Fraxinus pennsylvanica 'Cimarron'	Cimarron Ash	2" Cal.	BB	3	60'
	GL IM	Gleditsia triacanthos inermis 'Imperial'	Imperial Honeylocust	2" Cal.	BB	8	35'h. x 35'w.
	GL TR	Gleditsia triacanthos inermis 'Shademaster'	Shademaster Honeylocust	2" Cal.	BB	8	45'h. x 35'w.
	PL AC	Platanus x acerifolia	London Planetree	2" Cal.	BB	11	70'h. x 50'w.
	PO SA	Populus sargentii	Plains Cottonwood	2" Cal.	BB	3	75'h. x 55'w.
				3" Cal.	BB	2	
				4" Cal.	BB	4	
	QU MA	Quercus macrocarpa	Bur Oak	2" Cal.	BB	5	80'
	QU RO	Quercus robur	English Oak	2" Cal.	BB	9	80'
	QU RU	Quercus rubra	Northern Red Oak	2" Cal.	BB	2	60'
	TI CO	Tilia cordata 'Greenspire'	Greenspire Linden	2" Cal.	BB	2	35'h. x 30'w.
	UL AM	Ulmus americana 'Valley Forge'	Valley Forge Elm	2" Cal.	BB	3	60'h. x 60'w.
	UL FR	Ulmus 'Frontier'	Frontier Elm	2" Cal.	BB	3	30'h. x 20'w.
					TOTAL =	92	
ORNAMENTAL TREES							
	AM AL	Amelanchier alnifolia	Saskatoon Serviceberry	5 Gal.	Cont.	5	6'-20'h. x 6'-12'w
	AC TA	Acer tataricum 'Garrann'	Hot Wings Tatarian Maple	2" Cal.	BB	14	25'h. x 20'w.
	AM GRAB	Amelanchier x grandifolia 'Autumn Brilliance'	Autumn Brilliant Serviceberry	2" Cal./8'h.	CLUMP & TREE FORM	10	15'-25'h x 20'-25'w
	CR CR	Crataegus crus-gali inermis	Thornless Cockspur Hawthorn	2" Cal.	BB	2	15'-25'h x 15'-20'w
	MA SS	Malus 'Spring Snow'	Sping Snow Crabapple	2" Cal.	BB	10	25'h x 25'w.
	MA RR	Malus 'Royal Raindrop' (Red Flowers)	Royal Raindrop Crabapple	2" Cal.	BB	8	15'-20'h. x 12'-15'w.
	MA CO	Malus 'Coralburst' (Pink to White Flowers)	Coralburst Crabapple	2" Cal.	BB	4	12'-15'h. x 12'-15'w.
	PY CA	Pyrus calleryana 'Chanticleer'	Chanticleer Pear	2" Cal.	BB	6	20'-30'h x 15'-20'w.
	PY US	Pyrus ussuriensis 'Prairie Gem'	Prairie Gem Pear	2" Cal.	BB	13	25'h. x 20'w.
	QU FA	Quercus robur 'Fastigata'	Columnar English Oak	2" Cal.	BB	10	60'(x20'w.)
					TOTAL =	82	
EVERGREEN TREES							
	PI HE	Pinus heldreichii 'leucodermis'	Bosnian Pine	6'	BB	2	15'-25'h. x 10'-12'w
	PI NI	Pinus nigra	Austrian Pine	6'	BB	13	40'w. x 60'h.
	PI PU	Picea pungens	Colorado Spruce	6'	BB	68	30'w. x 60'h.
	PP SD	Picea pungens 'Sester Dwarf'	Dwarf Blue Spruce	6'	BB	2	6'-8'h. x 3'-5'w
					TOTAL =	85	
DECIDUOUS and EVERGREEN SHRUBS							
	ER NSS	Ericamerica nauseosus albicaulis	Tall Blue Rabbitbrush	5 Gal.	Cont.	XX	
	ER NAG	Ericamerica nauseosus glabra	Tall Green Rabbitbrush	5 Gal.	Cont.	XX	
	ER NAN	Ericamerica nauseosus nauseosus	Dwarf Blue Rabbitbrush	5 Gal.	Cont.	XX	
	CO CO	Cornus stolonifera coloradense	Colorado Dogwood	5 Gal.	Cont.	XX	
	FO NE	Forestiera neomexicana	New Mexico Privet	5 Gal.	Cont.	XX	
	PH OP	Physocarpus opulifolius 'Diablo'	Purple Leaf Ninebark	5 Gal.	Cont.	XX	
	PO SA	Populus sargentii	Plains Cottonwood	5 Gal.	Cont.	9	75'h. x 55'w.
	PR BE	Prunus besseyi	Western Sandcherry	5 Gal.	Cont.	XX	
	PR PB	Prunus besseyi 'Pawnee Buttes'	Creeping Western Sandcherry	5 Gal.	Cont.	XX	
	RI AU	Ribes aureum	Yellow Flowering Currant	5 Gal.	Cont.	XX	
	RI CE	Ribes cereum	Squaw Currant	5 Gal.	Cont.	XX	
	RU DE	Rubus deliciosus	Boulder Raspberry	5 Gal.	Cont.	XX	
	SY AL	Symphoricarpus albus	Common Snowberry	5 Gal.	Cont.	XX	
					TOTAL =	487 (DECIDUOUS)	
						90 (EVERGREEN)	
ORNAMENTAL GRASSES							
	CA KF	Calamagrostis acutiflora	Karl Forester Feather Reed Grass	1 Gal.	Cont.	XX	
	HE SE	Helictotrichan sempervirens	Blue Avena Grass	1 Gal.	Cont.	XX	
	PA SH	Panicum virgatum 'Shenandoah'	Red Switchgrass	1 Gal.	Cont.	XX	
	SC SC	Schizachyrium scoparium 'Blaze'	Little Bluestem Grass	1 Gal.	Cont.	XX	
					TOTAL =	1,482	
PERENNIALS, GROUNDCOVERS AND VINES							
	EC PU	Echinacea purpurea	Purple Coneflower	1 Gal.	Cont.	XX	
	RU FU	Rudbeckia fulgida 'Goldstrum'	Black-Eyed Susan	1 Gal.	Cont.	XX	
					TOTAL =	230	

LANDSCAPING TABLE - LOT 1

TOTAL LOT SIZE (sq.ft.): 425,625 sq.ft. (9.771 ACRES)

BUILDING AREA: COMBINED 1st FLOOR (45,104 sq.ft.) & 2nd FLOOR (7,341 sq.ft.) = 52,444 sq.ft.

TOTAL PARKING LOT SIZE
Initial Const. 64,498 sq.ft. (Paved)
13,622 sq.ft. (Gravel - Overflow)
78,120 sq.ft. Total
Future 1,695 sq.ft.
79,815 sq.ft. Total Build Out

TOTAL AREA NOT COVERED BY INITIAL BLDG. OR REQUIRED PARKING/VEHICULAR CIRCULATION = 316,023 sq.ft.

	REQUIRED	PROVIDED
TOTAL NUMBER OF PARKING STALLS	148	177 (INITIAL CONST.) 191 (FUTURE BUILD OUT)
TOTAL INTERIOR PARKING LOT LANDSCAPE AREA (SEE SHEET L104 FOR PARKING LOT DIAGRAM)	7,982 sq.ft.	8,245 sq.ft.
% LANDSCAPE WITHIN TOTAL PARKING LOT AREA	10%	10.33%

TOTAL NUMBER OF TREES IN INTERIOR PARKING LOT AREA (1 TREE PER 200 SQ.FT.)
REQUIRED: 40
PROVIDED: 41
23 LARGE DECIDUOUS TREES (56.1%)
8 MEDIUM DECIDUOUS TREES (19.5%)
10 SMALL DECIDUOUS TREES (24.4%)
75.6%

TOTAL QUANTITY OF LANDSCAPE PLANT MATERIALS (BASED ON 316,023 SQ.FT.)

	REQUIRED	PROVIDED
TREES (ASSUMES 1 TREE / 1,500 SQ.FT.)	211	259 (48 LOCATED ON SOUTH SIDE OF LOT 2)
SHRUBS (ASSUMES 5 SHRUBS / 1,500 SQ.FT.)	1,053	577
ORNAMENTAL GRASSES/PERENNIALS	0	1,712

TOTAL NUMBER OF STREET TREES: N/A - SEE LANDSCAPE TABLE ON SHEET L200 FOR STREET TREE LOCATIONS, QUANTITIES & SPECIES

NOTES

1. ROTOR AND SPRAY IRRIGATION HEADS SHALL BE USED IN BLUEGRASS SOD AND THERMAL BLUEGRASS (LOWER WATER TURF) SOD AREAS.
2. NATIVE SEEDED AREAS WILL NOT BE IRRIGATED.
3. TREES, SHRUBS, ORNAMENTAL GRASSES, AND PERENNIALS (IN PLANTING BEDS) SHALL BE INDIVIDUALLY DRIP IRRIGATED BY SEPARATE WATER USE ZONES.
4. WOOD MULCH SHALL BE USED IN SHRUB, PERENNIAL, ORNAMENTAL GRASS, AND TREE RING AREAS. LIMITED COBBLE MULCH SHALL BE UTILIZED IN LOT 1 PLANTING BED AS A DECORATIVE ELEMENT ONLY.
5. TYPE 1 NATIVE SEED MIX:

   PAWNEE BUTTES SEED, INC.
   FOOTHILLS NATIVE MIX - 25 LBS. / ACRE

   10% INDIAN RICEGRASS
   10% LITTLE BLUESTEM
   5% BLUEGRAMA
   7.5% YELLOW INDIANGRASS
   15% SWITCHGRASS
   10% ARIZONA / IDAHO FESCUE
   10% SIDEOATS GRAMA
   10% BLUEBUNCH WHEATGRASS
   10% THICKSPIKE WHEATGRASS
   2.5% SAND DROPSEED

6. TYPE 2 NATIVE SEED MIX:

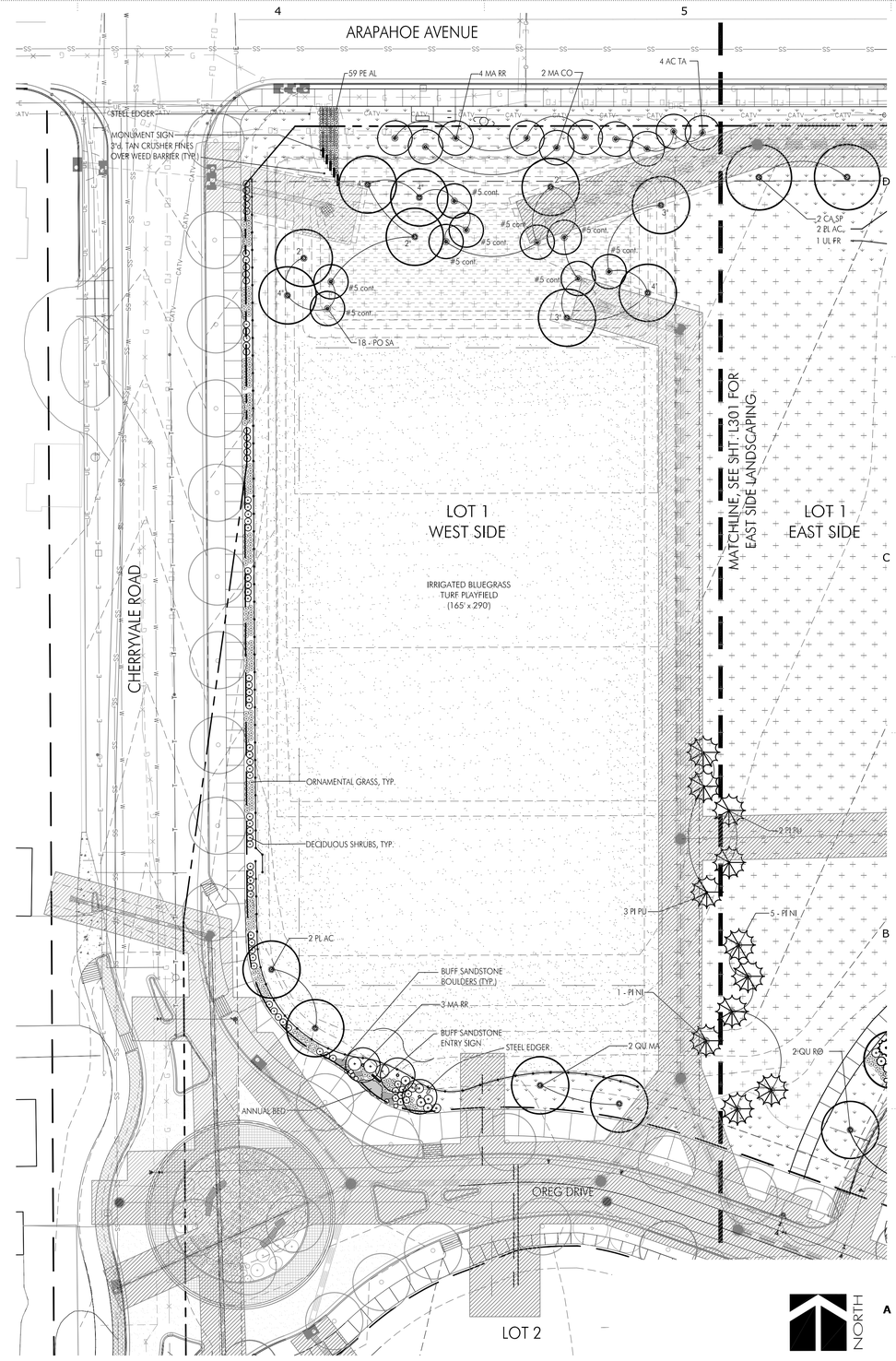
   PAWNEE BUTTES SEED, INC.
   PRAIRIE WETLAND MIX - 10LBS. / ACRE

   12% ALKALI BULBRUSH
   12% SWITCHGRASS
   12% CANADA WILDRYE
   12% PRAIRIE CORDGRASS
   8% SOFTSTEM BULRUSH
   8% NEBRASKA SEDGE
   6% THREE SQUARE BULBRUSH
   6% NUTTALL'S ALKALIGRASS
   6% CREEPING SPIKEGRASS
   6% MEADOW SEDGE
   2% POPCORN SEDGE
   2% INDIAN GRASS
   2% BALTIC RUSH
   2% BIG BLUESTEM
   1.5% TORREY'S RUSH
   1% MARSH SUNFLOWER
   1% YELLOW MONKEY FLOWER
   0.5% COLORADO RUSH

7. SEE SHEET L200 AND L201 FOR R.O.W. LANDSCAPING.

LEGEND

- IRRIGATED KENTUCKY BLUEGRASS SOD
- IRRIGATED THERMAL BLUEGRASS SOD (LOWER WATER USE TURF)
- NATIVE SEED - TYPE 1 SEE 'NOTES' FOR SEED MIX
- NATIVE SEED - TYPE 2 (NON-IRRIGATED) SEE 'NOTES' FOR SEED MIX
- ROLL-TOP STEEL EDGING
- UTILITY OFFSET - NO TREE PLANTING ALLOWED



LOT 1 LANDSCAPE PLAN - WEST SIDE

0' 15' 30' 60'

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F - 970.484.0264

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bha
BHA Design Incorporated
1603 Oakridge Drive
Fort Collins, Colorado 80525
voice: 970.223.7577
fax: 970.223.1827

SITE REVIEW
RE-SUBMITTAL

BOULDER JEWISH COMMONS
BOULDER JCC
ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

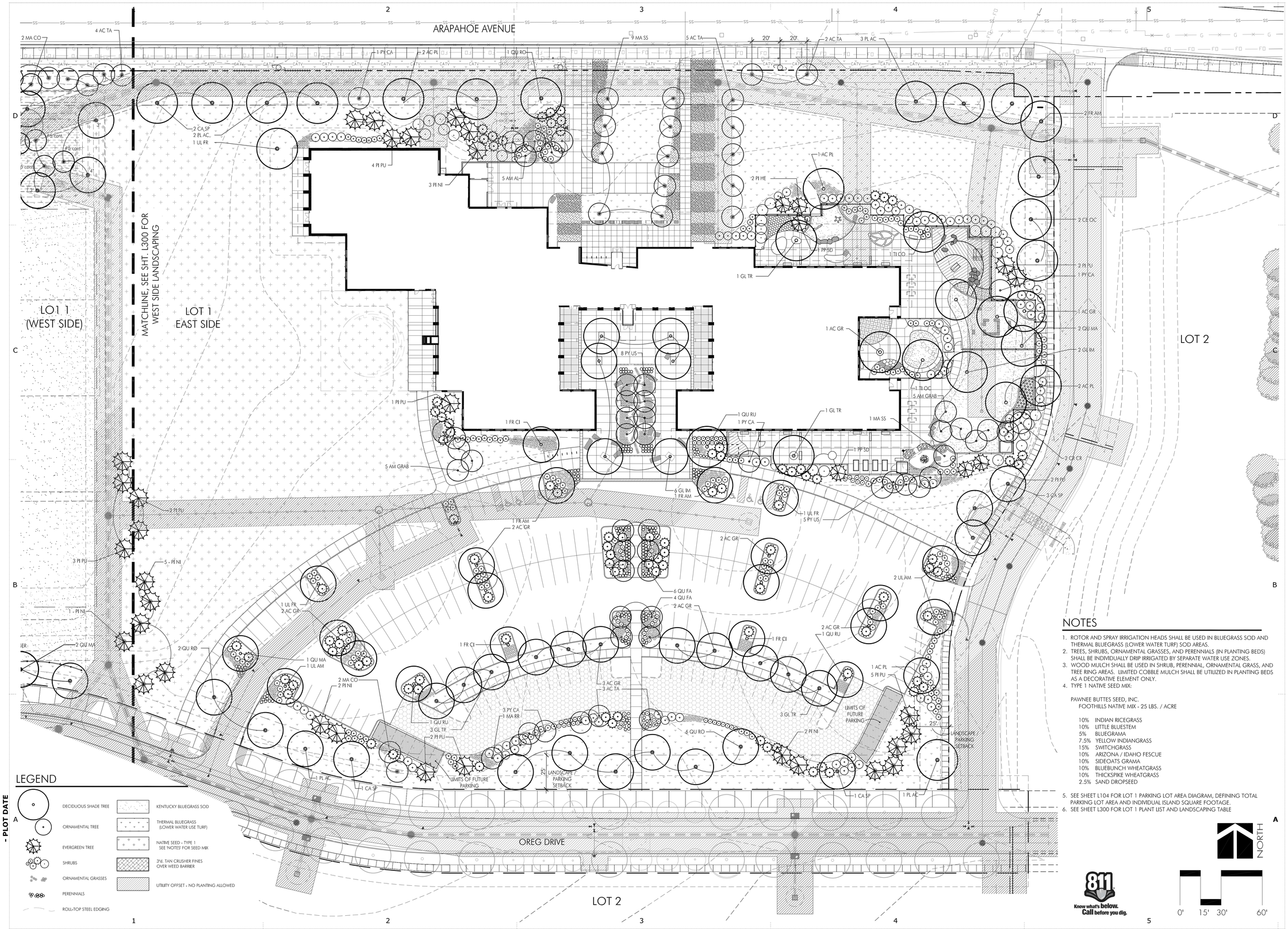
PROJECT #: 1118
ISSUE DATE: 07/01/13
DRAWN BY: BHA
CHECKED BY:

LOT 1 - WEST SIDE LANDSCAPE PLAN

L300

06/05/2012 10:50:02 AM - PLOT DATE

Know what's below. Call before you dig.



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5%	BLUEGRAMA
7.5%	YELLOW INDIANGRASS
15%	SWITCHGRASS
10%	ARIZONA / IDAHO FESCUE
10%	SIDEOATS GRAMA
10%	BLUEBUNCH WHEATGRASS
10%	THICKSPIKE WHEATGRASS
2.5%	SAND DROPSEED

5. SEE SHEET L104 FOR LOT 1 PARKING LOT AREA DIAGRAM, DEFINING TOTAL PARKING LOT AREA AND INDIVIDUAL ISLAND SQUARE FOOTAGE.
6. SEE SHEET L300 FOR LOT 1 PLANT LIST AND LANDSCAPING TABLE

LEGEND

- DECIDUOUS SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- SHRUBS
- ORNAMENTAL GRASSES
- PERENNIALS
- ROLL-TOP STEEL EDGING
- KENTUCKY BLUEGRASS SOD
- THERMAL BLUEGRASS (LOWER WATER USE TURF)
- NATIVE SEED - TYPE 1 SEE 'NOTES' FOR SEED MIX
- 3"rd. TAN CRUSHER FINES OVER WEED BARRIER
- UTILITY OFFSET - NO PLANTING ALLOWED

06/05/2012 10:50:02 AM - PLOT DATE

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SITE REVIEW RE-SUBMITTAL

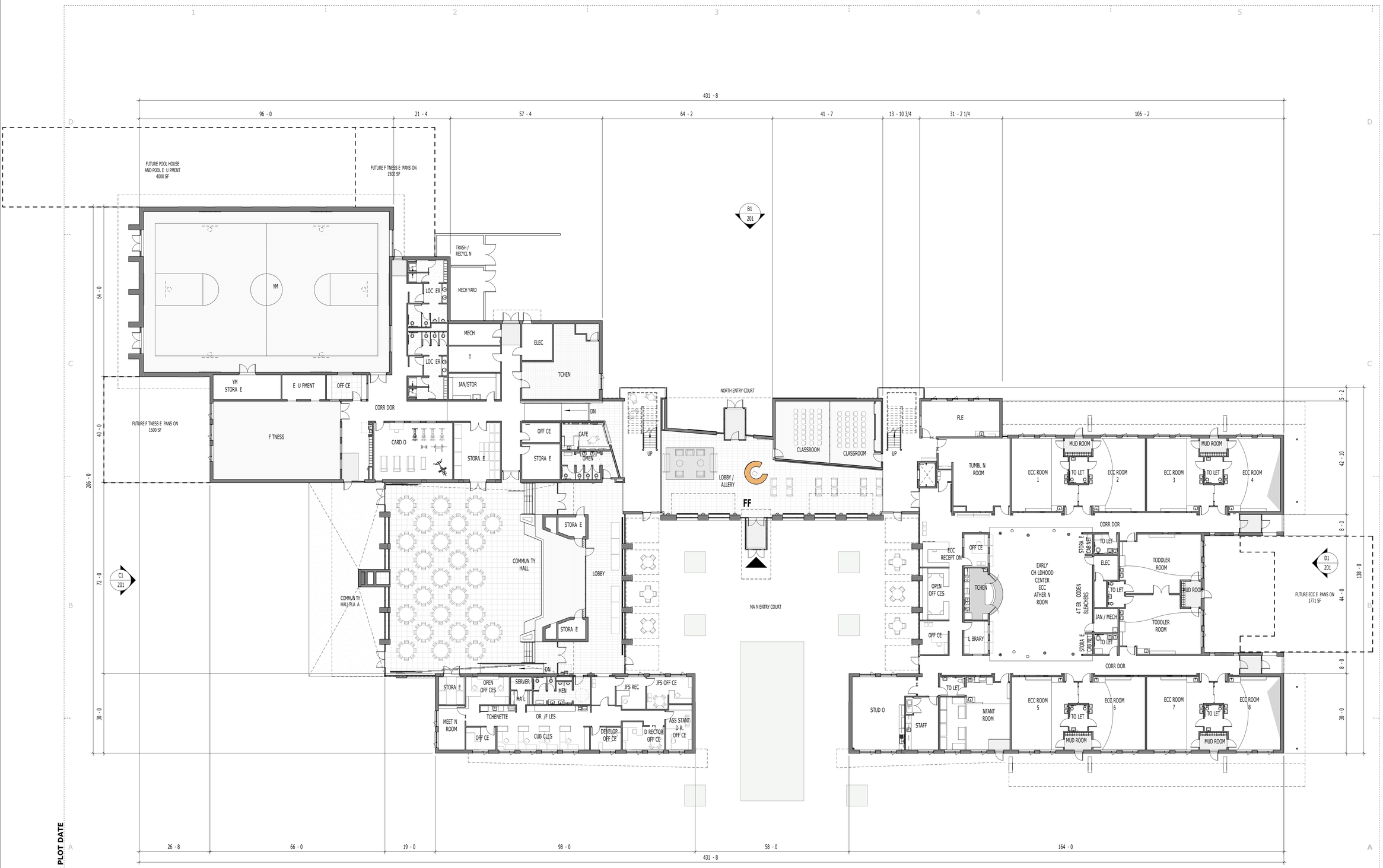
BOULDER JEWISH COMMONS

BOULDER JCC
ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

PROJECT #: 1118
ISSUE DATE: 07/01/13
DRAWN BY: BHA
CHECKED BY:

LOT 1 - EAST SIDE LANDSCAPE PLAN

L301



LEVEL ONE
PHASE 1: 10 SF
FUTURE: SF
TOTAL FUTURE: SF
ROSS AREA TO OUTSIDE OF E TERIOR WALLS

A1 LEVEL 1
1/16 1-0

8/29/2013 3:35:32 PM - **PLOT DATE**

ARCHITECT

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PROJECT PHASE

SITE REVIEW RE-SUBMITTAL

PROJECT INFORMATION

BOULDER JEWISH COMMONS
BOULDER JE SH COMMUN TY CENTER
ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

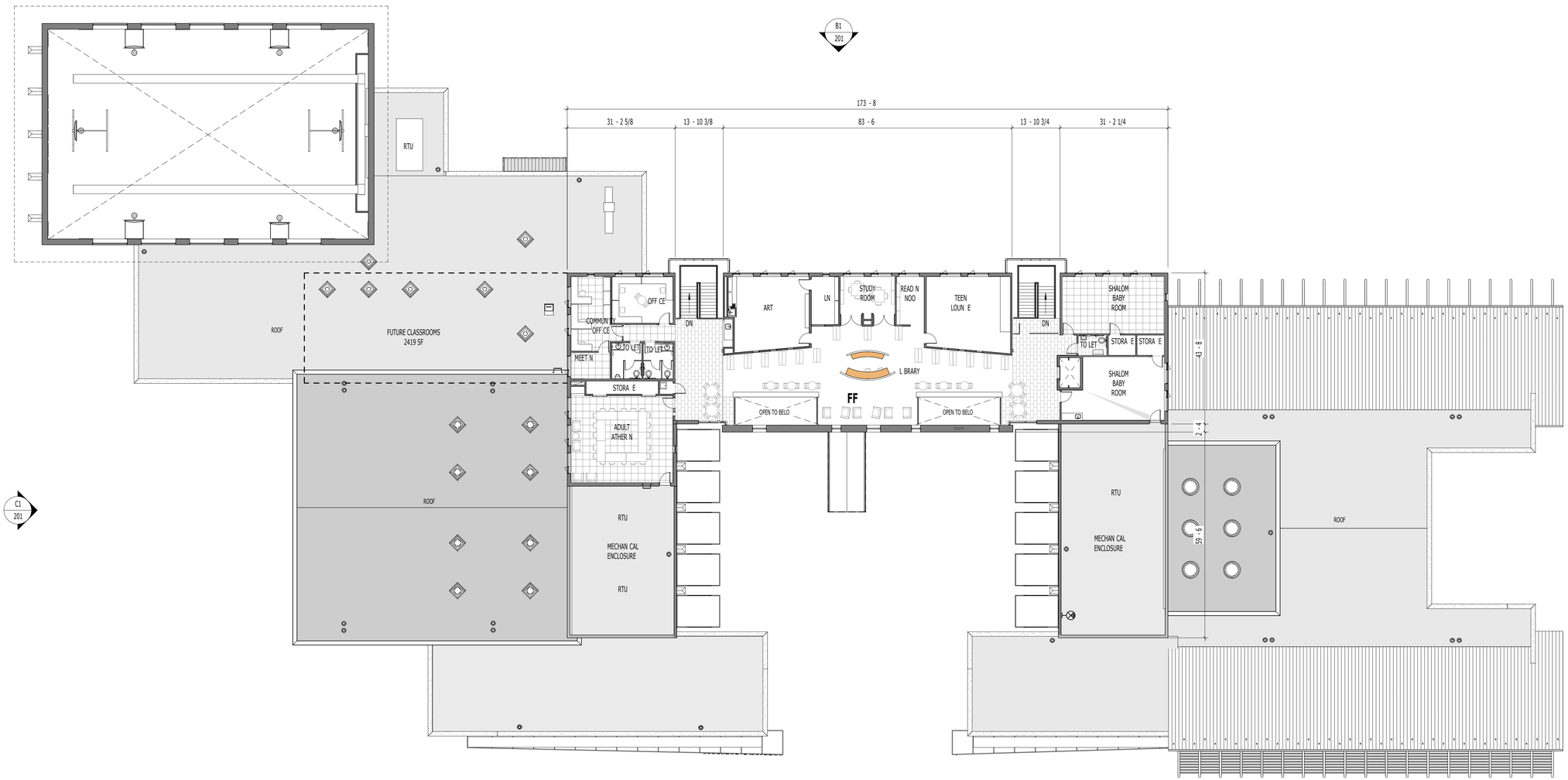
SHEET INFORMATION

PROJECT #: 1118

ISSUE DATE: 07/01/13

LEVEL ONE PLAN

101



LEVEL TWO
PHASE 1: 0 SF
FUTURE: 1 SF
TOTAL FUTURE: SF
ROSS AREA TO OUTSIDE OF E TERIOR WALLS

N

A1 **LEVEL**
1/16 1-0

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ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

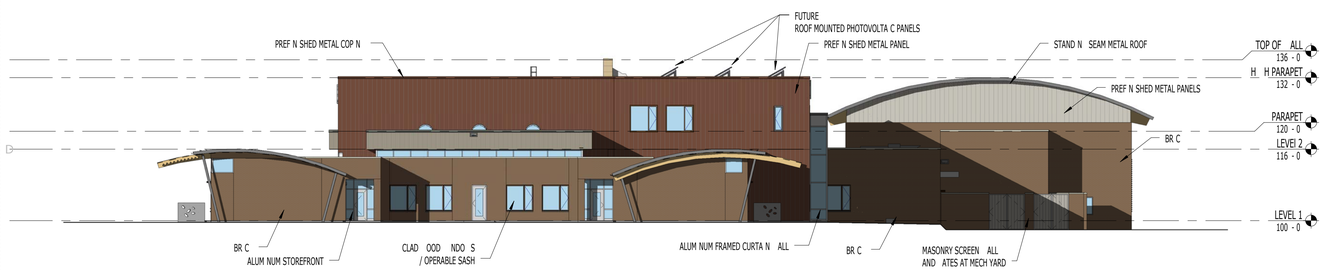
SHEET INFORMATION

PROJECT #: 1118

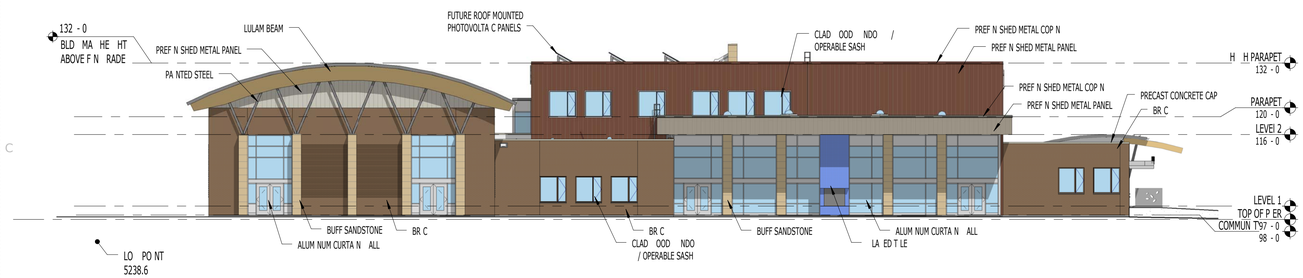
ISSUE DATE: 07/01/13

LEVEL T O PLAN

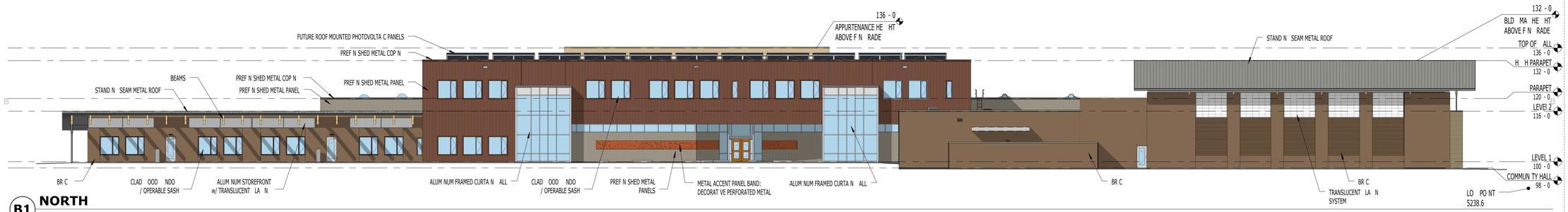
10



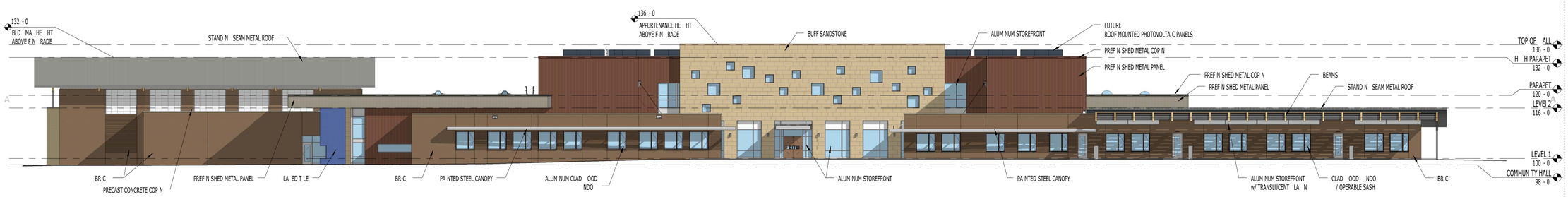
D1 EAST
1/16 1 -0



C1 WEST
1/16 1 -0



B1 NORTH
1/16 1 -0



A1 SOUTH
1/16 1 -0

8/29/2013 3:39:55 PM - **PLOT DATE**

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ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

SHEET INFORMATION

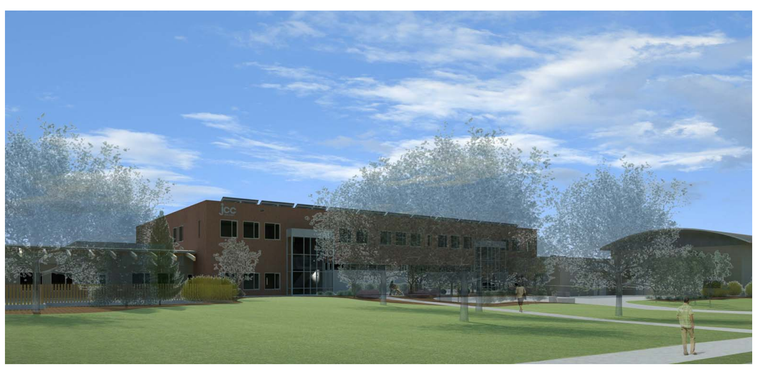
PROJECT #: 1118

ISSUE DATE: 07/01/13

ELEVAT ONS

01

C NORTH ENTRY
1/8 1-0



A1 NORTH ENTRY - EAST
1/8 1-0

A NORTH ENTRY - WEST
1/8 1-0

ARCHITECT

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SITE REVIEW RE-SUBMITTAL

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ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

SHEET INFORMATION

PROJECT #: 1118

ISSUE DATE: 07/01/13

3-D V E S

0

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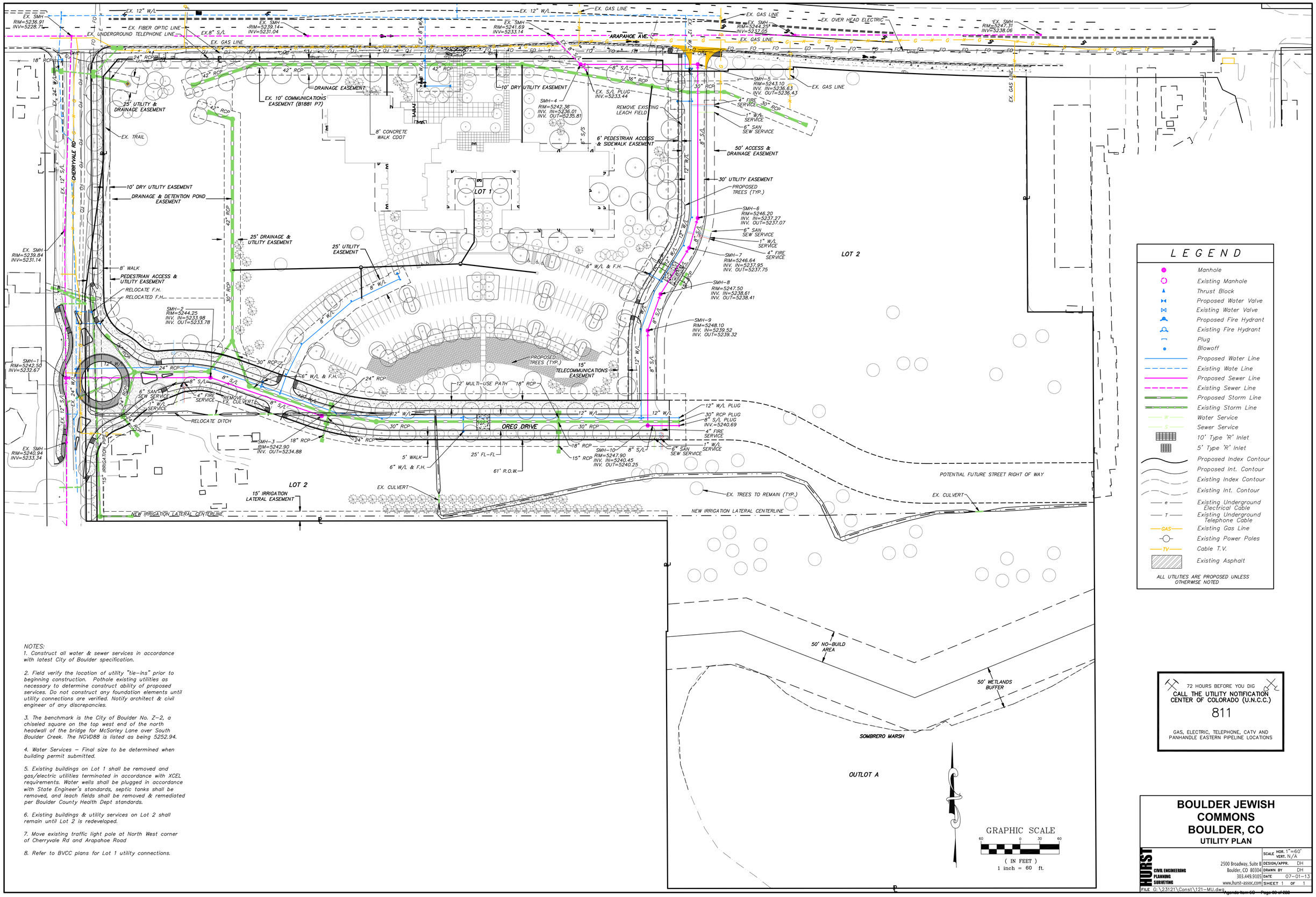

LEGEND

- Manhole
- Existing Manhole
- Thrust Block
- Proposed Water Valve
- Existing Water Valve
- Proposed Fire Hydrant
- Existing Fire Hydrant
- Plug
- Blowoff
- Proposed Water Line
- Existing Wate Line
- Proposed Sewer Line
- Existing Sewer Line
- Proposed Storm Line
- Existing Storm Line
- Water Service
- Sewer Service
- 10' Type 'R' Inlet
- 5' Type 'R' Inlet
- Proposed Index Contour
- Proposed Int. Contour
- Existing Index Contour
- Existing Int. Contour
- Existing Underground Electrical Cable
- Existing Underground Telephone Cable
- Existing Gas Line
- Existing Power Poles
- Cable T.V.
- Existing Asphalt

ALL UTILITIES ARE PROPOSED UNLESS OTHERWISE NOTED

NOTES:

1. Construct all water & sewer services in accordance with latest City of Boulder specification.

2. Field verify the location of utility "tie-ins" prior to beginning construction. Pothole existing utilities as necessary to determine construct ability of proposed services. Do not construct any foundation elements until utility connections are verified. Notify architect & civil engineer of any discrepancies.

3. The benchmark is the City of Boulder No. Z-2, a chiseled square on the top west end of the north headwall of the bridge for McSorley Lane over South Boulder Creek. The NGVD88 is listed as being 5252.94.

4. Water Services – Final size to be determined when building permit submitted.

5. Existing buildings on Lot 1 shall be removed and gas/electric utilities terminated in accordance with XCEL requirements. Water wells shall be plugged in accordance with State Engineer's standards, septic tanks shall be removed, and leach fields shall be removed & remediated per Boulder County Health Dept standards.

6. Existing buildings & utility services on Lot 2 shall remain until Lot 2 is redeveloped.

7. Move existing traffic light pole at North West corner of Cherryvale Rd and Arapahoe Road

8. Refer to BVCC plans for Lot 1 utility connections.

72 HOURS BEFORE YOU DIG
CALL THE UTILITY NOTIFICATION CENTER OF COLORADO (U.N.C.C.)
811
GAS, ELECTRIC, TELEPHONE, CATV AND PANHANDLE EASTERN PIPELINE LOCATIONS

BOULDER JEWISH COMMONS
BOULDER, CO
UTILITY PLAN

HURST
CIVIL ENGINEERING
PLANNING
SURVEYING

2500 Broadway, Suite B
Boulder, CO 80304
303.449.9105
www.hurst-assoc.com

SCALE	HOR. 1"=60' VERT. N/A
DESIGN/APPR.	DH
DRAWN BY	DH
DATE	07-01-13
SHEET	1 OF 1

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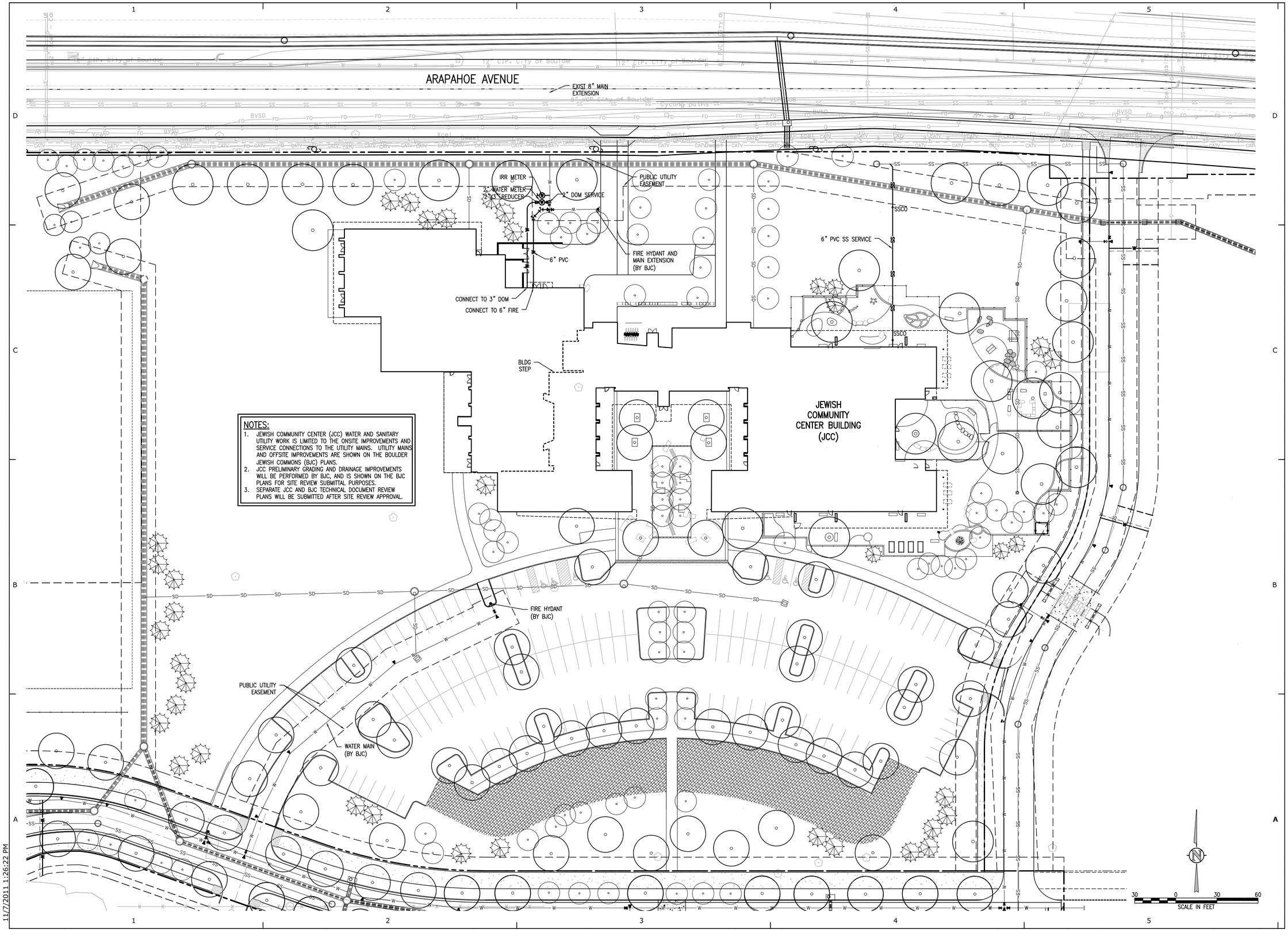

NOTES:

1. JEWISH COMMUNITY CENTER (JCC) WATER AND SANITARY UTILITY WORK IS LIMITED TO THE ONSITE IMPROVEMENTS AND SERVICE CONNECTIONS TO THE UTILITY MAINS. UTILITY MAINS AND OFFSITE IMPROVEMENTS ARE SHOWN ON THE BOULDER JEWISH COMMONS (BJC) PLANS.
2. JCC PRELIMINARY GRADING AND DRAINAGE IMPROVEMENTS WILL BE PERFORMED BY BJC, AND IS SHOWN ON THE BJC PLANS FOR SITE REVIEW SUBMITTAL PURPOSES.
3. SEPARATE JCC AND BJC TECHNICAL DOCUMENT REVIEW PLANS WILL BE SUBMITTED AFTER SITE REVIEW APPROVAL.

11/7/2011 1:26:22 PM

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1319 Spruce Street
Boulder, CO 80302
Phone: 303.444.1951
Fax: 303.444.1957
e-mail Info@jvajva.com

SITE REVIEW
RE-SUBMITTAL

BOULDER JEWISH COMMONS

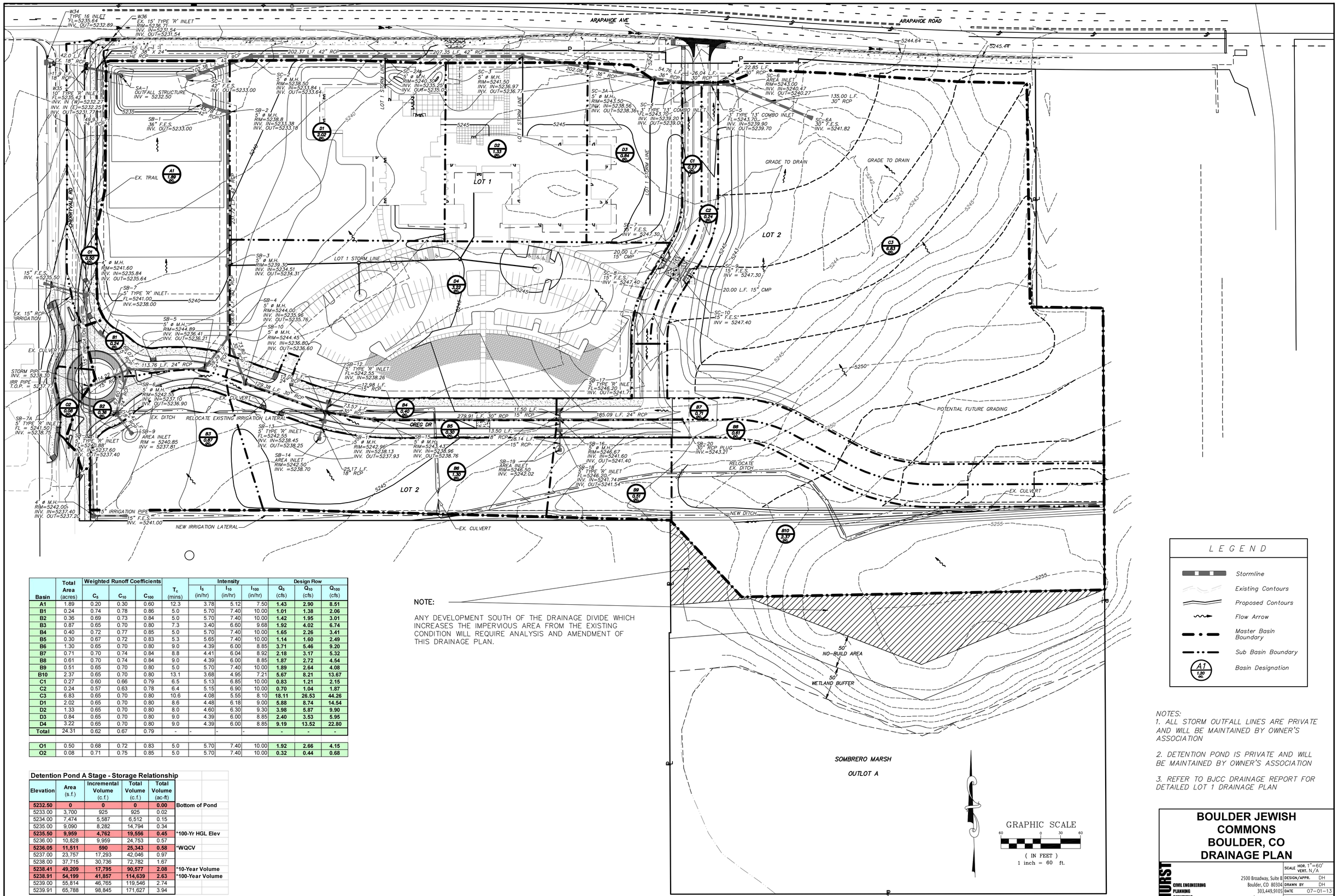
BOULDER JCC
ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

PROJECT #: 1118

ISSUE DATE: 07/01/13

UTILITY CONNECTION PLAN

C2.0



Basin	Total Area (acres)	Weighted Runoff Coefficients C_5	C_{10}	C_{100}	T_c (mins)	Intensity I_5 (in/hr)	I_{10} (in/hr)	I_{100} (in/hr)	Design Flow Q_5 (cfs)	Q_{10} (cfs)	Q_{100} (cfs)
A1	1.89	0.20	0.30	0.60	12.3	3.78	5.12	7.50	**1.43**	**2.90**	**8.51**
B1	0.24	0.74	0.78	0.86	5.0	5.70	7.40	10.00	**1.01**	**1.38**	**2.06**
B2	0.36	0.69	0.73	0.84	5.0	5.70	7.40	10.00	**1.42**	**1.95**	**3.01**
B3	0.87	0.65	0.70	0.80	7.3	3.40	6.60	9.68	**1.92**	**4.02**	**6.74**
B4	0.40	0.72	0.77	0.85	5.0	5.70	7.40	10.00	**1.65**	**2.26**	**3.41**
B5	0.30	0.67	0.72	0.83	5.3	5.65	7.40	10.00	**1.14**	**1.60**	**2.49**
B6	1.30	0.65	0.70	0.80	9.0	4.39	6.00	8.85	**3.71**	**5.46**	**9.20**
B7	0.71	0.70	0.74	0.84	8.8	4.41	6.04	8.92	**2.18**	**3.17**	**5.32**
B8	0.61	0.70	0.74	0.84	9.0	4.39	6.00	8.85	**1.87**	**2.72**	**4.54**
B9	0.51	0.65	0.70	0.80	5.0	5.70	7.40	10.00	**1.89**	**2.64**	**4.08**
B10	2.37	0.65	0.70	0.80	13.1	3.68	4.95	7.21	**5.67**	**8.21**	**13.67**
C1	0.27	0.60	0.66	0.79	6.5	5.13	6.85	10.00	**0.83**	**1.21**	**2.15**
C2	0.24	0.57	0.63	0.78	6.4	5.15	6.90	10.00	**0.70**	**1.04**	**1.87**
C3	6.83	0.65	0.70	0.80	10.6	4.08	5.55	8.10	**18.11**	**26.53**	**44.26**
D1	2.02	0.65	0.70	0.80	8.6	4.48	6.18	9.00	**5.88**	**8.74**	**14.54**
D2	1.33	0.65	0.70	0.80	8.0	4.60	6.30	9.30	**3.98**	**5.87**	**9.90**
D3	0.84	0.65	0.70	0.80	9.0	4.39	6.00	8.85	**2.40**	**3.53**	**5.95**
D4	3.22	0.65	0.70	0.80	9.0	4.39	6.00	8.85	**9.19**	**13.52**	**22.80**
Total	24.31	0.62	0.67	0.79	-	-	-	-	**-**	**-**	**-**
O1	0.50	0.68	0.72	0.83	5.0	5.70	7.40	10.00	**1.92**	**2.66**	**4.15**
O2	0.08	0.71	0.75	0.85	5.0	5.70	7.40	10.00	**0.32**	**0.44**	**0.68**

Detention Pond A Stage - Storage Relationship

Elevation	Area (s.f.)	Incremental Volume (c.f.)	Total Volume (c.f.)	Total Volume (ac-ft)	
5232.50	**0**	**0**	**0**	**0.00**	**Bottom of Pond**
5233.00	3,700	925	925	0.02	
5234.00	7,474	5,587	6,512	0.15	
5235.00	9,090	8,282	14,794	0.34	
5235.50	**9,959**	**4,762**	**19,556**	**0.45**	***100-Yr HGL Elev**
5236.00	10,828	9,959	24,753	0.57	
5236.05	**11,511**	**590**	**25,343**	**0.58**	***WQCV**
5237.00	23,757	17,293	42,046	0.97	
5238.00	37,715	30,736	72,782	1.67	
5238.41	**49,209**	**17,795**	**90,577**	**2.08**	***10-Year Volume**
5238.91	**54,199**	**41,857**	**114,639**	**2.63**	***100-Year Volume**
5239.00	55,814	46,765	119,546	2.74	
5239.91	65,788	98,845	171,627	3.94	

NOTE:

ANY DEVELOPMENT SOUTH OF THE DRAINAGE DIVIDE WHICH INCREASES THE IMPERVIOUS AREA FROM THE EXISTING CONDITION WILL REQUIRE ANALYSIS AND AMENDMENT OF THIS DRAINAGE PLAN.

LEGEND

- Stormline
- Existing Contours
- Proposed Contours
- Flow Arrow
- Master Basin Boundary
- Sub Basin Boundary
- A1 1.20 ac. — Basin Designation

NOTES:

1. ALL STORM OUTFALL LINES ARE PRIVATE AND WILL BE MAINTAINED BY OWNER'S ASSOCIATION
2. DETENTION POND IS PRIVATE AND WILL BE MAINTAINED BY OWNER'S ASSOCIATION
3. REFER TO BJCC DRAINAGE REPORT FOR DETAILED LOT 1 DRAINAGE PLAN

BOULDER JEWISH COMMONS BOULDER, CO DRAINAGE PLAN

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CIVIL ENGINEERING
PLANNING
SURVEYING
2500 Broadway, Suite B
Boulder, CO 80304
303.449.9105
www.hurst-assoc.com

SCALE	HOR. 1"=60' VERT. N/A
DESIGN/APPR.	DH
DRAWN BY	DH
DATE	07-01-13
SHEET	1 OF 1

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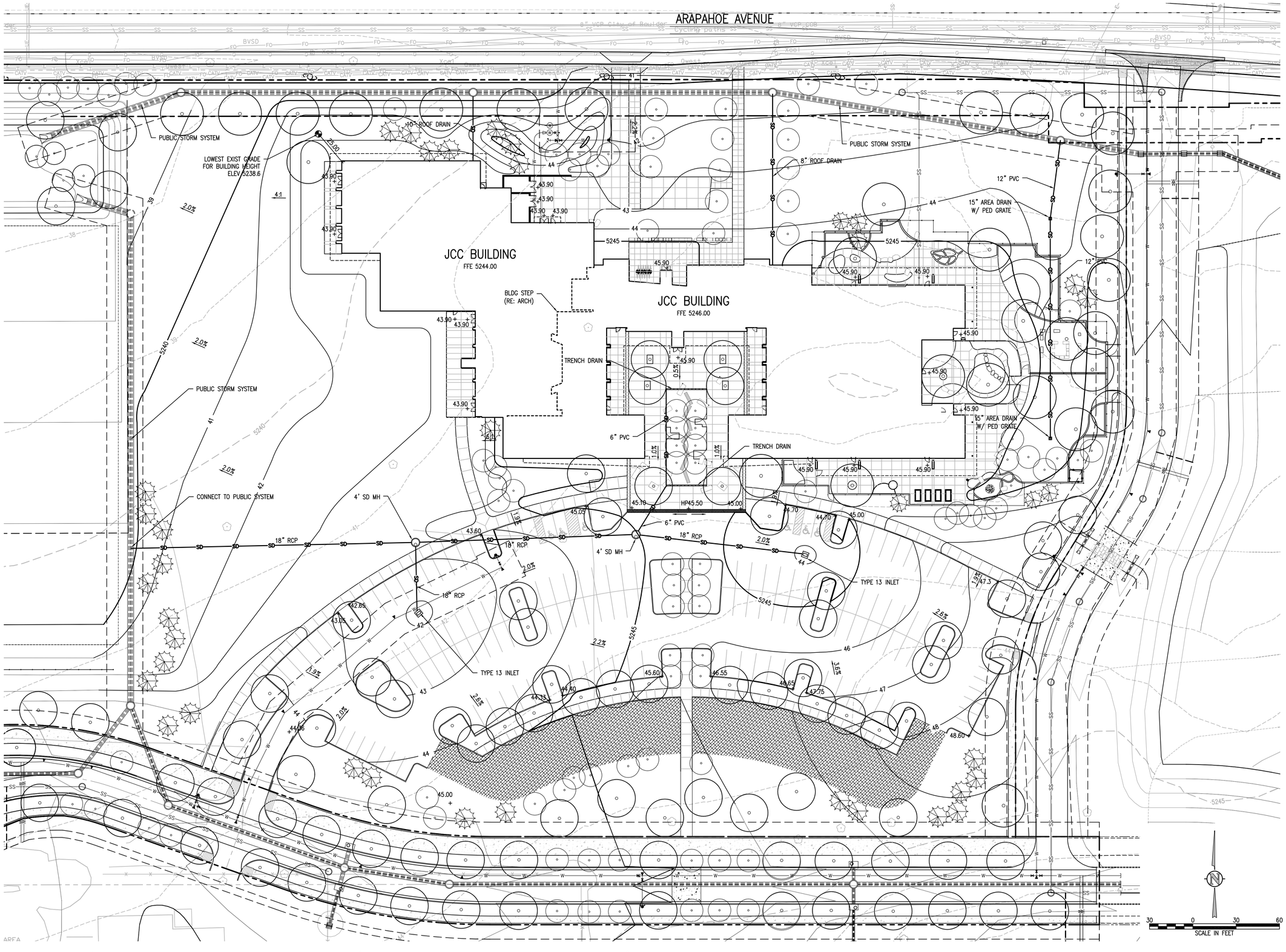

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e-mail Info@jvajva.com

SITE REVIEW
RE-SUBMITTAL

BOULDER JEWISH COMMONS

BOULDER JCC
ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

PROJECT #: 1118

ISSUE DATE: 07/01/13

GRADING AND DRAINAGE PLAN

C1.0

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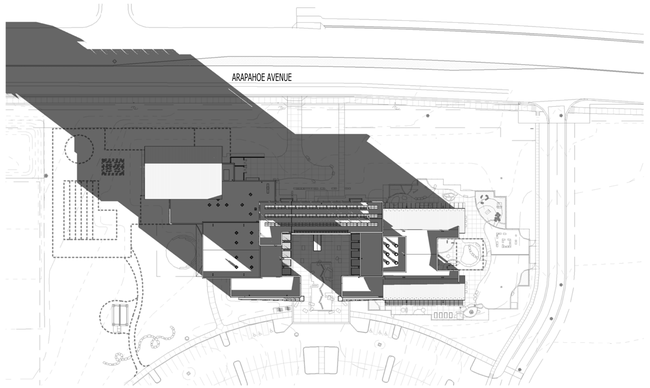

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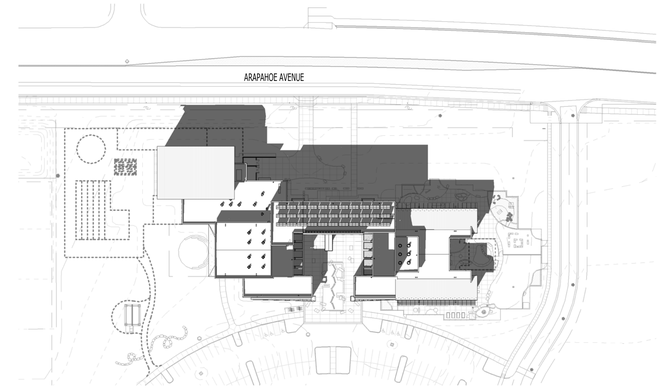

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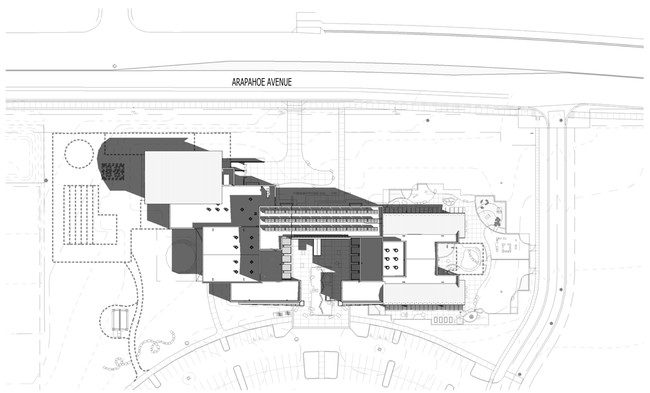

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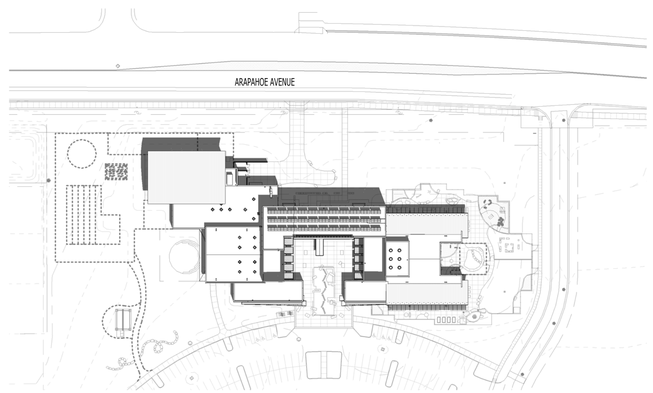

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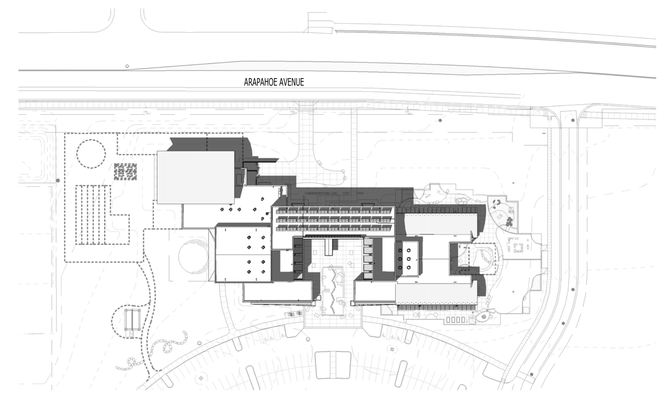

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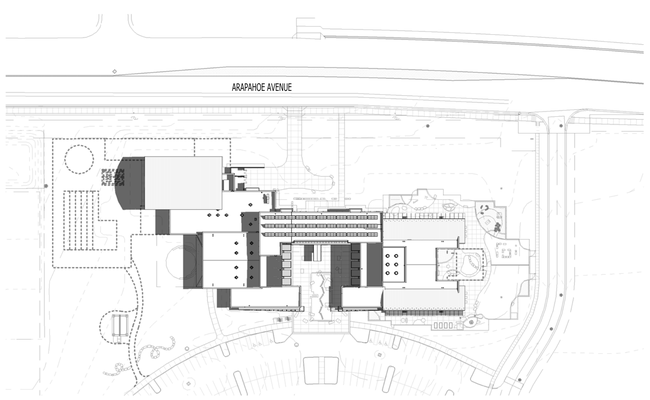

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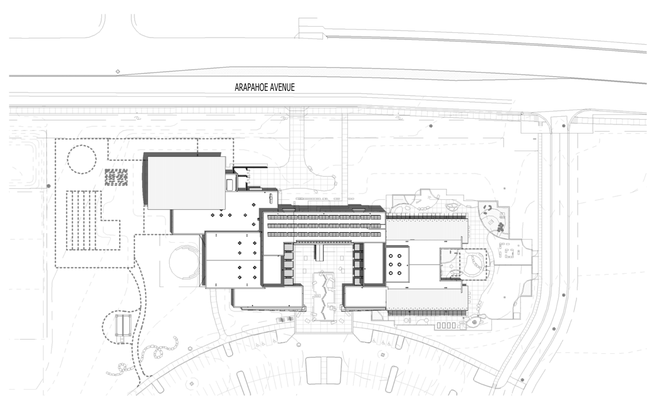

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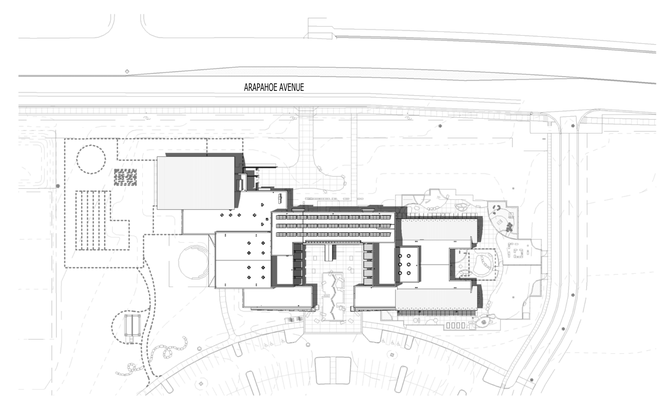

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ARCHITECT

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SEAL

CONSULTANT

PROJECT PHASE

SITE REVIEW
RE-SUBMITTAL

PROJECT INFORMATION

BOULDER JEWISH COMMONS

BOULDER JE SH COMMUN TY CENTER

ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

SHEET INFORMATION

PROJECT #: 1118

ISSUE DATE: 07/01/13

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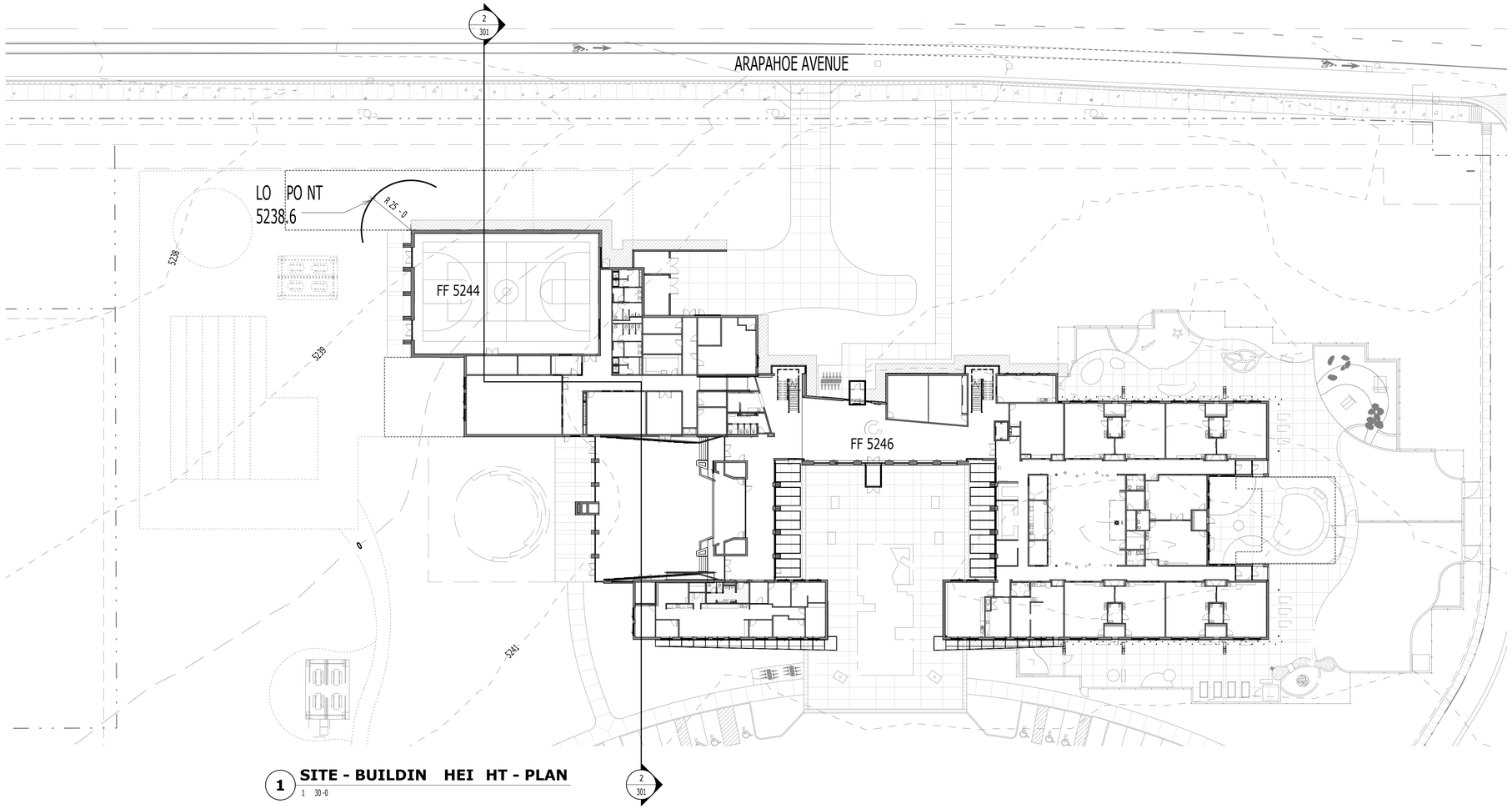

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ARCHITECT

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PROJECT PHASE

SITE REVIEW RE-SUBMITTAL

PROJECT INFORMATION

BOULDER JEWISH COMMONS

BOULDER JE SH COMMUN TY CENTER
ARAPAHOE AND CHERRYVALE
BOULDER, CO 80303

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ISSUE DATE: 07/01/13

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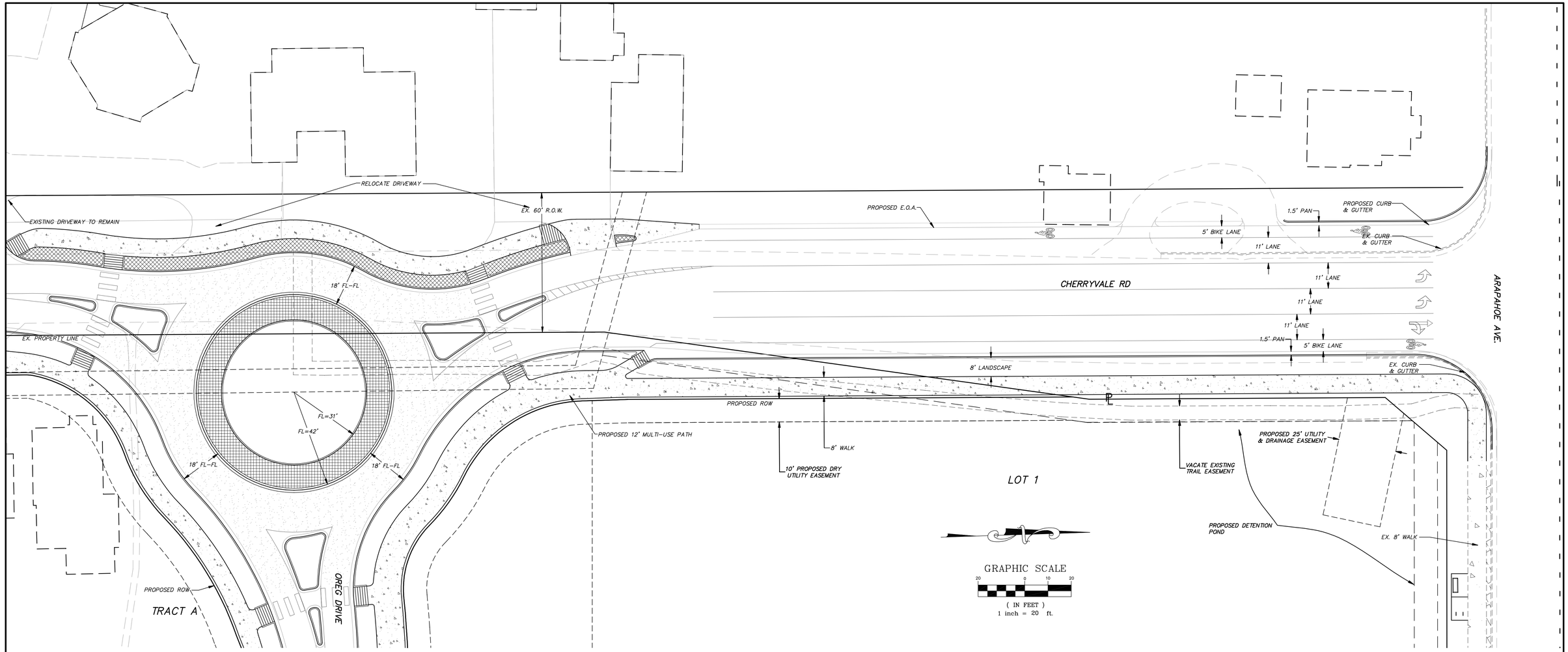

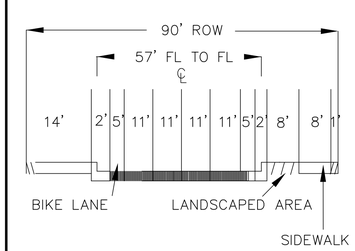

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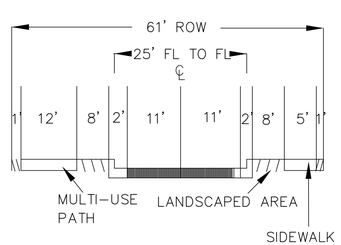
CHERRYVALE ROAD
BOULDER JEWISH COMMONS
PROPOSED STREET CROSS-SECTION



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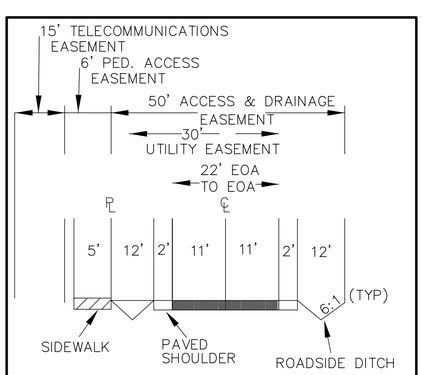

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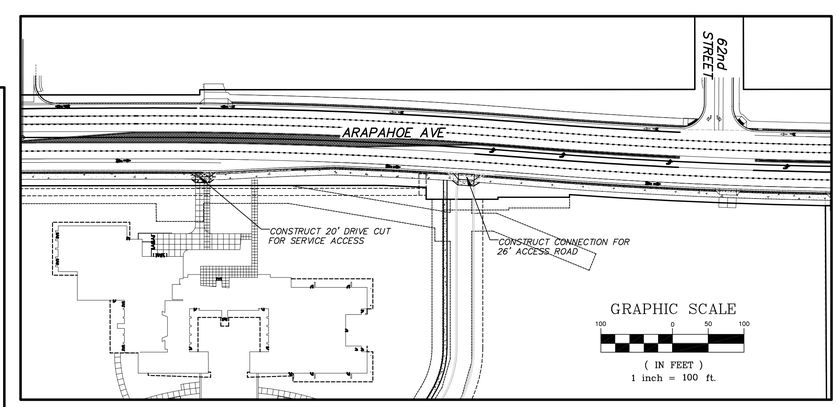
BOULDER JEWISH COMMONS
PROPOSED STREET CROSS-SECTION



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BOULDER JEWISH COMMONS
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Item 06

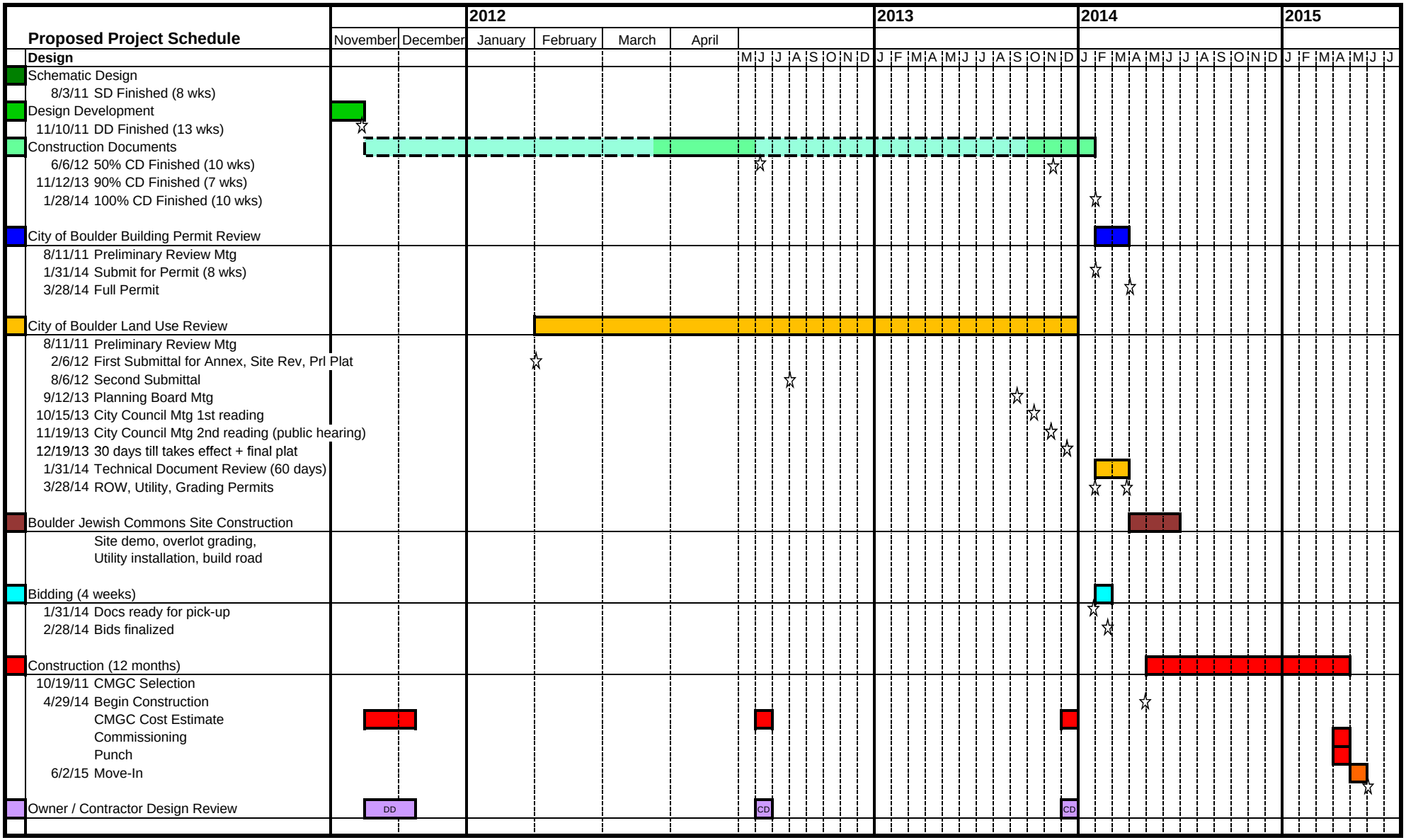
Written Statement describing **how the application meets the applicable criteria**

(A) Statement of current ownership Cherryvale Commons Ltd.
(B) Objectives to be achieved by the project With annexation, Boulder Jewish Commons is to be combined into one parcel which is subdivided into lots. One lot for the Boulder JCC (Jewish Community Center), other lots for future development and open space. The Boulder JCC Phase 1 will be 52,444 SF with Future Additions of 11,304 SF planned to be added in the next 10 years.
(C) Development schedule Construction is planned to commence upon completion of entitlement process and receipt of construction permit. At this time the only building is the Boulder JCC. Some aspects of that project have been identified as Future to be built as funds become available. There are currently no plans for other development other lots.
(D) Special agreements, covenants that govern use, maintenance, goals and any parks, open space Will be submitted with tech docs and will be privately maintained.

RB+B Architects, Inc.

Boulder Jewish Community Center — *Project Schedule*

07.01.13



GENERAL CRITERIA FOR ALL SITE REVIEW APPLICATIONS
BOULDER JEWISH COMMONS

I. Boulder Valley Comprehensive Plan:

(A) How is the proposed site plan consistent with the purposes and policies of the Boulder Valley Comprehensive Plan?

See Comprehensive Plan pages 1-6 at the end of this document.

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

(i) the density permitted in the Boulder Valley Comprehensive Plan, or,

(ii) the maximum number of units that could be placed on the site without waiving or varying any of the requirements of Chapter 9-7, "Bulk and Density Standards," B.R.C. 1981.

How is the proposed site plan consistent with the above density criteria? NA

II. Site Design:

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

A. Open space, including without limitation, parks, recreation areas, and playgrounds:

1. How is useable open space arranged to be accessible and functional?

The open space associated with Sombrero Marsh is on the south portion of the site. A conservation easement is north of the marsh. In addition, an open field/detention area has been planned for the west side of the building to keep the view towards the flatirons open from the large community rooms and plaza. Playgrounds surround the east half of the building for use by the early childhood center.

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

N/A

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

Boulder Jewish Commons provides for the preservation of natural features, including the Sombrero Marsh wetlands area, which is the most significant natural feature on the Boulder Jewish Commons property. Sombrero Marsh contains high-quality wetlands that support numerous native plant and wildlife species. The proposed Boulder JCC will not result in any direct or indirect impacts to Sombrero Marsh, the associated riparian areas, or the wetlands buffer zones.

No significant plant communities are known to occur at the project site. The only significant plant communities that may occur at the site would be in the wetlands associated with Sombrero Marsh, and all wetlands plant communities will be protected as all of the site development is proposed to the north of the wetland buffer zone.

No threatened and endangered species occur on the subject property, and there is no occupied habitat at the site for any of threatened and endangered species that could live in Boulder County, including the Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*), Ute Ladies' Tresses Orchid (*Spiranthes diluvialis*), and Colorado Butterfly Plant *(Guara neomexicana var. coloradensis*).

The project site terrain is mostly level with gradual elevation changes. Boulder Jewish Commons will only require minor changes to the topographical terrain. There is a pre-existing topographical drainage divide that runs east-west across the property, located to the south of the planned development zone; water on the north side of this divide flows to the northwest. This natural drainage pattern is preserved. There will be no impacts to the surface water flowing into Sombrero Marsh as all of the site development and grading is proposed to the north of the drainage divide. Surface water and drainage flows from the developed portions of the site will be directed to the northwest and away from Sombrero Marsh.

Groundwater at the site will not be depleted by the project, as there will be no wells, and the Boulder JCC building will not have a basement or sump pump. Buried utilities will be constructed using cut-off walls where necessary to prevent drainage flow along buried utility lines.

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

   The landscaping in the open space provides a buffer between any site development and residential homes to the south.

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

   A conservation easement to the north will protect the marsh.

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

   The proposed project will provide pedestrian and bicycle routes along Arapahoe Avenue and Cherryvale Road that will connect to the South Boulder Creek multi-use path, which connects to additional non-motorized transportation corridors throughout the City of Boulder and the surrounding region.

B. <u>Open Space in Mixed Use Developments</u>: Developments that contain a mix of residential and non-residential uses:

1. How does the open space provide for a balance of private and shared areas for the residential uses and common open space that is available for use by both the residential and non-residential uses that will meet the needs of the anticipated residents, occupants, tenants, and visitors of the property?

   N/A

2. How does the open space provide active areas and passive areas that will meet the needs of the anticipated residents, occupants, tenants, and visitors of the property and how is the open space compatible with the surrounding area or an adopted plan for the area?

   N/A

C. <u>Landscaping:</u>

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

   See "Representative Plant List" on the Drawings for a listing of the anticipated plant palette.

   Overall, landscaping shall strive to be site/climate appropriate, offering areas of low water vegetation, native trees and shrubs and limited higher water turf areas only as suitable for active play or high

pedestrian circulation. Irrigated turf grass within the tree lawn/planting strip and other areas not anticipated to receive considerable pedestrian foot traffic, will be planted in a hybrid bluegrass blend, to provide a more drought tolerant, deep rooting ground cover, such as thermal bluegrass blends or tall fescue cultivars.

Plant Material: A wide variety of both native and non-native trees, shrubs and groundcovers will be selected to provide an interesting mix of leaf, flower and fall colors, while providing interesting and contrasting planting schemes that provide an impactful impression on passers-by and facility users.

Hard Surfaces: The entry plazas on the south and north sides of the Boulder JCC building will be textured concrete, scored in a pattern of varying sizes. Sandstone boulders shall be used intermittently within the south and north plazas to provide bench height seating for adults and play opportunities for children, and will provide a security barrier from vehicular movements at the pedestrian drop off on the south and the maintenance / service drive area on the north.

Playground Area: This area includes a wide range of surface materials such as textured, scored concrete, stepping stones, boulders for seating, colored poured-in-place safety surfacing, sodded-irrigated berms and play areas, and open soil areas for gardening.

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

   No significant plant communities or threatened and endangered species are known to occur on the project site.

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

   In general, the proposed plants will meet the minimums (2” cal. shade trees, 1.5” cal ornamental trees, 5’h. evergreens, 5 gal. deciduous and evergreen shrubs and 1 gal. ornamental grasses and perennials) as described by the requirements indicated above. Larger caliper tree plantings in individual circumstances may be upsized to provide a more impactful planting statement and/or cast larger quantity of shade immediately following installation and during subsequent growing seasons.

   See the “landscape summary” chart and “representative plant list” on the Drawings for initial / anticipated plant material selection, quantities and sizing.

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

   The individual street frontages related to the project are described as follows:

   Arapahoe Avenue – The planned CDOT improvements associated with the Arapahoe Avenue expansion include a 24” wide concrete strip immediately back of curb and an attached 8’ wide sidewalk. This ROW frontage will be planted with large deciduous shade trees, spaced at 40’ o.c. per the City’s standard requirements OR, given the existing overhead Xcel electrical lines paralleling the property along the entire Arapahoe Avenue frontage, small to medium deciduous shade trees and / or ornamental trees may need to be substituted for the large trees. The Arapahoe Avenue setback will be planted (as possible given the utility corridor on the north side of the building) with a combination of evergreen trees, large shade trees and ornamental trees to provide an attractive sight and sound buffer between the building and roadway. Planting beds will be provided adjacent the JCC building, playground area, service drive and gymnasium, to further provide attractive views into the property from the north.

   Cherryvale Road – Improvements on the western edge of the property will expand on and blend with upgrades recently installed by the county which include an 8’ wide tree lawn (planting strip) and detached 8’ wide sidewalk. As required by City of Boulder Standards, large deciduous shade trees will be spaced at 40’ o.c. along this entire frontage, with a drought tolerant irrigated bluegrass grass blend sod as the

ground cover. A 6'h. black ornamental, steel picket fence, screened by vegetation will be installed east of the back of sidewalk to help contain children and kicked balls within the JCC irrigated, bluegrass sodded athletic field. Deciduous shrubs and ornamental grasses will be planted between the sidewalk and fence line, breaking up the long run of chain link fence. A roundabout has been incorporated into the proposed ROW improvements and will be planted with low growing, drought resistant, native deciduous shrubs and ornamental grasses, interspersed between sandstone boulders, all covered with tan crusher fines over landscape fabric and shredded cedar mulches.

Oreg Drive – This proposed entrance into the property off Cherryvale Road is fed off the eastern leg of the proposed Cherryvale Road roundabout. The roadway is flanked by 8' wide planting strips and 12' and 5' wide detached concrete sidewalks on north and south sides. Tree spacing combines the City standard 40' spacing interval for shade trees and 20' spacing interval for ornamental trees. Plant material shall be sized to reflect the City minimums. Ground cover along this entire ROW frontage will use a drought tolerant irrigated bluegrass blend sod.

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

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

   The development will be served by a new east-west street eventually connecting to 63rd Street to the east, and to Cherryvale Road on the west. Since this drive will be curvilinear and less than 2,000 feet in length, speeding should not be an issue. A roundabout is proposed at the intersection with Cherryvale Road as part of an overall traffic calming project for that street.

2. How are potential conflicts with vehicles minimized?

   The primary pedestrian/bike access will be from Arapahoe Avenue and Cherryvale Road so pedestrian/bicyclists will not have to cross the site's access drive to access the Boulder JCC building.

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

   An 8' sidewalk has been constructed along the south side of Arapahoe Avenue along the entire length of the property with all-weather path connections to the bicycle parking areas and public access doors of the facility. A 12' sidewalk on the north of Oreg Drive will serve both bikes and pedestrians and a 5' sidewalk on the south will serve pedestrians. This network will provide access to the Boulder Creek Bikeway network of trails, which can be accessed at the underpass located just west of Cherryvale Road. It also connects to Cherryvale Road which has on-street bikelanes and an 8'wide sidewalk. The sidewalks will also connect to bus stops located on Arapahoe Avenue near Cherryvale Road. RTD provides bus access to the site via the Jump Route, high frequency bus access to central Boulder and to residential areas in Lafayette and Louisville.

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

   See #3 above. In addition, bike parking will be provided in accordance with City standards and lockers and shower facilities will be available within the Boulder JCC building.

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

   The Boulder JCC is located in an area with excellent transit and bikeway access. The Boulder Creek Bikeway terminates at Arapahoe Avenue near Old Tale Road. This bikeway provides grade separated access to downtown Boulder, the University of Colorado, and many housing and recreational opportunities. As part of the site development, sidewalk/bikeways connect the JCC to sidewalk/bikeways on the new east-west street. The development will provide bike parking meeting City standards along with

bike lockers and shower facilities to encourage bike commuting by the building's employees. Bus and bike information will also be made available to employees and customers/members. Due to these travel demand management strategies (see the TDM plan), it is estimated that vehicular traffic will be reduced by ten percent compared to a traditional development.

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

   See #3 above.

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

   A single street is provided for connectivity between Cherryvale Road and Arapahoe Avenue. The width of this street is minimized by prohibiting on-street parking and combining bikeways with detached sidewalks.

8. How is the project designed for the types of traffic expected, including, without limitation, automobiles, bicycles, and pedestrians, and how does it provide safety, separation from living areas, and control of noise and exhaust?

   Vehicular access to the development will be from Arapahoe Avenue and Cherryvale Road. A sidewalk connection to the Boulder Creek Bikeway will be constructed along the south side of Arapahoe Avenue. Bike parking meeting City standards along with bike lockers and shower facilities will be provided to encourage bike commuting by the building's employees and users.

9. How will city construction standards be met, and how will emergency vehicle use be facilitated?

   Emergency vehicles will have access to the Boulder JCC building either from the north at the service drive directly off Arapahoe Avenue or from the south via the new east-west street. Parking lots and drives have been designed to accommodate turning radius of emergency vehicles.

E. <u>Parking:</u>

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

   A network of internal sidewalks extending thru the parking lot islands, provides a pedestrian link from the sidewalks adjacent the building out to the outer most drive aisle/stalls. Crossing of the drive aisles by pedestrian crosswalks will be delineated.

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

   The City of Boulder minimum aisle width and stall width/length dimensions/standards have been incorporated into the overall design of the parking lot layout.

   A parking study was conducted to determine number of spaces needed. The parking study is provided with this submittal. Proposed parking meets the needs of the facility for day-to-day uses in the early childhood center, classrooms and offices. Large gatherings in the community hall may make use of overflow parking.

   52,444 SF Phase 1 148 parking spaces provided Gravel lot available for overflow

   63,748 SF Total Future (includes 11,304 SF addition) parking spaces required will be evaluated at the time of expansion

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

Parking Lots: Significant plant material will be provided to screen the parking lot from the proposed east-west street and adjacent residential properties to the south.

Lighting: The site luminaires are at pole heights of 20 feet, meeting the City of Boulder design criteria, with full cutoff enclosures, and house-side shields (where necessary). Illuminance levels required by the City of Boulder are met.

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

   Street and parking lot trees were selected from the Approved Street Tree List. As required by code, a minimum of one tree for every 200 sq.ft. of interior parking lot landscape area has been provided. 100% of the parking lot trees are medium to large deciduous as set forth in the C.O.B. Design and Construction Standards. See 'landscape summary chart' on the Drawings for "Required" and "Provided" interior parking lot tree quantities.

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

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

   The existing architectural character of the neighborhood is undefined as it includes a mix of commercial uses such as auto sales and older storage facilities to the north as well as residential properties to the south. The intent of Boulder Jewish Commons is that the Boulder JCC and any future buildings share a common architectural character and include use of natural materials including stone and masonry.

   The Boulder JCC uses natural materials in earth-tone colors such as buff sandstone and brown brick masonry with accents of dark brown metal panels. The massing is mainly low-level with some 2nd story in the center of the structure. The curved roof surface and brick columns on the gym break up the mass and bring interest to this form. The curved roofs are repeated on the two classroom wings.

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

   The height of the Boulder JCC is similar to existing buildings in the area. The main mass of the building is one story in height. The feature stone wall at the south building entrance is the highest portion of the building. It is visible as a building identifier from the central portion of the Boulder Jewish Commons, without being obtrusive to surrounding development along Arapahoe Avenue.

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

   With an East-West orientation, the majority of shadowing is to the north either on the Boulder JCC property or slightly onto Arapahoe Avenue at the December low sun angle.

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

   NA

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

   While screening of the facility and providing privacy from the busy and noisy vehicular traffic along Arapahoe Avenue is a major design factor, pedestrian scale and safety are important. An 8' attached sidewalk is present along Arapahoe Avenue and detached sidewalks are planned on Oreg Drive. Patrons of the facility will access it via foot, bike and bus in addition to driving cars. The east-bound bus stop is conveniently located near the Cherryvale intersection. An attractive glass entrance with small courtyard is provided on the north of the building. It has been designed to access the lobby at the same point as the main entrance on the south. Landscaping will be incorporated with fencing required for the ECC

playgrounds on the east half of the building. The mass of the gym is made pedestrian scale by use of pilasters and windows. The building is parallel to Arapahoe Avenue and Oreg Drive.

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

   The new Boulder JCC will be an educational facility open to everyone. The JCC will house a day care center for infants and toddlers, an early childhood center for children ages 2.5-5, a community hall, an art studio, classrooms to cover topics for a varied audience from babies to seniors, a Jewish library, administrative office space, a teen lounge for after school programming, a full-court gymnasium, a group fitness studio and locker rooms. The community hall will be a welcome and affordable addition to the options currently available for events in the broader community. The Boulder JCC will feature a play field for the summer camp program and playground areas for the early childhood center. In addition, the entry courtyard can be used for events or as a pleasant spot to meet a friend for coffee.

   As a community facility, the Boulder JCC provides programming and services available to the public. A membership program is offered where members are entitled to discounts on programs and the opportunity to enroll in top-rated early childhood center and multiple camp programs.

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

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

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

   Security and safety are important concerns for this facility. Parking lot and walkway lighting are provided. A control scheme will be implemented to provide both security and energy efficiency. The site lighting meets the requirements of the Boulder Code table 9-10. The lighting plan will be submitted with Tech Docs. Site planning includes potential for a future perimeter fence should safety and security become a greater issue.

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

    See #4 Landscaping above.

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

    To the extent possible, the street and Boulder JCC building are sited to conform to the shape of the existing contours. In areas where fill or cut are required, a minimum slope of 4:1 is used to provide stable slopes. Further, erosion control measures are provided to protect existing drainage ways and to stabilize the site.

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

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

   The proposed Boulder JCC building is surrounded by open yards, parking lot and streets. The configuration of the building will not block solar access for any other structure.

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

   At this time the Boulder JCC is the only building planned. It is located such that any shading to the north is on its own lot or on Arapahoe Avenue.

3. Building Form. The shapes of buildings are designed to maximize utilization of solar energy. Buildings shall meet the solar access protection and solar siting requirements of Chapter 9-917, "Solar Access," B.R.C. 1981. How is this criterion met?

   The Boulder JCC building is mainly 1 story with a portion 2 story. The roof area of the 2 story portion has been designated as a potential solar collector area.

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

   The proposed Boulder JCC building and its associated landscaping are the only improvement being planned at this time. The building footprint and other site elements are set back significantly from the adjacent properties. Significant shading on adjacent properties is not anticipated.

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

1. The light pole is required for nighttime recreation activities, which are compatible with the surrounding neighborhood, or the light or traffic signal pole is required for safety, or the electrical utility pole is required to serve the needs of the city?

   N/A

2. The pole is at the minimum height appropriate to accomplish the purposes for which the pole was erected and is designed and constructed so as to minimize light and electromagnetic pollution. If applicable, how are these criteria met?

   N/A

Boulder Valley Comprehensive Plan Policies

Examples of how the proposed site plan is consistent with the purposes of the Boulder Valley Comprehensive plan are listed below in red.

1. Core Values, Sustainability Framework and General Policies

Sustainability Framework

1.02 Principles of Environmental Sustainability

The city and county will strive to preserve and protect the natural resource base and environmental quality on which life depends by:

a) Maintaining and enhancing the biodiversity and productivity of ecological systems;

b) Ensuring the efficient use of natural resources in a manner that does not deplete them over time; and

c) Reducing and minimizing the use of non-renewable resources.

This project is planned to embrace the principles of environmental sustainability in the site planning, building design and construction. Sustainable strategies include lowered energy use through increased wall and roof insulation, high-efficiency glazing, exterior solar shading, and light shelves that bounce sunlight to interior spaces. Interior artificial light levels may be adjusted based on available daylight. Operable windows allow natural ventilation and cooling. Low-flow plumbing fixtures, and drought tolerant native plants decrease the amount of water use. Local and recycled materials will be used in the building construction.

1.04 Principles of Social Sustainability

The city and county will strive to promote a healthy community and address social and cultural inequities by:

a) Respecting and valuing cultural and social diversity;

b) Ensuring the basic health and safety needs of all residents are met; and

c) Providing infrastructure and services that will encourage culturally and socially diverse communities to both prosper within and connect to the larger community.

The Boulder JCC's mission is to provide programs and services based in Jewish values and traditions in a place where people of all ages and backgrounds gather to connect, exchange ideas, learn and grow together. It is open and welcoming to everyone and provides a connection for residents to their community. The Jewish values that the JCC programming is based on include reflection, belonging, potential, intentionality, gratitude, inquiry and responsibility in repairing the world.

The JCC has been a convener in the community for issues such as mental health where multiple faiths have come together to talk about the issues.

The JCC will house Jewish Family Service (JFS), a non-profit agency that serves Boulder's elderly community. JFS assists older adults and people with disabilities in maintaining their independence while providing a support system for their special needs through care management and outreach.

Framework for Annexation and Urban Service Provision

1.22 Definition of New Urban Development

It is intended that 'new urban development,' including development within the city, not occur until and unless adequate urban facilities and services are available to serve the development as set out in Section IV.D. Urban Service Criteria and Standards. 'New urban development' is defined to include:

a) All new residential, commercial and industrial development and redevelopment within the city;

The property will be considered new urban development and in conformance with BVCP will be developed after annexation. Adequate and available urban facilities to the site include public water, public sewer, fire protection and emergency medical care, urban police protection, and urban transportation. Public stormwater and flood management is presently being upgraded through the CDOT project on Arapahoe.

1.24 Annexation
The policies in regard to annexation to be pursued by the city are:
a) Annexation will be required before adequate facilities and services are furnished.
An annexation process is part of this project for portions of the site which are currently outside the city limits.

Utilities
1.33 Consistency of Utility Extensions with Comprehensive Plan
The installation and extension of all utilities will be consistent with the provisions of the comprehensive plan and with the responsibilities of the respective utility providers.
Utilities are available along Arapahoe and will be extended through the site to the standard of the utility providers.

2. Built Environment

Community Identity / Land Use Pattern
2.03 Compact Development Pattern
The city and county will, by implementing the comprehensive plan, ensure that development will take place in an orderly fashion, take advantage of existing urban services, and avoid, insofar as possible, patterns of leapfrog, noncontiguous, scattered development within the Boulder Valley. The city prefers redevelopment and infill as compared to development in an expanded Service Area in order to prevent urban sprawl and create a compact community.
The proposal is in conformance with the BVCP as it is in area 2A and we are annexing as provided for in the comp plan.

Neighborhoods
2.15 Compatibility of Adjacent Land Uses
To avoid or minimize noise and visual conflicts between adjacent land uses that vary widely in use, intensity or other characteristics, the city will use tools such as interface zones, transitional areas, site and building design and cascading gradients of density in the design of subareas and zoning districts. With redevelopment, the transitional area should be within the zone of more intense use.
This development is between large commercial car dealerships and a busy highway to the north and residential area to the south and acts as a transition zone between the two.

Urban Design Linkages

2.19 Urban Open Lands

Open lands within the fabric of the city constitute Boulder's public realm and provide recreational opportunities, transportation linkages, gathering places and density relief from the confines of the city, as well as protection of the environmental quality of the urban environment. The city will promote and maintain an urban open lands system to serve the following functions: active and passive recreation, environmental protection, flood management, multimodal transportation, enhancement of community character and aesthetics.

The proposed project will provide pedestrian and bicycle routes that will connect to additional non-motorized transportation corridors throughout the City of Boulder and the surrounding region.

2.21 Commitment to a Walkable and Accessible City

The city and county will promote the development of a walkable and accessible city by designing neighborhoods and business areas to provide easy and safe access by foot to places such as neighborhood centers, community facilities, transit stops or centers, and shared public spaces and amenities. The city will consider additional neighborhood-serving commercial areas where appropriate and supported by the neighbors they would serve.

Accessible sidewalk connections are provided to the building from the surrounding network of sidewalks, paths and transit stops linking this development to the city.

2.23 Trail Corridors/Linkages

In the process of considering development proposals, the city and county will encourage the development of paths and trails where appropriate for recreation and transportation, such as walking, hiking, bicycling or horseback riding.. Implementation will be achieved through the coordinated efforts of the private and public sectors.

With CDOT improvements to SH7, an 8' wide sidewalk has been constructed along the south side of Arapahoe Avenue along the entire length of the property and will provide access to the Boulder Creek Bikeway network of trails ,which can be accessed at the underpass located just west of Cherryvale Rd. It also connects to Cherryvale Rd. which has on-street bikelanes and a detached bike path.

Design Quality

2.35 Outdoor Lighting/Light Pollution

The city and county will encourage the efficient use of outdoor lighting to reduce light pollution and conserves energy while providing for public safety. The city will seek to provide a nighttime environment that includes the ability to view the stars against a dark sky so that people can see the Milky Way Galaxy from residential and other appropriate viewing areas. Measures such as using more energy-efficient lights, ensuring that the level of outdoor lighting is appropriate to the application, minimizing glare, and using shielding techniques to direct light downward will be required.

Site lighting is designed to provide appropriate light levels for the security of the staff and visitors of the JCC. The site lighting will be designed to limit light trespass and sky glow and meet the current City of Boulder requirements.

4. Energy and Climate

Energy Conservation and Renewable Energy

4.03 Energy Conservation and Renewable Energy

The city and county will implement innovative programs and opportunities for individuals, businesses and organizations to reduce energy consumption and develop local energy generation. The city will support private decisions to use renewable energy, develop local renewable energy resources and preserve options for developing renewable energy in the future. The city will review and consider revisions to regulations to support on-site energy generation, including solar and wind. The city and county will pursue an energy path that not only reduces carbon emissions, but also promotes innovation, competition and economic vitality, and will set goals to ensure that the community has access to reliable, competitively priced and increasingly clean energy.

The Boulder JCC is planning to implement solar photovoltaics to be mounted on the roof and/or site mounted in parking areas in the future. See site plan and elevations for potential locations.

Land Use and Building Design

4.04 Energy-Efficient Land Use

The city and county will encourage energy conservation through land use policies and regulations governing placement, orientation and clustering of development.

Building placement, footprint and massing is designed to minimize energy use. The east-west orientation of the building is beneficial for taking advantage of natural daylighting in classrooms and offices by orienting the windows to the north and south. An east-west orientation is also advantageous for solar panel placement on the building.

4.05 Energy-Efficient Building Design

The city and county will pursue efforts to improve the energy and resource efficiency of new and existing buildings. The city and county will improve regulations ensuring energy and resource efficiency in new construction, remodels and renovation projects and will establish energy efficiency requirements for existing buildings. Energy conservation programs will be sensitive to the unique situations that involve historic preservation and low-income homeowners and renters and will ensure that programs assisting these groups are continued.

Per Annexation Agreement, the building will be designed to 20% better than ASHRAE 90.1-2012 (Section 501.1). The Boulder JCC is targeting LEED certification for the new building.

6. Transportation

6.01 All-Mode Transportation System

The Boulder Valley will be served by an integrated all-mode transportation system, developed cooperatively by the city and county. This transportation system will include completed networks for each mode, make safe and convenient connections between modes, and provide seamless connections between the city and county systems. Improvements to the travel corridors network will be made in a manner that preserves or improves the capacity or efficiency of all modes and recognizes pedestrian travel as a component of all trips.

Bus stops are located along Arapahoe Avenue adjacent to the BJCC site. Accessible connections between the bus stop and building entrances are planned. See statements on transportation impact and systems connections in the General Criteria for all Site Review Applications and TDM plan.

6.08 Transportation Impact
Traffic impacts from a proposed development that cause unacceptable community or environmental impacts or unacceptable reduction in level of service will be mitigated. All development will be designed and built to be multimodal, pedestrian-oriented and include strategies to reduce the vehicle miles traveled (VMT) generated by the development. New development will provide continuous pedestrian, bike and transit systems through the development and connect these systems to those surrounding the development. The city and county will provide tools and resources to help businesses manage employee access and mobility and support public-private partnerships, such as transportation management organizations, to facilitate these efforts.
See statements on transportation impact and systems connections in the General Criteria for all Site Review Applications and TDM plan.

6.10 Managing Parking Supply
Providing for vehicular parking will be considered as a component of a total access system of all modes of transportation - bicycle, pedestrian, transit and vehicular - and will be consistent with the desire to reduce single occupant vehicle travel, limit congestion, balance the use of public spaces and consider the needs of residential and commercial areas. Parking demand will be accommodated in the most efficient way possible with the minimal necessary number of new spaces. The city will promote parking reductions through parking maximums, shared parking, unbundled parking, parking districts and transportation demand management programs.
Vehicular parking is planned to meet the requirements of the uses of the JCC including childcare drop-off/pick-up, adult education classes, meetings and programs, as well as events in the Community Hall. Parking areas are designed to be shared with future development on the rest of the site as uses are likely to be at compatible hours. Bicycle parking is provided near the building.

8. Community Well-Being

Human Services
8.01 Providing for a Broad Spectrum of Human Needs
The city and county will develop and maintain human service programs that provide for the broad spectrum of human needs, from safety net services to early intervention and prevention programs which mitigate more costly, long-term interventions and forestall worsening social conditions. Services balance meeting immediate needs with long-term solutions to critical social issues.
Please see section 1.04. The JCC also offers scholarships for early childhood education and will continue to do so in its expanded preschool in the new building. Additionally, it has participated in the Crayons to Calculators program, and been recognized with Honorable Mention in The Top Community Challenge in both 2010 and 2011.

8.05 Diversity
The community values diversity as a source of strength and opportunity. The city and county will support the integration of diverse cultures and socio-economic groups in the physical, social, cultural and economic environments; promote opportunities for community engagement of diverse community members; and promote formal and informal representation of diverse community members in civic affairs.
The members and users of the services provided by the Boulder JCC are part of the diverse population of the City and County of Boulder. The Boulder JCC's board has adopted a policy of non-discrimination in relation to gender, race, religion, national origin, and sexual orientation.
While all programming is based in Jewish values (see 1.04), we offer many programs which are secular in nature (parenting classes, school day out programs, winter and summer camps, etc.). We also serve as an

educator to the broader community about Jewish values and culture. All programming at the Boulder JCC is open to the general public.

8.10 Support for Community Facilities

The city and county recognize the importance of educational, health and non-profit community agencies that provide vital services to the residents of the Boulder Valley and will work collaboratively with these agencies to reasonably accommodate their facility needs and consider location based on transportation accessibility.

As a non-profit community agency, education is one of the JCC's primary focuses. By moving to a larger facility with both better access and more functional space, the JCC will be able to expand the early childhood center as well as educational and cultural programs for all ages. The JCC is currently one of only a few local organizations that offers summer camp programming for children as young as 2 ½.

The Boulder JCC convenes area educators from the various synagogues, agencies and other Jewish non-profits once a month. This group will continue to meet in the new location. And finally, as mentioned previously, JFS will operate out of the new facility to provide support to those community members in need.

Culture

8.15. Information Resource/Community Center

The city will provide access to information through a variety of formats providing materials, technology and services to enhance the personal development of the community's residents. In its role as the community's public and civic information center, the library will provide venues for community group meetings and resources and services to meet the needs of the community's multicultural and special populations. Other community gathering spaces and information sources include the city and county websites, municipal buildings, and recreation and senior centers.

The JCC will serve as a gathering space and resource center for area residents. It will house the only public Jewish library in Boulder with a collection of over 10,000 books, videos and DVD's for people of all ages. As a centrally located community center, the Boulder JCC will provide many opportunities for learning and exploration. In addition, there are numerous spaces in the new facility that can be used by the general public for a variety of purposes and outreach programs. The facility is being designed as a comfortable space for people to linger.

9. Agriculture and Food

9.05 Urban Gardening & Food Production

The city will encourage community and private gardens to be integrated in the city. This may include allowing flexibility and/or helping to remove restrictions for food production in shared open spaces and public areas, encouraging rooftop gardens and composting and planting edible fruit and vegetable plants where appropriate.

In preparation for the move to the new facility, the JCC has already begun a robust gardening program in the Early Childhood Center. In addition, popular gardening camps were run this summer for children ages 2 ½ - 5. The JCC plans to expand this program in the new facility and hopes to offer a community garden in the future.

BOULDER JCC
USE AND PARKING MANAGEMENT PLAN
September 3, 2012

Overview

The Boulder JCC has operated at our current location—3800 Kalmia Avenue in Boulder—for 11 years. The new Boulder JCC will be located at the southeast corner of Cherryvale Road and Arapahoe Avenue in Boulder, as detailed in our City submission. This new facility will allow the Boulder JCC to enlarge our Early Childhood Center, expand our educational programs, and provide community meeting and celebration space. These are fundamentally similar uses to those that we conduct presently in our current location, but will be enhanced by our larger and more up-to-date facility. *This Use and Parking Management Plan (PMP) is therefore based on our experience at our current location, which informs the assumptions herein about events, use patterns, and parking needs. In short, we know a great deal about how we will use our new facility because of our history in our existing facility*.

Based on the analysis in this Use and Parking Management Plan, we conclude that the new Boulder JCC facility will need between 165 and 180 parking spaces. **For a typical day we will need approximately 160 spaces, but under a maximum use scenario we may need as many as 180.**

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I. Background Information

a. Description of Proposed Facility

The proposed Boulder JCC will be an approximately 50,000 square foot (gross) building developed on a 9 acre parcel at the southeast corner of Cherryvale Road and Arapahoe Avenue in Boulder. Our City submission also proposes up to 20,000 square feet (gross) of additional future expansion in a later phase.

The Boulder JCC is a multi-use facility catering to all ages—from six-week-old infants to seniors. The proposed building has a number of different programming spaces, including:

- Early Childhood Center (ECC)
- adult classrooms
- gymnasium
- group fitness and cardio rooms
- Community Hall
- baby classrooms
- library
- tumbling room
- community office space
- JCC office space
- teen lounge

The new facility will also have outdoor facilities that include an athletic field and recreation areas. The proposed future expansion includes a larger fitness area, additional ECC classrooms, additional adult classroom space, and the future addition of an outdoor swimming pool.

b. Proposed Hours of Use

To understand the JCC's hours of use it is helpful to break our uses into two categories: *regular uses* and *special uses*.

> *Regular Uses:* Our normal uses occur Monday through Thursday 8:00 a.m. to 9:00 p.m., Fridays 8:00 a.m. to sundown, and Sundays 8:00 a.m. to 8:00 p.m. This includes all of our regular daily uses, such as our pre-school, classroom and fitness, evening programming for seniors, etc. In general we have far less activity on weekends than during the week, and will be open on Sundays only if there is a special program (e.g., we are showing a film, etc.).
>
> *Special Uses:* In addition to these regular uses, we will use our Community Hall for larger lectures or events on a weekday or weekend evening. We also anticipate renting our facility for bar/bat mitzvahs, wedding celebrations, and other special events, particularly on Saturdays and Sundays when we might otherwise be closed. We cannot determine precisely the times such rentals might occur, but we anticipate that they would usually begin in the afternoon and run into the evening (e.g., 4:00 p.m. through 11:00 p.m., for example).

c. Number of Employees

Based on our pro forma and our current use patterns, we anticipate that we will operate in our new building with approximately 50 employees. More than half of these employees will be part-time (around 24 hours). The others will be full-time or ¾ time. If we expand further in the future—as discussed above—the staff could grow to 58, again with half being part time.

The Boulder JCC encourages health and wellness. At our current Kalmia Avenue location, up to 10 staff members ride their bicycles to work and some carpool as well. Our new location at the corner of Cherryvale and Arapahoe has better access to the bike trail system, so we see bicycle use continuing or increasing as we move to our new facility. In addition, our new location is better served by public transportation, and we anticipate that several of our staff members will take the bus from Boulder or Louisville. We plan to continue to encourage our employees to make use of bicycle, carpooling, and public transportation.

II. Explanation of Parking Needs

As noted, we have operated the Boulder JCC at our current location for 11 years. Based on this experience, it is very important to understand that the JCC does not generate consistent heavy traffic or parking usage throughout a typical day. Instead, our parking needs vary greatly as different activities take place at our facility.

To understand the JCC's parking needs, the following basic overview may be helpful. (These are simply guidelines for reference—specific information is provided in the remainder of this PMP.)

(1) *During the regular school year, our primary parking needs are generated by our Early Childhood Center, which operates Monday through Friday only*. Parents come in the morning to drop off their children and return in the afternoon to pick them up. For parking purposes, the Early Childhood Center is essentially a large pre-school facility. At maximum capacity it will hold 150 children. During the summer, our Early Childhood Center operates at a reduced capacity (50 percent or 75 children).

(2) *During the summer, our primary parking needs are generated by our summer camp for kids and teens*. Again, most of our parking needs result from parents dropping off their children in the morning and picking them up in the afternoon.

(3) *Our third major use will be for events taking place in our Community Hall*. This might include showing a film, hosting a speaker, or celebrating a bar/bat mitzvah or a wedding. Some of these will be JCC events and some will be rental events. The Community Hall seats 250 people in a dinner configuration at round tables, or 330 people auditorium-style in rows of seats. *Most of our existing JCC events, however, attract between 50 and 120 people. In addition, larger Community Hall events will take place in the evenings, and therefore will not conflict with the parking needs of either the Early Childhood Center or the summer camp, because they will occur later in the day.*

(4) *All of our other uses—our fitness studio, our gymnasium, our adult classroom spaces, etc.—have relatively low impact on parking demand.* We do not fill these spaces full time, but instead conduct programming in such spaces on and off throughout the day.

The JCC has a great deal of control over the scheduling of these uses. Our Facilities Director is careful to program our classes and events so that they do not conflict with our Early Childhood Center pick up or drop-off times, for example, and so that adult education classes do not overlap with Community Hall events.

To explain our parking needs, we present three scenarios for your consideration that illustrate how these uses combine:

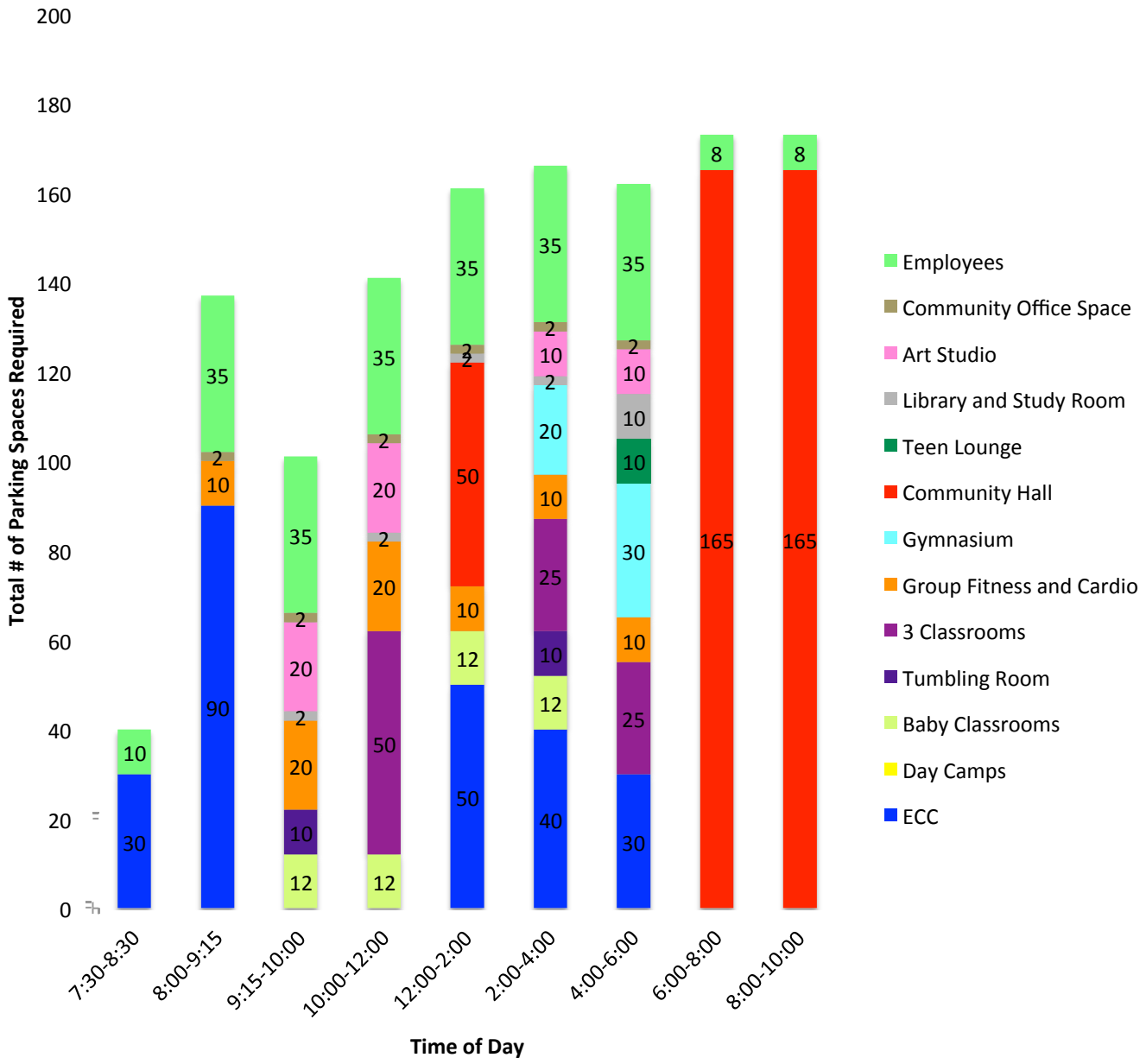
(a) a "Maximum Use Scenario" that shows what our maximum parking needs will be when we have a large community hall event scheduled in the evening;

(b) a "Typical Weekday/School Year Use Scenario" that shows the parking needs for a weekday during the school year when the Early Childhood Center is our primary use; and

(c) a "Typical Weekday/Summer Use Scenario" that shows the parking needs for a weekday during the summer.

a. Maximum Use Scenario – Requires Approx. 173 Spaces

Figure 1:
Parking Space Usage for a School-Year Weekday
With 35 Employees Driving,
an At-Capacity Early Childhood Center,
Regular Programming in All Spaces,
and a Very Large Evening Community Hall Event
(See Appendix B p. 11 for Detailed Supporting Data)



We begin with a maximum use scenario: a school-year weekday in which our Early Childhood Center is in session and operating at maximum capacity (150 students), there is programming in all other spaces (such as the adult classrooms, the gymnasium, etc.), and there is a large evening event scheduled in our Community Hall (330 attendees).

Figure 1 shows this maximum use scenario. On the day shown in Figure 1, the morning parking usage is generated by parents dropping off their children at the Early Childhood Center, as well as employees arriving for work. During the middle of the day, usage rises as some parents pick up their children mid-day. Figure 1 then shows a large Community Hall event in the evening. Additionally, smaller spaces such as the Art Studio, Library, Teen Lounge, Gymnasium, Fitness room, or Classrooms are in use throughout the day, although they generate far less parking demand. (Figure 1 is based on the Maximum Use Scenario data chart on page 11 of Appendix B.)

Figure 1 shows that in this maximum use scenario, our largest parking need is for 173 spaces. *The vast majority of days at the JCC are far less busy than Figure 1 suggests, however. In fact, parking demand would be* reduced *by each of the following three factors:*

- Figure 1 assumes that 80 percent of children brought to or picked up from our Early Childhood Center are brought in a car alone with a parent—that only 20 percent are brought with a sibling or in a carpool. Based on our experience at the existing JCC, we predict that in fact a significantly higher percentage of our ECC children will share rides, which will lower parking demand during ECC drop off and pick up times.

- Figure 1 assumes that 35 employees out of 50 will drive to work and require parking spaces. This is roughly equivalent to the percentage of employees that drive to our current facility. We expect a slightly greater percentage to use public transportation, bicycles, or carpooling in our new facility, however, and we will encourage employees to use such shared forms of transportation.

- Figure 1 shows a 330 person auditorium-style seating event in the Community Hall during the evening. *This would be an extremely large event for the JCC*. Most auditorium-style events in the Community Hall would be far smaller—perhaps 50-125 people. Dinner-style events in the Community Hall would hold up to 250 people.

  In addition, Figure 1 assumes that an event of this size would need 165 parking places (for a total during that time period, including employee parking spaces, of 173). To reach this figure, we assume that 45% (75 cars) of the cars attending this event would bring only one person; approximately 25% (40 cars) would bring 2 people; 15% (25 cars) would bring 3 people; and 15% (25 cars) would bring 4 people. This totals 165 cars and parking spaces.

  This mix of ride types (e.g., 1-person, 2-person, etc.) most likely *overestimates* the number of parking spaces needed. Boulder JCC events are almost always family-oriented, and therefore a majority of our patrons arrive in vehicles carrying 2-4 people. In addition, our senior patrons often carpool, again leading to a majority of vehicles with multiple occupants. The JCC encourages such carpooling, and if we ever hold an event as large as the one depicted in Figure 1, we would certainly encourage shared vehicle occupancy to reduce the parking demand. We could also offer incentives at such an event—for example, a reduced ticket price—for patrons that carpool. All of this would most likely mean that we would need fewer than 165 parking spaces for such an event.

  (Note that even a very different mix of ride types would generate need for no more than 165 parking spaces. For example, if we assume that most attendees to such an event came in cars as couples, rather than as families, we might assume 18% (30 cars) of the cars attending would bring only one person; 67% (110 cars) would bring two; 9% (15 cars) would bring three; and 6% (10 cars) would bring four people. This again totals 165 cars/parking spaces for a 330 person event.)

In summary, Figure 1 shows a maximum use scenario under which both of our largest parking uses—the Early Childhood Center and the Community Hall—are at maximum capacity. This scenario would require a maximum of approximately 173 parking spaces.

b. Typical Weekday/School Year Use Scenario – Requires Approx. 166 Spaces

Figure 2:
Parking Space Usage for a School-Year Weekday
With Normal Early Childhood Center Use,
Normal Programming in All Spaces,
and an Evening Community Hall Event
(See Appendix B p. 12 for Detailed Supporting Data)

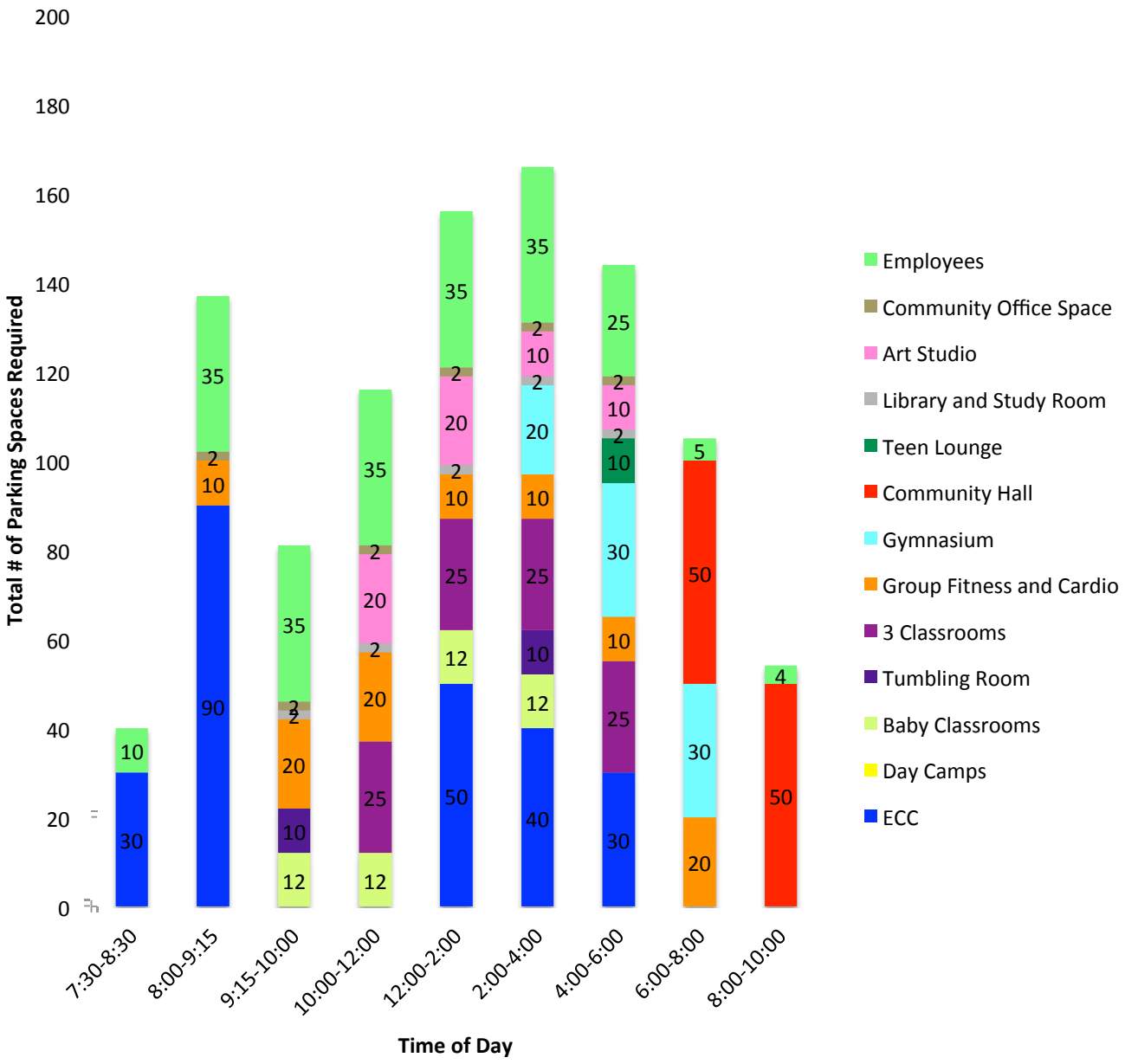


Figure 2 shows a far more typical Boulder JCC weekday during the school year. The parking needs for a typical day are lower than for the "Maximum Use" scenario. The day begins with Early Childhood Center drop-offs in the early morning and the arrival of our employees. Although programming in our various classroom, fitness, and gymnasium spaces adds some parking demand on-and-off throughout the day, the Early Childhood Center pickup/drop-off at mid-day again accounts for the greatest parking need. Figure 2 assumes an evening event in the Community Hall that requires 50 parking spaces. In this typical school year weekday scenario, our maximum parking need would be approximately 166 spaces.

c. Typical Weekday/Summer Use Scenario – Requires Approx. 161 Spaces

Figure 3:
Parking Space Usage for a Summer Weekday
With Normal Early Childhood Center Summer Use,
Normal Summer Camp Use,
Normal Programming in all Spaces
And an Evening Community Hall Event
(See Appendix B p. 12 for Detailed Supporting Data)

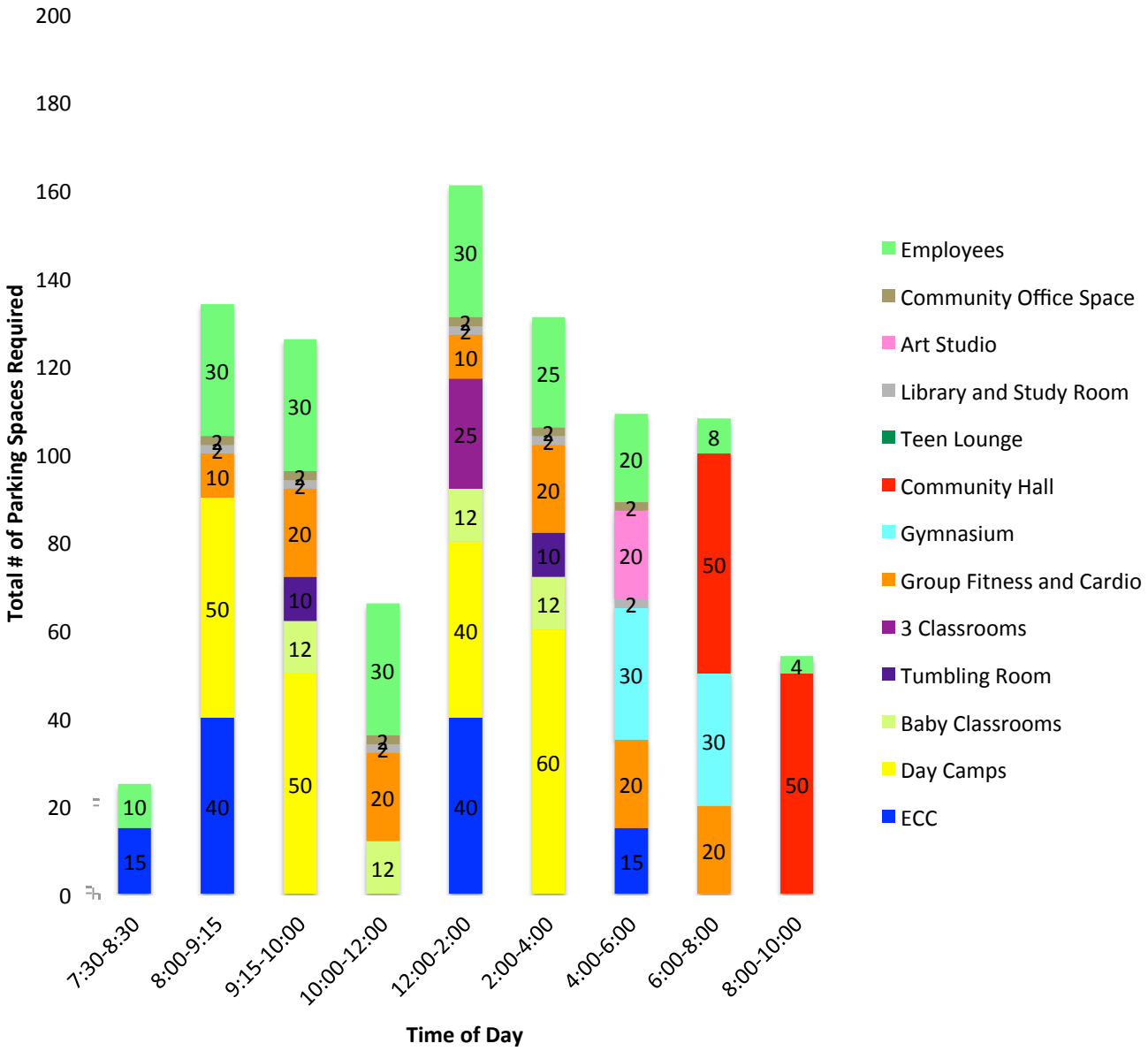


Figure 3 shows a typical summer day. As noted, during the summer our Early Childhood Center is open at a reduced capacity—roughly 40-50 percent (or 75 students). At the same time, we operate a summer camp for elementary-aged children and teens. As a result, Figure 3 shows usage in the morning for ECC and summer camp drop-offs. Figure 3 also shows a Community Hall event requiring 50 parking spaces in the evening, just to illustrate that such events do not overlap with either the ECC or the summer camp. In this typical summer weekday scenario, our maximum parking need would be approximately 161 spaces.

APPENDIX A:
DETAILED EXPLANATION OF SPECIFIC PARKING USES

As explained above, our three primary uses that affect parking are our Early Childhood Center, our summer camp, and our Community Hall. In this Appendix we describe those three uses in detail. In addition, we describe each of our other uses in detail. As noted, however, even in combination all of the other uses of the JCC's facility are relatively small compared to these three primary uses.

a. Three Primary Uses: Early Childhood Center, Summer Camp, and Community Hall

(1) Early Childhood Center: The ECC will serve families with children from 6 weeks old to pre-kindergarten. The total capacity of the school at any given time will be 150 students. These students will be picked up and dropped off at different times depending on their choice of half-day, extended day, or full-day. Many of these students are siblings and many carpool as well. This function requires 30 spaces between 7:30-8:30am (for early drop-off), 90 spaces between 8:30-9:15am (for regular drop-off) and about 70 spaces between 12-2pm (for pick-up). It also requires 30 spaces between 2-4pm and 30 spaces between 4-6 pm (as some families choose extended day options). The spaces will be used for about 20 minutes to allow time for parents to walk their children into the building and leave.

During the summer our ECC operates at 40-50% capacity. We therefore estimate needing 15 spaces between 7:30-8:30am and 40 spaces between 8:30-9:15am (for drop-off), 40 spaces between 12-2pm (for pickup), and 15 spaces between 4-6pm (for late pickup).

(2) Summer Camp: The Boulder JCC operates a day camp during the summer for elementary and middle school children. The camp utilizes much of the space in the building, meaning that we offer limited other (adult) programming.

When we reach capacity, we anticipate that our elementary age camp will serve approximately 150 campers (many siblings of Early Childhood Center summer attendees and many siblings of other campers). We will start our camp slightly later than our Summer ECC to ease parking demand and traffic flow. Depending on the number of children, we will stagger the starts of these programs to ensure safety in the parking lots.

(3) Community Hall: The Community Hall's primary use will be in the evening when larger events and rentals will use the space. The largest of the JCC programs currently attract about 120 people, but most events are closer to 50 people. If a larger event is planned we will ensure that no other events that require parking will occur during the same time. During the summer, the Community Hall will be used for camp during the day, so no additional parking will be necessary. The largest events will be rentals that will take place on Friday night and Saturday when the JCC does not have any other programming, so the entire parking lot will be allocated to the Community Hall, as indicated in the Maximum Use Scenario.

b. Other Uses

Adult Classroom Space: The two classrooms on the first floor and the adult gathering space on the second floor provide space to hold meetings, educational lectures, films, receptions, and other cultural events. Each of the three rooms can hold 25 people. Meetings are scattered throughout the day. At any given time, we anticipate that these rooms will require up to 50 spaces, but they will not be scheduled to start at the same time as the primary drop-off and pick-up times of the ECC. During the summer, we will not host many events in these rooms. Instead, in the summer these rooms will be used for camp.

Gymnasium: During the day in the school-year from 9am-3pm the gymnasium will be used as activity space for the ECC, so no additional spaces will be necessary. From 3pm-6pm, the gym will be used for afterschool programming that will require approximately 20 parking spaces. From 6pm-8pm the gymnasium will be used for leagues. We

anticipate that about 30 cars will be parked at this time. (If the gymnasium generates more than 30 parking spaces in the evening, we will ensure that such gymnasium use does not occur if a large Community Hall event is taking place, so that the two uses do not simultaneously generate parking demand.) During the summer, the gymnasium will be used for our day camps.

Group Fitness and Small Cardio Rooms: These two small fitness rooms hold 20 and 12 people, respectively. We plan to use the Group Fitness room for small classes throughout the day. Most of the attendees will be parents dropping off or picking up their children at our ECC or summer camp. During those drop-off and pickup times, therefore, we estimate needing 8-10 additional parking spaces for the group fitness room; during other times we estimate needing 15-20 spaces. The Small Cardio Room will be used primarily by staff and for personal training sessions. The vast majority of personal training attendees will be parents dropping off or picking up their children from our ECC or summer camp. We therefore estimate needing only 1-2 additional spaces for this cardio room.

Baby Classrooms: There are classes that run throughout the day from 9:30-4pm. Each of these classes has at most 12 baby participants (parent and child). There are two classrooms where this programming will take place and they rarely occur at the same time. We therefore anticipate that there will be at most 12 cars parked for these activities at any given time. During the summer the programming is limited as the day camps use these classrooms. There is little to no programming on the weekends in these rooms.

Tumbling Room: The tumbling room is shared between the ECC, Baby Classes, and Open (public) Tumbling Times. There will be up to 2 tumbling classes a day (but not every day and not on weekends). At most, at any given time, we anticipate 10 cars parked to use this space.

Teen Lounge: The teen lounge will mostly be used in afterschool programming and some evening activities. Many of these teens do not drive, so they will be dropped off. We anticipate that this program will serve about 20 teens during the afterschool time with about 10 cars parking at any given time.

Library and Study Room: The heaviest use of the library is from our ECC. Other than these children, most of the use comes from people in the building for other reasons. We have about 300 check-outs a year. Therefore, we anticipate at any given time that there will be at most 2 additional people parked to check-out, meet, or study in the library. In addition, the Library has a small Study Room. We expect at most 10 cars once or twice a day if meetings are held in this room.

Art Studio: The small art studio will be used for art-related classes. In the mornings we will hold art classes for adults, which may require up to 20 parking spaces. In the afternoons this art studio will be used for kids art classes. The majority of students will be attendees at our ECC or summer camp that stay for additional class time. In addition, attendees to these afternoon or after school classes will often be siblings of ECC or summer camp children, and/or will carpool with other students. We therefore expect to need 10 parking spaces for the art studio classes in the afternoons.

Community Office Space: The new Boulder JCC will provide office space to several affiliated organizations. For example, the JCC is home to Jewish Family Service. JFS operates with 1.25 employees and anticipates the same as they move into the new building. Most of their services are provided out of the building in senior centers around Boulder County. The programs they operate are joint programming with the Boulder JCC and included in the estimates for parking in our adult classrooms. We have similarly accounted for the possibility of other future users of our community office space by accounting for them as employees in our parking estimates.

c. Proposed Future Expansion

In our City submission we have indicated the future expansions that we envision for the JCC. Here we provide descriptions of the parking needs of these possible future expansions. We anticipate that with these future expansions, the JCC would require a total of 200 parking spaces, 40 more than needed prior to expansion for typical use and 20 more than needed prior to expansion for maximum use.

Swimming Pool: The Boulder JCC swimming pool will be an outdoor pool that will operate from Memorial Day to Labor Day. During the limited part of the school year that the pool is open, the pool will be used by our Early Childhood Center. During the summer, it will be used by our day camp, swim team, as well as JCC members. It will also be open to JCC members in the evening and on weekends. Based on current projections we anticipate that in mornings we would allow swim team and camp to use the pool from 7:30-11:00am, and the pool being open to JCC members from 11:00am-6:00pm. The early morning swim team use will require 20 parking spaces between 7:30-8:30. The membership use from 11:00am-6:00pm will require between 15 and 30 parking spaces—many pool users are likely to also be ECC or summer camp parents. Finally, we will close the pool when a large event (e.g., a bar/bat mitzvah or wedding) is scheduled in the Community Hall.

Fitness Area: In the future we have set aside space to house a 2000 - 3000 SF fitness area. Hours of operation are anticipated to be 9:00am-8:00pm. We see this area being used by many of our parents that drop off their children in our Early Childhood Center as well as other members of the community surrounding the JCC. With this size facility we anticipate that at any given time there will be up to 20 additional cars on top of the cars that park for other reasons and utilize the facility.

2 additional early childhood classes: With the growth of our Early Childhood Center and the demand we see currently, we anticipate that we might need to build two additional classrooms. These classrooms would provide space for an additional 24 children, again with many siblings, carpools, and alternative transportation methods.

3 Additional Classrooms: With the growth of our camps, we may need additional space to house them during the summer. These additional classrooms would provide gathering spaces for the campers. These additional classrooms would not require additional parking spaces, because they would not increase the size of our camp—merely provide more spaces for our camp experience.

APPENDIX B: SUPPORTING DATA TABLES

Figure 1: Maximum Use Scenario

Mon.-Fri. School-Year with Maximum Use Assumptions									
	# of Cars Parked During Time-Frame Listed								
Type	**7:30-8:30am**	**8:30-9:15am**	**9:15-10am**	**10- 12pm**	**12-2pm**	**2-4pm**	**4-6pm**	**6-8pm**	**8-10pm**
Early Childhood Center	30	90			50	40	30		
Day Camps									
Baby Classrooms			12	12	12	12			
Tumbling Room		ECC*	10	ECC*	ECC*	10			
3 Classrooms				50		25	25		
Group Fitness and Cardio		10	20	20	10	10	10		
Gymnasium		ECC*	ECC*	ECC*		20	30		
Community Hall					50			165	165
Teen Lounge							10		
Library and Study Room			2	2	2	2	10		
Art Studio			20	20		10	10		
Community Office Space		2	2	2	2	2	2		
Employees	10	35	35	35	35	35	35	8	8
TOTALS	40	137	101	141	161	166	162	173	173
		*ECC means that the early childhood center will be using it therefore there are no additional cars							

Figure 2: Typical School Year Weekday

Mon.-Fri. School-Year Weekday with Typical Use									
	# of Cars Parked During Time-Frame Listed								
Type	**7:30-8:30am**	**8:30-9:15am**	**9:15-10am**	**10- 12pm**	**12-2pm**	**2-4pm**	**4-6pm**	**6-8pm**	**8-10pm**
Early Childhood Center	30	90			50	40	30		
Day Camps									
Baby Classrooms			12	12	12	12			
Tumbling Room		ECC*	10	ECC*	ECC*	10			
3 Classrooms				25	25	25	25		
Group Fitness and Cardio		10	20	20	10	10	10	20	
Gymnasium		ECC*	ECC*	ECC*		20	30	30	
Community Hall								50	50
Teen Lounge							10		
Library and Study Room			2	2	2	2	2		
Art Studio				20	20	10	10		
Community Office Space		2	2	2	2	2	2		
Employees	10	35	35	35	35	35	25	5	4
TOTALS	40	137	81	116	156	166	144	105	54
		*ECC means that the early childhood center will be using it therefore there are no additional cars							

Figure 3: Typical Summer Weekday

Mon.-Fri. Summer Weekday with Typical Use									
	# of Cars Parked During Time-Frame Listed								
Type	**7:30-8:30am**	**8:30-9:15am**	**9:15-10am**	**10- 12pm**	**12-2pm**	**2-4pm**	**4-6pm**	**6-8pm**	**8-10pm**
Early Childhood Center	15	40			40		15		
Day Camps		50	50		40	60			
Baby Classrooms			12	12	12	12			
Tumbling Room		ECC*	10	ECC*	ECC*	10			
3 Classrooms		CAMP**	CAMP**	CAMP**	25	CAMP**			
Group Fitness and Cardio		10	20	20	10	20	20	20	
Gymnasium		CAMP**	CAMP**	CAMP**	CAMP **	CAMP**	30	30	
Community Hall		CAMP**	CAMP**	CAMP**	CAMP**	CAMP**		50	50
Teen Lounge		CAMP**	CAMP**	CAMP**	CAMP**	CAMP**			
Library and Study Room		2	2	2	2	2	2		
Art Studio		CAMP**	CAMP**	CAMP**	CAMP**	CAMP**	20		
Community Office Space		2	2	2	2	2	2		
Employees	10	30	30	30	30	25	20	8	4
TOTALS	25	134	126	66	161	131	109	108	54
		*ECC means that the early childhood center will be using it therefore there are no additional cars ** Our day camps use most of the building during the summer, precluding other classes and uses							

TRAFFIC IMPACT ANALYSIS

BOULDER JEWISH COMMONS

BOULDER, COLORADO

TRANSPORTATION CONSULTANTS, INC.

TRANSPORTATION
CONSULTANTS, INC.

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August 20, 2013

Ms. Julie Shaffer
Cherryvale Commons
PO Box 20587
Boulder, CO 80308

Re: Boulder Jewish Commons
Boulder, Colorado
(LSC #110400)

Dear Ms. Shaffer:

We are pleased to submit our Traffic Impact Analysis (TIA) report of the proposed Boulder Jewish Commons development to be located in Boulder, Colorado. This traffic impact study first provides a summary of the existing roadways and traffic volumes in the vicinity of the proposed development, followed by estimates of the amount and directional distribution of vehicular traffic likely to be generated. This information is then combined with projected future traffic volumes in the vicinity to evaluate the impact of the new development on the existing and future roadway system and, where appropriate, to make recommendations for the necessary roadway improvements.

We trust that our findings and recommendations will assist in the planning of the proposed development. Please call if we can be of further assistance.

Respectfully submitted,

LSC Transportation Consultants, Inc.

COLORADO LICENSED
CHRISTOPHER S. McGRANAHAN
39018
PROFESSIONAL ENGINEER

By:_____
Christopher S. McGranahan, P.E., PTOE
Principal

8-20-13

CSM/wc

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Traffic Impact Analysis

Boulder Jewish Commons

Boulder, Colorado

Prepared for

Cherryvale Commons
PO Box 20587
Boulder, CO 80308

Prepared by

LSC Transportation Consultants, Inc.
1889 York Street
Denver, CO 80206
(303) 333-1105

November 8, 2011
Revised: November 18, 2011
Revised: October 29, 2012
Revised: March 28, 2013
Revised: August 20, 2013
(LSC #110400)

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SECTION A
Introduction

The proposed Boulder Jewish Commons is to be located south of Arapahoe Road (SH 7) and east of Cherryvale Road in Boulder, Colorado. One right-in/right-out access is proposed on SH 7 and one full movement roundabout access is planned on Cherryvale Road. A secondary right-in/right-out service access is proposed on SH 7. The proposed site plan accommodates a future connection east to 63rd Street and is assumed as part of the 2035 analysis.

Cherryvale Commons has retained LSC Transportation Consultants, Inc. to determine the traffic impacts of the proposed development on the surrounding roadway system. The following analysis procedures were utilized in the evaluation:

- A review and analysis of present roadway and traffic conditions in the vicinity of the site. This task included the collection of intersection turning movement traffic counts at the intersections of Arapahoe Road/Cherryvale Road and Arapahoe Road/63rd Street, two-day machine traffic counts on Arapahoe Road east of Cherryvale Road and on Cherryvale Road, and a review of the planned and proposed roadway improvements in the general vicinity.

- A projection of future background traffic volumes on the adjacent roadway system for future Years 2015 and 2035.

- A determination of the average weekday and peak-hour traffic that would be generated by the proposed development.

- An analysis of the estimated directional distribution of site-generated traffic and an assignment of that traffic to the adjacent roadway network.

- A determination of future traffic impacts associated with the proposed development. These impacts are based upon estimates of the total amount of traffic on the surrounding roadway system and the resulting Levels of Service (LOS) at the key intersections in the vicinity of the development.

- A determination of street and access improvements that will be necessary to mitigate the traffic impacts associated with the proposed development.

SECTION B
Roadway and Traffic Conditions

The location of the proposed Boulder Jewish Commons is shown in Figure 1. The site is located south of Arapahoe Road and east of Cherryvale Road. The surrounding area is light industrial to the north and east with residential uses located to the south and west.

Planned access to the development consists of one right-in/right-out access on Arapahoe Road and one full movement roundabout access on Cherryvale Road south of Arapahoe Road as shown in Figure 2. A secondary right-in/right-out service access drive is proposed a few hundred feet west of the right-in/right-out Arapahoe Road access.

Area Roadways

Major roadways in the vicinity of the site are illustrated in Figure 3 along with existing lane geometry and traffic controls. The following is a brief discussion of anticipated future roadway improvements:

- Arapahoe Road is an east-west principal arterial roadway connecting the City of Boulder on the west with Lafayette on the east. It is designated as State Highway 7 and classified as NR-B (Non-Rural Arterial) by CDOT. It continues east past Lafayette to I-25 and then to Brighton and I-76. The posted speed limit on Arapahoe Road in the vicinity of the site is 45 mph. There are traffic signals on Arapahoe Road at Cherryvale Road and 63rd Street. East of the site, Arapahoe Road has one through lane westbound and eastbound. At Cherryvale Road, the roadway widens to include three through lanes in the westbound direction and two through lanes in the eastbound direction. In May, 2008, CDOT completed an *Environmental Assessment* for SH 7, from Cherryvale Road to 75th Street. This effort resulted in a recommendation to widen SH 7 to a four-lane section from Cherryvale Road to 63rd Street. The second proposed eastbound through lane transitions into a bus lane east of 63rd Street. Construction of these improvements is ongoing and is assumed to be completed in the 2015 analysis.

- Cherryvale Road is a rural collector roadway connecting Arapahoe Road on the north with Marshall Drive (SH 170) on the south. The posted speed limit is 30 mph near the site. The existing northbound approach to Arapahoe Road has significant queuing. Cherryvale Road is signed for no large trucks.

Existing Traffic Volumes

Peak-hour and daily traffic counts were conducted by Counter Measures in September, 2011 in the vicinity of the site and are illustrated in Figure 3. A summary of the raw count data is provided in Appendix A. As shown, Arapahoe Road carries about 20,350 vehicles per day, with Cherryvale Road carrying about 5,400 vehicles per day.

Future Traffic Conditions

Two planning horizons were considered in this analysis. The short term horizon is 2015 and the long term horizon is 2035.

Projections of 2015 and 2035 peak-hour traffic volumes have been made for the roadway system adjacent to the site in order to have a basis for determining future traffic impacts. Future 2015 and 2035 traffic projections, shown in Figures 4 and 5, were made assuming a one percent annual growth in traffic volumes on the surrounding roadway system. This growth rate was applied to the existing weekday peak-hour vehicle turning movement and daily traffic counts to estimate 2015 and 2035 "background traffic" volumes. This growth rate is consistent with the 2008 *SH 7 Environmental Assessment* which predicted a 20% increase in traffic on SH 7 from 2007 to 2030.

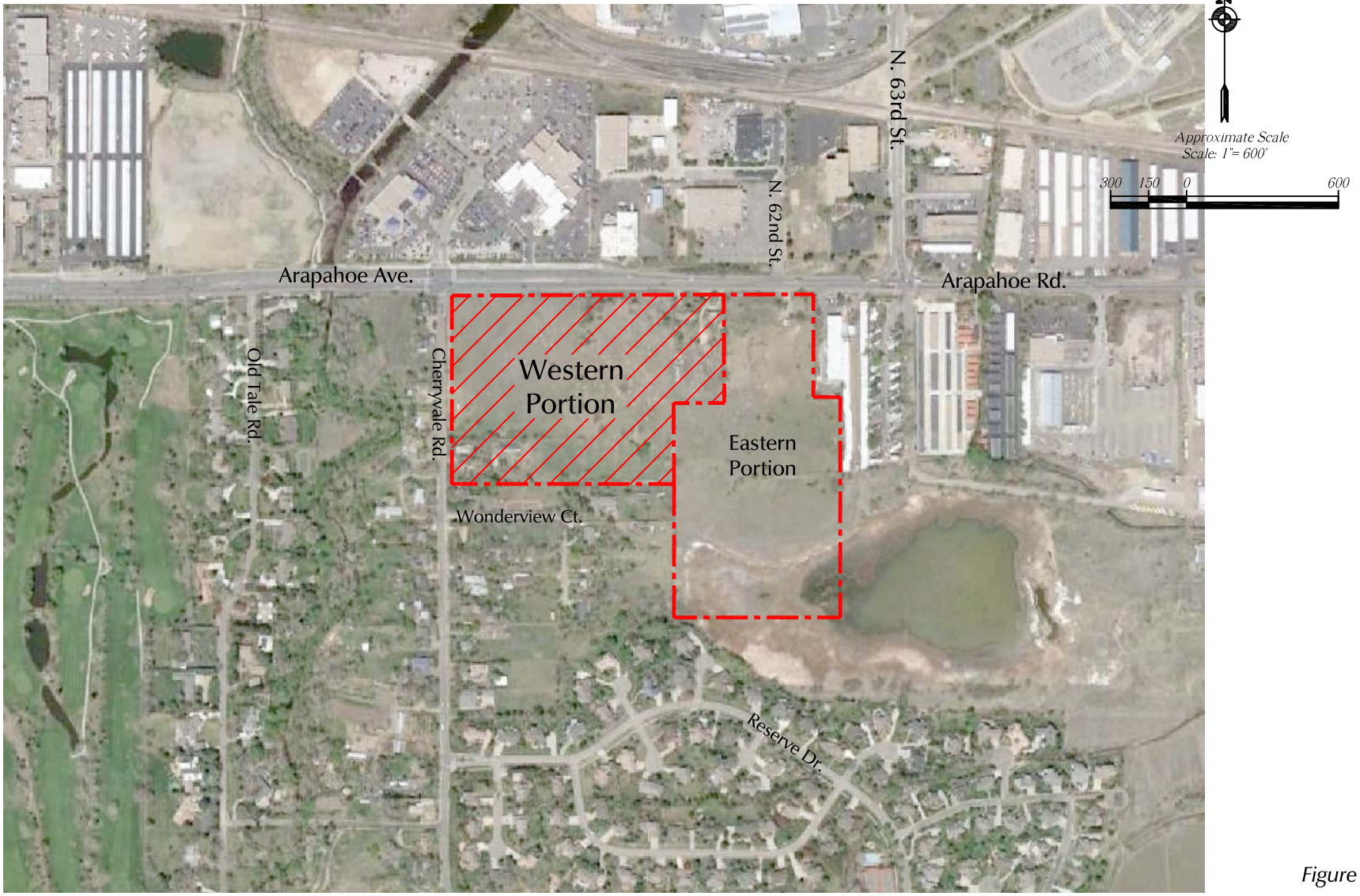


Figure 1

Vicinity Map

Boulder Jewish Commons (LSC #110400)

LSC TRANSPORTATION CONSULTANTS, INC.

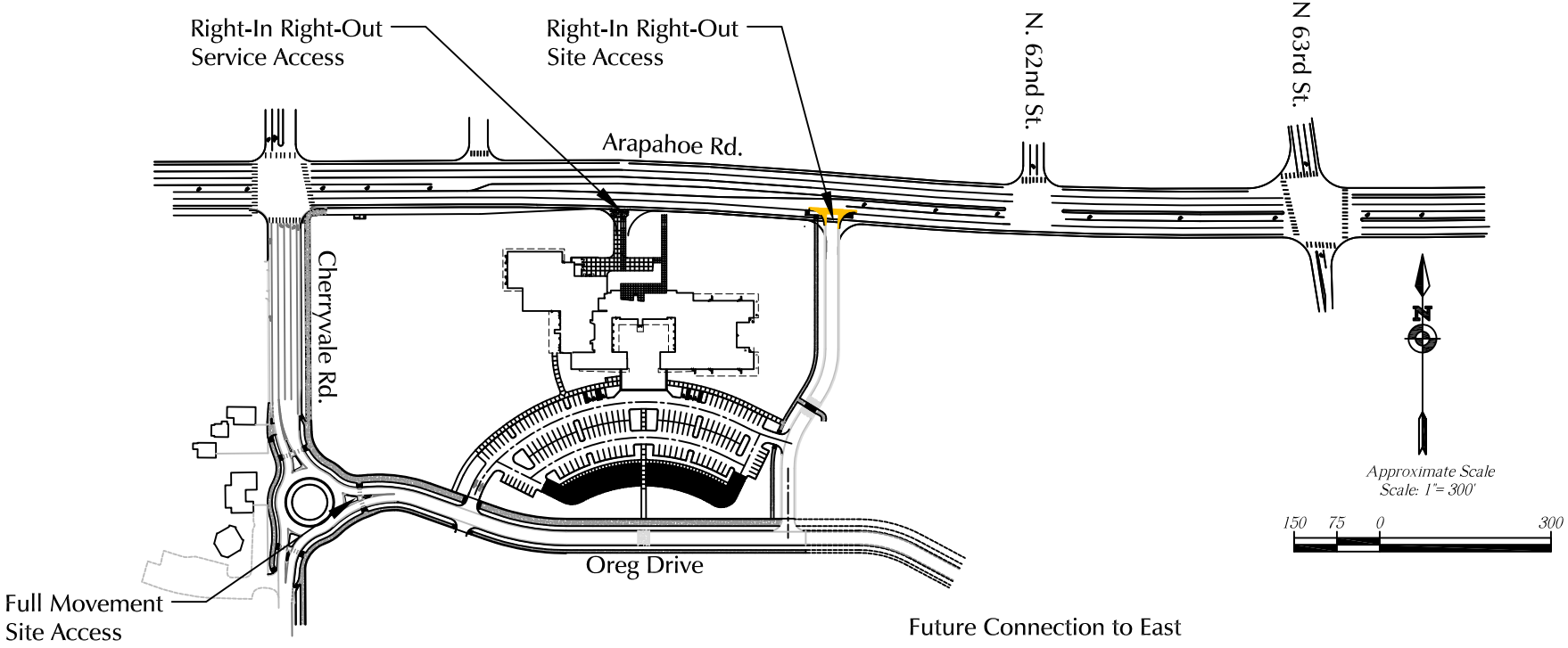
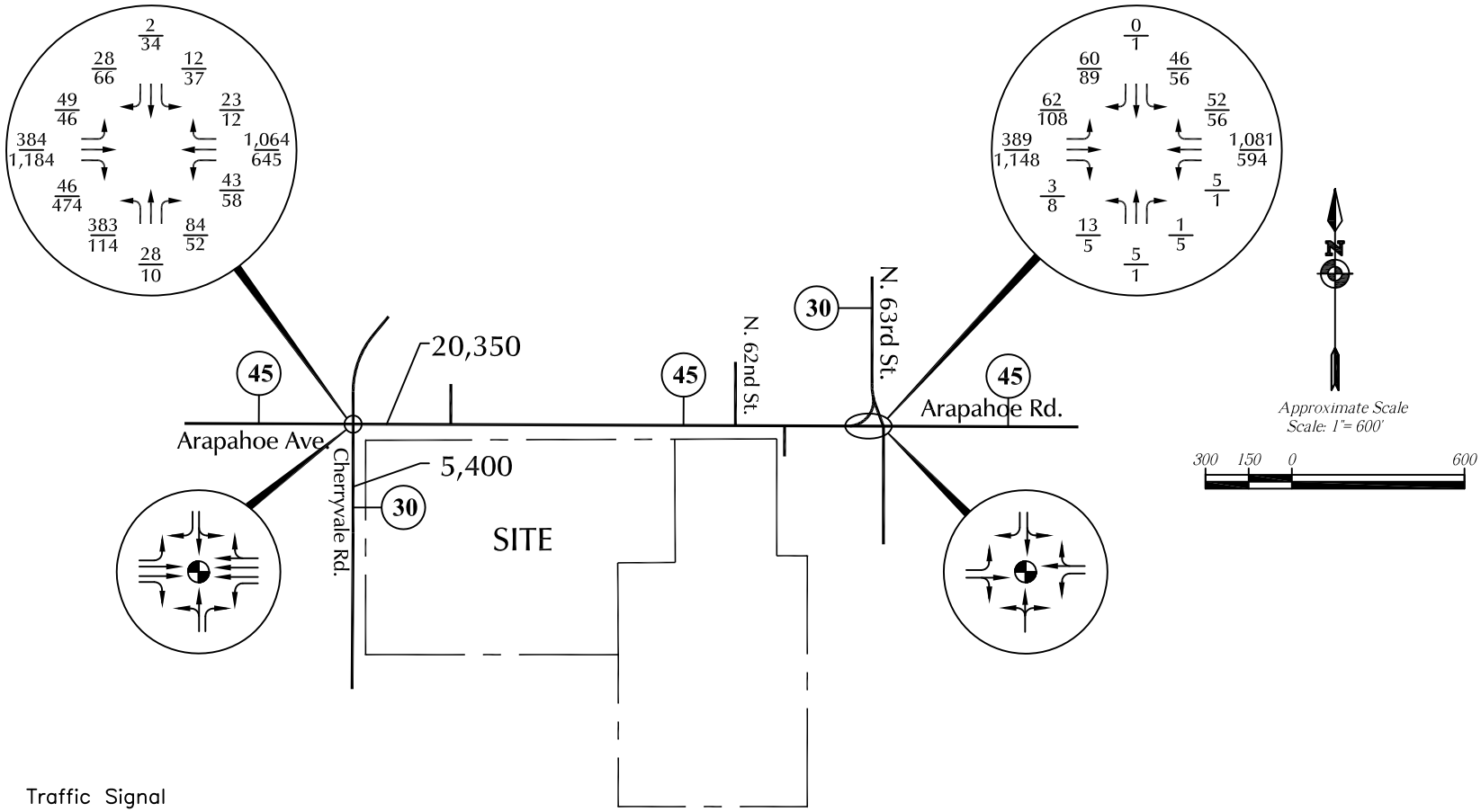


Figure 2

Site Plan for Western Portion of The Site

Boulder Jewish Commons (LSC #110400)



LEGEND:

= Traffic Signal

= Stop Sign

(35) = Speed Limit

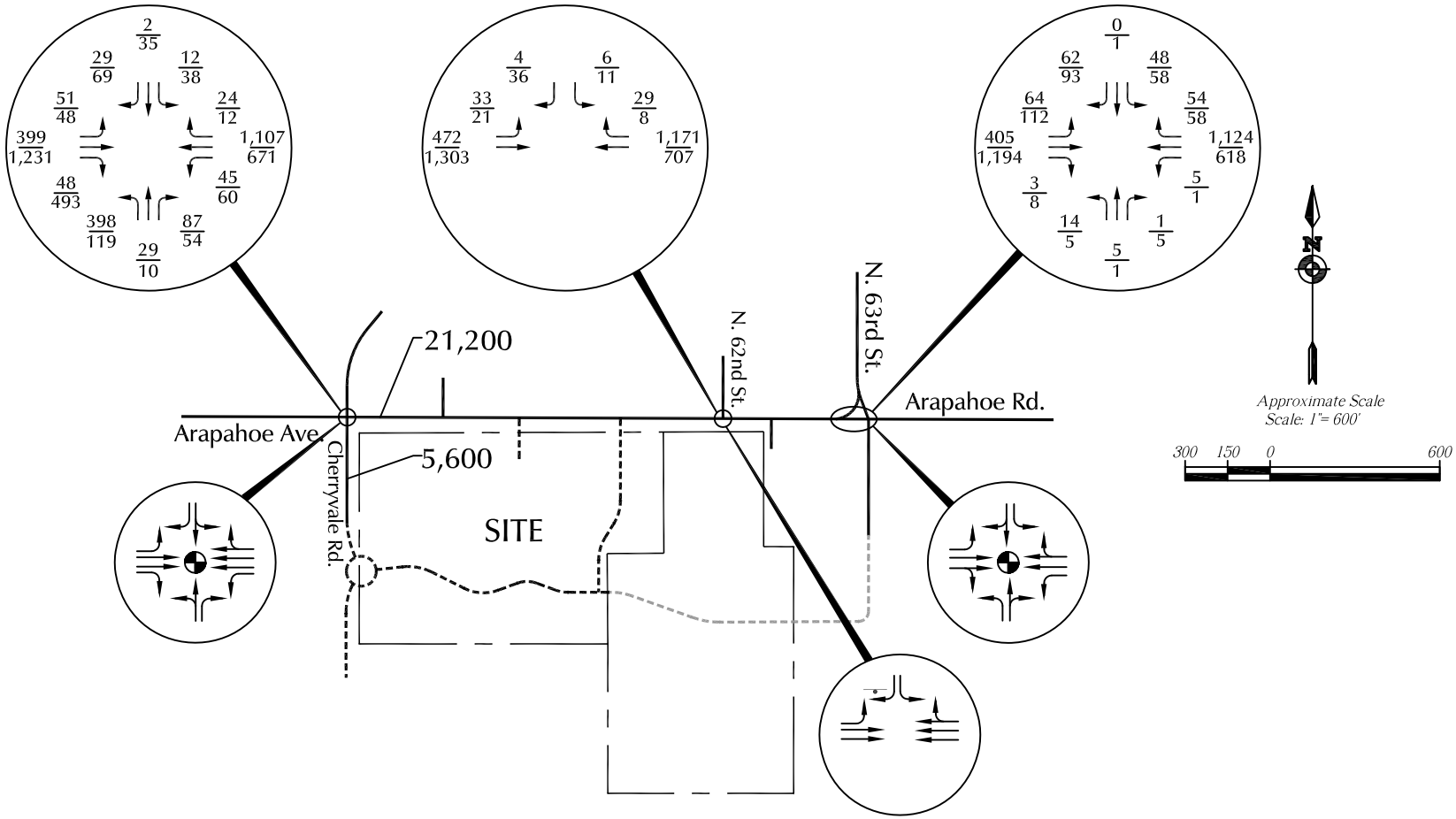
5/10 = AM Peak–Hour Traffic / PM Peak–Hour Traffic

32,500 = Average Weekday Traffic

Figure 3

Existing Traffic, Traffic Control and Lane Geometry

Boulder Jewish Commons (LSC #110400)



LEGEND:

= Traffic Signal

= Stop Sign

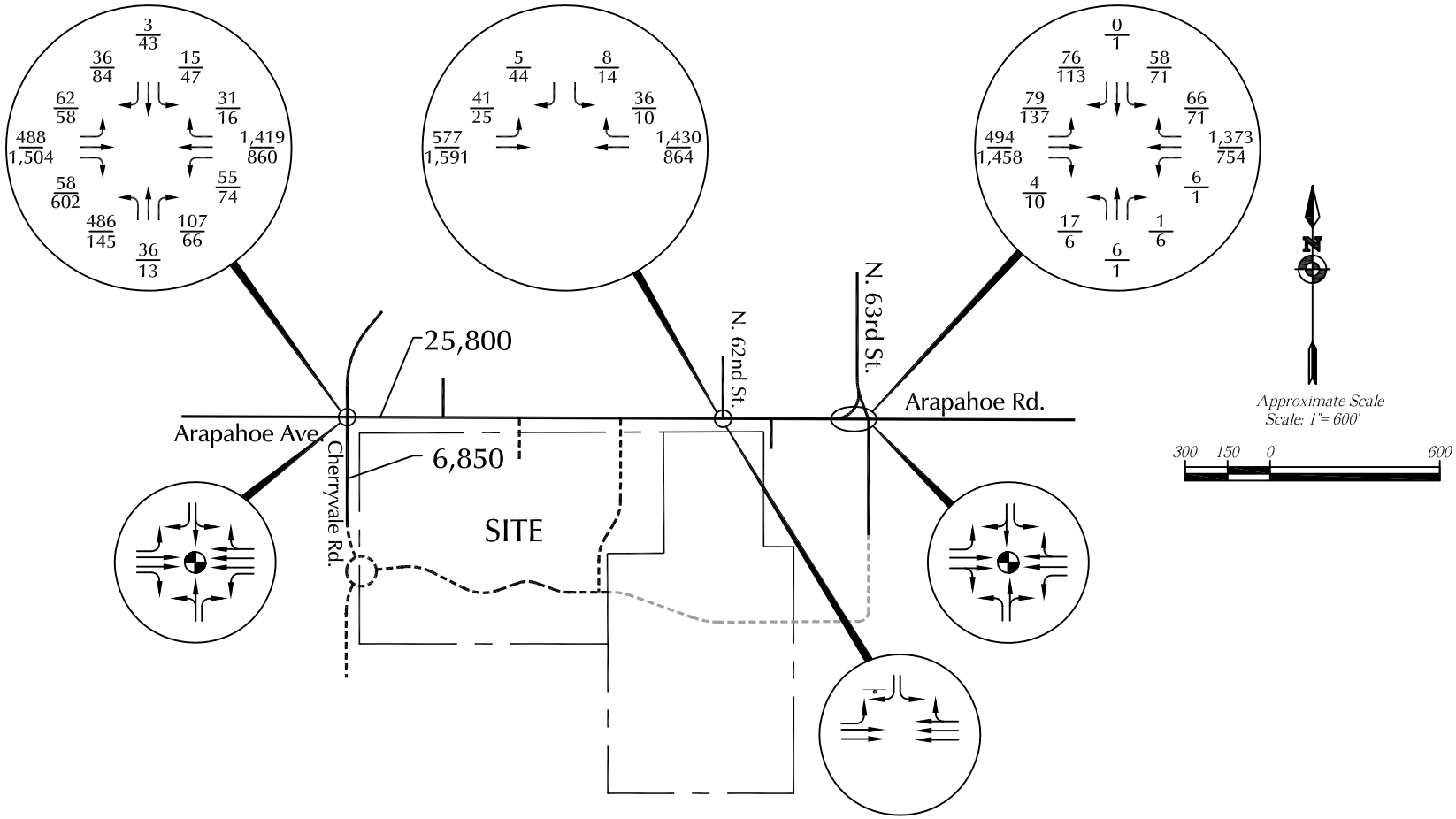
$\frac{5}{10}$ = $\frac{\text{AM Peak-Hour Traffic}}{\text{PM Peak-Hour Traffic}}$

32,500 = Average Weekday Traffic

Figure 4

Year 2015 Background Traffic, Lane Geometry and Traffic Control

Boulder Jewish Commons (LSC #110400)



LEGEND:

= Traffic Signal

= Stop Sign

$\frac{5}{10}$ = $\frac{\text{AM Peak-Hour Traffic}}{\text{PM Peak-Hour Traffic}}$

32,500 = Average Weekday Traffic

Figure 5

Year 2035 Background Traffic, Lane Geometry and Traffic Control

Boulder Jewish Commons (LSC #110400)

SECTION C

Travel Demand Management and Traffic Generation

Travel Demand Management

The Boulder Jewish Community Center proposed on the Boulder Jewish Commons site is located in an area with excellent transit and bikeway access. The Boulder Creek Bikeway terminates at Arapahoe Road near Old Tale Road. This bikeway provides grade separated access to downtown Boulder, the University of Colorado, and many housing and recreational opportunities. As part of CDOT's SH 7 improvement project, a path will be constructed along the south side of Arapahoe Road along or near the property frontage, between 63rd Street and Cherryvale Road. There are existing bike lanes on Arapahoe Road. A 12-foot wide multi-use path will be built along the north side of Oreg Drive. The development will provide bicycle parking for 24 bicycles, a secured room with space for six bicycles, and shower facilities to encourage bike commuting by the building's employees. Table 1 summarizes all of the travel demand management (TDM) plan responses to City of Boulder requirements.

RTD provides bus access to the site via the *Jump Route* which provides high frequency bus access to central Boulder, Lafayette and Louisville. The Jump Route provides service from 5:30 AM to 11:00 PM with 10-minute frequency between 7:00 AM and 6:00 PM. Bus and bike information will also be provided for employees. The existing bus stop on Arapahoe Road just east of Cherryvale Road will be improved as part of site development.

Due to these travel demand management strategies, it is estimated that vehicular traffic will be reduced by ten percent.

Trip Generation

The amount of traffic that will be generated by Boulder Jewish Commons was determined using existing traffic data and trip generation rates published by the Institute of Transportation Engineers in its report *Trip Generation*, 9th Edition, 2012, unless noted otherwise

and is shown in Table 2. The existing Boulder Jewish Community Center is located at the east end of Kalmia Road in Boulder. Since it is the only use on the east end of this dead-end street, a road-tube traffic counter placed just west of the site would capture the traffic generated by the Center. Traffic was counted in mid-September, 2011, with the data included in Appendix A. Using this count data, morning, evening, and daily trip generation rates could be calculated for this existing center which is estimated to contain 15,000 square feet. The results are shown in Table 2. These trip generation rates were used to estimate vehicles expected to be generated by the Early Childhood Center component of the new Boulder Jewish Commons. Table 2 takes into account the assumed ten percent reduction in vehicular trips due to the proposed travel demand management program.

The Boulder Jewish Community Center portion of the Boulder Jewish Commons site is proposed to be completed by 2015 and includes an 18,715 square-foot early childhood center and a 33,729 square-foot community recreation center. For purposed of this report it was assumed that the balance of the western portion of the site could be developed as up to eleven single-family homes based on existing City zoning. There is no plan at this time to develop this area of the site. As shown in Table 2, on a typical weekday, the western portion of the site can be expected to generate about 1,812 vehicle-trips per day, with about half entering and half exiting the site in a 24-hour period. During the morning peak-hour, about 112 vehicles will enter and about 67 vehicles will exit the site. During the afternoon peak-hour, there will be about 113 entering and about 84 exiting vehicles.

Buildout of the site is proposed to be completed by 2035 and could include a 20,486 square-foot early childhood center and a 50,050 square-foot community recreation center. For purposes of this report it is assumed that the eastern portion of the site could be developed as up to 135 residential condo/townhomes (medium density residential) based on the City's *Comprehensive Plan*. There is no plan at this time to develop this area of the site. However, any further development will have to come back through a city review and at that time a new Traffic Impact Analysis will be prepared based on the uses proposed.

As shown in Table 2, on a typical weekday, by 2035 the Boulder Jewish Commons site could potentially be expected to generate about 3,080 vehicle-trips per day, with about half entering and half exiting the site in a 24-hour period. During the morning peak-hour, about 147 vehicles will enter and about 127 vehicles will exit the site. During the afternoon peak-hour, there will be about 180 entering and about 129 exiting vehicles.

Table 1
Boulder Jewish Commons TDM Plan Actions

TDM Toolkit Element		Within CTN Buffer Package A
CORE ELEMENTS	Meet Short-Term Bicycle Parking Code	Auto parking for the site totals 148 paved spaces and 29 gravel overflow spaces, and the bicycle parking requirement is either 3 spaces or 10% of the off-street parking, whichever is higher. This results in an estimated 18 bicycle parking spaces. Bicycle racks for 24 bicycles will be provided.
	Meet Long-Term Bicycle Parking Code	A secured room will be provied for storage of six bicycles.
	Ratio of MOV Mode Share	The Boulder Jewish Commons will include ridesharing information in its employee orientation packets. This may include eGo Car sharing and DRCOG's RideArrangers. The nearest current eGO car share site is at 30th Street/Smiley Court just south of Scott Carpenter Park.
	Pedestrian Enhancements	As part of CDOT's SH 7 improvement project, a multi-use path will be built along or near the frontage of the Boulder Jewish Commons development on the south side of Araphaoe between 63rd Street and Cherryvale Road. This will provide a connection to existing pathways on the north side of Arapahoe, west of Cherryvale Roac via that intersection's crosswalk. Connections from this path to walks on the Boulder Jewish Commons campus will be made. There are existing bike lanes on Arapahoe Road. A 12-foot multi-use path will be built along the north side of Oreg Drive.
	Bike Enhancements	As part of CDOT's SH 7 improvement project, multi-use path will be built along or near the frontage of the Boulder Jewish Commons development on the south side of Araphaoe between 63rd Street and Cherryvale Road. This will provide a connection to existing pathways on the north side of Arapahoe, west of Cherryvale Roac via that intersection's crosswalk. Connections from this path to walks on the Boulder Jewish Commons campus will be made. There are existing bike lanes on Arapahoe Road. A 12-foot multi-use path will be built along the north side of Oreg Drive.
	Showers - Conditional	Showers provided for recreation patrons will also be available for employees to use.
	Changing Facilities - Conditional	Changing facilities provided for recreation patrons will also be available for employees to use.
	Transportation Information Center / Access	The Boulder Jewish Commons development will maintain a Transportation Information Center at the work site. This center will serve as a means to providing employees with important travel information regarding transit maps and schedules, bicycle maps, local and regional marketing campaigns, and information on the commute benefits provided to employees.
	Program Evaluation	Boulder Jewish Commons will assist in the dissemination and collection of periodic travel surveys to measure the impact of the Commute Trip Reduction Program. GO Boulder staff will work with the assigned ETC to determine the most efficient methods to distribute and collect the surveys from employees.
	Employee Transportation Coordinator (ETC) Network	Boulder Jewish Commons will appoint an Employee Transportation Coordinator (ETC) and provide that employee's contact information to GO Boulder staff. The ETC will be responsible for implementing and maintaining the Employee Commute Trip Reduction Program. The ETC will act as a liaison to GO Boulder and disseminate transportation information and marketing materials to co-workers with the objective of reducing single-occupant vehicle (SOV) commuting. The ETC will be involved in employee orientation to communicate the commute benefits available to co-workers and serve as the point of contact for any GO Boulder or regional promotional campaigns that encourage alternative transportation. The ETC will also be responsible for maintaining the Transportation Information Center.
PACKAGE ELEMENTS	Business Eco Pass Program (BECO Pass) - 3 years	The Boulder Jewish Commons development will provide three years of Business Eco Passes to employees with a financial guarantee. Boulder Jewish Commons will set up an escrow account in the amount of $11,916 to reimburse employees for BECO pass purchases for three years. This amount is based on 50 employees at $72.00 for the first year, $79.20 for the second year, and $87.12 for the third year. The existing bus stop on Arapahoe Road just east of Cherryvale Road will be improved as part of site development.

Source: LSC, 2013.

Table 2
ESTIMATED TRAFFIC GENERATION
Boulder Jewish Commons
City of Boulder, Colorado
(LSC #110400; August, 2013)

	Quantity	Trip Generation Rates[1] Average Weekday	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour In	PM Peak Hour Out	Alternate Mode Reduction %	Vehicle - Trips Generated Average Weekday	AM Peak Hour In	AM Peak Hour Out	PM Peak - Hour In	PM Peak - Hour Out
Development of Early Childhood Center Trip Generation Rates based on traffic counts at the existing Kalmia Center												
		Trip Generation Rates developed from counts						Results of existing driveway counts				
Existing Kalmia Center[2]	15 KSF[3]	41.05	4.07	2.36	3.93	2.23		626	62	36	60	34
Proposed Land Uses												
2015 Scenario - Western Portion of the Site												
Early Childhood Center (ECC)[4]	18.715 KSF	41.05	4.07	2.36	3.93	2.23	10%	691	69	40	66	38
Community Recreation Center[5]	33.729 KSF	33.82	1.35	0.70	1.34	1.40	10%	1,027	41	21	41	42
Single-Family Homes[6]	11 DU	9.52	0.19	0.56	0.63	0.37	10%	94	2	6	6	4
							Total =	**1,812**	**112**	**67**	**113**	**84**
Possible 2032 Scenario- Full Site												
Early Childhood Center[3]	20.486 KSF	41.05	4.07	2.36	3.93	2.23	10%	757	75	44	72	41
Community Recreation Center[5]	50.050 KSF	33.82	1.35	0.70	1.34	1.40	10%	1,523	61	32	60	63
Single-Family Homes[6]	11 DU	9.52	0.19	0.56	0.63	0.37	10%	94	2	6	6	4
Medium Density Residential[7]	135 DU	5.81	0.07	0.37	0.35	0.17	10%	706	9	45	42	21
							Total =	**3,080**	**147**	**127**	**180**	**129**

Notes:
(1) Source: *Trip Generation*, Institute of Transportation Engineers, 9th Edition, 2012 unless noted otherwise.
(2) The Kalmia Center driveway counts were used to develop trip generation rates for the proposed ECC.
(3) KSF = 1,000 square feet
(4) Trip generation rates based on weekday peak-hour driveway counts conducted in September 2011 at the existing Kalmia Center.
(5) ITE Land Use 495, Recreational Community Center. This land use was used because the majority of this portion of the building will be used for this purpose.
(6) ITE Land Use 210, Single Family Detached Housing - This land use could be developed per City zoning but is not proposed at this time.
(7) ITE Land Use 230, Residential Condominium/Townhouse - This land use could be developed as on the eastern portion of the site per the City's *Comprehensive Plan* but is not proposed at this time.

SECTION D
Distribution and Assignment

Traffic Distribution

The directional distribution of site-generated vehicular traffic on the roadways providing access to and from the proposed development is one of the most important elements in planning specific access requirements and in determining traffic impacts on surrounding roadways and intersections. Major factors that have influenced the traffic distribution assumptions include:

- The location of the site relative to nearby residential areas.
- The roadway network serving the site. (The primary roadways serving the site will be Arapahoe Road, 63rd Street, and Cherryvale Road.)
- The planned access system on the site. (The site will have two accesses on Arapahoe Road: a right-in/right-out service access and a right-in/right-out public access. A full movement access roundabout access is planned on Cherryvale Road.)
- The existing traffic patterns in the area are supported by traffic counts conducted in September 2011 by Counter Measures.

Specific distribution estimates have been made considering the combined effects of these factors and are shown in Figure 6, which illustrates the percent of site-generated traffic on the surrounding roadway system. As shown, about 55 percent of site-generated traffic will travel on Arapahoe Road west of Cherryvale Road; 30 percent on Arapahoe Road east of 63rd Street; five percent north on 63rd Street; and ten percent south on Cherryvale Road.

Site-Generated Traffic

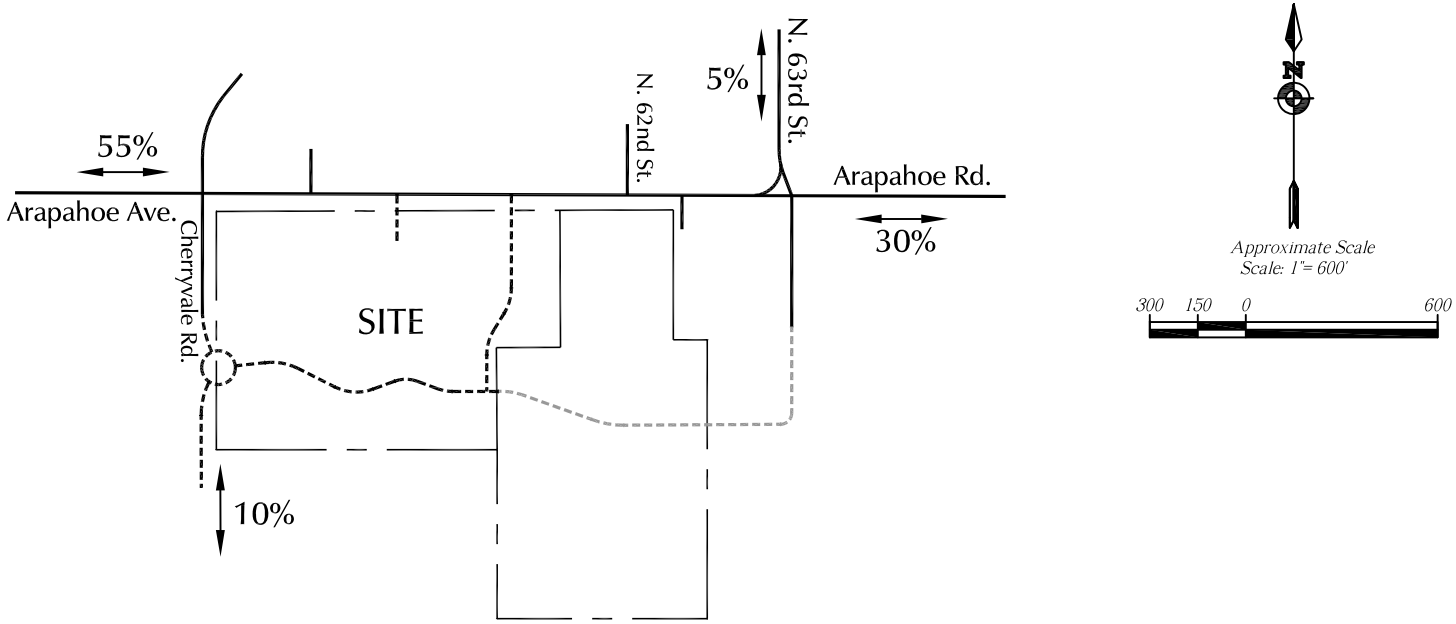
Figure 7 shows the assignment of 2015 site-generated weekday peak-hour traffic onto the adjacent street system. This assignment of site-generated traffic is based upon the traffic distribution percentages shown in Figure 6 and the vehicle-trip generation estimates of Table 2. Similarly, assignment of 2035 site-generated weekday peak-hour traffic is shown in Figure 8.

Background Traffic

As discussed in Section B under "Future Traffic Conditions", the background traffic volumes are 2015 and 2035 projections of morning and evening peak-hour traffic on the surrounding street system without consideration of the traffic generated by the proposed development. Background traffic volumes are shown in Figures 4 and 5 for 2015 and 2035, respectively. The future lane geometry and traffic control are also shown in Figures 4 and 5.

Total Traffic

Total 2015 and 2035 traffic volumes on the adjacent roadway network are shown in Figures 9 and 10, respectively. These total volumes are the sum of site-generated traffic from Figures 7 and 8 and the background traffic from Figures 4 and 5. The recommended lane geometry and traffic control are also shown in Figures 9 and 10.



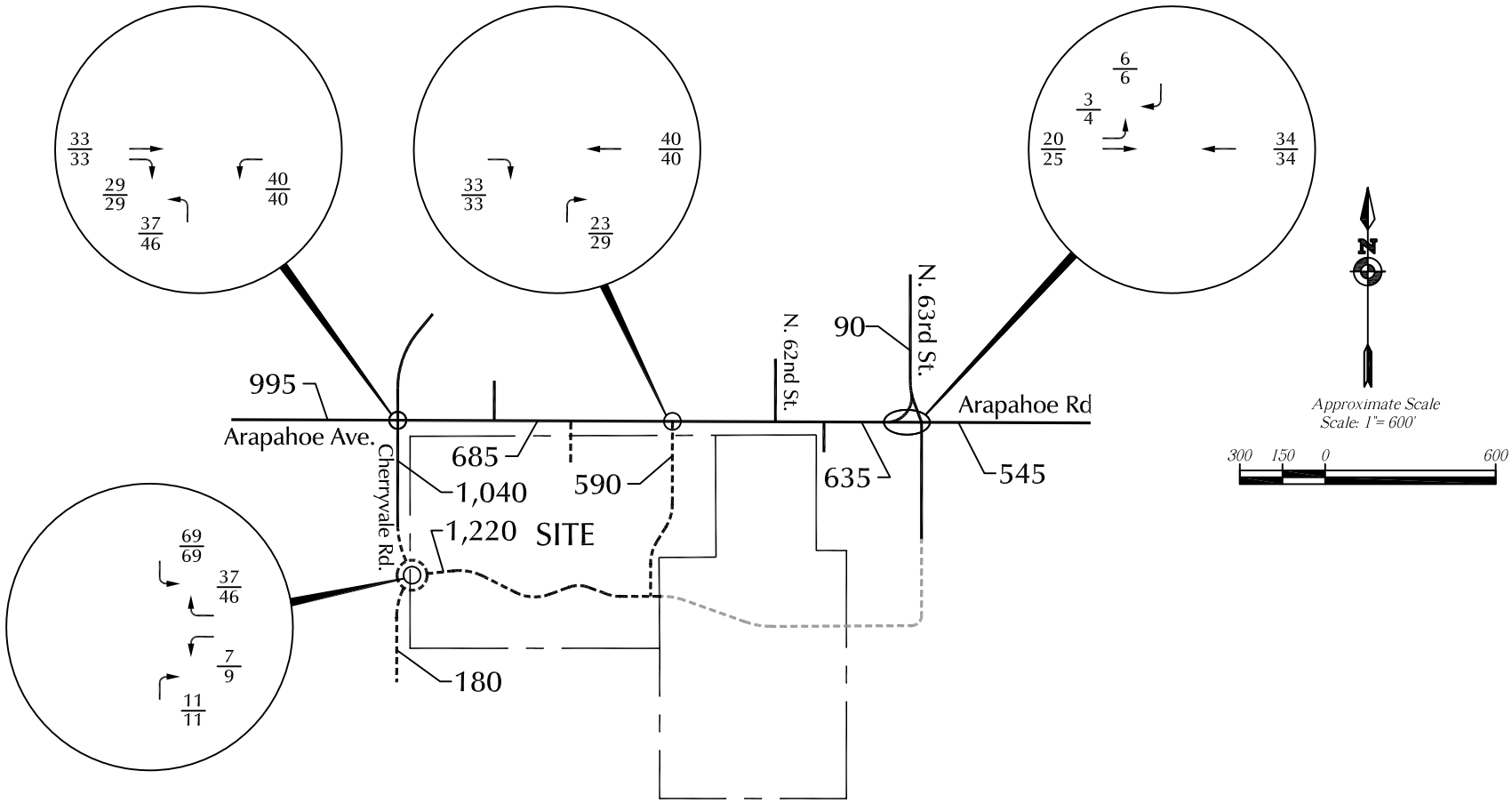
LEGEND:

65% = Percent Directional Distribution

Figure 6

Directional Distribution of Site-Generated Traffic

Boulder Jewish Commons (LSC #110400)



LEGEND:

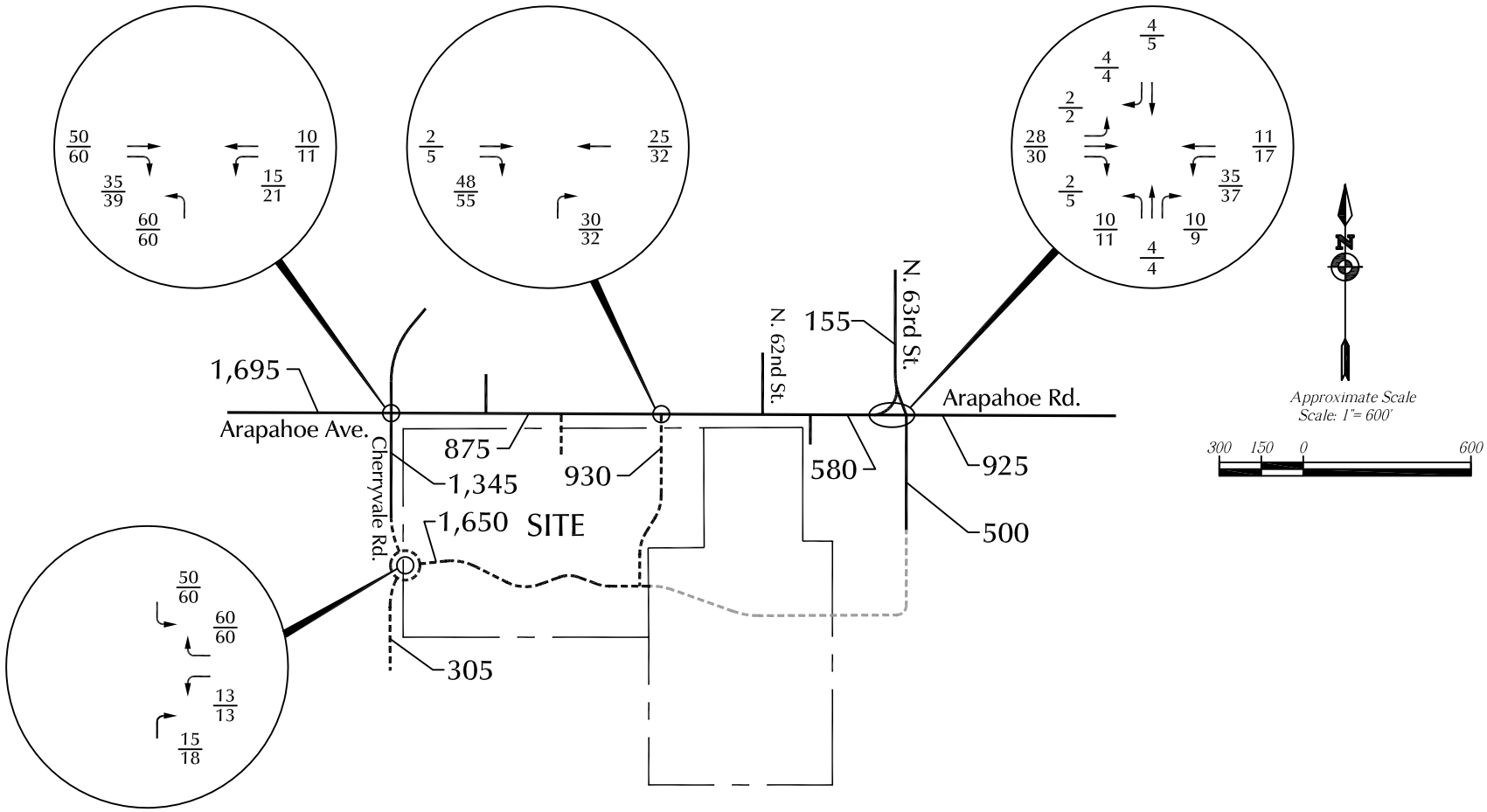
$\frac{5}{10}$ = $\frac{\text{AM Peak-Hour Traffic}}{\text{PM Peak-Hour Traffic}}$

32,500 = Average Weekday Traffic

Figure 7

Year 2015 Assignment of Site-Generated Traffic

Boulder Jewish Commons (LSC #110400)



LEGEND:

$\frac{5}{10}$ = $\frac{\text{AM Peak–Hour Traffic}}{\text{PM Peak–Hour Traffic}}$

32,500 = Average Weekday Traffic

Figure 8

Year 2035 Assignment of Site-Generated Traffic

Boulder Jewish Commons (LSC #110400)

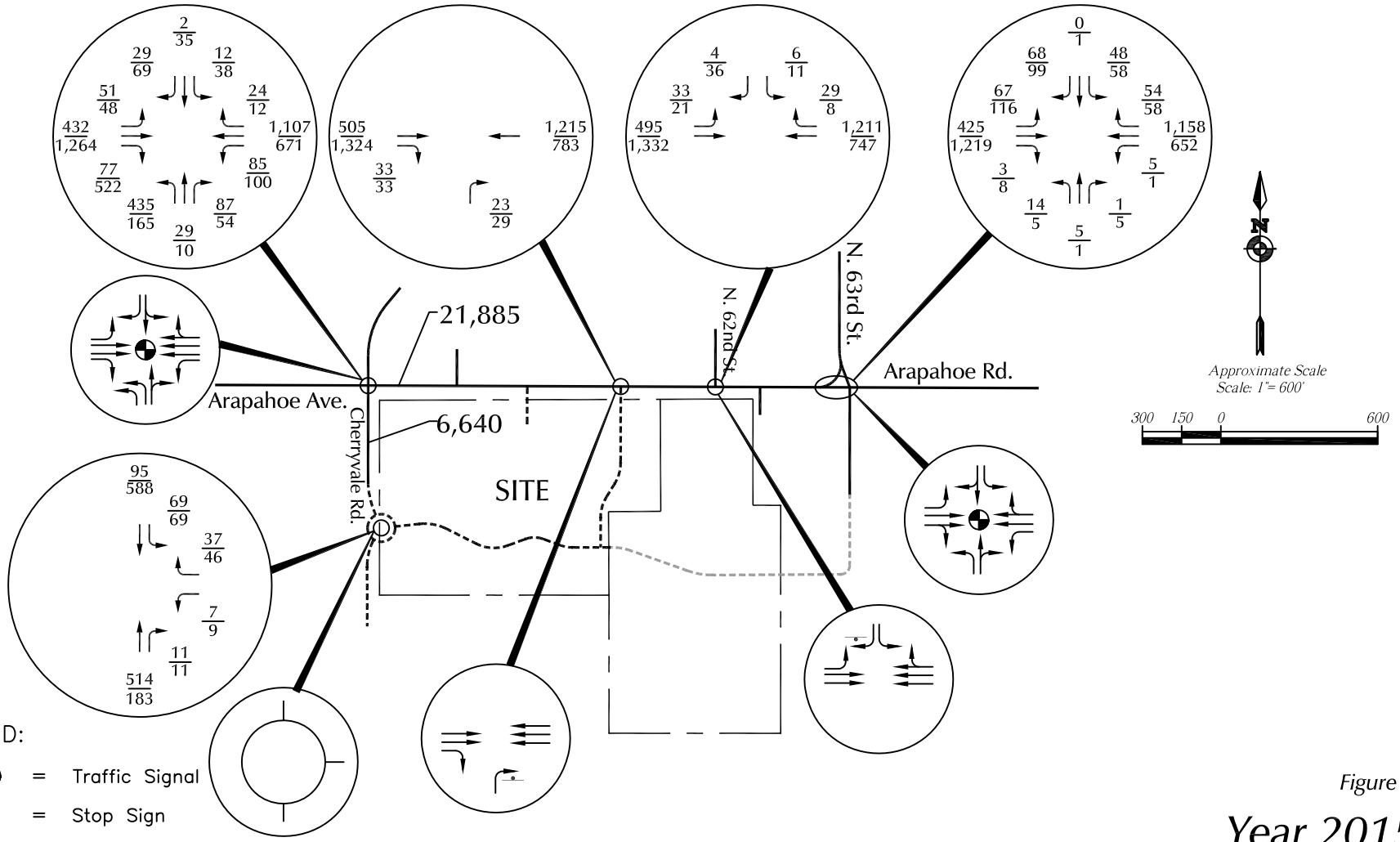


Figure 9

Year 2015 Total Traffic

Boulder Jewish Commons (LSC #110400)

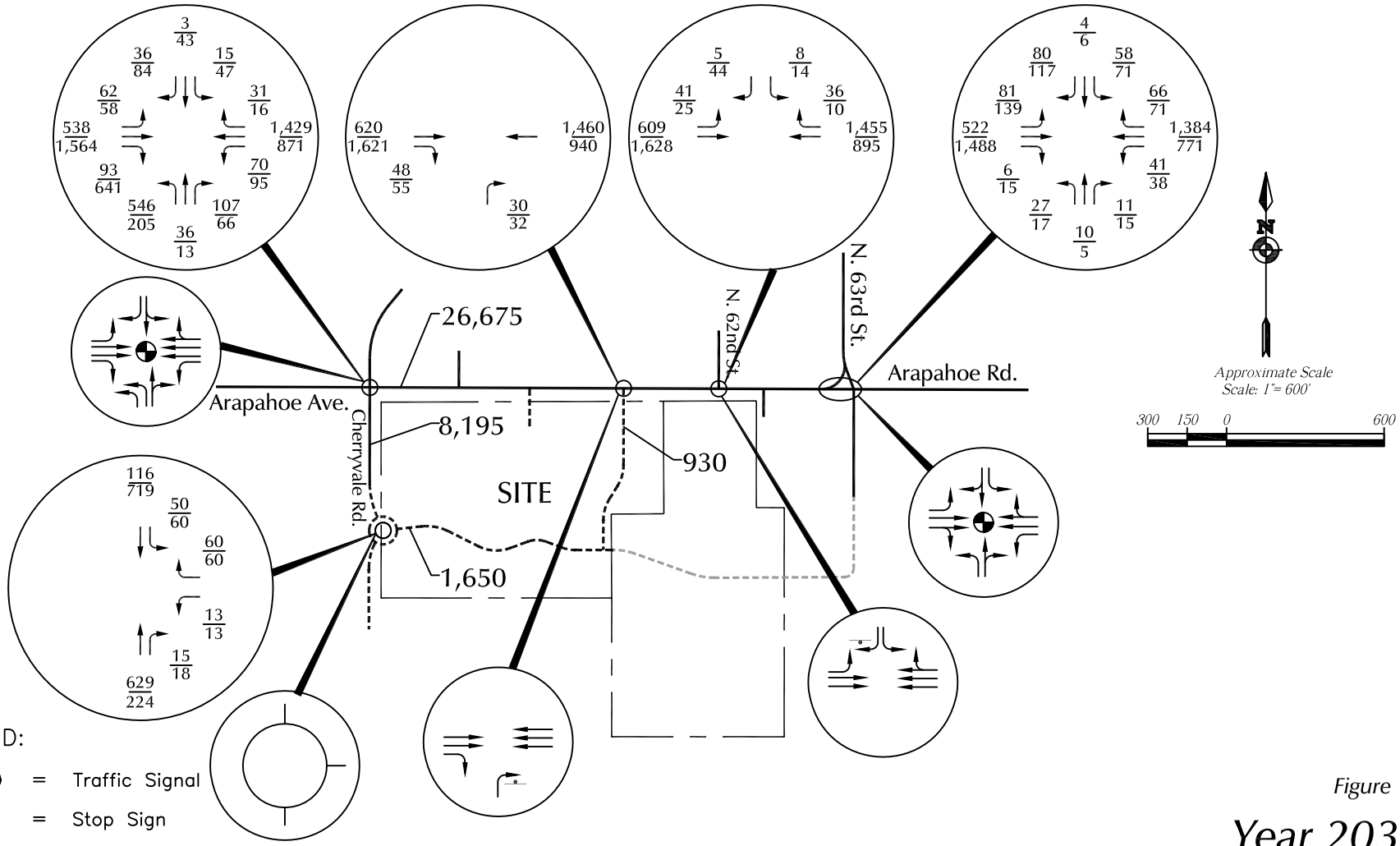


Figure 10

Year 2035 Total Traffic

Boulder Jewish Commons (LSC #110400)

Traffic Impacts

Average Daily Traffic Impacts

When site-generated and total traffic volumes on nearby roadways are estimated, the relative impact of the site on the surrounding roadway system can be projected. Figure 11 shows average daily site-generated traffic as an increment of the total average daily traffic for the Year 2035 and expected roadway capacity. Site-generated traffic on Arapahoe Avenue/Road adjacent to the site will constitute about three percent of the total traffic on the roadway in 2035, 16 percent of 2035 traffic on Cherryvale Road north of the site access, and about four percent on Cherryvale Road south of the site access.

Peak-Hour Traffic Impacts and Intersection Capacity Analysis

A more significant methodology for determining traffic impacts is to examine the Levels of Service at individual intersections and access points that will be directly impacted by the development. In this particular case, the expected impacts are primarily concentrated at the Arapahoe Road/right-in/right-out site access, the Arapahoe Road/63rd Street intersection, the Arapahoe Road/Cherryvale Road intersection, and the Cherryvale Road/ Site Access intersection. To assess the Year 2015 and 2035 traffic impacts of Boulder Jewish Commons, intersection Level of Service analyses have been conducted at these intersections for the weekday peak-hours. The traffic volumes of Figures 4, 5, 9 and 10 have been used in this analysis. Intersection capacities have been analyzed in accordance with the requirements of the *Highway Capacity Manual* (HCM). The concept of Level of Service (LOS) is used as a basis for computing combinations of roadway operating conditions. By definition, six different Levels of Service are used (A, B, C, D, E and F) with "A" being a free-flow condition and "E" representing the "capacity" of a given intersection or traffic movement. The complete analysis reports are found in Appendix B of this report, and the results of the capacity analyses are shown in Table 3. This table shows LOS conditions for existing traffic as well as for 2015 and 2035 background and total traffic volumes. Note that the upcoming improvements to Arapahoe Avenue/Road are assumed to be in place in the 2015 and 2035 analyses. The existing traffic signal timings are used in all analyses with the exception of the morning peak-hour in the 2015 Total Traffic and 2035

Total Traffic scenarios. In these scenarios, the north/south maximum green time for Cherryvale Road was decreased from 48 seconds to 35 seconds per coordination with City staff.

- Arapahoe Avenue/Cherryvale Road: With the planned Arapahoe Avenue/Road widening improvements and the recommended improvements to mitigate site impact and side road background traffic, this intersection will operate at an overall LOS "C" in the morning peak-hour and LOS "B" in the afternoon peak-hour through the Year 2035. The recommended improvements to Cherryvale Road will prevent the northbound approach queues from blocking the Cherryvale Road site access. A simulation showing the interaction between the traffic signal and the proposed roundabout has been presented to City staff.

- Arapahoe Road/62nd Street: The unsignalized southbound approach is expected to operate at LOS "F" during the morning peak-hour in 2035 with or without the addition of site-generated traffic.

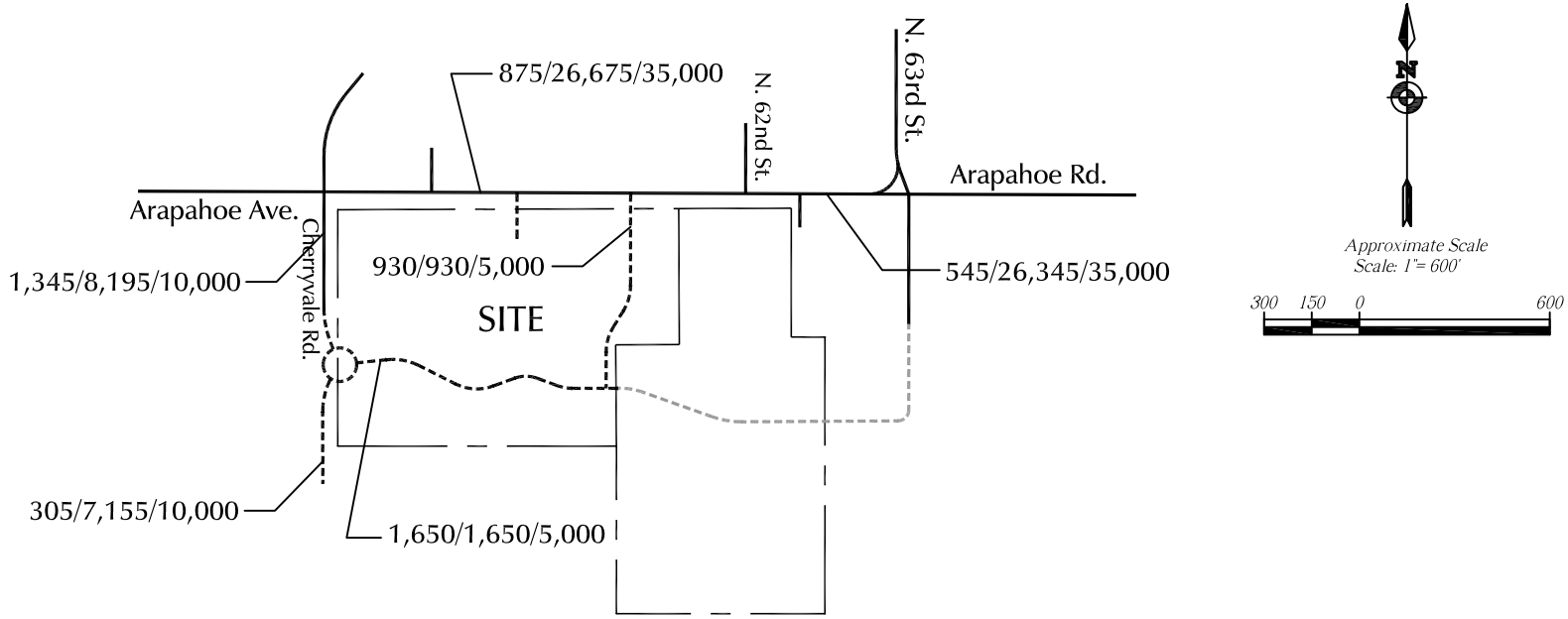
- Arapahoe Road/63rd Street: With the planned Arapahoe Road widening improvements, the intersection will operate at LOS "A" with or without site-generated traffic through 2035.

- Cherryvale Road/Site Access: All approaches of this roundabout controlled intersection will operate at LOS "B" or better through 2035 with the addition of site-generated traffic.

- Arapahoe Road/RIRO Site Access: The northbound approach will operate at LOS "B" during the morning peak-hour and LOS "C" during the afternoon peak-hour through 2035.

Queuing Analysis

Table 4 shows the estimated 95th percentile queue lengths and available storage lengths for the northbound left-turn movement, the northbound through/right movement, and the westbound left-turn movement at the intersection of Arapahoe Avenue and Cherryvale Road. The westbound left-turn movement is expected to occasionally spill out of the 275-foot long storage lane in the afternoon peak-hour. This could be mitigated by providing a short protected left-turn phase for this movement or by extending the 275-foot storage length. An updated queuing analysis should be completed as part of a future phase traffic study.



LEGEND:

350/6,755/25,000 = Site–Generated Traffic / Total Traffic / Roadway Capacity

Figure 11

Year 2035 Average Daily Traffic Impacts

Boulder Jewish Commons (LSC #110400)

Table 3
Intersection Level of Service [1] [2]
Boulder Jewish Commons
Boulder, Colorado
(LSC #110400; August, 2013)

Traffic Control	Intersection Location	Year 2015 Background Traffic				Year 2015 Total Traffic				Year 2035 Background Traffic				Year 2035 Total Traffic			
		Level of Service	Move-ment Delay	Level of Service	Move-ment Delay	Level of Service	Move-ment Delay	Level of Service	Move-ment Delay	Level of Service	Move-ment Delay	Level of Service	Move-ment Delay	Level of Service	Move-ment Delay	Level of Service	Move-ment Delay
		AM		PM		AM		PM		AM		PM		AM		PM	
Signalized	Arapahoe Avenue/Cherryvale Road																
	Eastbound Left	C	25.7	A	9.5	B	13.6	A	5.2	D	37.2	B	11.1	C	20.8	A	8.1
	Eastbound Through	B	14.4	B	10.7	A	7.7	A	6.0	B	14.9	B	12.6	A	8.6	A	9.5
	Eastbound Right	B	13.1	B	11.3	A	7.1	A	6.7	B	13.2	B	13.4	A	7.7	B	10.6
	Westbound Left	B	17.4	C	26.7	B	10.3	C	26.3	B	19.0	E	59.5	B	11.6	E	73.0
	Westbound Through	B	16.8	A	7.5	A	8.9	A	4.1	B	18.6	A	7.9	B	10.5	A	5.7
	Westbound Right	B	17.5	A	7.7	A	9.3	A	4.2	B	19.8	A	8.2	B	11.1	A	5.9
	Northbound Left	--	--	--	--	D	42.6	D	46.3	--	--	--	--	E	56.1	D	47.6
	Northbound Left/Through	F	>120	F	>120	--	--	--	--	F	>120	F	>120	--	--	--	--
	Northbound Through/Right	C	20.3	C	34.4	C	30.5	D	38.7	C	20.6	C	34.8	C	30.7	D	37.4
	Southbound Left/Through	D	40.1	F	>120	C	30.6	D	39.8	D	41.3	F	>120	C	31.0	D	39.3
	Southbound Right	B	19.4	C	34.9	C	28.5	D	38.9	B	19.5	D	35.3	C	28.2	D	37.6
	Entire Intersection Delay (sec /veh)	>120		46.9		16.4		10.9		>120		64.3		20.1		14.5	
	Entire Intersection LOS	F		D		B		B		F		E		C		B	
Unsignalized	Arapahoe Road/62nd Street																
	Eastbound Left	C	19.9	B	12.5	C	20.7	B	12.9	D	28.1	B	14.3	D	29.0	B	14.7
	Southbound Left	E	41.9	E	36.0	E	45.7	E	38.9	F	80.8	F	61.1	F	87.7	F	66.9
	Southbound Right	C	15.4	B	12.5	C	15.7	B	12.7	C	18.0	B	13.8	C	18.3	B	14.0
	Critical Movement Delay(sec /veh)	41.9		36.0		45.7		38.9		80.8		61.1		87.7		66.9	
Signalized	Arapahoe Road/63rd Street																
	Eastbound Left	A	7.2	A	3.7	A	9.9	A	3.8	B	10.6	A	5.3	B	15.4	A	6.2
	Eastbound Through/Right	A	3.5	A	4.1	A	3.6	A	3.5	A	3.7	A	5.8	A	3.8	A	5.5
	Eastbound Right	A	3.5	A	4.1	A	3.6	A	3.5	A	3.7	A	5.7	A	3.8	A	5.4
	Westbound Left	A	3.8	A	4.5	A	3.8	A	4.0	A	4.0	A	6.7	A	4.5	A	9.2
	Westbound Through	--	--	--	--	A	5.1	A	2.2	A	4.6	A	2.7	A	5.9	A	3.0
	Westbound Through/Right	A	4.2	A	2.3	--	--	--	--	A	5.0	A	2.9	--	--	--	--
	Westbound Right	A	4.4	A	2.5	A	3.1	A	1.7	--	--	--	--	A	3.1	A	2.3
	Northbound Left	D	39.5	C	25.7	D	39.9	D	44.5	D	40.6	C	26.1	D	41.8	D	45.4
	Northbound Left/Through/Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Northbound Through/Right	D	35.5	C	22.6	D	35.5	D	38.5	D	35.6	C	22.2	D	36.4	D	37.9
	Southbound Left	D	38.2	C	25.2	D	38.2	D	41.2	D	39.0	C	25.3	D	39.9	D	41.2
	Southbound Left/Through	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Southbound Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Southbound Through/Right	D	39.4	D	36.1	D	40.0	D	46.5	D	40.7	D	36.0	D	41.2	D	44.5
	Entire Intersection Delay (sec /veh)	6.7		5.6		7.3		6.2		7.2		6.7		8.5		7.9	
	Entire Intersection LOS	A		A		A		A		A		A		A		A	
Roundabout	Cherryvale Road/Site Access																
	Westbound Approach	--	--	--	--	A	5.2	A	3.9	--	--	--	--	A	6.3	A	4.2
	Northbound Approach	--	--	--	--	A	8.6	A	4.7	--	--	--	--	B	10.5	A	5.1
	Southbound Approach	--	--	--	--	A	4.1	B	10.0	--	--	--	--	A	4.2	B	13.2
	Entire Intersection Delay (sec /veh)	--	--	--	--	7.1		7.1		--	--	--	--	9.0		10.8	
	Entire Intersection LOS	--	--	--	--	A		A		--	--	--	--	A		B	
Unsignalized	Arapahoe Road/RIRO Site Access																
	Northbound Right	--	--	--	--	B	10.2	C	15.6	--	--	--	--	B	10.7	C	19.1
	Critical Movement Delay(sec /veh)	--	--	--	--	10.2		15.6		--	--	--	--	10.7		19.1	

Note:
[1] All scenarios include widening of Arapahoe Avenue/Road as indicated by CDOT.
[2] Assumes existing signal timings with the exception of the morning peak-hour for the 2015 and 2035 Total scenarios at Arapahoe Avenue/Cherryvale Road - 13 seconds of green time was shifted from N/S to E/W based on discussions with City staff.

Table 4
Queuing Analysis (1)
Boulder Jewish Commons
Arapahoe Avenue/Cherryvale Road Intersection
Boulder, Colorado
(LSC #110400; August, 2013)

				Northbound Left-Turn		Northbound Shared Through/Right	Westbound Left-Turn
				feet		feet	feet
Storage Length Available				**305**		**305**	**275**
2015 Total	AM	95th Percentile	(Modeled)	199	229	111	70
2015 Total	PM	95th Percentile	(Modeled)	122	146	65	391
2035 Total	AM	95th Percentile	(Modeled)	251	267	105	74
2035 Total	PM	95th Percentile	(Modeled)	142	164	84	374

Notes:
(1) Based on 95th percentile queue length from the SimTraffic Simulation model presented to City staff.

SECTION F
Access Recommendations

Based on this analysis, the following access recommendations have been made to mitigate the impacts of the Boulder Jewish Commons. These are shown in Figures 12 and 13.

1. A public right-in/right-out site access and a right-in/right-out service access are proposed on Arapahoe Road.

2. Recommended improvements at the Arapahoe Avenue/Cherryvale Road intersection include the addition of dedicated northbound dual left-turn lanes and modifications to the existing traffic signal. These improvements will prevent the northbound approach queues from blocking the Cherryvale Road site access and allow the City to shift as much as 13 seconds of green time from Cherryvale Road to Arapahoe Avenue during the morning peak-hour. The actual change in timings will be determined by City staff.

3. The site access on Cherryvale Road is proposed as a single-lane roundabout. Analysis of the roundabout design is included in Section G. A city bus can maneuver through the roundabout without using the raised truck apron. The truck apron is designed to accommodate an occasional WB-50 truck that may pass through the intersection despite the signing of Cherryvale Road for no large trucks. This is very important to avoid damage to the raised design features that channelize vehicles through the roundabout.

Figure 12

Overall Recommended Improvements

Boulder Jewish Commons (LSC #110400)

LSC TRANSPORTATION CONSULTANTS, INC.

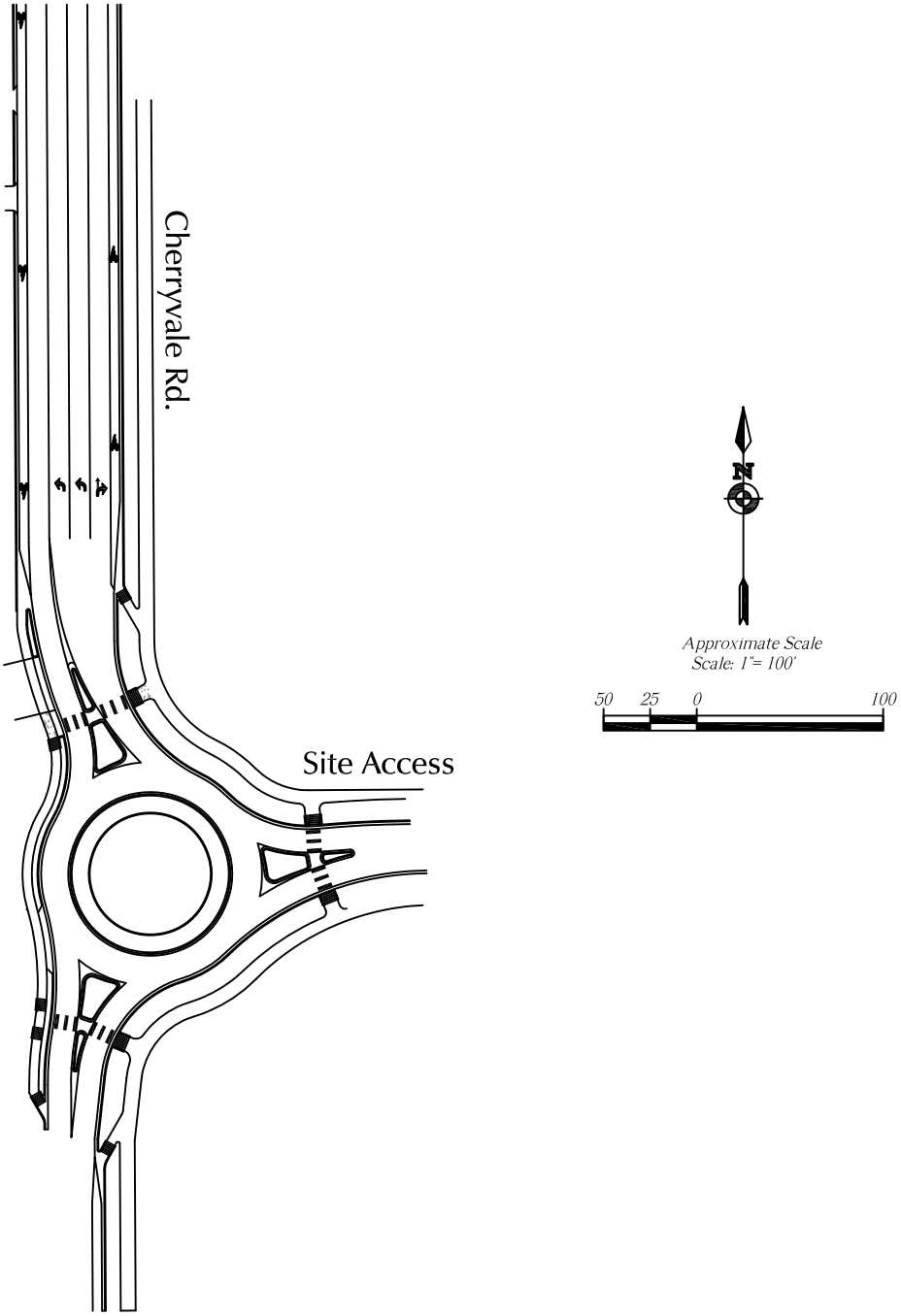


Figure 13

Cherryvale Road Recommended Improvements

Boulder Jewish Commons (LSC #110400)

LSC TRANSPORTATION CONSULTANTS, INC.

SECTION G
Roundabout Analyses

Roundabout Geometry

Figure 14 shows many of the design features of the proposed roundabout at the site access on Cherryvale Road. This design is based on the vehicle turning paths in Figures 15 through 21, the fastest path analyses shown in Figures 22 through 25, and the projected traffic volumes. The *City of Boulder Design and Construction Standards* (DCS) require a minimum intersection approach tangent of 100 feet for a local street. It is our opinion that this standard does not consider a roundabout as a design tool. It is recommended that this standard not apply to the proposed roundabout considering a major design feature of a roundabout is the deflection of entering vehicles to reduce the fastest path through the roundabout.

Design Vehicle

The circulating roadway design vehicle is a city bus or school bus. These turning paths are shown in Figures 15, 17, and 19. The truck apron design vehicle is a WB-50 truck. These turning paths are shown in Figures 16, 18, and 20. The design vehicle for the two driveways to remain close to the roundabout is a typical passenger vehicle. These turning paths are shown in Figure 21. Figure 21 shows that a passenger vehicle waiting to turn left into the northern driveway will not block the crosswalk and can make the turn into the driveway without conflicting with the proposed splitter island. Northbound vehicles exiting the roundabout will have to slow or stop for the occasional vehicle turning left into the driveway, similar to what occurs at the other driveways along Cherryvale Road. At this driveway, the vehicles will be exiting the roundabout at a slower speed than the typical vehicle speed along Cherryvale Road.

Figure 21 also shows the available sight distance for vehicles entering Oreg Drive from the site driveways exceeds the fastest paths of circulating vehicles within the roundabout.

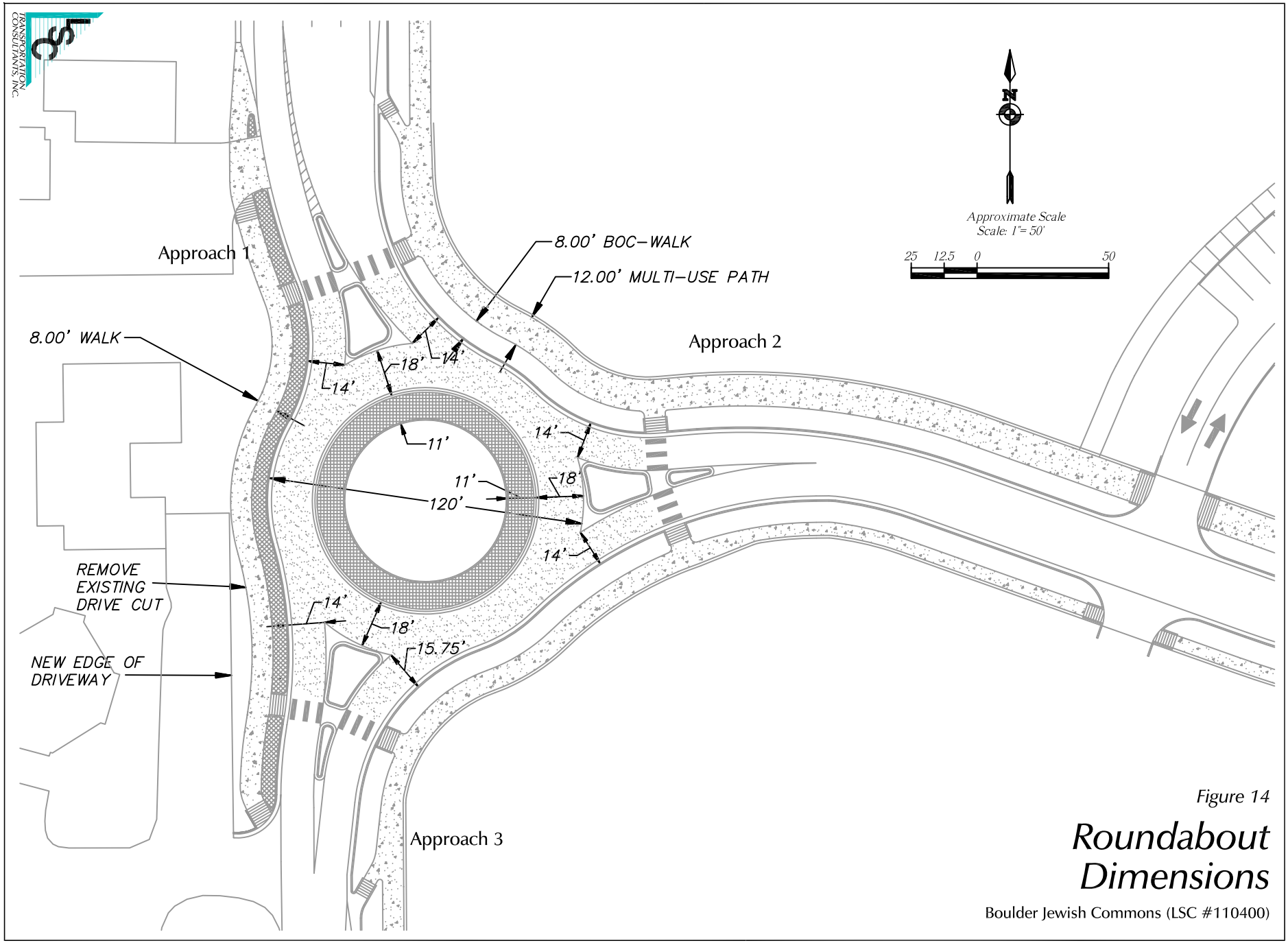


Figure 14

Roundabout Dimensions

Boulder Jewish Commons (LSC #110400)

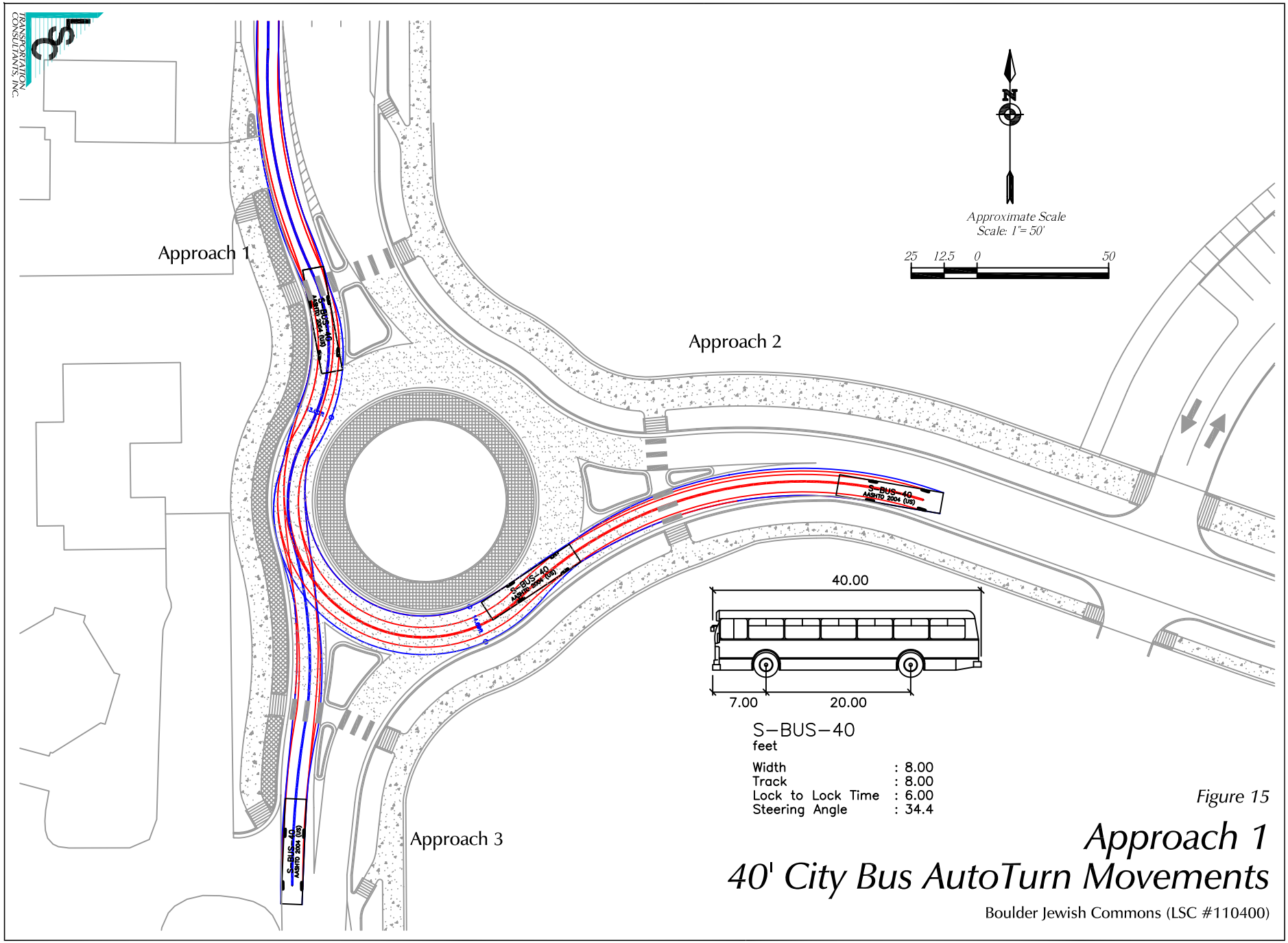


Figure 15

Approach 1
40' City Bus AutoTurn Movements

Boulder Jewish Commons (LSC #110400)

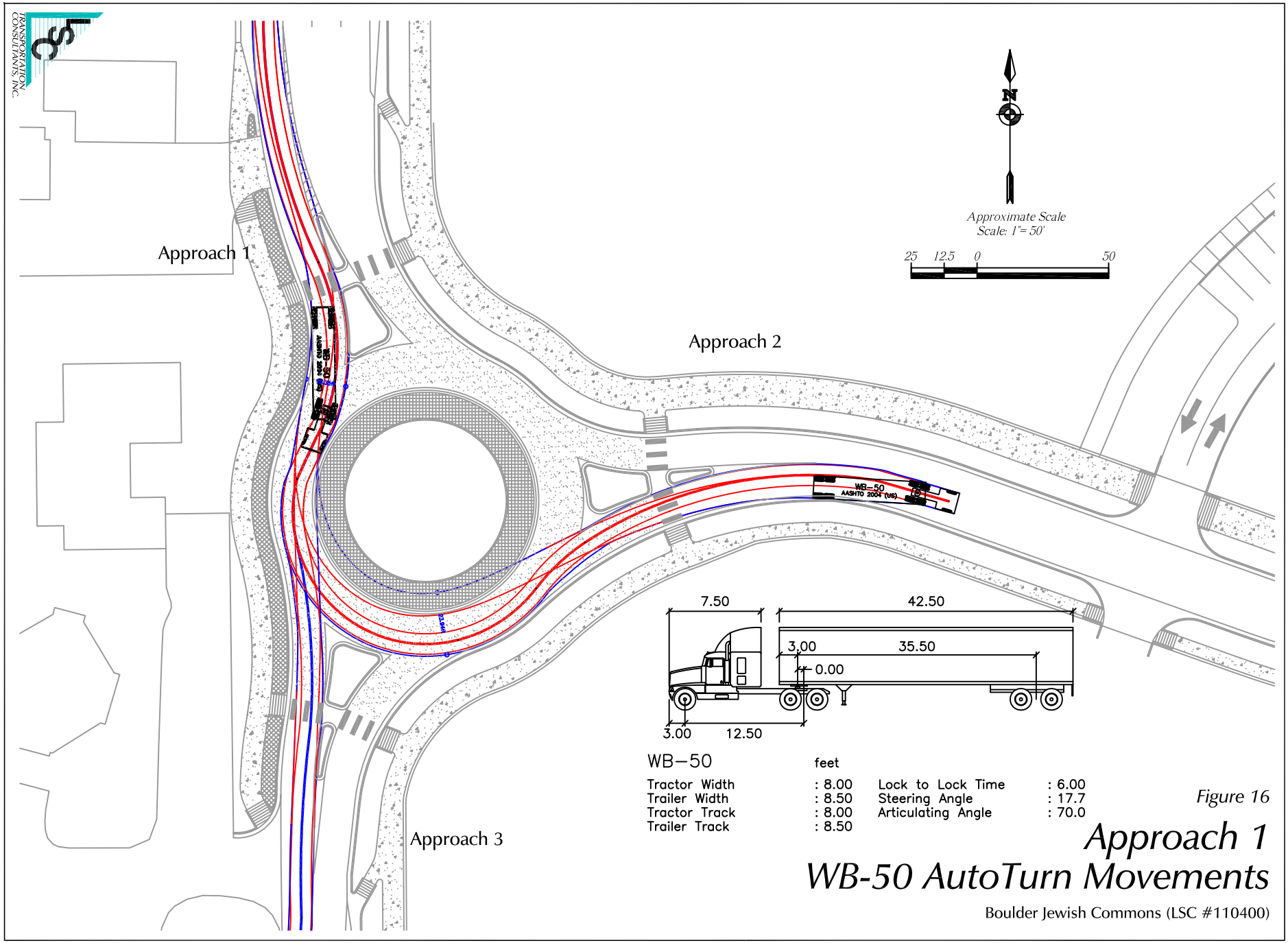


Figure 16

Approach 1
WB-50 AutoTurn Movements

Boulder Jewish Commons (LSC #110400)

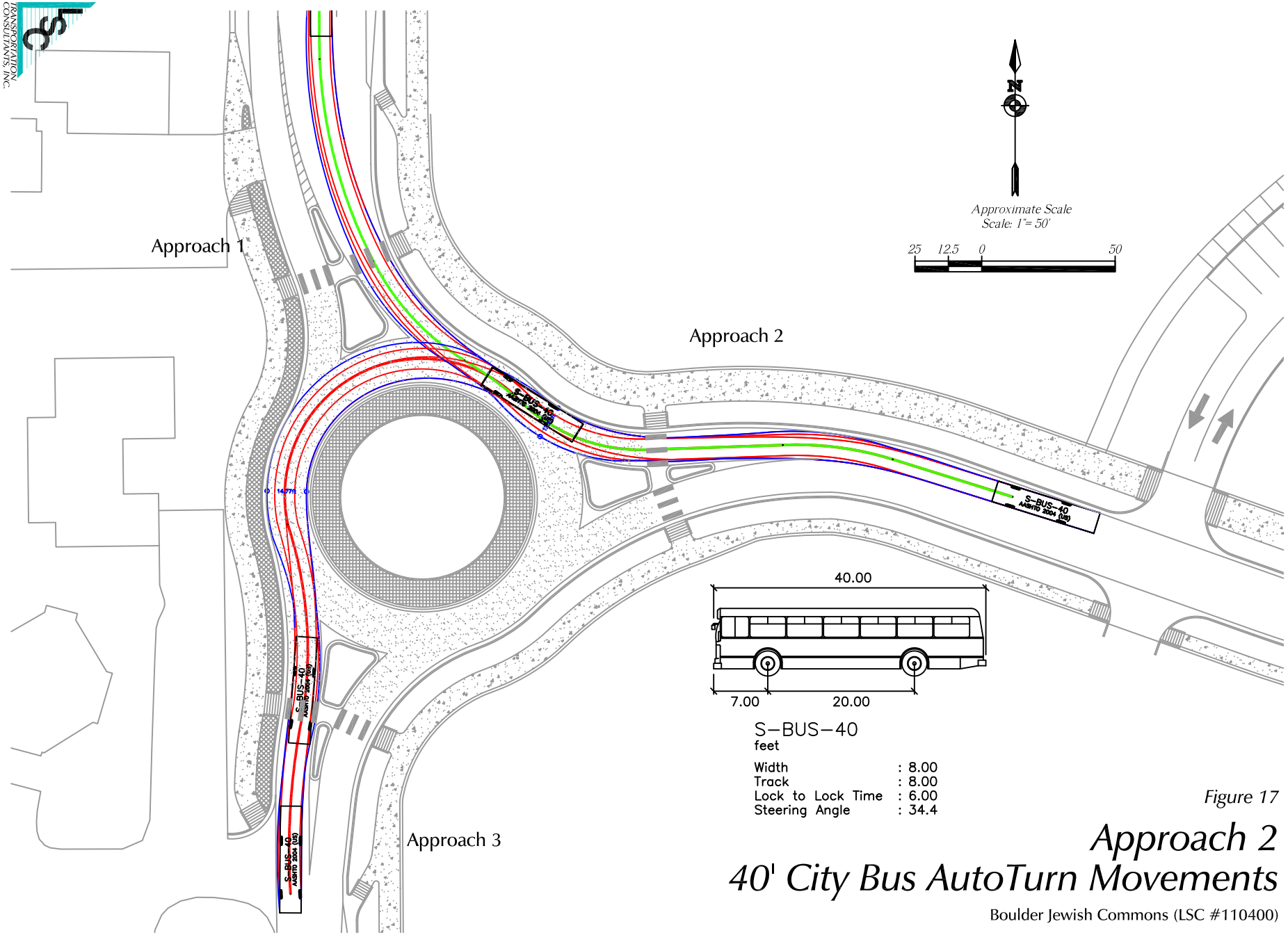


Figure 17

Approach 2
40' City Bus AutoTurn Movements

Boulder Jewish Commons (LSC #110400)

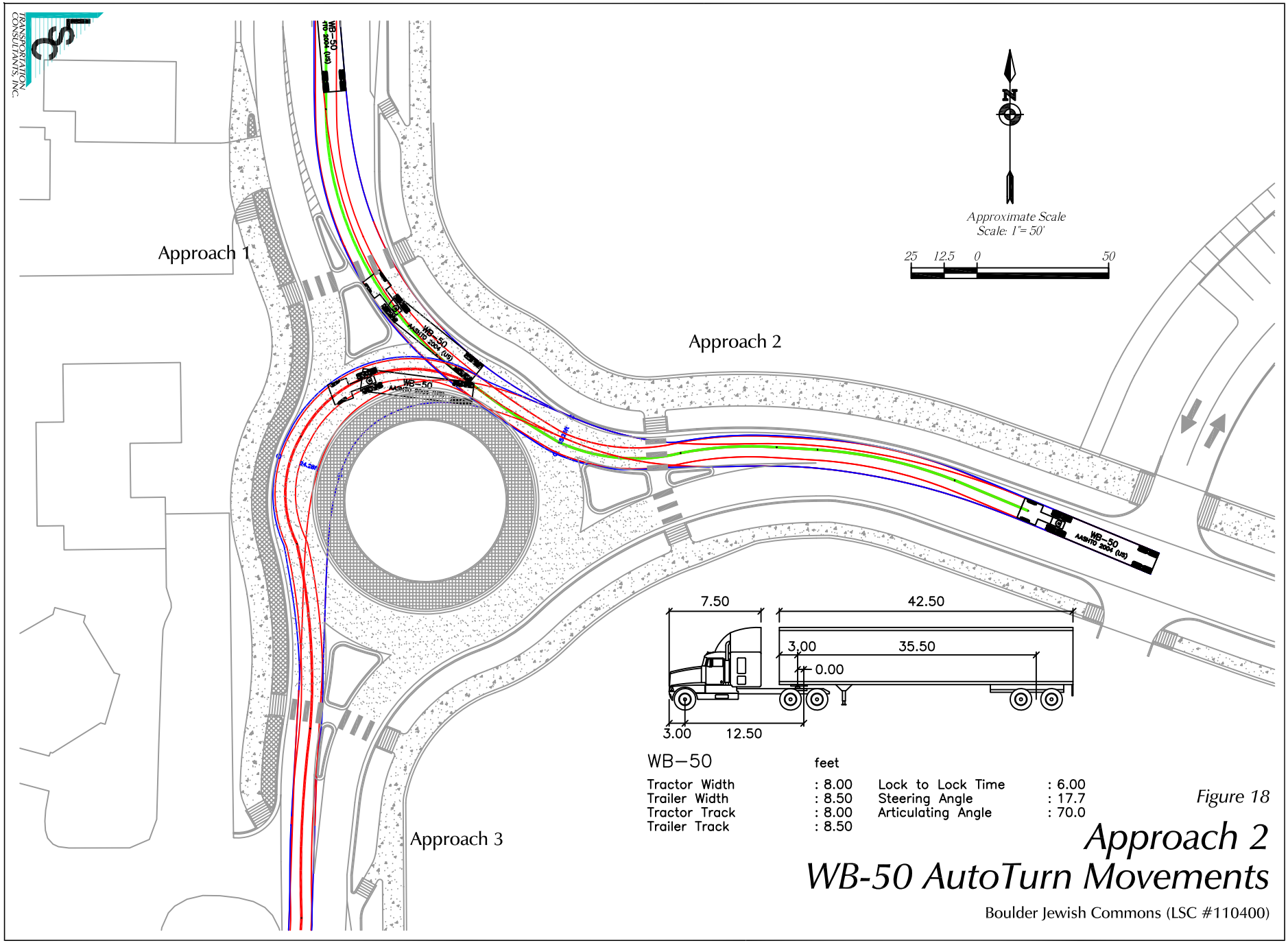


Figure 18

Approach 2
WB-50 AutoTurn Movements

Boulder Jewish Commons (LSC #110400)

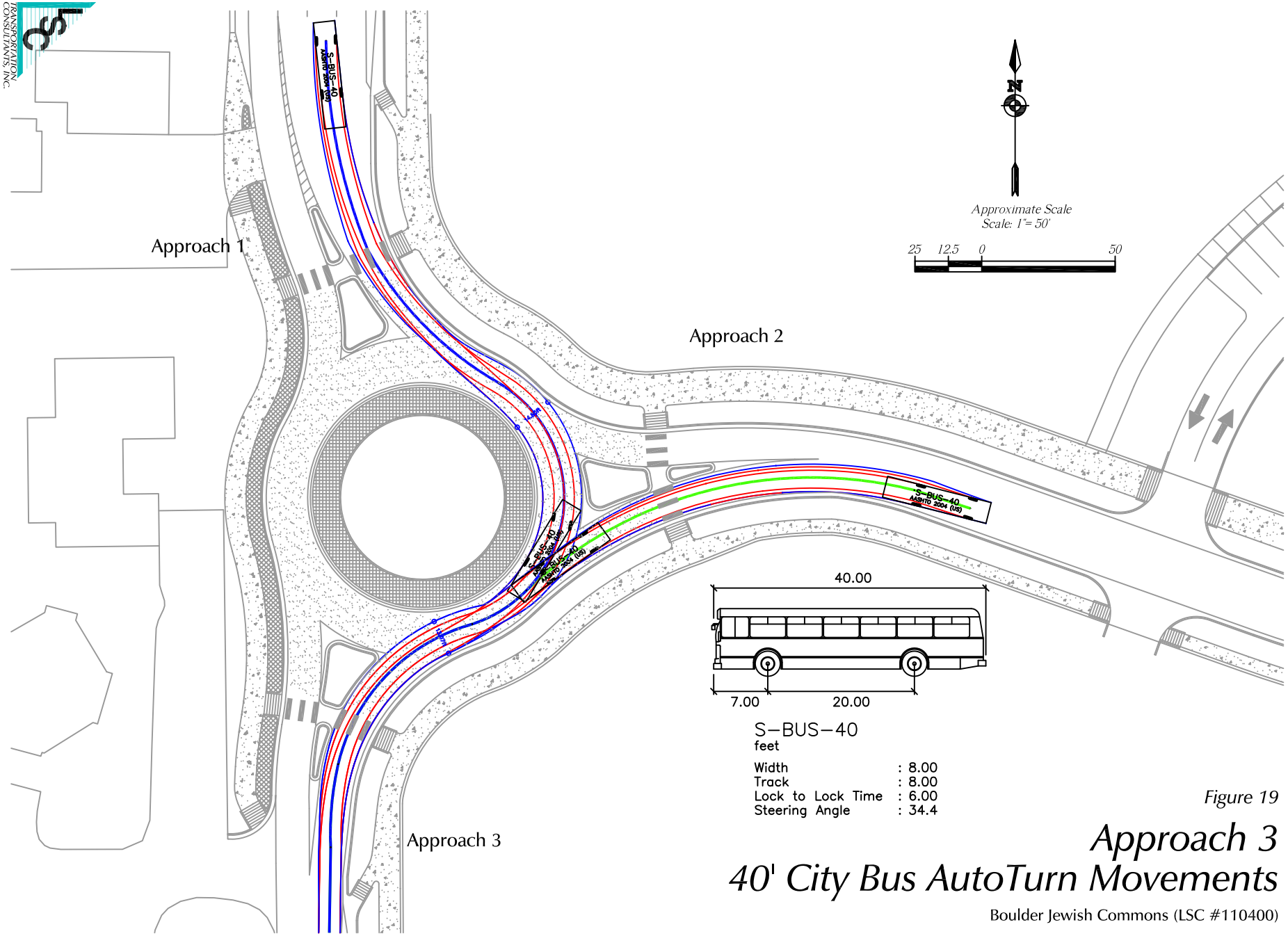


Figure 19

Approach 3
40' City Bus AutoTurn Movements

Boulder Jewish Commons (LSC #110400)

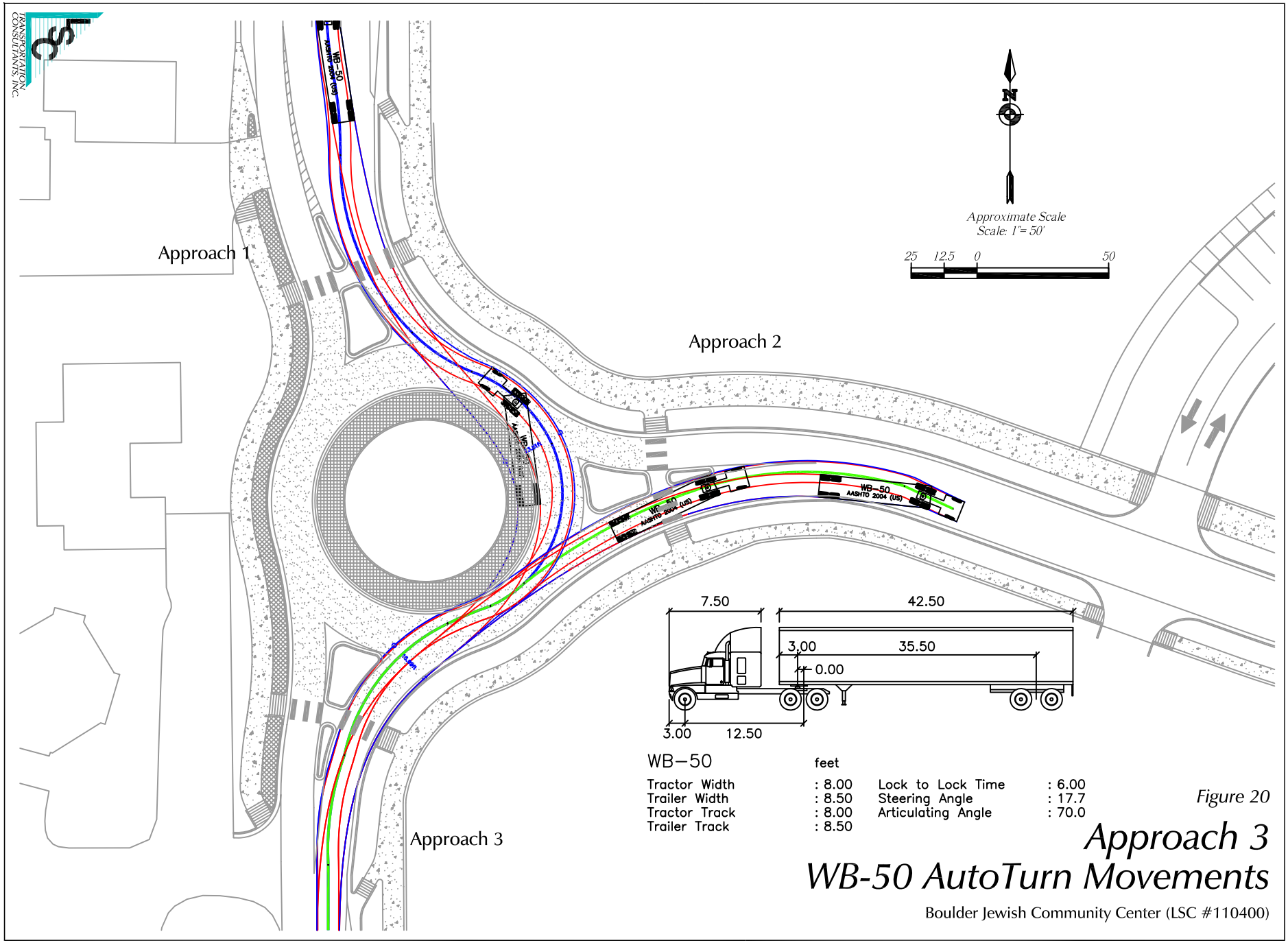


Figure 20

Approach 3
WB-50 AutoTurn Movements

Boulder Jewish Community Center (LSC #110400)

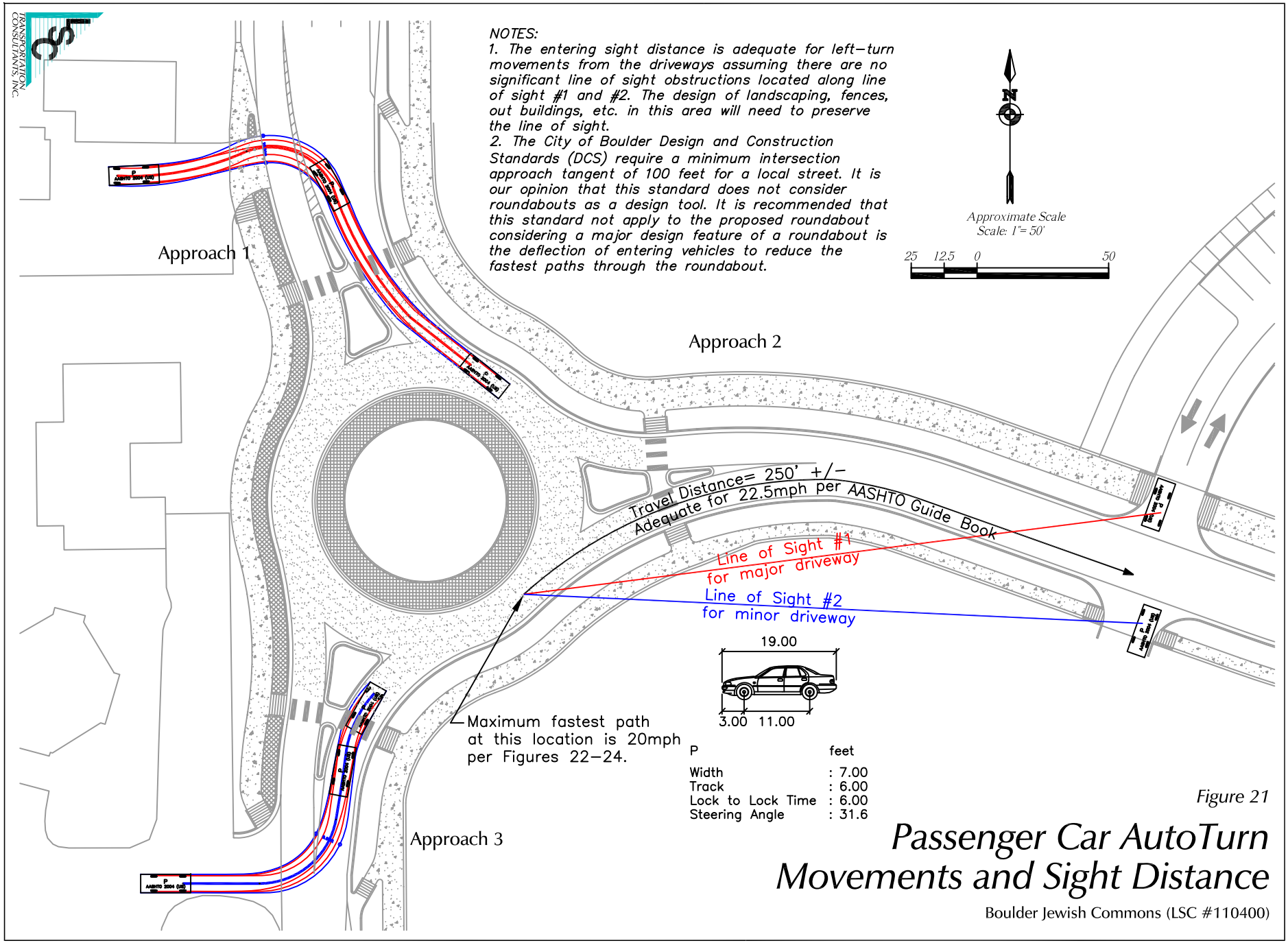


Figure 21

Passenger Car AutoTurn Movements and Sight Distance

Boulder Jewish Commons (LSC #110400)

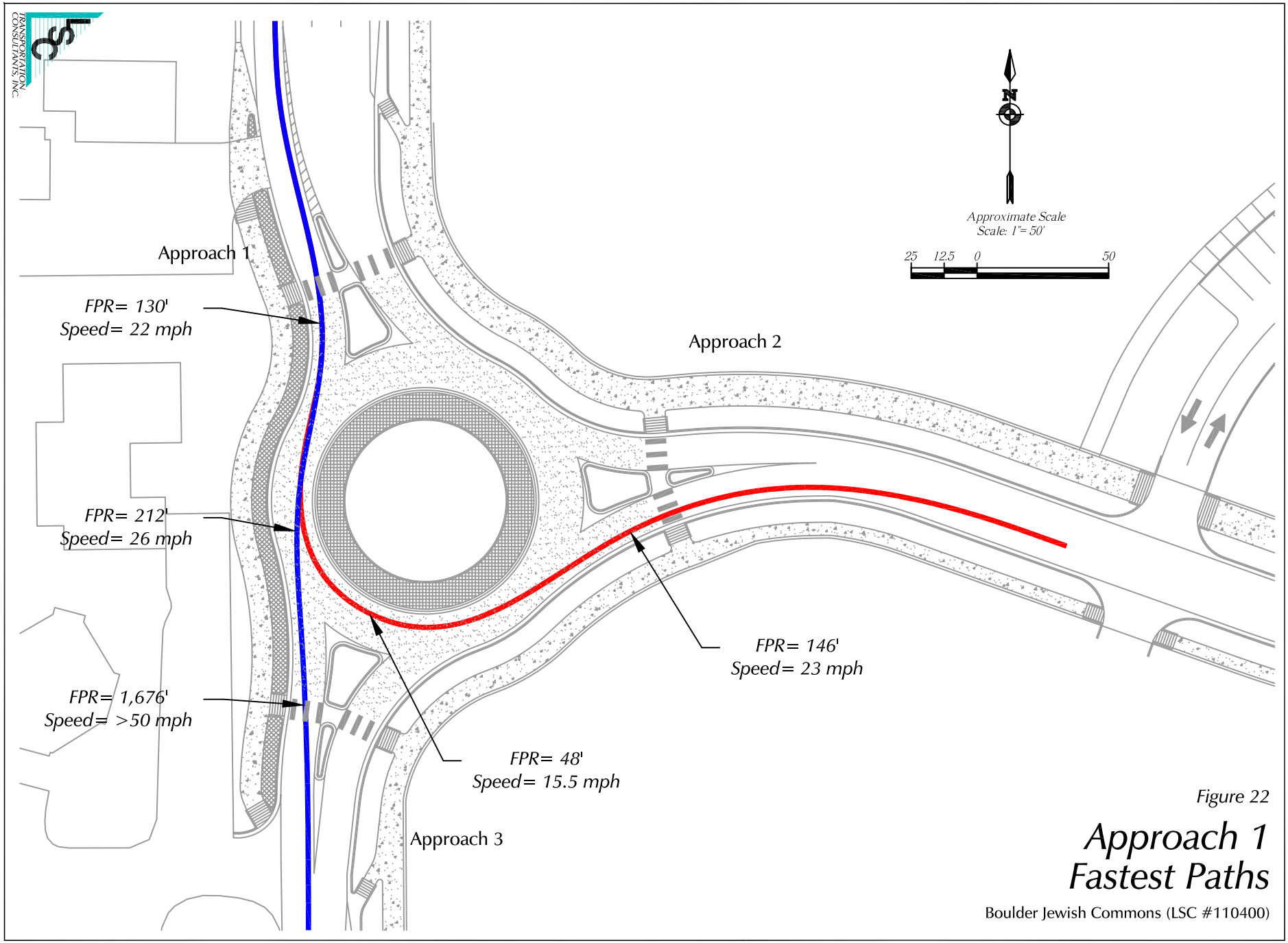


Figure 22

Approach 1 Fastest Paths

Boulder Jewish Commons (LSC #110400)

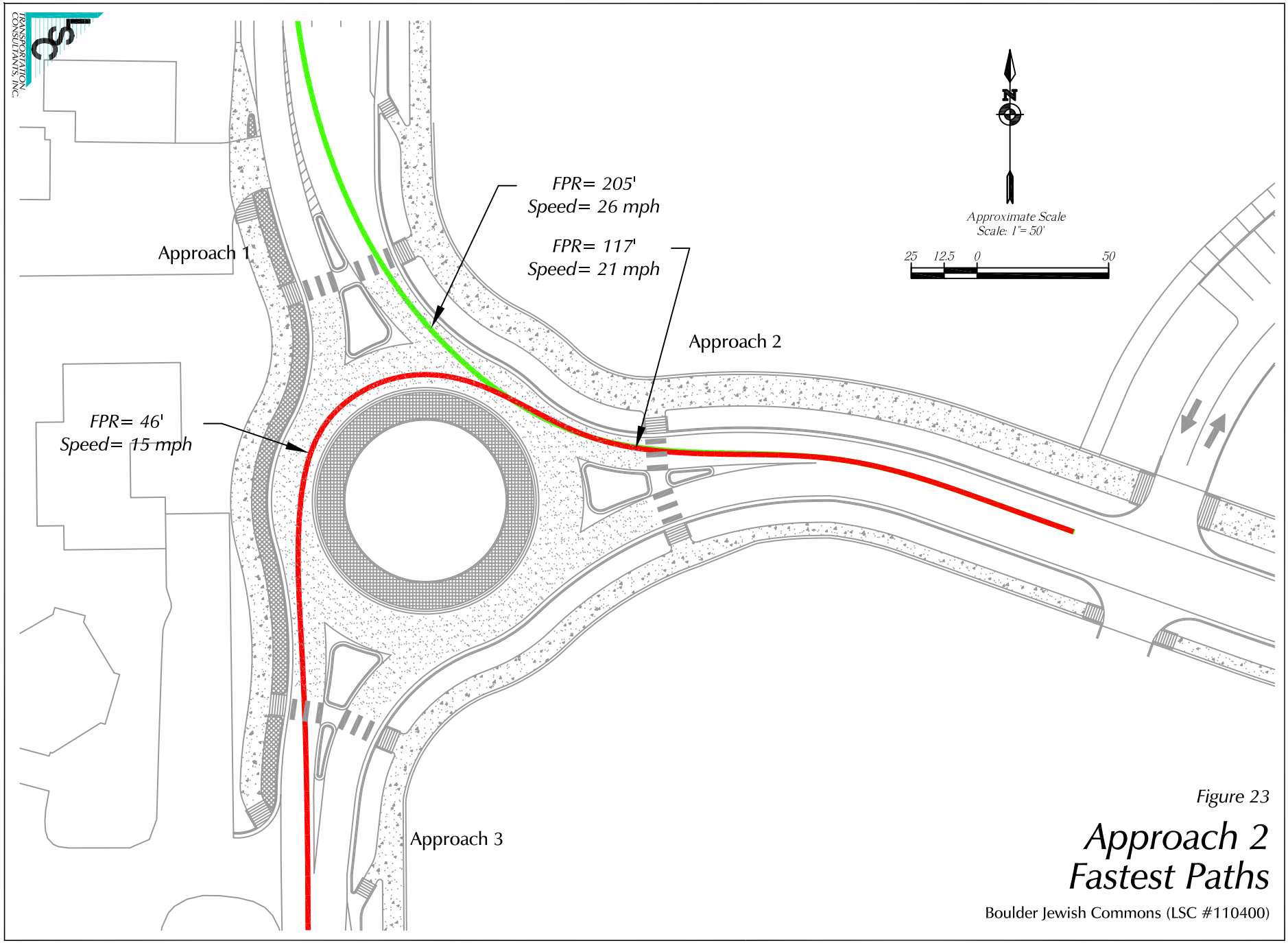


Figure 23

Approach 2 Fastest Paths

Boulder Jewish Commons (LSC #110400)

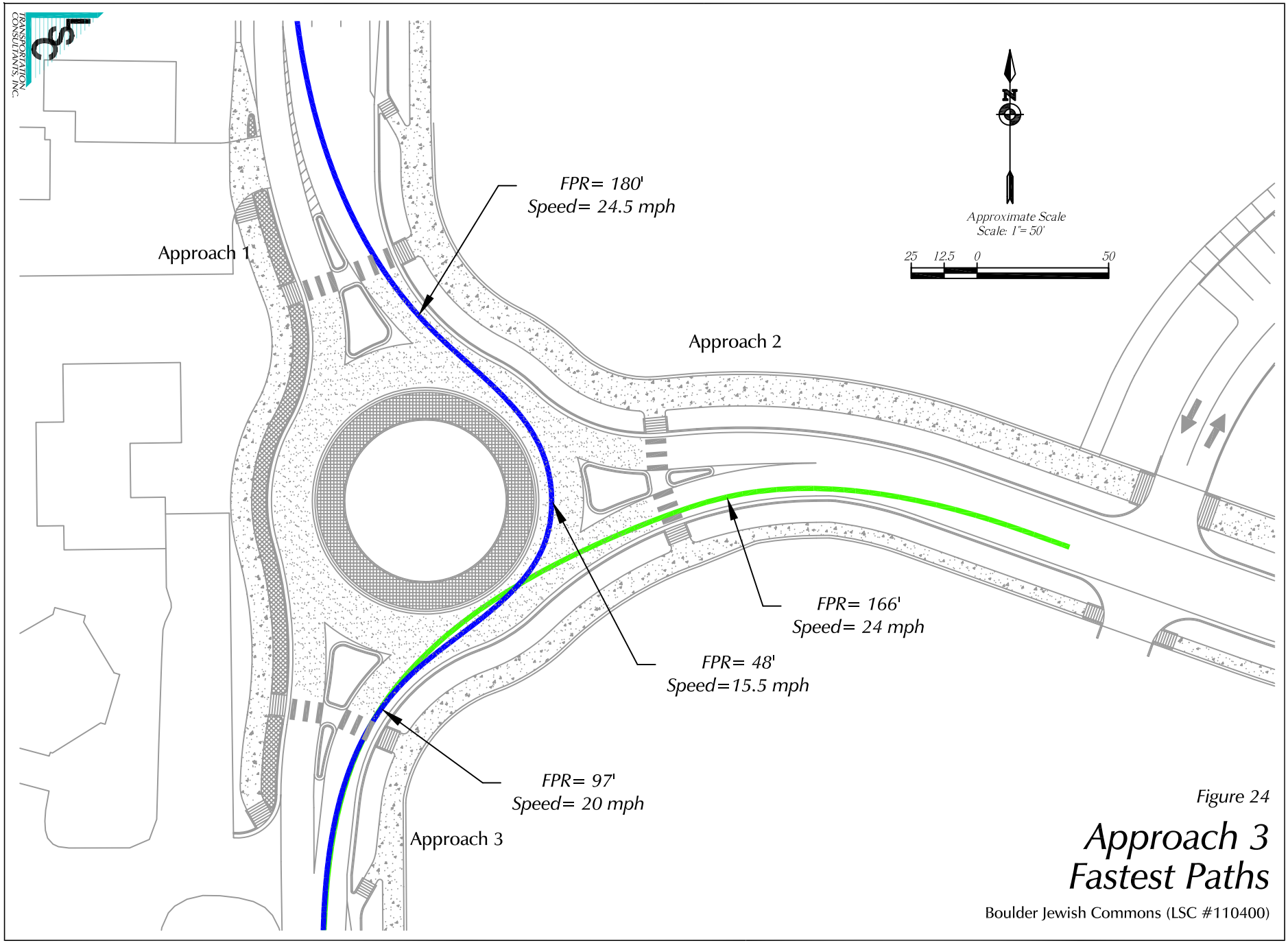


Figure 24

Approach 3 Fastest Paths

Boulder Jewish Commons (LSC #110400)

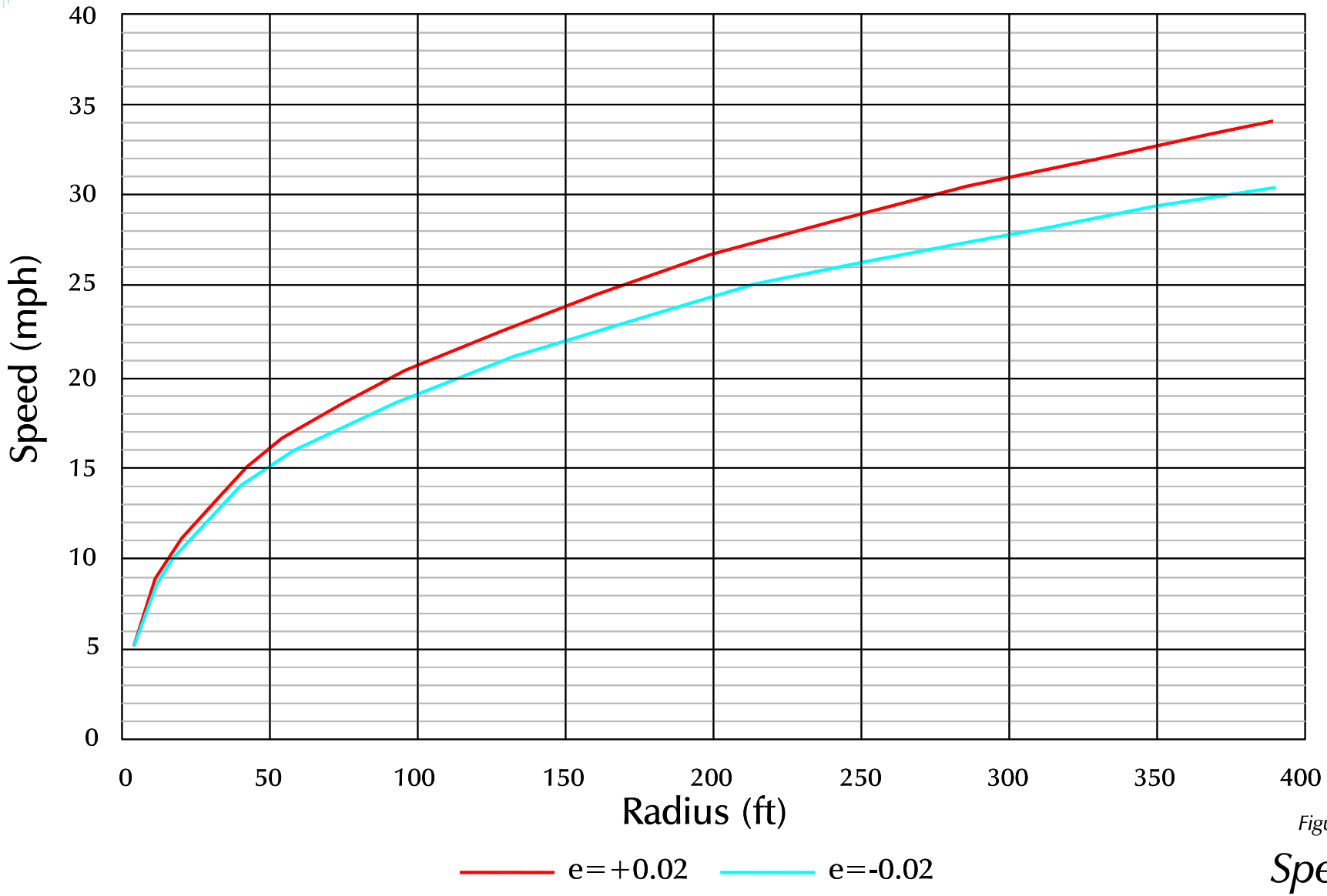


Figure 25

Speed Table

Boulder Jewish Commons (LSC #110400)

SECTION H
Conclusions

Based on this analysis, the following conclusions may be made regarding the traffic impacts of Boulder Jewish Commons:

1. On a typical weekday in 2015, the western portion of the site can be expected to generate about 1,812 vehicle-trips per day, with about half entering and half exiting the site in a 24-hour period. During the morning peak-hour, about 112 vehicles will enter and about 67 vehicles will exit the site. During the afternoon peak-hour, there will be about 113 entering and about 84 exiting vehicles.

   In 2035, the full site has the potential to generate about 3,080 vehicle-trips on a typical weekday, with about half entering and half exiting the site in a 24-hour period. During the morning peak-hour, about 147 vehicles will enter and about 127 vehicles will exit the site. During the afternoon peak-hour, there will be about 180 entering and about 129 exiting vehicles.

2. Site-generated traffic is expected to be distributed as follows: about 55 percent of site-generated traffic will travel on Arapahoe Avenue west of Cherryvale Road; 30 percent on Arapahoe Road east of 63rd Street; five percent north on 63rd Street; and ten percent south on Cherryvale Road.

3. Access to the development consists of one public right-in/right-out access on Arapahoe Road and one full movement roundabout access on Cherryvale Road south of Arapahoe Avenue. A secondary right-in/right-out service access is proposed a few hundred feet west of the public right-in/right-out Arapahoe Road access.

4. Recommended improvements at the Arapahoe Avenue/Cherryvale Road intersection include the addition of dedicated northbound dual left-turn lanes and modifications to the existing traffic signal. An updated queuing analysis should be completed for this intersection as part of any future phase traffic studies.

5. The site access on Cherryvale Road is proposed as a single-lane roundabout. The design characteristics of the roundabout are included in Section G.

6. Traffic associated with Boulder Jewish Commons can be accommodated by the adjacent roadway network with the improvements recommended herein.

APPENDIX A
Traffic Counts

COUNTER MEASURES INC.

1889 YORK ST
DENVER, COLORADO
303-333-7409

N/S STREET: CHERRYVALE RD
E/W STREET: ARAPAHOE AVE
CITY: BOULDER
COUNTY: BOULDER

File Name : CHERARAP
Site Code : 00000010
Start Date : 9/28/2011
Page No : 1

Groups Printed- 1 - VEHICLES

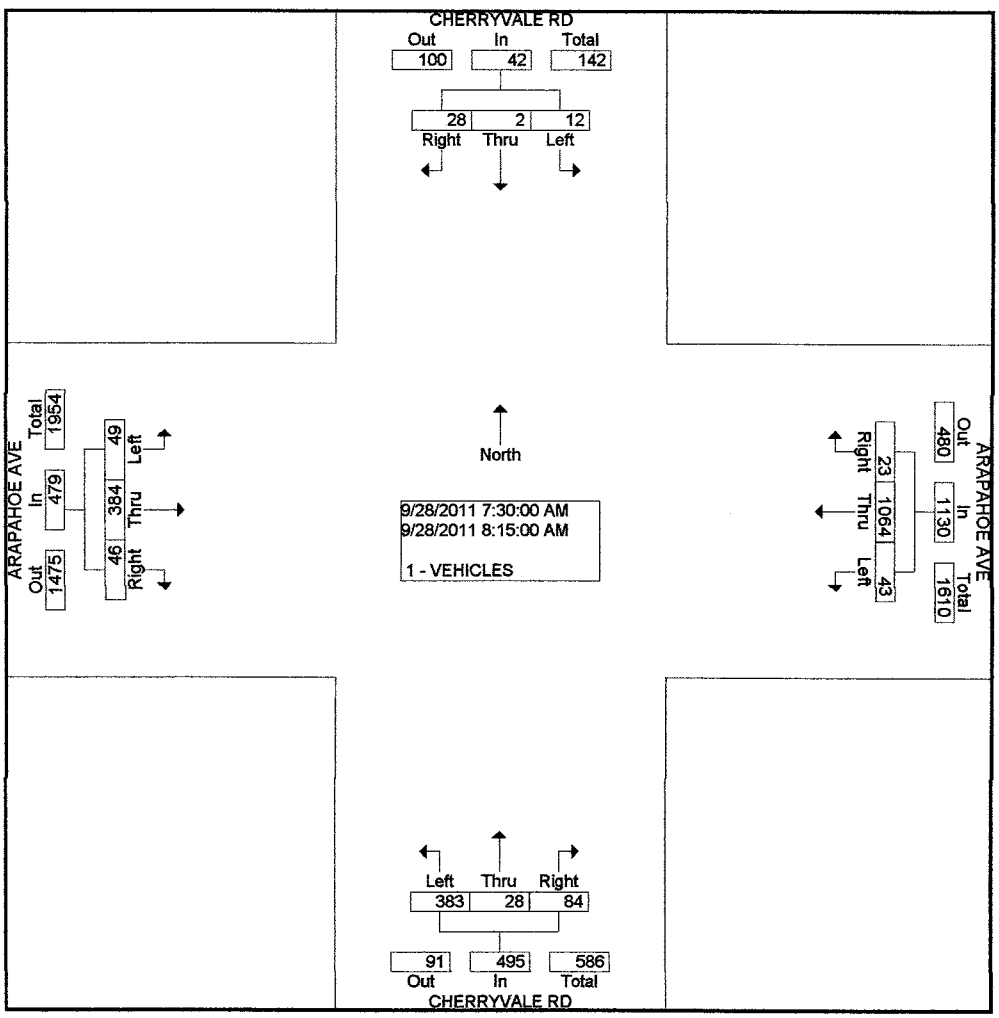
	CHERRYVALE RD From North			ARAPAHOE AVE From East			CHERRYVALE RD From South			ARAPAHOE AVE From West			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	0	0	1	8	135	4	13	1	16	3	50	5	236
06:45 AM	2	0	1	4	178	7	16	4	32	5	59	9	317
Total	2	0	2	12	313	11	29	5	48	8	109	14	553
07:00 AM	1	0	0	7	201	8	16	4	31	7	47	3	325
07:15 AM	3	0	1	8	213	5	17	8	56	9	84	13	417
07:30 AM	7	1	2	2	242	13	21	6	73	5	99	12	483
07:45 AM	6	0	1	11	273	13	26	7	130	11	102	11	591
Total	17	1	4	28	929	39	80	25	290	32	332	39	1816
08:00 AM	6	1	7	9	273	11	18	10	98	11	80	15	539
08:15 AM	9	0	2	1	276	6	19	5	82	19	103	11	533
Total	15	1	9	10	549	17	37	15	180	30	183	26	1072
04:00 PM	15	2	7	1	147	17	10	1	21	72	289	16	598
04:15 PM	17	2	4	4	138	13	13	2	25	75	242	14	549
04:30 PM	13	7	5	0	133	23	15	3	24	93	266	14	596
04:45 PM	15	7	7	3	152	16	13	3	34	92	261	15	618
Total	60	18	23	8	570	69	51	9	104	332	1058	59	2361
05:00 PM	22	13	13	2	169	12	11	1	23	115	314	13	708
05:15 PM	18	11	9	6	170	17	12	2	31	139	288	6	709
05:30 PM	11	3	8	1	154	13	16	4	26	128	321	12	697
05:45 PM	8	4	4	4	148	12	17	0	22	62	252	3	536
Total	59	31	34	13	641	54	56	7	102	444	1175	34	2650
Grand Total	153	51	72	71	3002	190	253	61	724	846	2857	172	8452
Apprch %	55.4	18.5	26.1	2.2	92.0	5.8	24.4	5.9	69.7	21.8	73.7	4.4	
Total %	1.8	0.6	0.9	0.8	35.5	2.2	3.0	0.7	8.6	10.0	33.8	2.0	

COUNTER MEASURES INC.
1889 YORK ST
DENVER, COLORADO
303-333-7409

N/S STREET: CHERRYVALE RD
E/W STREET: ARAPAHOE AVE
CITY: BOULDER
COUNTY: BOULDER

File Name : CHERARAP
Site Code : 00000010
Start Date : 9/28/2011
Page No : 2

	CHERRYVALE RD From North				ARAPAHOE AVE From East				CHERRYVALE RD From South				ARAPAHOE AVE From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:30 AM - Peak 1 of 1																	
Intersection	07:30 AM																
Volume	28	2	12	42	23	1064	43	1130	84	28	383	495	46	384	49	479	2146
Percent	66.7	4.8	28.6		2.0	94.2	3.8		17.0	5.7	77.4		9.6	80.2	10.2		
07:45 Volume	6	0	1	7	11	273	13	297	26	7	130	163	11	102	11	124	591
Peak Factor																	0.908
High Int.	08:00 AM				07:45 AM				07:45 AM				08:15 AM				
Volume	6	1	7	14	11	273	13	297	26	7	130	163	19	103	11	133	
Peak Factor				0.750				0.951				0.759				0.900	



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DENVER, COLORADO
303-333-7409

N/S STREET: CHERRYVALE RD
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CITY: BOULDER
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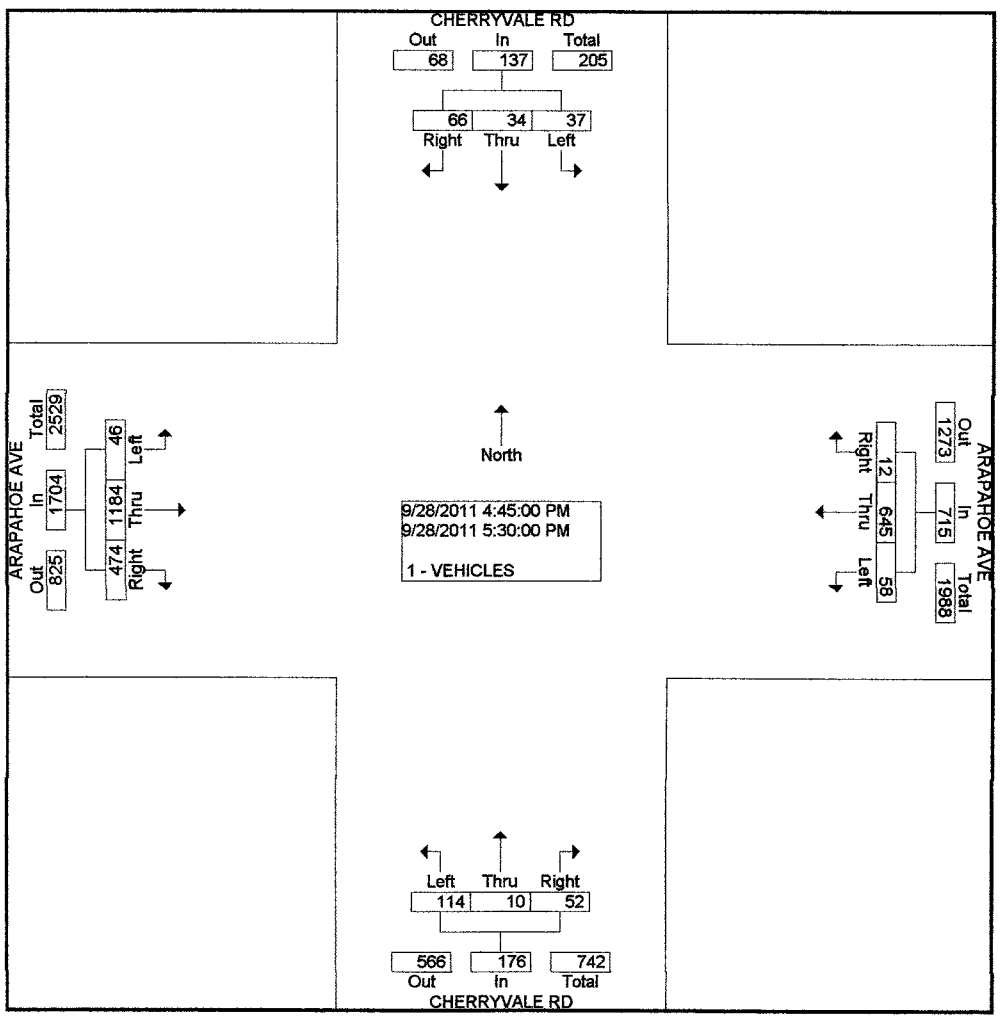
File Name : CHERARAP
Site Code : 00000010
Start Date : 9/28/2011
Page No : 2

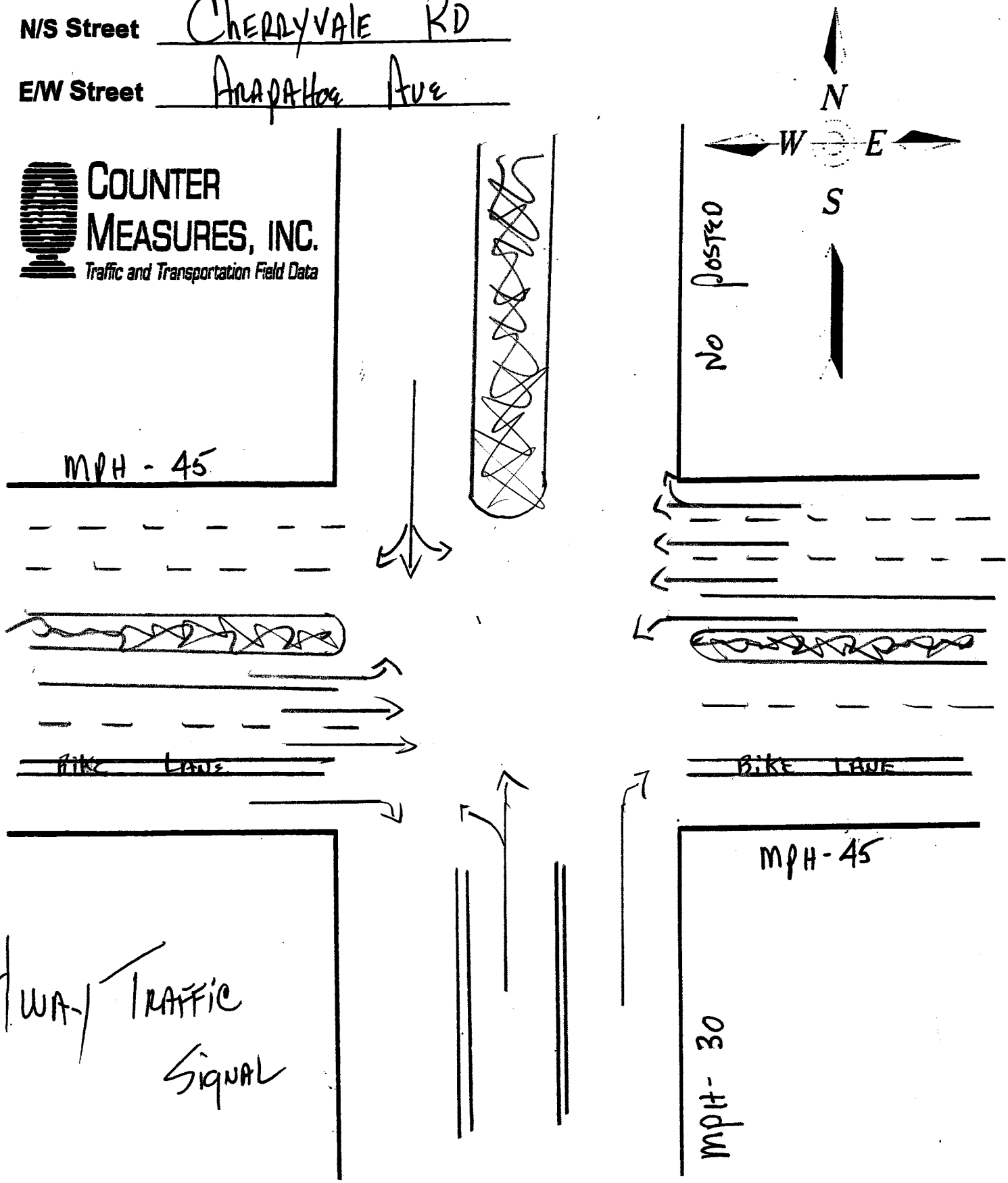
	CHERRYVALE RD From North				ARAPAHOE AVE From East				CHERRYVALE RD From South				ARAPAHOE AVE From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:45 PM																
Volume	66	34	37	137	12	645	58	715	52	10	114	176	474	1184	46	1704	2732
Percent	48.2	24.8	27.0		1.7	90.2	8.1		29.5	5.7	64.8		27.8	69.5	2.7		
05:15 Volume	18	11	9	38	6	170	17	193	12	2	31	45	139	288	6	433	709
Peak Factor																	0.963
High Int.	05:00 PM				05:15 PM				04:45 PM				05:30 PM				
Volume	22	13	13	48	6	170	17	193	13	3	34	50	128	321	12	461	
Peak Factor				0.714				0.926				0.880				0.924	



N/S Street Cherryvale Rd

E/W Street Arapahoe Ave

COUNTER MEASURES, INC.
Traffic and Transportation Field Data



COUNTER MEASURES INC.

1889 YORK ST
DENVER, COLORADO
303-333-7409

N/S STREET: 63RD ST
E/W STREET: ARAPAHOE AVE
CITY: BOULDER
COUNTY: BOULDER

File Name : 63RDARAP
Site Code : 00000005
Start Date : 9/28/2011
Page No : 1

Groups Printed- 1 - VEHICLES

	63RD ST From North			ARAPAHOE AVE From East			63RD ST From South			ARAPAHOE AVE From West			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	6	0	4	9	142	0	0	0	3	1	45	20	230
06:45 AM	6	0	1	27	183	0	1	1	11	0	52	15	297
Total	12	0	5	36	325	0	1	1	14	1	97	35	527
07:00 AM	11	0	5	4	212	1	1	3	4	0	57	6	304
07:15 AM	13	0	10	10	228	0	0	1	7	0	85	4	358
07:30 AM	12	0	12	12	259	2	0	2	6	1	99	9	414
07:45 AM	14	0	18	12	287	3	0	1	3	1	110	12	461
Total	50	0	45	38	986	6	1	7	20	2	351	31	1537
08:00 AM	16	0	7	14	273	0	0	1	1	1	80	17	410
08:15 AM	18	0	9	14	262	0	1	1	3	0	100	24	432
Total	34	0	16	28	535	0	1	2	4	1	180	41	842
04:00 PM	22	0	27	12	143	1	0	2	2	1	253	18	481
04:15 PM	21	0	25	16	123	2	2	0	0	3	266	16	474
04:30 PM	20	0	9	5	129	1	3	2	2	5	270	21	467
04:45 PM	17	0	9	14	143	1	0	1	1	2	285	12	485
Total	80	0	70	47	538	5	5	5	5	11	1074	67	1907
05:00 PM	28	0	16	14	149	0	3	0	0	2	275	18	505
05:15 PM	28	1	22	14	154	0	1	0	3	3	291	26	543
05:30 PM	16	0	9	14	148	0	1	0	1	1	297	52	539
05:45 PM	18	0	18	17	141	1	0	1	0	2	251	35	484
Total	90	1	65	59	592	1	5	1	4	8	1114	131	2071
Grand Total	266	1	201	208	2976	12	13	16	47	23	2816	305	6884
Apprch %	56.8	0.2	42.9	6.5	93.1	0.4	17.1	21.1	61.8	0.7	89.6	9.7	
Total %	3.9	0.0	2.9	3.0	43.2	0.2	0.2	0.2	0.7	0.3	40.9	4.4	

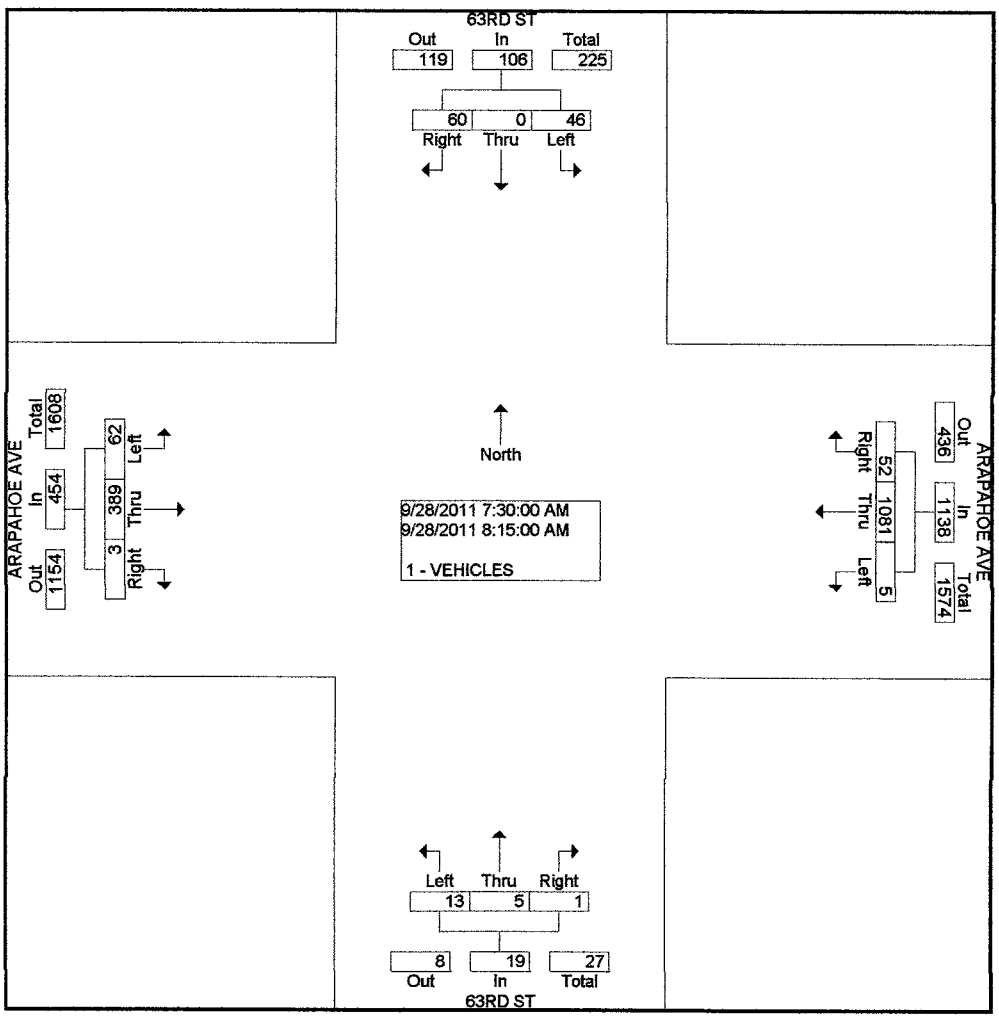
COUNTER MEASURES INC.

1889 YORK ST
DENVER, COLORADO
303-333-7409

N/S STREET: 63RD ST
E/W STREET: ARAPAHOE AVE
CITY: BOULDER
COUNTY: BOULDER

File Name : 63RDARAP
Site Code : 00000005
Start Date : 9/28/2011
Page No : 2

	63RD ST From North				ARAPAHOE AVE From East				63RD ST From South				ARAPAHOE AVE From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:30 AM - Peak 1 of 1																	
Intersection	07:30 AM																
Volume	60	0	46	106	52	1081	5	1138	1	5	13	19	3	389	62	454	1717
Percent	56.6	0.0	43.4		4.6	95.0	0.4		5.3	26.3	68.4		0.7	85.7	13.7		
07:45 Volume	14	0	18	32	12	287	3	302	0	1	3	4	1	110	12	123	461
Peak Factor																	0.931
High Int.	07:45 AM				07:45 AM				07:30 AM				08:15 AM				
Volume	14	0	18	32	12	287	3	302	0	2	6	8	0	100	24	124	
Peak Factor				0.828				0.942				0.594				0.915	



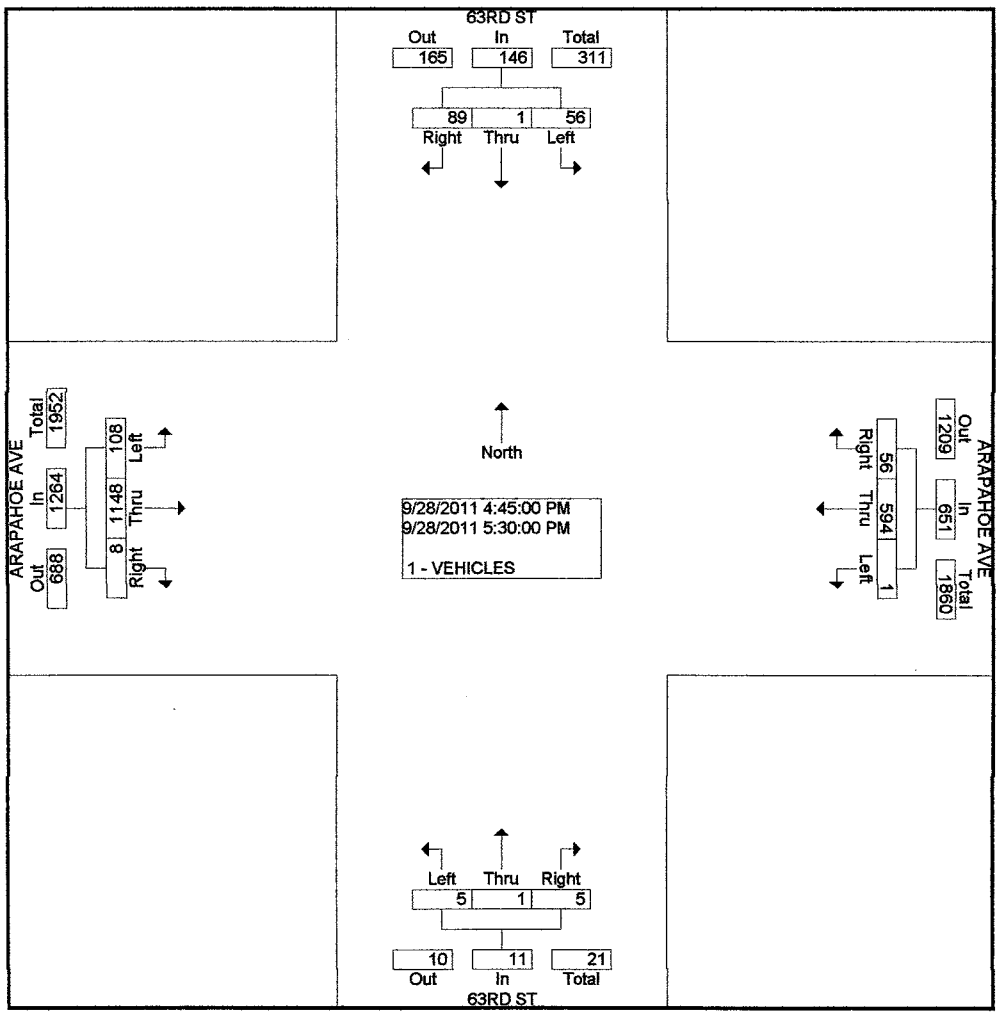
COUNTER MEASURES INC.

1889 YORK ST
DENVER, COLORADO
303-333-7409

N/S STREET: 63RD ST
E/W STREET: ARAPAHOE AVE
CITY: BOULDER
COUNTY: BOULDER

File Name : 63RDARAP
Site Code : 00000005
Start Date : 9/28/2011
Page No : 2

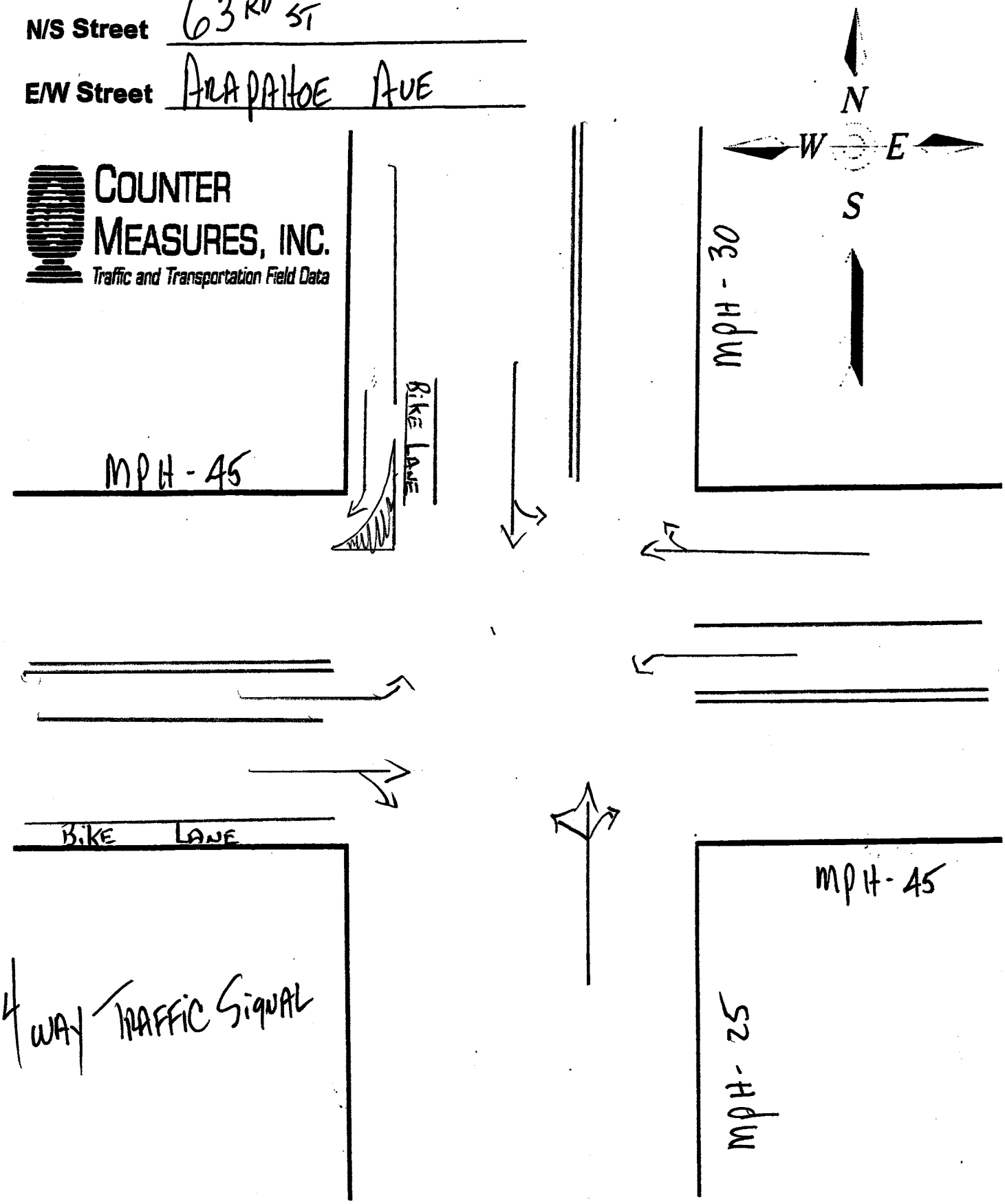
	63RD ST From North				ARAPAHOE AVE From East				63RD ST From South				ARAPAHOE AVE From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:45 PM																
Volume	89	1	56	146	56	594	1	651	5	1	5	11	8	1148	108	1264	2072
Percent	61.0	0.7	38.4		8.6	91.2	0.2		45.5	9.1	45.5		0.6	90.8	8.5		
05:15 Volume	28	1	22	51	14	154	0	168	1	0	3	4	3	291	26	320	543
Peak Factor																	0.954
High Int.	05:15 PM				05:15 PM				05:15 PM				05:30 PM				
Volume	28	1	22	51	14	154	0	168	1	0	3	4	1	297	52	350	
Peak Factor				0.716				0.969				0.688				0.903	



N/S Street 63RD ST

E/W Street ARAPAHOE AVE

COUNTER MEASURES, INC.
Traffic and Transportation Field Data



COUNTER MEASURES INC.

1889 YORK ST
DENVER,COLORADO 80206
303-333-7409

Location: ARAPAHOE AVE E/O CHERRYVALE RD
City: BOULDER
County: BOULDER
Direction: EASTBOUND-WESTBOUND

Site Code: 092602

Start Time	27-Sep-11 Tue	EB	WB	Total
12:00 AM		59	23	82
01:00		27	10	37
02:00		15	11	26
03:00		20	18	38
04:00		18	25	43
05:00		58	67	125
06:00		222	254	476
07:00		358	711	1069
08:00		613	**852**	**1465**
09:00		535	779	1314
10:00		552	617	1169
11:00		**650**	567	1217
12:00 PM		800	538	1338
01:00		763	542	1305
02:00		858	531	1389
03:00		978	566	1544
04:00		1132	516	1648
05:00		**1280**	**576**	**1856**
06:00		964	448	1412
07:00		692	338	1030
08:00		507	216	723
09:00		348	206	554
10:00		182	130	312
11:00		112	62	174
Total		11743	8603	20346
Percent		57.7%	42.3%	
AM Peak		11:00	08:00	08:00
Vol.		650	852	1465
PM Peak		17:00	17:00	17:00
Vol.		1280	576	1856
Grand Total		11743	8603	20346
Percent		57.7%	42.3%	

ADT Not Calculated

COUNTER MEASURES INC.

1889 YORK ST
DENVER,COLORADO 80206
303-333-7409

Location: CHERRYVALE RD S/O ARAPAHOE AVE
City: BOULDER
County: BOULDER
Direction: SOUTHBOUND-NORTHBOUND

Site Code: 092608

Start Time	27-Sep-11 Tue	SB	NB	Total
12:00 AM		3	2	5
01:00		2	1	3
02:00		0	3	3
03:00		3	1	4
04:00		1	8	9
05:00		8	45	53
06:00		34	144	178
07:00		74	395	469
08:00		96	**400**	**496**
09:00		86	177	263
10:00		**112**	145	257
11:00		100	165	265
12:00 PM		144	170	314
01:00		143	176	319
02:00		154	150	304
03:00		246	**183**	429
04:00		419	164	583
05:00		**529**	165	**694**
06:00		216	93	309
07:00		104	70	174
08:00		58	43	101
09:00		51	30	81
10:00		34	20	54
11:00		12	4	16
Total		2629	2754	5383
Percent		48.8%	51.2%	
AM Peak		10:00	08:00	08:00
Vol.		112	400	496
PM Peak		17:00	15:00	17:00
Vol.		529	183	694
Grand Total		2629	2754	5383
Percent		48.8%	51.2%	

ADT ADT 5,383 AADT 5,383

COUNTER MEASURES INC.

1889 YORK ST
DENVER,COLORADO 80206
303-333-7409

Location: KALMIA AVE W/O BOULDER JEWISH
City: BOULDER
County: BOULDER
Direction: EASTBOUND-WESTBOUND

Site Code: 091204

Start	12-Sep-11		13-Sep-11		14-Sep-11		15-Sep-11		16-Sep-11		Weekday Average		17-Sep-11		18-Sep-11	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	0	0	0	0	*	*	*	*	0	0	*	*	*	*
01:00	*	*	0	0	0	0	*	*	*	*	0	0	*	*	*	*
02:00	*	*	0	0	0	0	*	*	*	*	0	0	*	*	*	*
03:00	*	*	0	0	0	0	*	*	*	*	0	0	*	*	*	*
04:00	*	*	0	0	0	0	*	*	*	*	0	0	*	*	*	*
05:00	*	*	0	0	0	0	*	*	*	*	0	0	*	*	*	*
06:00	*	*	1	0	0	0	*	*	*	*	0	0	*	*	*	*
07:00	*	*	2	1	4	1	*	*	*	*	3	1	*	*	*	*
08:00	*	*	17	7	17	6	*	*	*	*	17	6	*	*	*	*
09:00	*	*	47	30	77	43	*	*	*	*	62	36	*	*	*	*
10:00	*	*	9	9	10	21	*	*	*	*	10	15	*	*	*	*
11:00	*	*	8	19	10	11	*	*	*	*	9	15	*	*	*	*
12:00 PM	*	*	15	8	11	13	*	*	*	*	13	10	*	*	*	*
01:00	*	*	16	24	26	37	*	*	*	*	21	30	*	*	*	*
02:00	*	*	22	27	26	26	*	*	*	*	24	26	*	*	*	*
03:00	*	*	12	12	9	23	*	*	*	*	10	18	*	*	*	*
04:00	*	*	36	33	19	10	*	*	*	*	28	22	*	*	*	*
05:00	*	*	41	44	11	8	*	*	*	*	26	26	*	*	*	*
06:00	*	*	66	26	54	43	*	*	*	*	60	34	*	*	*	*
07:00	*	*	14	17	8	10	*	*	*	*	11	14	*	*	*	*
08:00	*	*	6	44	34	48	*	*	*	*	20	46	*	*	*	*
09:00	*	*	4	13	1	4	*	*	*	*	2	8	*	*	*	*
10:00	*	*	1	1	1	1	*	*	*	*	1	1	*	*	*	*
11:00	*	*	1	2	0	0	*	*	*	*	0	1	*	*	*	*
Total	0	0	318	317	318	305	0	0	0	0	317	309	0	0	0	0
Day	0		635		623		0		0		626		0		0	
AM Peak			09:00	09:00	09:00	09:00					09:00	09:00				
Vol.			47	30	77	43					62	36				
PM Peak			18:00	17:00	18:00	20:00					18:00	20:00				
Vol.			66	44	54	48					60	46				
Comb. Total	0		635		623		0		0		626		0		0	

ADT ADT 629 AADT 629

APPENDIX B
Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	51	399	48	45	1107	24	398	29	87	12	2	29
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	190.0	186.3	186.3	190.0	186.3	186.3
Lanes	1	2	1	1	3	0	0	1	1	0	1	1
Cap, veh/h	239	1932	821	479	2826	61	64	0	645	62	5	645
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.50	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	452	3725	1583	906	5450	118	0	0	1583	0	13	1583
Grp Volume(v), veh/h	55	434	52	49	822	407	465	0	95	15	0	32
Grp Sat Flow(s),veh/h/ln	452	1863	1583	906	1863	1842	0	0	1583	13	0	1583
Q Serve(g_s), s	9.3	6.9	1.8	3.4	14.7	14.8	0.0	0.0	4.1	0.0	0.0	1.3
Cycle Q Clear(g_c), s	24.0	6.9	1.8	10.2	14.7	14.8	44.0	0.0	4.1	44.0	0.0	1.3
Prop In Lane	1.00		1.00	1.00		0.06	0.93		1.00	0.87		1.00
Lane Grp Cap(c), veh/h	239	1932	821	479	1932	955	64	0	645	68	0	645
V/C Ratio(X)	0.23	0.22	0.06	0.10	0.43	0.43	7.22	0.00	0.15	0.22	0.00	0.05
Avail Cap(c_a), veh/h	239	1932	821	479	1932	955	64	0	645	68	0	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	14.2	12.9	17.0	16.1	16.1	54.0	0.0	20.2	38.5	0.0	19.4
Incr Delay (d2), s/veh	2.2	0.3	0.1	0.4	0.7	1.4	2832.7	0.0	0.1	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	3.0	0.7	0.8	6.5	6.6	52.4	0.0	1.6	0.3	0.0	0.5
Lane Grp Delay (d), s/veh	25.7	14.4	13.1	17.4	16.8	17.5	2886.7	0.0	20.3	40.1	0.0	19.4
Lane Grp LOS	C	B	B	B	B	B	F		C	D		B
Approach Vol, veh/h		541			1278			560			47	
Approach Delay, s/veh		15.5			17.0			2400.4			26.0	
Approach LOS		B			B			F			C	

Timer								
Assigned Phs		6			2			4			8	
Phs Duration (G+Y+Rc), s		60.0			60.0			48.0			48.0	
Change Period (Y+Rc), s		5.9			5.9			5.6			5.6	
Max Green Setting (Gmax), s		54.1			54.1			42.4			42.4	
Max Q Clear Time (g_c+I1), s		26.0			16.8			46.0			46.0	
Green Ext Time (p_c), s		9.5			10.1			0.0			0.0	

Intersection Summary	
HCM 2010 Ctrl Delay	567.0
HCM 2010 LOS	F

Notes

Intersection	
Intersection Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	33	472	1171	29	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	200			0	0	200
Median Width		12	12		12	
Grade, %		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	513	1273	32	7	4
Number of Lanes	1	2	3	0	1	1

Major/Minor	Major 1		Major 2			
Conflicting Flow All	1304	0	-	0	1617	652
Stage 1	-	-	-	-	1289	-
Stage 2	-	-	-	-	328	-
Follow-up Headway	3.12	-	-	-	3.67	3.92
Pot Capacity-1 Maneuver	278	-	-	-	119	352
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	678	-
Time blocked-Platoon, %	0	-	-	-	0	0
Mov Capacity-1 Maneuver	278	-	-	-	104	352
Mov Capacity-2 Maneuver	-	-	-	-	104	-
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	590	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	31.3
HCM LOS	-	-	D

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Cap, veh/h	278	-	-	-	104	352
HCM Control Delay, s	19.859	-	-	-	41.9	15.4
HCM Lane V/C Ratio	0.13	-	-	-	0.06	0.01
HCM Lane LOS	C	-	-	-	E	C
HCM 95th-tile Q, veh	0.4	-	-	-	0.2	0.0

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	405	3	5	1124	54	14	5	1	48	1	62
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Cap, veh/h	365	2739	19	757	3778	182	234	241	48	293	4	250
Arrive On Green	0.76	0.76	0.76	0.76	0.76	0.76	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	430	3603	25	943	4971	240	1328	1508	302	1404	23	1563
Grp Volume(v), veh/h	70	216	227	5	833	448	15	0	6	52	0	68
Grp Sat Flow(s),veh/h/ln	430	1770	1858	943	1695	1820	1328	0	1810	1404	0	1587
Q Serve(g_s), s	6.2	3.3	3.3	0.1	7.8	7.8	1.0	0.0	0.3	3.2	0.0	3.8
Cycle Q Clear(g_c), s	14.0	3.3	3.3	3.5	7.8	7.8	4.8	0.0	0.3	3.5	0.0	3.8
Prop In Lane	1.00		0.01	1.00		0.13	1.00		0.17	1.00		0.99
Lane Grp Cap(c), veh/h	365	1345	1412	757	2577	1384	234	0	290	293	0	254
V/C Ratio(X)	0.19	0.16	0.16	0.01	0.32	0.32	0.06	0.00	0.02	0.18	0.00	0.27
Avail Cap(c_a), veh/h	365	1345	1412	757	2577	1384	234	0	290	293	0	254
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.0	3.3	3.3	3.8	3.8	3.8	38.9	0.0	35.4	36.9	0.0	36.9
Incr Delay (d2), s/veh	1.2	0.3	0.2	0.0	0.3	0.6	0.5	0.0	0.1	1.3	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	1.1	1.2	0.0	2.3	2.6	0.4	0.0	0.1	1.3	0.0	1.7
Lane Grp Delay (d), s/veh	7.2	3.5	3.5	3.8	4.2	4.4	39.5	0.0	35.5	38.2	0.0	39.4
Lane Grp LOS	A	A	A	A	A	A	D		D	D		D
Approach Vol, veh/h		513			1286			21			120	
Approach Delay, s/veh		4.0			4.3			38.3			38.9	
Approach LOS		A			A			D			D	

Timer												
Assigned Phs		8			4			6			2	
Phs Duration (G+Y+Rc), s		80.0			80.0			20.0			20.0	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		76.0			76.0			16.0			16.0	
Max Q Clear Time (g_c+I1), s		16.0			9.8			6.8			5.8	
Green Ext Time (p_c), s		10.1			10.1			0.3			0.3	

Intersection Summary												
HCM 2010 Ctrl Delay			6.7									
HCM 2010 LOS			A									

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	48	1231	493	60	671	12	119	10	54	38	35	69
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	190.0	186.3	186.3	190.0	186.3	186.3
Lanes	1	2	1	1	3	0	0	1	1	0	1	1
Cap, veh/h	507	2515	1069	180	3695	66	58	3	409	46	29	409
Arrive On Green	0.68	0.68	0.68	0.68	0.68	0.66	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	715	3725	1583	243	5474	97	0	10	1583	0	111	1583
Grp Volume(v), veh/h	52	1338	536	65	496	246	140	0	59	79	0	75
Grp Sat Flow(s),veh/h/ln	715	1863	1583	243	1863	1846	10	0	1583	111	0	1583
Q Serve(g_s), s	3.5	21.9	20.0	22.3	6.0	6.0	0.0	0.0	3.4	0.0	0.0	4.4
Cycle Q Clear(g_c), s	9.6	21.9	20.0	44.1	6.0	6.0	31.0	0.0	3.4	31.0	0.0	4.4
Prop In Lane	1.00		1.00	1.00		0.05	0.92		1.00	0.52		1.00
Lane Grp Cap(c), veh/h	507	2515	1069	180	2515	1246	60	0	409	74	0	409
V/C Ratio(X)	0.10	0.53	0.50	0.36	0.20	0.20	2.32	0.00	0.14	1.06	0.00	0.18
Avail Cap(c_a), veh/h	507	2515	1069	180	2515	1246	60	0	409	74	0	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	9.9	9.6	21.1	7.3	7.3	58.6	0.0	34.3	48.4	0.0	34.6
Incr Delay (d2), s/veh	0.4	0.8	1.7	5.6	0.2	0.4	643.4	0.0	0.2	122.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	8.8	7.2	1.6	2.4	2.5	12.7	0.0	1.4	4.8	0.0	1.8
Lane Grp Delay (d), s/veh	9.5	10.7	11.3	26.7	7.5	7.7	702.1	0.0	34.4	171.0	0.0	34.9
Lane Grp LOS	A	B	B	C	A	A	F		C	F		C
Approach Vol, veh/h		1926			807			199			154	
Approach Delay, s/veh		10.8			9.1			504.1			104.7	
Approach LOS		B			A			F			F	

Timer								
Assigned Phs		6			2			4			8	
Phs Duration (G+Y+Rc), s		85.0			85.0			35.0			35.0	
Change Period (Y+Rc), s		5.9			5.9			5.6			5.6	
Max Green Setting (Gmax), s		79.1			79.1			29.4			29.4	
Max Q Clear Time (g_c+I1), s		23.9			46.1			33.0			33.0	
Green Ext Time (p_c), s		23.3			18.5			0.0			0.0	

Intersection Summary	
HCM 2010 Ctrl Delay	46.9
HCM 2010 LOS	D

Notes

Intersection	
Intersection Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	21	1303	707	8	11	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	200			0	0	200
Median Width		12	12		12	
Grade, %		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	1416	768	9	12	39
Number of Lanes	1	2	3	0	1	1

Major/Minor		Major 1	Major 2			
Conflicting Flow All	777	0	-	0	1527	389
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	754	-
Follow-up Headway	3.12	-	-	-	3.67	3.92
Pot Capacity-1 Maneuver	501	-	-	-	134	521
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	414	-
Time blocked-Platoon, %	0	-	-	-	0	0
Mov Capacity-1 Maneuver	501	-	-	-	128	521
Mov Capacity-2 Maneuver	-	-	-	-	128	-
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	395	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	18
HCM LOS	-	-	C

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Cap, veh/h	501	-	-	-	128	521
HCM Control Delay, s	12.528	-	-	-	36	12.5
HCM Lane V/C Ratio	0.05	-	-	-	0.09	0.08
HCM Lane LOS	B	-	-	-	E	B
HCM 95th-tile Q, veh	0.1	-	-	-	0.3	0.2

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	112	1194	8	1	618	58	5	1	5	58	1	93
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Cap, veh/h	633	2684	19	380	3527	328	195	31	153	282	2	178
Arrive On Green	0.74	0.74	0.74	0.74	0.74	0.74	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	719	3603	25	419	4735	441	1287	271	1353	1404	16	1570
Grp Volume(v), veh/h	122	637	670	1	480	255	5	0	6	63	0	102
Grp Sat Flow(s),veh/h/ln	719	1770	1858	419	1695	1785	1287	0	1624	1404	0	1586
Q Serve(g_s), s	3.4	8.1	8.1	0.1	2.4	2.4	0.2	0.0	0.2	2.4	0.0	3.4
Cycle Q Clear(g_c), s	5.8	8.1	8.1	8.2	2.4	2.4	3.6	0.0	0.2	2.5	0.0	3.4
Prop In Lane	1.00		0.01	1.00		0.25	1.00		0.83	1.00		0.99
Lane Grp Cap(c), veh/h	633	1318	1384	380	2526	1330	195	0	184	282	0	179
V/C Ratio(X)	0.19	0.48	0.48	0.00	0.19	0.19	0.03	0.00	0.03	0.22	0.00	0.57
Avail Cap(c_a), veh/h	633	1318	1384	380	2526	1330	963	0	1152	1119	0	1125
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.0	2.9	2.9	4.5	2.1	2.1	25.4	0.0	22.3	23.4	0.0	23.7
Incr Delay (d2), s/veh	0.7	1.3	1.2	0.0	0.2	0.3	0.2	0.0	0.3	1.8	0.0	12.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	2.1	2.1	0.0	0.5	0.6	0.1	0.0	0.1	0.9	0.0	1.9
Lane Grp Delay (d), s/veh	3.7	4.1	4.1	4.5	2.3	2.5	25.7	0.0	22.6	25.2	0.0	36.1
Lane Grp LOS	A	A	A	A	A	A	C		C	C		D
Approach Vol, veh/h		1429			736			11			165	
Approach Delay, s/veh		4.1			2.4			24.0			32.0	
Approach LOS		A			A			C			C	

Timer												
Assigned Phs		8			4			6			2	
Phs Duration (G+Y+Rc), s		46.0			46.0			10.4			10.4	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		42.0			42.0			40.0			40.0	
Max Q Clear Time (g_c+I1), s		10.1			10.2			5.6			5.4	
Green Ext Time (p_c), s		12.1			12.1			0.7			0.7	

Intersection Summary												
HCM 2010 Ctrl Delay			5.6									
HCM 2010 LOS			A									

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	488	58	55	1419	31	486	36	107	15	3	36
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	190.0	186.3	186.3	190.0	186.3	186.3
Lanes	1	2	1	1	3	0	0	1	1	0	1	1
Cap, veh/h	173	1932	821	427	2824	62	64	0	645	61	6	645
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.50	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	324	3725	1583	821	5447	120	0	0	1583	0	16	1583
Grp Volume(v), veh/h	67	530	63	60	1055	521	567	0	116	19	0	39
Grp Sat Flow(s),veh/h/ln	324	1863	1583	821	1863	1842	0	0	1583	16	0	1583
Q Serve(g_s), s	18.9	8.6	2.2	4.8	20.5	20.6	0.0	0.0	5.1	0.0	0.0	1.6
Cycle Q Clear(g_c), s	39.5	8.6	2.2	13.4	20.5	20.6	44.0	0.0	5.1	44.0	0.0	1.6
Prop In Lane	1.00		1.00	1.00		0.07	0.93		1.00	0.84		1.00
Lane Grp Cap(c), veh/h	173	1932	821	427	1932	955	64	0	645	68	0	645
V/C Ratio(X)	0.39	0.27	0.08	0.14	0.55	0.55	8.81	0.00	0.18	0.28	0.00	0.06
Avail Cap(c_a), veh/h	173	1932	821	427	1932	955	64	0	645	68	0	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.7	14.6	13.0	18.4	17.5	17.5	54.0	0.0	20.5	39.1	0.0	19.4
Incr Delay (d2), s/veh	6.4	0.4	0.2	0.7	1.1	2.2	3544.8	0.0	0.1	2.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.8	3.8	0.8	1.0	8.9	9.3	65.2	0.0	2.0	0.3	0.0	0.6
Lane Grp Delay (d), s/veh	37.2	14.9	13.2	19.0	18.6	19.8	3598.8	0.0	20.6	41.3	0.0	19.5
Lane Grp LOS	D	B	B	B	B	B	F		C	D		B
Approach Vol, veh/h		660			1636			683			58	
Approach Delay, s/veh		17.0			19.0			2991.1			26.6	
Approach LOS		B			B			F			C	

Timer												
Assigned Phs		6			2			4			8	
Phs Duration (G+Y+Rc), s		60.0			60.0			48.0			48.0	
Change Period (Y+Rc), s		5.9			5.9			5.6			5.6	
Max Green Setting (Gmax), s		54.1			54.1			42.4			42.4	
Max Q Clear Time (g_c+I1), s		41.5			22.6			46.0			46.0	
Green Ext Time (p_c), s		8.2			13.8			0.0			0.0	

Intersection Summary												
HCM 2010 Ctrl Delay			687.1									
HCM 2010 LOS			F									

Notes

Intersection	
Intersection Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	41	577	1430	36	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	200			0	0	200
Median Width		12	12		12	
Grade, %		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	627	1554	39	9	5
Number of Lanes	1	2	3	0	1	1

Major/Minor		Major 1	Major 2			
Conflicting Flow All	1593	0	-	0	1977	797
Stage 1	-	-	-	-	1574	-
Stage 2	-	-	-	-	403	-
Follow-up Headway	3.12	-	-	-	3.67	3.92
Pot Capacity-1 Maneuver	200	-	-	-	72	283
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	622	-
Time blocked-Platoon, %	0	-	-	-	0	0
Mov Capacity-1 Maneuver	200	-	-	-	56	283
Mov Capacity-2 Maneuver	-	-	-	-	56	-
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	482	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	56.6
HCM LOS	-	-	F

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Cap, veh/h	200	-	-	-	56	283
HCM Control Delay, s	28.087	-	-	-	80.8	18
HCM Lane V/C Ratio	0.22	-	-	-	0.16	0.02
HCM Lane LOS	D	-	-	-	F	C
HCM 95th-tile Q, veh	0.8	-	-	-	0.5	0.1

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	494	4	6	1373	66	17	6	1	58	0	76
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Cap, veh/h	287	2737	20	690	3778	182	221	255	36	291	0	253
Arrive On Green	0.76	0.76	0.76	0.76	0.76	0.76	0.16	0.16	0.16	0.16	0.00	0.16
Sat Flow, veh/h	328	3601	27	861	4971	240	1310	1595	228	1402	0	1583
Grp Volume(v), veh/h	86	264	277	7	1018	546	18	0	8	63	0	83
Grp Sat Flow(s),veh/h/ln	328	1770	1858	861	1695	1820	1310	0	1823	1402	0	1583
Q Serve(g_s), s	12.2	4.2	4.2	0.2	10.3	10.3	1.2	0.0	0.4	4.0	0.0	4.6
Cycle Q Clear(g_c), s	22.5	4.2	4.2	4.4	10.3	10.3	5.9	0.0	0.4	4.3	0.0	4.6
Prop In Lane	1.00		0.01	1.00		0.13	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	287	1345	1412	690	2577	1384	221	0	292	291	0	253
V/C Ratio(X)	0.30	0.20	0.20	0.01	0.39	0.39	0.08	0.00	0.03	0.22	0.00	0.33
Avail Cap(c_a), veh/h	287	1345	1412	690	2577	1384	221	0	292	291	0	253
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.0	3.4	3.4	4.0	4.1	4.1	39.8	0.0	35.4	37.3	0.0	37.2
Incr Delay (d2), s/veh	2.7	0.3	0.3	0.0	0.5	0.8	0.7	0.0	0.2	1.7	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	1.4	1.4	0.0	3.1	3.5	0.5	0.0	0.2	1.6	0.0	2.1
Lane Grp Delay (d), s/veh	10.6	3.7	3.7	4.0	4.6	5.0	40.6	0.0	35.6	39.0	0.0	40.7
Lane Grp LOS	B	A	A	A	A	A	D		D	D		D
Approach Vol, veh/h		627			1571			26			146	
Approach Delay, s/veh		4.7			4.7			39.0			39.9	
Approach LOS		A			A			D			D	

Timer												
Assigned Phs		8			4			6			2	
Phs Duration (G+Y+Rc), s		80.0			80.0			20.0			20.0	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		76.0			76.0			16.0			16.0	
Max Q Clear Time (g_c+I1), s		24.5			12.3			7.9			6.6	
Green Ext Time (p_c), s		14.2			14.6			0.4			0.4	

Intersection Summary												
HCM 2010 Ctrl Delay			7.2									
HCM 2010 LOS			A									

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	58	1504	602	74	860	16	145	13	66	47	43	84
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	190.0	186.3	186.3	190.0	186.3	186.3
Lanes	1	2	1	1	3	0	0	1	1	0	1	1
Cap, veh/h	417	2515	1069	128	3693	67	58	0	409	46	29	409
Arrive On Green	0.68	0.68	0.68	0.68	0.68	0.66	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	587	3725	1583	161	5471	99	0	0	1583	0	111	1583
Grp Volume(v), veh/h	63	1635	654	80	636	316	172	0	72	98	0	91
Grp Sat Flow(s),veh/h/ln	587	1863	1583	161	1863	1845	0	0	1583	111	0	1583
Q Serve(g_s), s	5.7	30.5	27.4	50.5	8.0	8.1	0.0	0.0	4.2	0.0	0.0	5.4
Cycle Q Clear(g_c), s	13.7	30.5	27.4	81.0	8.0	8.1	31.0	0.0	4.2	31.0	0.0	5.4
Prop In Lane	1.00		1.00	1.00		0.05	0.92		1.00	0.52		1.00
Lane Grp Cap(c), veh/h	417	2515	1069	128	2515	1246	58	0	409	74	0	409
V/C Ratio(X)	0.15	0.65	0.61	0.63	0.25	0.25	2.99	0.00	0.18	1.32	0.00	0.22
Avail Cap(c_a), veh/h	417	2515	1069	128	2515	1246	58	0	409	74	0	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	11.3	10.8	38.6	7.6	7.7	60.0	0.0	34.6	48.4	0.0	35.0
Incr Delay (d2), s/veh	0.8	1.3	2.6	20.9	0.2	0.5	939.5	0.0	0.2	212.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	12.5	10.0	3.2	3.3	3.3	16.8	0.0	1.7	6.7	0.0	2.2
Lane Grp Delay (d), s/veh	11.1	12.6	13.4	59.5	7.9	8.2	999.5	0.0	34.8	260.5	0.0	35.3
Lane Grp LOS	B	B	B	E	A	A	F		C	F		D
Approach Vol, veh/h		2352			1032			244			189	
Approach Delay, s/veh		12.8			12.0			714.8			152.1	
Approach LOS		B			B			F			F	

Timer								
Assigned Phs		6			2			4			8	
Phs Duration (G+Y+Rc), s		85.0			85.0			35.0			35.0	
Change Period (Y+Rc), s		5.9			5.9			5.6			5.6	
Max Green Setting (Gmax), s		79.1			79.1			29.4			29.4	
Max Q Clear Time (g_c+I1), s		32.5			83.0			33.0			33.0	
Green Ext Time (p_c), s		30.6			0.0			0.0			0.0	

Intersection Summary	
HCM 2010 Ctrl Delay	64.3
HCM 2010 LOS	E

Notes

Intersection	
Intersection Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	25	1591	864	10	14	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	200			0	0	200
Median Width		12	12		12	
Grade, %		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	1729	939	11	15	48
Number of Lanes	1	2	3	0	1	1

Major/Minor	Major 1		Major 2			
Conflicting Flow All	950	0	-	0	1864	475
Stage 1	-	-	-	-	945	-
Stage 2	-	-	-	-	919	-
Follow-up Headway	3.12	-	-	-	3.67	3.92
Pot Capacity-1 Maneuver	414	-	-	-	84	459
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	340	-
Time blocked-Platoon, %	0	-	-	-	0	0
Mov Capacity-1 Maneuver	414	-	-	-	79	459
Mov Capacity-2 Maneuver	-	-	-	-	79	-
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	318	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	25.2
HCM LOS	-	-	D

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Cap, veh/h	414	-	-	-	79	459
HCM Control Delay, s	14.306	-	-	-	61.1	13.8
HCM Lane V/C Ratio	0.07	-	-	-	0.19	0.10
HCM Lane LOS	B	-	-	-	F	B
HCM 95th-tile Q, veh	0.2	-	-	-	0.7	0.3

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	137	1458	10	1	754	71	6	1	6	71	1	113
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Cap, veh/h	542	2634	18	290	3459	323	196	26	183	301	2	204
Arrive On Green	0.73	0.73	0.73	0.73	0.73	0.73	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	618	3603	25	318	4732	442	1262	202	1412	1402	13	1572
Grp Volume(v), veh/h	149	778	818	1	586	311	7	0	8	77	0	124
Grp Sat Flow(s),veh/h/ln	618	1770	1858	318	1695	1785	1262	0	1614	1402	0	1585
Q Serve(g_s), s	5.9	12.1	12.2	0.1	3.2	3.3	0.3	0.0	0.2	2.9	0.0	4.2
Cycle Q Clear(g_c), s	9.2	12.1	12.2	12.2	3.2	3.3	4.5	0.0	0.2	3.2	0.0	4.2
Prop In Lane	1.00		0.01	1.00		0.25	1.00		0.88	1.00		0.99
Lane Grp Cap(c), veh/h	542	1294	1358	290	2478	1305	196	0	209	301	0	206
V/C Ratio(X)	0.27	0.60	0.60	0.00	0.24	0.24	0.04	0.00	0.04	0.26	0.00	0.60
Avail Cap(c_a), veh/h	542	1294	1358	290	2478	1305	911	0	1123	1095	0	1104
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.0	3.7	3.7	6.7	2.5	2.5	25.7	0.0	21.9	23.2	0.0	23.6
Incr Delay (d2), s/veh	1.3	2.1	2.0	0.0	0.2	0.4	0.3	0.0	0.3	2.0	0.0	12.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	3.3	3.5	0.0	0.7	0.8	0.1	0.0	0.1	1.2	0.0	2.3
Lane Grp Delay (d), s/veh	5.3	5.8	5.7	6.7	2.7	2.9	26.1	0.0	22.2	25.3	0.0	36.0
Lane Grp LOS	A	A	A	A	A	A	C		C	C		D
Approach Vol, veh/h		1745			898			15			201	
Approach Delay, s/veh		5.7			2.8			24.0			31.9	
Approach LOS		A			A			C			C	

Timer												
Assigned Phs		8			4			6			2	
Phs Duration (G+Y+Rc), s		46.0			46.0			11.5			11.5	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		42.0			42.0			40.0			40.0	
Max Q Clear Time (g_c+I1), s		14.2			14.2			6.5			6.2	
Green Ext Time (p_c), s		15.5			15.5			0.9			0.9	

Intersection Summary												
HCM 2010 Ctrl Delay			6.7									
HCM 2010 LOS			A									

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	51	432	77	85	1107	24	435	29	87	12	2	29
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0	190.0	186.3	186.3
Lanes	1	2	1	1	3	0	2	1	0	0	1	1
Cap, veh/h	315	2414	1026	576	3531	76	697	115	341	310	43	439
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.63	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	452	3725	1583	851	5450	118	2656	415	1231	891	157	1583
Grp Volume(v), veh/h	55	470	84	92	822	407	473	0	127	15	0	32
Grp Sat Flow(s),veh/h/ln	452	1863	1583	851	1863	1842	1328	0	1646	1048	0	1583
Q Serve(g_s), s	6.7	5.4	2.1	5.2	10.6	10.7	18.2	0.0	6.4	0.5	0.0	1.6
Cycle Q Clear(g_c), s	17.3	5.4	2.1	10.6	10.6	10.7	25.1	0.0	6.4	7.0	0.0	1.6
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.75	0.87		1.00
Lane Grp Cap(c), veh/h	315	2414	1026	576	2414	1193	697	0	456	353	0	439
V/C Ratio(X)	0.17	0.19	0.08	0.16	0.34	0.34	0.68	0.00	0.28	0.04	0.00	0.07
Avail Cap(c_a), veh/h	315	2414	1026	576	2414	1193	735	0	479	372	0	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.4	7.6	7.0	9.7	8.5	8.5	40.3	0.0	30.2	30.5	0.0	28.4
Incr Delay (d2), s/veh	1.2	0.2	0.2	0.6	0.4	0.8	2.4	0.0	0.3	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	2.2	0.7	1.1	4.4	4.5	6.3	0.0	2.7	0.3	0.0	0.6
Lane Grp Delay (d), s/veh	13.6	7.7	7.1	10.3	8.9	9.3	42.6	0.0	30.5	30.6	0.0	28.5
Lane Grp LOS	B	A	A	B	A	A	D		C	C		C
Approach Vol, veh/h		609			1321			600			47	
Approach Delay, s/veh		8.2			9.1			40.1			29.2	
Approach LOS		A			A			D			C	

Timer								
Assigned Phs		6			2			4			8	
Phs Duration (G+Y+Rc), s		73.0			73.0			33.5			33.5	
Change Period (Y+Rc), s		5.9			5.9			5.6			5.6	
Max Green Setting (Gmax), s		67.1			67.1			29.4			29.4	
Max Q Clear Time (g_c+I1), s		19.3			12.7			27.1			9.0	
Green Ext Time (p_c), s		11.5			11.6			0.8			3.0	

Intersection Summary			
HCM 2010 Ctrl Delay			16.4
HCM 2010 LOS			B

Notes

Intersection	
Intersection Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	33	495	1211	29	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	200			0	200	0
Median Width		12	12		12	
Grade, %		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	538	1316	32	7	4
Number of Lanes	1	2	3	0	1	1

Major/Minor	Major 1		Major 2			
Conflicting Flow All	1348	0	-	0	1673	674
Stage 1	-	-	-	-	1332	-
Stage 2	-	-	-	-	341	-
Follow-up Headway	3.12	-	-	-	3.67	3.92
Pot Capacity-1 Maneuver	265	-	-	-	110	341
Stage 1	-	-	-	-	154	-
Stage 2	-	-	-	-	668	-
Time blocked-Platoon, %	0	-	-	-	0	0
Mov Capacity-1 Maneuver	265	-	-	-	95	341
Mov Capacity-2 Maneuver	-	-	-	-	95	-
Stage 1	-	-	-	-	154	-
Stage 2	-	-	-	-	577	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	33.7
HCM LOS	-	-	D

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Cap, veh/h	265	-	-	-	95	341
HCM Control Delay, s	20.7	-	-	-	45.7	15.7
HCM Lane V/C Ratio	0.14	-	-	-	0.07	0.01
HCM Lane LOS	C	-	-	-	E	C
HCM 95th-tile Q, veh	0.5	-	-	-	0.2	0.0

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	67	425	3	5	1158	54	14	5	1	48	1	68
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	0	1	2	1	1	1	0	1	1	0
Cap, veh/h	332	2740	18	741	2690	1203	228	241	48	293	3	250
Arrive On Green	0.76	0.76	0.76	0.76	0.76	0.76	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	415	3605	23	924	3539	1583	1319	1508	302	1404	21	1565
Grp Volume(v), veh/h	73	227	238	5	1259	59	15	0	6	52	0	75
Grp Sat Flow(s),veh/h/ln	415	1770	1859	924	1770	1583	1319	0	1810	1404	0	1587
Q Serve(g_s), s	8.0	3.5	3.5	0.1	13.3	0.9	1.0	0.0	0.3	3.2	0.0	4.2
Cycle Q Clear(g_c), s	21.2	3.5	3.5	3.7	13.3	0.9	5.2	0.0	0.3	3.5	0.0	4.2
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.17	1.00		0.99
Lane Grp Cap(c), veh/h	332	1345	1413	741	2690	1203	228	0	290	293	0	254
V/C Ratio(X)	0.22	0.17	0.17	0.01	0.47	0.05	0.07	0.00	0.02	0.18	0.00	0.30
Avail Cap(c_a), veh/h	332	1345	1413	741	2690	1203	228	0	290	293	0	254
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	3.3	3.3	3.8	4.5	3.0	39.3	0.0	35.4	36.9	0.0	37.0
Incr Delay (d2), s/veh	1.5	0.3	0.3	0.0	0.6	0.1	0.6	0.0	0.1	1.3	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	1.2	1.2	0.0	4.2	0.3	0.4	0.0	0.1	1.3	0.0	1.9
Lane Grp Delay (d), s/veh	9.9	3.6	3.6	3.8	5.1	3.1	39.9	0.0	35.5	38.2	0.0	40.0
Lane Grp LOS	A	A	A	A	A	A	D		D	D		D
Approach Vol, veh/h		538			1323			21			127	
Approach Delay, s/veh		4.4			5.0			38.6			39.3	
Approach LOS		A			A			D			D	

Timer												
Assigned Phs		8			4			6			2	
Phs Duration (G+Y+Rc), s		80.0			80.0			20.0			20.0	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		76.0			76.0			16.0			16.0	
Max Q Clear Time (g_c+I1), s		23.2			15.3			7.2			6.2	
Green Ext Time (p_c), s		11.7			11.8			0.3			0.3	

Intersection Summary												
HCM 2010 Ctrl Delay			7.3									
HCM 2010 LOS			A									

Notes

Intersection	
Intersection Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	505	33	0	1215	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length		0	0		0	0
Median Width	12			12	0	
Grade, %	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	549	36	0	1321	0	25
Number of Lanes	2	1	0	3	0	1

Major/Minor	Major 1			Major 2		
Conflicting Flow All	0	0	549	0	1077	274
Stage 1	-	-	-	-	549	-
Stage 2	-	-	-	-	528	-
Follow-up Headway	-	-	2.22	-	3.67	3.32
Pot Capacity-1 Maneuver	-	-	1017	-	246	724
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	523	-
Time blocked-Platoon, %	-	-	0	-	0	0
Mov Capacity-1 Maneuver	-	-	1017	-	246	724
Mov Capacity-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	523	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.2
HCM LOS	-	-	B

Minor Lane / Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Cap, veh/h	724	-	-	1017	-
HCM Control Delay, s	10.2	-	-	0	-
HCM Lane V/C Ratio	0.04	-	-	-	-
HCM Lane LOS	B	-	-	A	-
HCM 95th-tile Q, veh	0.1	-	-	0.0	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	48	1264	522	100	671	12	165	10	54	38	35	69
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0	190.0	186.3	186.3
Lanes	1	2	1	1	3	0	2	1	0	0	1	1
Cap, veh/h	574	2789	1185	203	4097	73	420	45	243	163	136	281
Arrive On Green	0.75	0.75	0.75	0.75	0.75	0.73	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	715	3725	1583	227	5474	97	2473	255	1367	633	766	1583
Grp Volume(v), veh/h	52	1374	567	109	496	246	179	0	70	79	0	75
Grp Sat Flow(s),veh/h/ln	715	1863	1583	227	1863	1846	1236	0	1622	1399	0	1583
Q Serve(g_s), s	2.5	15.9	15.2	39.8	4.2	4.2	7.5	0.0	4.0	2.7	0.0	4.4
Cycle Q Clear(g_c), s	6.7	15.9	15.2	55.7	4.2	4.2	14.1	0.0	4.0	6.7	0.0	4.4
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.84	0.52		1.00
Lane Grp Cap(c), veh/h	574	2789	1185	203	2789	1382	420	0	288	299	0	281
V/C Ratio(X)	0.09	0.49	0.48	0.54	0.18	0.18	0.43	0.00	0.24	0.26	0.00	0.27
Avail Cap(c_a), veh/h	574	2789	1185	203	2789	1382	690	0	465	467	0	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.9	5.4	5.3	16.5	3.9	4.0	45.6	0.0	38.3	39.3	0.0	38.4
Incr Delay (d2), s/veh	0.3	0.6	1.4	9.8	0.1	0.3	0.7	0.0	0.4	0.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	6.0	5.0	2.6	1.5	1.5	2.4	0.0	1.7	2.0	0.0	1.8
Lane Grp Delay (d), s/veh	5.2	6.0	6.7	26.3	4.1	4.2	46.3	0.0	38.7	39.8	0.0	38.9
Lane Grp LOS	A	A	A	C	A	A	D		D	D		D
Approach Vol, veh/h		1993			851			249			154	
Approach Delay, s/veh		6.2			7.0			44.1			39.4	
Approach LOS		A			A			D			D	

Timer												
Assigned Phs		6			2			4			8	
Phs Duration (G+Y+Rc), s		85.0			85.0			23.2			23.2	
Change Period (Y+Rc), s		5.9			5.9			5.6			5.6	
Max Green Setting (Gmax), s		79.1			79.1			29.4			29.4	
Max Q Clear Time (g_c+I1), s		17.9			57.7			16.1			8.7	
Green Ext Time (p_c), s		25.9			14.8			1.5			1.7	

Intersection Summary												
HCM 2010 Ctrl Delay			10.9									
HCM 2010 LOS			B									

Notes

Intersection	
Intersection Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	21	1332	747	8	11	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	200			0	0	200
Median Width		12	12		12	
Grade, %		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	1448	812	9	12	39
Number of Lanes	1	2	3	0	1	1

Major/Minor		Major 1	Major 2			
Conflicting Flow All	821	0	-	0	1586	410
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	770	-
Follow-up Headway	3.12	-	-	-	3.67	3.92
Pot Capacity-1 Maneuver	477	-	-	-	124	505
Stage 1	-	-	-	-	321	-
Stage 2	-	-	-	-	406	-
Time blocked-Platoon, %	0	-	-	-	0	0
Mov Capacity-1 Maneuver	477	-	-	-	118	505
Mov Capacity-2 Maneuver	-	-	-	-	118	-
Stage 1	-	-	-	-	321	-
Stage 2	-	-	-	-	386	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	18.8
HCM LOS	-	-	C

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Cap, veh/h	477	-	-	-	118	505
HCM Control Delay, s	12.926	-	-	-	38.9	12.7
HCM Lane V/C Ratio	0.05	-	-	-	0.10	0.08
HCM Lane LOS	B	-	-	-	E	B
HCM 95th-tile Q, veh	0.2	-	-	-	0.3	0.3

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	116	1219	8	1	652	58	5	1	5	58	1	99
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	0	1	2	1	1	1	0	1	1	0
Cap, veh/h	611	2941	20	366	2888	1292	118	27	134	211	1	156
Arrive On Green	0.82	0.82	0.82	0.82	0.82	0.82	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	695	3604	24	409	3539	1583	1279	271	1353	1404	15	1571
Grp Volume(v), veh/h	126	651	683	1	709	63	5	0	6	63	0	109
Grp Sat Flow(s),veh/h/ln	695	1770	1858	409	1770	1583	1279	0	1624	1404	0	1586
Q Serve(g_s), s	4.8	10.1	10.1	0.1	4.3	0.7	0.4	0.0	0.3	4.0	0.0	6.3
Cycle Q Clear(g_c), s	9.2	10.1	10.1	10.2	4.3	0.7	6.6	0.0	0.3	4.3	0.0	6.3
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.83	1.00		0.99
Lane Grp Cap(c), veh/h	611	1444	1517	366	2888	1292	118	0	161	211	0	157
V/C Ratio(X)	0.21	0.45	0.45	0.00	0.25	0.05	0.04	0.00	0.04	0.30	0.00	0.69
Avail Cap(c_a), veh/h	611	1444	1517	366	2888	1292	466	0	602	592	0	588
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.0	2.5	2.5	4.0	2.0	1.7	44.3	0.0	38.4	40.4	0.0	41.1
Incr Delay (d2), s/veh	0.8	1.0	1.0	0.0	0.2	0.1	0.1	0.0	0.1	0.8	0.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	2.9	3.1	0.0	1.2	0.2	0.1	0.0	0.1	1.5	0.0	2.7
Lane Grp Delay (d), s/veh	3.8	3.5	3.5	4.0	2.2	1.7	44.5	0.0	38.5	41.2	0.0	46.5
Lane Grp LOS	A	A	A	A	A	A	D		D	D		D
Approach Vol, veh/h		1460			773			11			172	
Approach Delay, s/veh		3.5			2.2			41.2			44.5	
Approach LOS		A			A			D			D	

Timer												
Assigned Phs		8			4			6			2	
Phs Duration (G+Y+Rc), s		81.0			81.0			13.4			13.4	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		77.0			77.0			35.0			35.0	
Max Q Clear Time (g_c+I1), s		12.1			12.2			8.6			8.3	
Green Ext Time (p_c), s		15.2			15.2			0.7			0.7	

Intersection Summary												
HCM 2010 Ctrl Delay			6.2									
HCM 2010 LOS			A									

Notes

Intersection	
Intersection Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1324	33	0	783	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length		0	0		0	0
Median Width	12			12	0	
Grade, %	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1439	36	0	851	0	32
Number of Lanes	2	1	0	3	0	1

Major/Minor	Major 1			Major 2		
Conflicting Flow All	0	0	1439	0	1779	720
Stage 1	-	-	-	-	1439	-
Stage 2	-	-	-	-	340	-
Follow-up Headway	-	-	2.22	-	3.67	3.32
Pot Capacity-1 Maneuver	-	-	468	-	95	370
Stage 1	-	-	-	-	181	-
Stage 2	-	-	-	-	656	-
Time blocked-Platoon, %	-	-	0	-	0	0
Mov Capacity-1 Maneuver	-	-	468	-	95	370
Mov Capacity-2 Maneuver	-	-	-	-	95	-
Stage 1	-	-	-	-	181	-
Stage 2	-	-	-	-	656	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.6
HCM LOS	-	-	C

Minor Lane / Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Cap, veh/h	370	-	-	468	-
HCM Control Delay, s	15.6	-	-	0	-
HCM Lane V/C Ratio	0.09	-	-	-	-
HCM Lane LOS	C	-	-	A	-
HCM 95th-tile Q, veh	0.3	-	-	0.0	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	534	93	69	1429	31	546	36	107	15	3	36
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0	190.0	186.3	186.3
Lanes	1	2	1	1	3	0	2	1	0	0	1	1
Cap, veh/h	225	2380	1012	500	3481	76	677	119	353	294	50	454
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.62	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	320	3725	1583	756	5448	119	2637	414	1231	810	174	1583
Grp Volume(v), veh/h	67	580	101	75	1062	525	593	0	155	19	0	39
Grp Sat Flow(s),veh/h/ln	320	1863	1583	756	1863	1842	1318	0	1645	984	0	1583
Q Serve(g_s), s	14.4	7.2	2.7	5.1	15.5	15.6	22.3	0.0	8.0	0.7	0.0	1.9
Cycle Q Clear(g_c), s	30.0	7.2	2.7	12.3	15.5	15.6	31.0	0.0	8.0	8.7	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.75	0.84		1.00
Lane Grp Cap(c), veh/h	225	2380	1012	500	2380	1177	677	0	472	344	0	454
V/C Ratio(X)	0.30	0.24	0.10	0.15	0.45	0.45	0.88	0.00	0.33	0.06	0.00	0.09
Avail Cap(c_a), veh/h	225	2380	1012	500	2380	1177	677	0	472	344	0	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.4	8.3	7.5	11.0	9.8	9.9	43.8	0.0	30.3	31.0	0.0	28.1
Incr Delay (d2), s/veh	3.4	0.2	0.2	0.6	0.6	1.2	12.3	0.0	0.4	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	2.9	1.0	1.0	6.2	6.5	9.4	0.0	3.4	0.4	0.0	0.8
Lane Grp Delay (d), s/veh	20.8	8.6	7.7	11.6	10.5	11.1	56.1	0.0	30.7	31.0	0.0	28.2
Lane Grp LOS	C	A	A	B	B	B	E		C	C		C
Approach Vol, veh/h		748			1662			748			58	
Approach Delay, s/veh		9.6			10.7			50.9			29.1	
Approach LOS		A			B			D			C	

Timer								
Assigned Phs		6			2			4			8	
Phs Duration (G+Y+Rc), s		73.0			73.0			35.0			35.0	
Change Period (Y+Rc), s		5.9			5.9			5.6			5.6	
Max Green Setting (Gmax), s		67.1			67.1			29.4			29.4	
Max Q Clear Time (g_c+I1), s		32.0			17.6			33.0			10.7	
Green Ext Time (p_c), s		15.4			17.2			0.0			3.8	

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Notes

Intersection	
Intersection Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	41	609	1454	36	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	200			0	0	200
Median Width		12	12		12	
Grade, %		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	662	1580	39	9	5
Number of Lanes	1	2	3	0	1	1

Major/Minor	Major 1		Major 2			
Conflicting Flow All	1620	0	-	0	2020	810
Stage 1	-	-	-	-	1600	-
Stage 2	-	-	-	-	420	-
Follow-up Headway	3.12	-	-	-	3.67	3.92
Pot Capacity-1 Maneuver	194	-	-	-	68	277
Stage 1	-	-	-	-	104	-
Stage 2	-	-	-	-	610	-
Time blocked-Platoon, %	0	-	-	-	0	0
Mov Capacity-1 Maneuver	194	-	-	-	52	277
Mov Capacity-2 Maneuver	-	-	-	-	52	-
Stage 1	-	-	-	-	104	-
Stage 2	-	-	-	-	469	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	61
HCM LOS	-	-	F

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Cap, veh/h	194	-	-	-	52	277
HCM Control Delay, s	29.005	-	-	-	87.7	18.3
HCM Lane V/C Ratio	0.23	-	-	-	0.17	0.02
HCM Lane LOS	D	-	-	-	F	C
HCM 95th-tile Q, veh	0.9	-	-	-	0.5	0.1

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	81	522	6	40	1384	66	27	10	11	58	4	79
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	0	1	2	1	1	1	0	1	1	0
Cap, veh/h	261	2721	34	669	2690	1203	215	131	142	277	11	244
Arrive On Green	0.76	0.76	0.76	0.76	0.76	0.76	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	324	3580	44	835	3539	1583	1301	816	890	1383	71	1523
Grp Volume(v), veh/h	88	280	294	43	1504	72	29	0	23	63	0	90
Grp Sat Flow(s),veh/h/ln	324	1770	1855	835	1770	1583	1301	0	1706	1383	0	1594
Q Serve(g_s), s	15.6	4.5	4.5	1.5	17.7	1.1	2.0	0.0	1.1	4.1	0.0	5.0
Cycle Q Clear(g_c), s	33.3	4.5	4.5	6.1	17.7	1.1	7.1	0.0	1.1	5.2	0.0	5.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.52	1.00		0.96
Lane Grp Cap(c), veh/h	261	1345	1410	669	2690	1203	215	0	273	277	0	255
V/C Ratio(X)	0.34	0.21	0.21	0.06	0.56	0.06	0.14	0.00	0.08	0.23	0.00	0.35
Avail Cap(c_a), veh/h	261	1345	1410	669	2690	1203	215	0	273	277	0	255
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.0	3.4	3.4	4.3	5.0	3.0	40.5	0.0	35.8	38.0	0.0	37.4
Incr Delay (d2), s/veh	3.5	0.4	0.3	0.2	0.8	0.1	1.3	0.0	0.6	1.9	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	1.5	1.5	0.3	5.7	0.3	0.8	0.0	0.5	1.6	0.0	2.3
Lane Grp Delay (d), s/veh	15.4	3.8	3.8	4.5	5.9	3.1	41.8	0.0	36.4	39.9	0.0	41.2
Lane Grp LOS	B	A	A	A	A	A	D		D	D		D
Approach Vol, veh/h		662			1619			52			153	
Approach Delay, s/veh		5.3			5.7			39.4			40.7	
Approach LOS		A			A			D			D	

Timer								
Assigned Phs		8			4			6			2	
Phs Duration (G+Y+Rc), s		80.0			80.0			20.0			20.0	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		76.0			76.0			16.0			16.0	
Max Q Clear Time (g_c+I1), s		35.3			19.7			9.1			7.2	
Green Ext Time (p_c), s		15.8			17.1			0.4			0.5	

Intersection Summary	
HCM 2010 Ctrl Delay	8.5
HCM 2010 LOS	A

Notes

Intersection	
Intersection Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	620	44	0	1459	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length		0	0		0	0
Median Width	12			12	0	
Grade, %	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	674	48	0	1586	0	33
Number of Lanes	2	1	0	3	0	1

Major/Minor	Major 1			Major 2		
Conflicting Flow All	0	0	674	0	1308	337
Stage 1	-	-	-	-	674	-
Stage 2	-	-	-	-	634	-
Follow-up Headway	-	-	2.22	-	3.67	3.32
Pot Capacity-1 Maneuver	-	-	913	-	181	659
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	460	-
Time blocked-Platoon, %	-	-	0	-	0	0
Mov Capacity-1 Maneuver	-	-	913	-	181	659
Mov Capacity-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	460	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.7
HCM LOS	-	-	B

Minor Lane / Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Cap, veh/h	659	-	-	913	-
HCM Control Delay, s	10.7	-	-	0	-
HCM Lane V/C Ratio	0.05	-	-	-	-
HCM Lane LOS	B	-	-	A	-
HCM 95th-tile Q, veh	0.2	-	-	0.0	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	58	1564	641	95	871	16	205	13	66	47	43	84
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0	190.0	186.3	186.3
Lanes	1	2	1	1	3	0	2	1	0	0	1	1
Cap, veh/h	445	2669	1134	133	3921	70	449	56	289	182	154	337
Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.70	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	580	3725	1583	145	5473	98	2417	264	1359	630	723	1583
Grp Volume(v), veh/h	63	1700	697	103	644	320	223	0	86	98	0	91
Grp Sat Flow(s),veh/h/ln	580	1863	1583	145	1863	1845	1209	0	1623	1353	0	1583
Q Serve(g_s), s	4.7	26.9	25.2	54.1	6.7	6.7	10.0	0.0	5.0	4.0	0.0	5.4
Cycle Q Clear(g_c), s	11.5	26.9	25.2	81.0	6.7	6.7	19.0	0.0	5.0	9.0	0.0	5.4
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.84	0.52		1.00
Lane Grp Cap(c), veh/h	445	2669	1134	133	2669	1322	449	0	345	336	0	337
V/C Ratio(X)	0.14	0.64	0.61	0.77	0.24	0.24	0.50	0.00	0.25	0.29	0.00	0.27
Avail Cap(c_a), veh/h	445	2669	1134	133	2669	1322	598	0	445	430	0	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.5	8.4	8.1	38.3	5.5	5.5	46.8	0.0	37.0	38.8	0.0	37.2
Incr Delay (d2), s/veh	0.7	1.2	2.5	34.7	0.2	0.4	0.8	0.0	0.4	0.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	10.8	8.9	4.2	2.7	2.7	3.2	0.0	2.1	2.5	0.0	2.2
Lane Grp Delay (d), s/veh	8.1	9.5	10.6	73.0	5.7	5.9	47.6	0.0	37.4	39.3	0.0	37.6
Lane Grp LOS	A	A	B	E	A	A	D		D	D		D
Approach Vol, veh/h		2460			1067			309			189	
Approach Delay, s/veh		9.8			12.3			44.8			38.5	
Approach LOS		A			B			D			D	

Timer								
Assigned Phs		6			2			4			8	
Phs Duration (G+Y+Rc), s		85.0			85.0			28.0			28.0	
Change Period (Y+Rc), s		5.9			5.9			5.6			5.6	
Max Green Setting (Gmax), s		79.1			79.1			29.4			29.4	
Max Q Clear Time (g_c+I1), s		28.9			83.0			21.0			11.0	
Green Ext Time (p_c), s		34.0			0.0			1.5			2.1	

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	25	1628	895	10	14	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	200			0	0	200
Median Width		12	12		12	
Grade, %		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	1770	973	11	15	48
Number of Lanes	1	2	3	0	1	1

Major/Minor	Major 1		Major 2			
Conflicting Flow All	984	0	-	0	1917	492
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	939	-
Follow-up Headway	3.12	-	-	-	3.67	3.92
Pot Capacity-1 Maneuver	398	-	-	-	78	447
Stage 1	-	-	-	-	255	-
Stage 2	-	-	-	-	332	-
Time blocked-Platoon, %	0	-	-	-	0	0
Mov Capacity-1 Maneuver	398	-	-	-	73	447
Mov Capacity-2 Maneuver	-	-	-	-	73	-
Stage 1	-	-	-	-	255	-
Stage 2	-	-	-	-	309	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	26.8
HCM LOS	-	-	D

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Cap, veh/h	398	-	-	-	73	447
HCM Control Delay, s	14.707	-	-	-	66.9	14
HCM Lane V/C Ratio	0.07	-	-	-	0.21	0.11
HCM Lane LOS	B	-	-	-	F	B
HCM 95th-tile Q, veh	0.2	-	-	-	0.7	0.4

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	139	1488	15	38	771	71	17	5	15	71	6	117
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	0	1	2	1	1	1	0	1	1	0
Cap, veh/h	517	2846	28	265	2805	1255	130	49	156	232	10	189
Arrive On Green	0.79	0.79	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	608	3591	36	307	3539	1583	1250	391	1251	1385	83	1512
Grp Volume(v), veh/h	151	796	837	41	838	77	18	0	21	77	0	134
Grp Sat Flow(s),veh/h/ln	608	1770	1856	307	1770	1583	1250	0	1642	1385	0	1596
Q Serve(g_s), s	8.7	16.5	16.5	5.7	6.2	1.0	1.4	0.0	1.1	5.1	0.0	7.8
Cycle Q Clear(g_c), s	15.0	16.5	16.5	22.2	6.2	1.0	9.1	0.0	1.1	6.2	0.0	7.8
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.76	1.00		0.95
Lane Grp Cap(c), veh/h	517	1403	1472	265	2805	1255	130	0	205	232	0	199
V/C Ratio(X)	0.29	0.57	0.57	0.15	0.30	0.06	0.14	0.00	0.10	0.33	0.00	0.67
Avail Cap(c_a), veh/h	517	1403	1472	265	2805	1255	424	0	592	558	0	575
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.8	3.8	3.8	8.0	2.7	2.2	45.0	0.0	37.7	40.4	0.0	40.6
Incr Delay (d2), s/veh	1.4	1.7	1.6	1.2	0.3	0.1	0.5	0.0	0.2	0.8	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	5.3	5.5	0.5	1.9	0.3	0.5	0.0	0.5	1.9	0.0	3.4
Lane Grp Delay (d), s/veh	6.2	5.5	5.4	9.2	3.0	2.3	45.4	0.0	37.9	41.2	0.0	44.5
Lane Grp LOS	A	A	A	A	A	A	D		D	D		D
Approach Vol, veh/h		1784			956			39			211	
Approach Delay, s/veh		5.5			3.2			41.4			43.3	
Approach LOS		A			A			D			D	

Timer								
Assigned Phs		8			4			6			2	
Phs Duration (G+Y+Rc), s		81.0			81.0			16.1			16.1	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		77.0			77.0			35.0			35.0	
Max Q Clear Time (g_c+I1), s		18.5			24.2			11.1			9.8	
Green Ext Time (p_c), s		23.0			22.3			1.0			1.0	

Intersection Summary	
HCM 2010 Ctrl Delay	7.9
HCM 2010 LOS	A

Notes

Intersection	
Intersection Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1621	55	0	940	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length		0	0		0	0
Median Width	12			12	0	
Grade, %	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1762	60	0	1022	0	35
Number of Lanes	2	1	0	3	0	1

Major/Minor	Major 1			Major 2		
Conflicting Flow All	0	0	1762	0	2171	881
Stage 1	-	-	-	-	1762	-
Stage 2	-	-	-	-	409	-
Follow-up Headway	-	-	2.22	-	3.67	3.32
Pot Capacity-1 Maneuver	-	-	351	-	55	290
Stage 1	-	-	-	-	121	-
Stage 2	-	-	-	-	604	-
Time blocked-Platoon, %	-	-	0	-	0	0
Mov Capacity-1 Maneuver	-	-	351	-	55	290
Mov Capacity-2 Maneuver	-	-	-	-	55	-
Stage 1	-	-	-	-	121	-
Stage 2	-	-	-	-	604	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.1
HCM LOS	-	-	C

Minor Lane / Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Cap, veh/h	290	-	-	351	-
HCM Control Delay, s	19.1	-	-	0	-
HCM Lane V/C Ratio	0.12	-	-	-	-
HCM Lane LOS	C	-	-	A	-
HCM 95th-tile Q, veh	0.4	-	-	0.0	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

ROUNDABOUT REPORT

General Information		Site Information	
Analyst	CSM	Intersection	Cherryvale/Site Access
Agency or Co.	LSC	E/W Street Name	Site Access
Date Performed	3/18/2013	N/S Street Name	Cherryvale
Time Period	AM Peak	Analysis Year	2015 Total
Peak Hour Factor	0.88	Project ID	LSC #110400

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	0	0		0	1	0		0	1	0	
Lane Assignment			LR				LR				TR				LT	
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0		0	0	7		37	0		514	11	0	69	95		0
Heavy Veh. Adj. (f_{HV}), %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Pedestrians Crossing	0				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929
Follow-Up Headway (sec)	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	198			596			80			8		
Exiting Flow (V_{ex}), pc/h	93			0			639			118		
Entry Flow (V_e), pc/h		0			51			609			190	
Entry Volume veh/h					50			597			186	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		1102			809			1208			1278	
Capacity (c), veh/h		0			793			1184			1253	
v/c Ratio (X)					0.06			0.50			0.15	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					5.2			8.6			4.1	
Lane LOS					A			A			A	
Lane 95% Queue					0.2			2.9			0.5	
Approach Delay, s/veh				5.16			8.61			4.12		
Approach LOS, s/veh				A			A			A		
Intersection Delay, s/veh	7.08											
Intersection LOS	A											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	CSM	Intersection	Cherryvale/Site Access
Agency or Co.	LSC	E/W Street Name	Site Access
Date Performed	3/18/2013	N/S Street Name	Cherryvale
Time Period	PM Peak	Analysis Year	2015 Total
Peak Hour Factor	0.88	Project ID	LSC #110400

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	0	0		0	1	0		0	1	0	
Lane Assignment			LR				LR				TR				LT	
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0		0	0	9		46	0		183	11	0	69	588		0
Heavy Veh. Adj. (f_{HV}), %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Pedestrians Crossing	0				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929
Follow-Up Headway (sec)	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	772			212			80			10		
Exiting Flow (V_{ex}), pc/h	93			0			265			692		
Entry Flow (V_e), pc/h		0			64			225			762	
Entry Volume veh/h					63			221			747	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		705			1090			1208			1275	
Capacity (c), veh/h		0			1069			1184			1250	
v/c Ratio (X)					0.06			0.19			0.60	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					3.9			4.7			10.0	
Lane LOS					A			A			B	
Lane 95% Queue					0.2			0.7			4.2	
Approach Delay, s/veh				3.87			4.67			10.05		
Approach LOS, s/veh				A			A			B		
Intersection Delay, s/veh	7.08											
Intersection LOS	A											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	CSM	Intersection	Cherryvale/Site Access
Agency or Co.	LSC	E/W Street Name	Site Access
Date Performed	3/18/2013	N/S Street Name	Cherryvale
Time Period	AM Peak	Analysis Year	2035 Total
Peak Hour Factor	0.88	Project ID	LSC #110400

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	0	0		0	1	0		0	1	0	
Lane Assignment							LR				TR				LT	
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h				0	13		60	0		629	15	0	49	116		0
Heavy Veh. Adj. (f_{HV}), %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Pedestrians Crossing	0				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929
Follow-Up Headway (sec)	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	206			729			57			15		
Exiting Flow (V_{ex}), pc/h	74			0			799			150		
Entry Flow (V_e), pc/h		0			85			746			191	
Entry Volume veh/h					83			731			187	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		0			729			1230			1271	
Capacity (c), veh/h		0			715			1206			1246	
v/c Ratio (X)					0.12			0.61			0.15	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					6.3			10.5			4.2	
Lane LOS		F			A			B			A	
Lane 95% Queue					0.4			4.3			0.5	
Approach Delay, s/veh				6.28			10.50			4.15		
Approach LOS, s/veh				A			B			A		
Intersection Delay, s/veh	8.97											
Intersection LOS	A											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	CSM	Intersection	Cherryvale/Site Access
Agency or Co.	LSC	E/W Street Name	Site Access
Date Performed	3/18/2013	N/S Street Name	Cherryvale
Time Period	PM Peak	Analysis Year	2035 Total
Peak Hour Factor	0.88	Project ID	LSC #110400

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	0	0		0	1	0		0	1	0	
Lane Assignment							LR				TR				LT	
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h				0	13		60	0		224	18	0	60	719		0
Heavy Veh. Adj. (f_{HV}), %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Pedestrians Crossing	0				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929	5.1929	4.2000	5.1929
Follow-Up Headway (sec)	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858	3.1858	2.8000	3.1858

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	918			260			70			15		
Exiting Flow (V_{ex}), pc/h	90			0			329			848		
Entry Flow (V_e), pc/h		0			85			280			903	
Entry Volume veh/h					83			275			885	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		0			1051			1218			1271	
Capacity (c), veh/h		0			1030			1194			1246	
v/c Ratio (X)					0.08			0.23			0.71	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					4.2			5.1			13.2	
Lane LOS		F			A			A			B	
Lane 95% Queue					0.3			0.9			6.4	
Approach Delay, s/veh				4.21			5.06			13.18		
Approach LOS, s/veh				A			A			B		
Intersection Delay, s/veh	10.79											
Intersection LOS	B											

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APPENDIX C
Queuing Analyses

Intersection: 1: Cherryvale Rd. & Arapahoe Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	TR	L	L	TR	LT
Maximum Queue (ft)	103	96	109	40	85	169	180	157	220	244	133	39
Average Queue (ft)	36	45	41	11	32	79	86	68	133	162	58	12
95th Queue (ft)	82	87	90	29	70	148	155	129	199	229	111	36
Link Distance (ft)		2639	2639			510	510	510			420	263
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			190	275				305	305		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: Cherryvale Rd. & Arapahoe Rd.

Movement	SB
Directions Served	R
Maximum Queue (ft)	46
Average Queue (ft)	19
95th Queue (ft)	46
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Arapahoe Rd. & 62nd St

Movement	EB	SB	SB
Directions Served	L	L	R
Maximum Queue (ft)	56	38	31
Average Queue (ft)	16	4	4
95th Queue (ft)	43	22	21
Link Distance (ft)			267
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	200	200	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: 63 rd St/63rd St & Arapahoe Rd.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	88	87	88	25	158	157	19	39	49	98	73
Average Queue (ft)	35	23	28	2	81	43	5	8	7	34	31
95th Queue (ft)	70	61	72	14	140	103	17	31	28	81	58
Link Distance (ft)		390	390		594	594			343	481	481
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100			100			100	100			
Storage Blk Time (%)	0	0			2	0					
Queuing Penalty (veh)	0	0			0	0					

Intersection: 4: Cherryvale Rd. & JCC Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	30	146	10
Average Queue (ft)	5	29	1
95th Queue (ft)	24	96	9
Link Distance (ft)	560	504	420
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Site Access RIRO & Arapahoe Rd.

Movement	NB
Directions Served	R
Maximum Queue (ft)	29
Average Queue (ft)	13
95th Queue (ft)	31
Link Distance (ft)	182
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1

Intersection: 1: Cherryvale Rd. & Arapahoe Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B7	B7	NB	NB
Directions Served	L	T	T	R	L	T	T	TR	T	T	L	L
Maximum Queue (ft)	62	248	252	185	300	582	530	242	164	150	151	174
Average Queue (ft)	23	108	104	56	228	333	233	43	61	50	58	94
95th Queue (ft)	51	191	201	124	391	753	591	143	221	199	122	146
Link Distance (ft)		2640	2640			522	522	522	276	276		
Upstream Blk Time (%)						33	1	0	4	0		
Queuing Penalty (veh)						86	2	0	11	1		
Storage Bay Dist (ft)	300			190	275						305	305
Storage Blk Time (%)			1	0	60	0						
Queuing Penalty (veh)			3	0	134	0						

Intersection: 1: Cherryvale Rd. & Arapahoe Rd.

Movement	NB	SB	SB
Directions Served	TR	LT	R
Maximum Queue (ft)	87	165	119
Average Queue (ft)	32	65	33
95th Queue (ft)	65	127	71
Link Distance (ft)	420	236	
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			100
Storage Blk Time (%)		4	0
Queuing Penalty (veh)		3	0

Intersection: 2: Arapahoe Rd. & 62nd St

Movement	EB	SB	SB
Directions Served	L	L	R
Maximum Queue (ft)	30	58	51
Average Queue (ft)	8	14	24
95th Queue (ft)	29	43	49
Link Distance (ft)		245	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	200		200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: 63rd St & Arapahoe Rd.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	99	123	135	10	93	52	59	36	28	95	74
Average Queue (ft)	42	40	55	1	34	10	8	5	5	40	37
95th Queue (ft)	75	102	124	7	77	35	34	24	22	83	64
Link Distance (ft)		391	391		799	799			177		522
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100			100			100	100		200	
Storage Blk Time (%)	0	1			0						
Queuing Penalty (veh)	0	1			0						

Intersection: 4: Cherryvale Rd. & Site Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	36	62	39
Average Queue (ft)	4	9	2
95th Queue (ft)	21	37	15
Link Distance (ft)	473	333	420
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Site Access RIRO & Arapahoe Rd.

Movement	EB	WB	WB	NB
Directions Served	T	T	T	R
Maximum Queue (ft)	17	60	46	54
Average Queue (ft)	1	9	5	15
95th Queue (ft)	10	65	46	39
Link Distance (ft)	276	354	354	224
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 241

Intersection: 1: Cherryvale Rd. & Arapahoe Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	TR	L	L	TR	LT
Maximum Queue (ft)	104	152	144	44	99	240	256	244	297	291	135	53
Average Queue (ft)	41	65	55	13	36	112	131	110	166	194	56	14
95th Queue (ft)	83	119	108	35	74	199	221	193	251	267	105	43
Link Distance (ft)		2639	2639			510	510	510			420	263
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			190	275				305	305		
Storage Blk Time (%)									0	0		
Queuing Penalty (veh)									0	0		

Intersection: 1: Cherryvale Rd. & Arapahoe Rd.

Movement	SB
Directions Served	R
Maximum Queue (ft)	67
Average Queue (ft)	17
95th Queue (ft)	44
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Arapahoe Rd. & 62nd St

Movement	EB	WB	SB	SB
Directions Served	L	TR	L	R
Maximum Queue (ft)	66	7	45	31
Average Queue (ft)	24	0	7	6
95th Queue (ft)	53	4	30	25
Link Distance (ft)		392	267	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			200
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 63 rd St/63rd St & Arapahoe Rd.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	110	132	150	99	199	171	56	66	58	108	114
Average Queue (ft)	55	33	42	20	98	53	8	19	18	47	39
95th Queue (ft)	109	93	102	57	165	125	34	53	46	91	77
Link Distance (ft)		392	392		594	594			343		481
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100			100			100	100		200	
Storage Blk Time (%)	5	0			4	1		0			
Queuing Penalty (veh)	13	0			2	1		0			

Intersection: 4: Cherryvale Rd. & JCC Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	53	249	18
Average Queue (ft)	17	51	1
95th Queue (ft)	46	171	12
Link Distance (ft)	560	504	420
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Site Access RIRO & Arapahoe Rd.

Movement	NB
Directions Served	R
Maximum Queue (ft)	23
Average Queue (ft)	14
95th Queue (ft)	32
Link Distance (ft)	182
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 16

Intersection: 1: Cherryvale Rd. & Arapahoe Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B7	B7	NB	NB
Directions Served	L	T	T	R	L	T	T	TR	T	T	L	L
Maximum Queue (ft)	85	280	322	215	300	608	523	146	305	276	148	180
Average Queue (ft)	33	155	162	99	268	448	176	66	150	86	80	109
95th Queue (ft)	65	239	273	212	374	804	473	126	364	275	142	164
Link Distance (ft)		2640	2640			522	522	522	276	276		
Upstream Blk Time (%)						60	0		29	0		
Queuing Penalty (veh)						187	1		89	1		
Storage Bay Dist (ft)	300			190	275						305	305
Storage Blk Time (%)			2	1	78	0						
Queuing Penalty (veh)			14	5	227	0						

Intersection: 1: Cherryvale Rd. & Arapahoe Rd.

Movement	NB	SB	SB
Directions Served	TR	LT	R
Maximum Queue (ft)	104	168	125
Average Queue (ft)	41	73	47
95th Queue (ft)	84	145	106
Link Distance (ft)	420	236	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)		8	0
Queuing Penalty (veh)		7	0

Intersection: 2: Arapahoe Rd. & 62nd St

Movement	EB	WB	WB	SB	SB
Directions Served	L	T	T	L	R
Maximum Queue (ft)	38	52	54	59	59
Average Queue (ft)	11	2	1	15	28
95th Queue (ft)	35	20	15	41	50
Link Distance (ft)		391	391	245	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200				200
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: 63rd St & Arapahoe Rd.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	122	197	238	70	145	113	47	50	52	117	130
Average Queue (ft)	58	66	90	24	58	26	11	16	15	59	52
95th Queue (ft)	102	156	184	54	116	73	34	43	42	105	98
Link Distance (ft)		391	391		799	799			177		522
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100			100			100	100		200	
Storage Blk Time (%)	1	2		0	1	0					
Queuing Penalty (veh)	10	2		0	1	0					

Intersection: 4: Cherryvale Rd. & Site Access

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	46	46	45
Average Queue (ft)	6	7	5
95th Queue (ft)	29	31	25
Link Distance (ft)	473	333	420
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Site Access RIRO & Arapahoe Rd.

Movement	B7	WB	WB	WB	NB
Directions Served	T	T	T	T	R
Maximum Queue (ft)	10	315	318	65	60
Average Queue (ft)	0	85	70	2	19
95th Queue (ft)	5	293	257	37	49
Link Distance (ft)	522	354	354	354	224
Upstream Blk Time (%)		1	0		
Queuing Penalty (veh)		2	0		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 546

LSC TRANSPORTATION CONSULTANTS, INC.

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November 5, 2012

Ms. Rebecca Spears
AIA, LEED AP
RB+B Architects, Inc.
315 E. Mountain Avenue, Suite 100
Fort Collins, CO 80524

RE: Jewish Community Center
Parking Study
LSC #110401

Dear Ms. Spears:

In response to your request, LSC Transportation Consultants, Inc. has prepared this parking study for the proposed Jewish Community Center (JCC). As shown on Figure 1, the site is located on the southeast corner of the Arapahoe Road (SH 7) and Cherryvale Road intersection in the City of Boulder, Colorado.

REPORT CONTENTS

The report contains the following: a summary of various parking scenarios presented by the JCC in their September 3, 2012 *Parking Management Plan*, a summary of estimated parking demand based on the 3rd Edition of the Institute of Transportation Engineers (ITE) *Parking Generation Manual*, and a summary including the recommended number of parking spaces.

JCC PARKING MANAGEMENT PLAN

This plan was prepared by the JCC and estimates the site's parking demand over time. The plan is effectively a shared parking study because it looks at the Phase 1 parking demand over time for three different scenarios of events and activities on the site. The plan is attached for reference. The scenarios include:

1. A weekday during the school year "maximum use" scenario. Additional detail on the assumptions assumed can be found in the attached plan. The JCC estimates this scenario would require a maximum of 173 parking spaces.

2. A weekday during the school year "typical peak" scenario. Additional detail on the assumptions assumed can be found in the attached plan. The JCC estimates this scenario would require a maximum of 166 parking spaces.

3. A weekday during the summer "typical" scenario. Additional detail on the assumptions assumed can be found in the attached plan. The JCC estimates this scenario would require a maximum of 161 parking spaces.

COMMENTS ON JCC PARKING MANAGEMENT PLAN

The JCC *Parking Management Plan* appears to be very organized and thorough and, most importantly, is based on the JCC's experience at their existing site and their plans to operate this new site. Based on our review of the Plan, we have the following suggestions:

Phase 1

Scenario 2 is the scenario with the highest probability of occurrence based on the JCC's commitment to manage events and activities to prevent Scenario 1 from occurring. This would result in a recommendation of 166 parking spaces.

Phase 2 (2022 Scenario)

The number of parking spaces required for development beyond Phase 1 would best be determined at the time the future phase is proposed based on the utilization of Phase 1 parking.

PARKING GENERATION

Table 1 shows both the estimated Phase 1 and Phase 2 (2022 Scenario) parking demand based on the rates from *Parking Generation, 3th Edition, 2004* by the Institute of Transportation Engineers (ITE).

Assuming a 10% alternative travel modes reduction consistent with the traffic impact analysis, the Phase 1 recommendation would be to provide 148 parking spaces. The number of parking spaces required for development beyond Phase 1 would best be determined at the time the future phase is proposed based on the utilization of Phase 1 parking.

CONCLUSIONS AND RECOMMENDATIONS

1. Two separate methods were used to estimate the number of parking spaces for the JCC. The first method is based on the shared parking analysis developed by the JCC and the second method is based on the ITE *Parking Generation Manual* with an appropriate alternative travel mode reduction.

2. It is recommended to provide 148 parking spaces for Phase 1 with the overflow capacity of 166 total parking spaces. The number of parking spaces required for development beyond Phase 1 would best be determined at the time the future phase is proposed based on the utilization of Phase 1 parking.

* * * * *

We trust this parking study will assist you in gaining approval of the JCC. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By_____
Christopher S. McGranahan, P.E., PTOE
Associate

COLORADO LICENSED
CHRISTOPHER S. McGRANAHAN
39018
PROFESSIONAL ENGINEER

11-5-12

CSM/wc

Enclosures: Table 1
Figure 1
ITE Parking Generation Data
September 3, 2012 Boulder JCC *Parking Management Plan*

Z:\LSC\Projects\2011\110401\Report\JCC_Parking_Study-110512.wpd

Table 1
ESTIMATED PARKING GENERATION
Jewish Community Center
Boulder, CO
(LSC #110401; November, 2012)

Trip Generating Category	Quantity	Average Peak Period Parking Demand Rates [1]	Gross Average Peak Period Parking Demand	Alternate Mode Reduction	Gross Average Peak Period Parking Demand
Phase 1					
Day Care [2]	150 students	0.24	36	10%	32
Recreational Community Center [3]	33.73 KSF [4]	3.83	129	10%	116
Total			**165**		**148**
Phase 2 (2022 Scenario)					
Day Care [2]	174 students	0.24	42	10%	38
Recreational Community Center [3]	40.00 KSF	3.83	153	10%	138
Total			**195**		**176**

Notes:
(1) Source: *Parking Generation Manual*, Institute of Transportation Engineers, 3rd Edition, 2004.
(2) Land Use #565 - Day Care Center
(3) Land Use #495 - Recreational Community Center
(4) KSF = 1,000 Square Feet

Figure 1

Vicinity Map

Jewish Community Center (LSC #110401)

LSC TRANSPORTATION CONSULTANTS, INC.

Land Use: 565
Day Care Center

Land Use Description

A day care center is a facility where care for pre-school aged children is provided, normally during the daytime hours. Day care facilities generally include classrooms, offices, eating areas and playgrounds. Some centers also provide after-school care for children.

Database Description

The database consisted of a mix of 17 suburban and 21 urban locations. Parking demand rates at the suburban sites were similar to those at urban sites and therefore the data were combined and analyzed together.

- Average parking supply ratio: 0.24 spaces per student (29 study sites), 1.5 spaces per employee (29 study sites) and 3.5 spaces per 1,000 sq. ft. GFA (29 study sites).

For all but one of the study sites, the only counts taken were between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m.

More than 75 percent of the study sites were located in Tennessee.

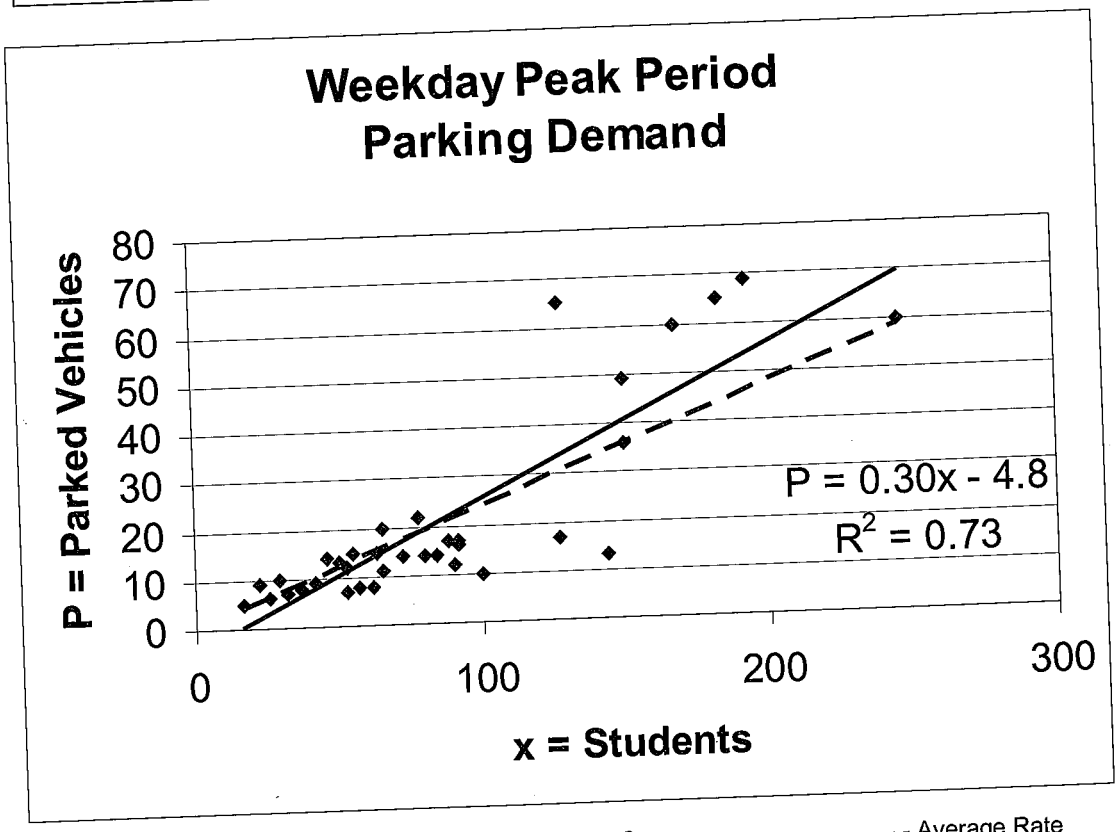
Study Sites/Years

Alhambra, CA (1988); Chattanooga, TN (1990); Nashville, TN (1991); Bragg, NC (1992); Eustis, VA (1992); Riley, KS (1992); Tacoma, WA (1992); Happy Valley, OR (2002)

Land Use: 565
Day Care Center

Average Peak Period Parking Demand vs: Students
On a: Weekday

Statistic	Peak Period Demand
Peak Period	8:00–9:00 a.m.; 4:00–6:00 p.m.
Number of Study Sites	37
Average Size of Study Sites	85 students
Average Peak Period Parking Demand	0.24 vehicles per student
Standard Deviation	0.09
Coefficient of Variation	39%
95% Confidence Interval	0.21–0.27 vehicles per student
Range	0.09–0.51 vehicles per student
85th Percentile	0.34 vehicles per student
33rd Percentile	0.19 vehicles per student



◆ Actual Data Points ——— Fitted Curve - - - - Average Rate

Land Use: 495
Recreational Community Center

Land Use Description

Recreational community centers are stand-alone public facilities similar to and including YMCAs. These facilities often include classes and clubs for adults and children; a day care or nursery school; meeting rooms; swimming pools and whirlpools; saunas; tennis, racquetball, handball, basketball and volleyball courts; outdoor athletic fields/courts; exercise classes; weightlifting and gymnastics equipment; locker rooms; and a restaurant or snack bar. Public access is typically allowed, but a fee may be charged. Racquet/tennis club (Land Use 491), health/fitness club (Land Use 492) and athletic club (Land Use 493) are related uses.

Database Description

The database consisted of all suburban sites with the exception of one urban site. Parking demand at the urban site differed from the suburban sites and therefore the data were analyzed separately.

- Average parking supply ratio: 3.0 spaces per 1,000 sq. ft. GFA (four study sites).
- Average number of employees: 20
- Average employee density: 1 employee per 4,300 sq. ft. GFA (six study sites).

Parking demand was reported for the urban study site with 40,000 sq. ft. GFA. The site had a weekday peak parking demand ratio of 1.15 vehicles per 1,000 sq. ft. GFA. The weekday peak period was between 4:00 and 5:00 p.m. and between 6:00 and 7:00 p.m. based on a continuous count between 3:00 p.m. and 8:00 p.m.

One study site was counted on a Sunday and had a peak parking demand ratio of 4.0 vehicles per 1,000 sq. ft. GFA. The Sunday peak period was between 3:00 and 4:00 p.m. based on a continuous count between 11:00 a.m. and 5:00 p.m.

Additional Data

Transitions between events at athletic clubs (for example, youth league basketball games) can result in wide variation in parking demand.

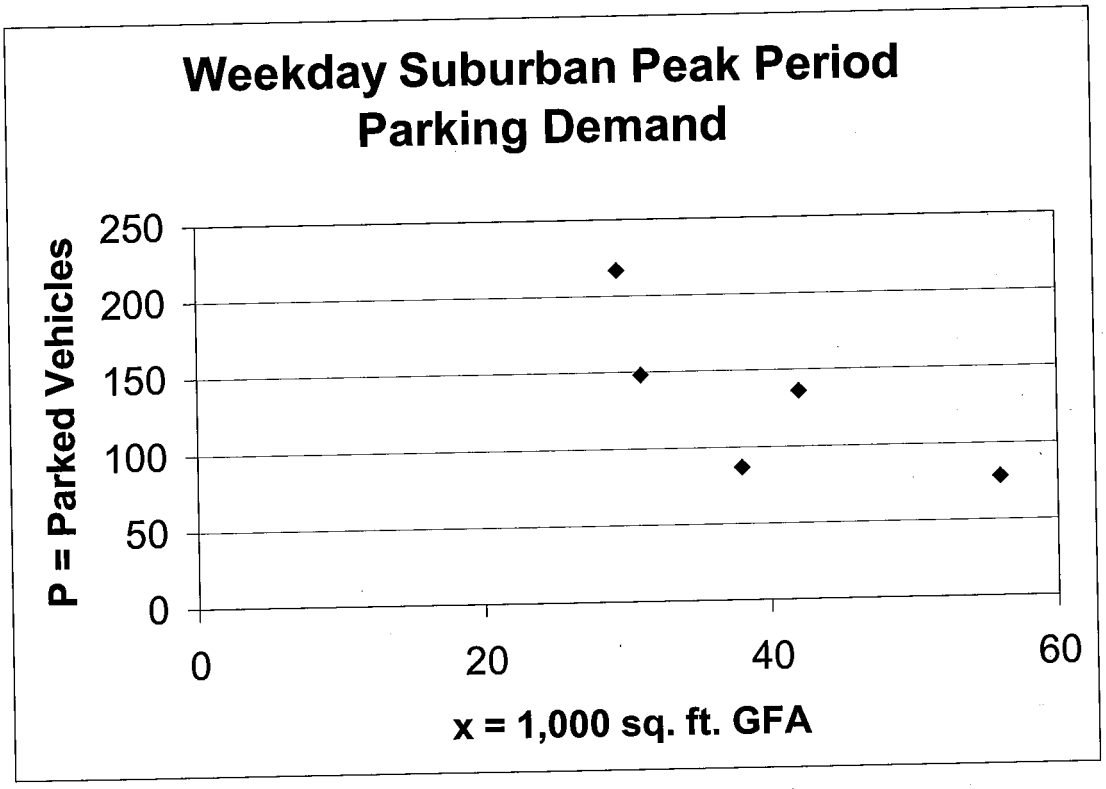
Study Sites/Years

Edina, MN (1984); Lakewood, CO (1984); Beaverton, OR (1995); Clackamas, OR (1995); Portland, OR (1995)

Land Use: 495
Recreational Community Center

Average Peak Period Parking Demand vs: 1,000 sq. ft. GFA
On a: Weekday
Location: Suburban

Statistic	Peak Period Demand
Peak Period	6:00–8:00 p.m.
Number of Study Sites	5
Average Size of Study Sites	39,300 sq. ft. GFA
Average Peak Period Parking Demand	3.83 vehicles per 1,000 sq. ft. GFA
Standard Deviation	2.34
Coefficient of Variation	61%
Range	1.46–7.38 vehicles per 1,000 sq. ft. GFA
85th Percentile	5.82 vehicles per 1,000 sq. ft. GFA
33rd Percentile	2.59 vehicles per 1,000 sq. ft. GFA



◆ Actual Data Points

BOULDER JCC
PARKING MANAGEMENT PLAN
September 3, 2012

Overview

The Boulder JCC has operated at our current location—3800 Kalmia Avenue in Boulder—for 11 years. The new Boulder JCC will be located at the southeast corner of Cherryvale Road and Arapahoe Avenue in Boulder, as detailed in our City submission. This new facility will allow the Boulder JCC to enlarge our Early Childhood Center, expand our educational programs, and provide community meeting and celebration space. These are fundamentally similar uses to those that we conduct presently in our current location, but will be enhanced by our larger and more up-to-date facility. *This Parking Management Plan (PMP) is therefore based on our experience at our current location, which informs the assumptions herein about events, use patterns, and parking needs. In short, we know a great deal about how we will use our new facility because of our history in our existing facility.*

***Based on the analysis in this Parking Management Plan, we conclude that the new Boulder JCC facility will need between 165 and 180 parking spaces.* For a typical day we will need approximately 160 spaces, but under a maximum use scenario we may need as many as 180.**

Table of Contents

We have organized this Parking Management Plan as follows:

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I. Background Information

a. Description of Proposed Facility

The proposed Boulder JCC will be an approximately 50,000 square foot (gross) building developed on a 9 acre parcel at the southeast corner of Cherryvale Road and Arapahoe Avenue in Boulder. Our City submission also proposes up to 20,000 square feet (gross) of additional future expansion in a later phase.

The Boulder JCC is a multi-use facility catering to all ages—from six-week-old infants to seniors. The proposed building has a number of different programming spaces, including:

- Early Childhood Center (ECC)
- adult classrooms
- gymnasium
- group fitness and cardio rooms
- Community Hall
- baby classrooms
- library
- tumbling room
- community office space
- JCC office space
- teen lounge

The new facility will also have outdoor facilities that include an athletic field and recreation areas. The proposed future expansion includes a larger fitness area, additional ECC classrooms, additional adult classroom space, and the future addition of an outdoor swimming pool.

b. Proposed Hours of Use

To understand the JCC's hours of use it is helpful to break our uses into two categories: *regular uses* and *special uses*.

> *Regular Uses:* Our normal uses occur Monday through Thursday 8:00 a.m. to 9:00 p.m., Fridays 8:00 a.m. to sundown, and Sundays 8:00 a.m. to 8:00 p.m. This includes all of our regular daily uses, such as our pre-school, classroom and fitness, evening programming for seniors, etc. In general we have far less activity on weekends than during the week, and will be open on Sundays only if there is a special program (e.g., we are showing a film, etc.).
>
> *Special Uses:* In addition to these regular uses, we will use our Community Hall for larger lectures or events on a weekday or weekend evening. We also anticipate renting our facility for bar/bat mitzvahs, wedding celebrations, and other special events, particularly on Saturdays and Sundays when we might otherwise be closed. We cannot determine precisely the times such rentals might occur, but we anticipate that they would usually begin in the afternoon and run into the evening (e.g., 4:00 p.m. through 11:00 p.m., for example).

c. Number of Employees

Based on our pro forma and our current use patterns, we anticipate that we will operate in our new building with approximately 50 employees. More than half of these employees will be part-time (around 24 hours). The others will be full-time or ¾ time. If we expand further in the future—as discussed above—the staff could grow to 58, again with half being part time.

The Boulder JCC encourages health and wellness. At our current Kalmia Avenue location, up to 10 staff members ride their bicycles to work and some carpool as well. Our new location at the corner of Cherryvale and Arapahoe has better access to the bike trail system, so we see bicycle use continuing or increasing as we move to our new facility. In addition, our new location is better served by public transportation, and we anticipate that several of our staff members will take the bus from Boulder or Louisville. We plan to continue to encourage our employees to make use of bicycle, carpooling, and public transportation.

II. Explanation of Parking Needs

As noted, we have operated the Boulder JCC at our current location for 11 years. Based on this experience, it is very important to understand that the JCC does not generate consistent heavy traffic or parking usage throughout a typical day. Instead, our parking needs vary greatly as different activities take place at our facility.

To understand the JCC's parking needs, the following basic overview may be helpful. (These are simply guidelines for reference—specific information is provided in the remainder of this PMP.)

(1) *During the regular school year, our primary parking needs are generated by our Early Childhood Center, which operates Monday through Friday only*. Parents come in the morning to drop off their children and return in the afternoon to pick them up. For parking purposes, the Early Childhood Center is essentially a large pre-school facility. At maximum capacity it will hold 150 children. During the summer, our Early Childhood Center operates at a reduced capacity (50 percent or 75 children).

(2) *During the summer, our primary parking needs are generated by our summer camp for kids and teens*. Again, most of our parking needs result from parents dropping off their children in the morning and picking them up in the afternoon.

(3) *Our third major use will be for events taking place in our Community Hall*. This might include showing a film, hosting a speaker, or celebrating a bar/bat mitzvah or a wedding. Some of these will be JCC events and some will be rental events. The Community Hall seats 250 people in a dinner configuration at round tables, or 330 people auditorium-style in rows of seats. *Most of our existing JCC events, however, attract between 50 and 120 people. In addition, larger Community Hall events will take place in the evenings, and therefore will not conflict with the parking needs of either the Early Childhood Center or the summer camp, because they will occur later in the day.*

(4) *All of our other uses—our fitness studio, our gymnasium, our adult classroom spaces, etc.—have relatively low impact on parking demand.* We do not fill these spaces full time, but instead conduct programming in such spaces on and off throughout the day.

The JCC has a great deal of control over the scheduling of these uses. Our Facilities Director is careful to program our classes and events so that they do not conflict with our Early Childhood Center pick up or drop-off times, for example, and so that adult education classes do not overlap with Community Hall events.

To explain our parking needs, we present three scenarios for your consideration that illustrate how these uses combine:

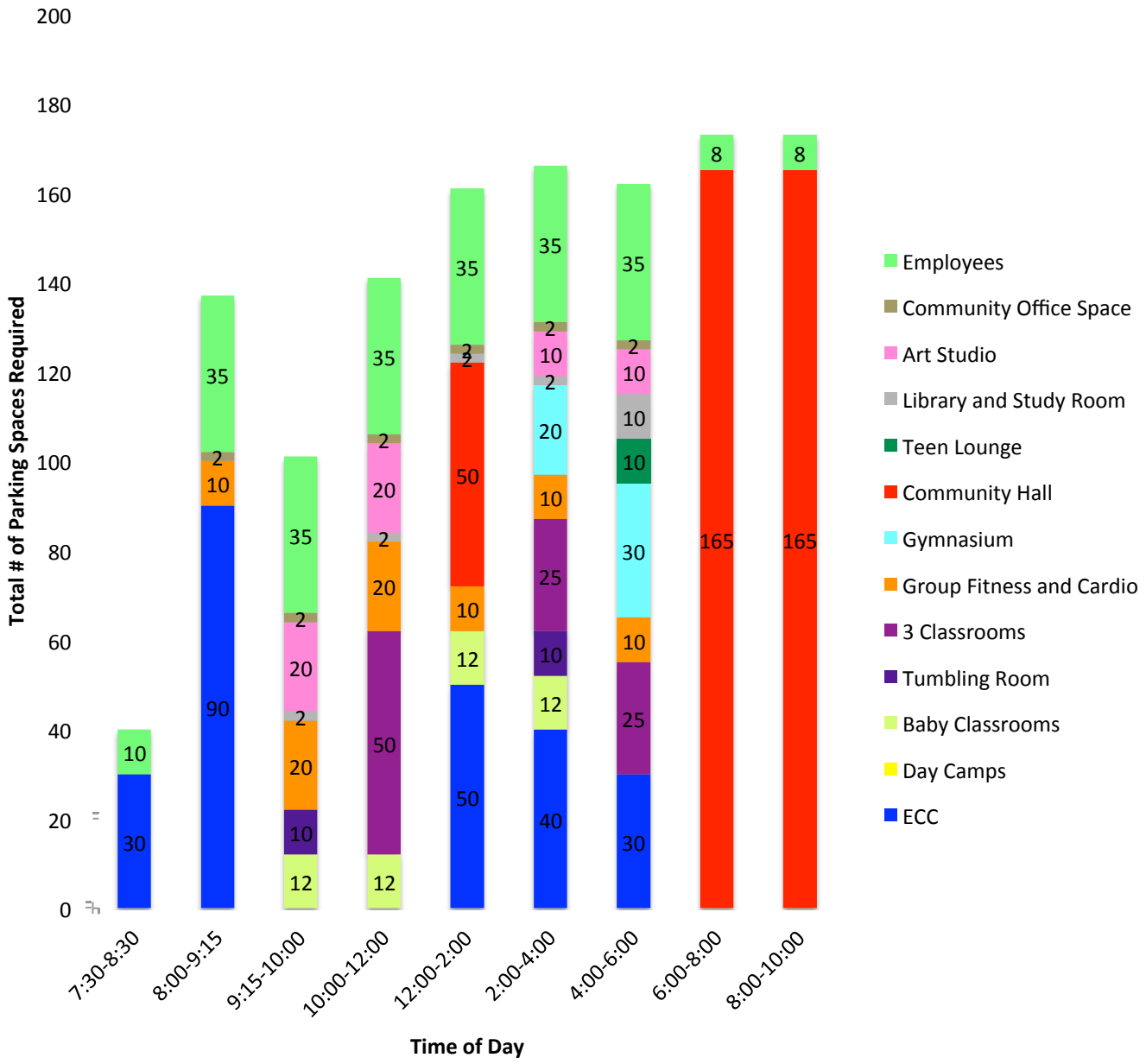
(a) a "Maximum Use Scenario" that shows what our maximum parking needs will be when we have a large community hall event scheduled in the evening;

(b) a "Typical Weekday/School Year Use Scenario" that shows the parking needs for a weekday during the school year when the Early Childhood Center is our primary use; and

(c) a "Typical Weekday/Summer Use Scenario" that shows the parking needs for a weekday during the summer.

a. Maximum Use Scenario – Requires Approx. 173 Spaces

Figure 1:
Parking Space Usage for a School-Year Weekday
With 35 Employees Driving,
an At-Capacity Early Childhood Center,
Regular Programming in All Spaces,
and a Very Large Evening Community Hall Event
(See Appendix B p. 11 for Detailed Supporting Data)



We begin with a maximum use scenario: a school-year weekday in which our Early Childhood Center is in session and operating at maximum capacity (150 students), there is programming in all other spaces (such as the adult classrooms, the gymnasium, etc.), and there is a large evening event scheduled in our Community Hall (330 attendees).

Figure 1 shows this maximum use scenario. On the day shown in Figure 1, the morning parking usage is generated by parents dropping off their children at the Early Childhood Center, as well as employees arriving for work. During the middle of the day, usage rises as some parents pick up their children mid-day. Figure 1 then shows a large Community Hall event in the evening. Additionally, smaller spaces such as the Art Studio, Library, Teen Lounge, Gymnasium, Fitness room, or Classrooms are in use throughout the day, although they generate far less parking demand. (Figure 1 is based on the Maximum Use Scenario data chart on page 11 of Appendix B.)

Figure 1 shows that in this maximum use scenario, our largest parking need is for 173 spaces. *The vast majority of days at the JCC are far less busy than Figure 1 suggests, however. In fact, parking demand would be* reduced *by each of the following three factors:*

- Figure 1 assumes that 80 percent of children brought to or picked up from our Early Childhood Center are brought in a car alone with a parent—that only 20 percent are brought with a sibling or in a carpool. Based on our experience at the existing JCC, we predict that in fact a significantly higher percentage of our ECC children will share rides, which will lower parking demand during ECC drop off and pick up times.

- Figure 1 assumes that 35 employees out of 50 will drive to work and require parking spaces. This is roughly equivalent to the percentage of employees that drive to our current facility. We expect a slightly greater percentage to use public transportation, bicycles, or carpooling in our new facility, however, and we will encourage employees to use such shared forms of transportation.

- Figure 1 shows a 330 person auditorium-style seating event in the Community Hall during the evening. *This would be an extremely large event for the JCC.* Most auditorium-style events in the Community Hall would be far smaller—perhaps 50-125 people. Dinner-style events in the Community Hall would hold up to 250 people.

  In addition, Figure 1 assumes that an event of this size would need 165 parking places (for a total during that time period, including employee parking spaces, of 173). To reach this figure, we assume that 45% (75 cars) of the cars attending this event would bring only one person; approximately 25% (40 cars) would bring 2 people; 15% (25 cars) would bring 3 people; and 15% (25 cars) would bring 4 people. This totals 165 cars and parking spaces.

  This mix of ride types (e.g., 1-person, 2-person, etc.) most likely *overestimates* the number of parking spaces needed. Boulder JCC events are almost always family-oriented, and therefore a majority of our patrons arrive in vehicles carrying 2-4 people. In addition, our senior patrons often carpool, again leading to a majority of vehicles with multiple occupants. The JCC encourages such carpooling, and if we ever hold an event as large as the one depicted in Figure 1, we would certainly encourage shared vehicle occupancy to reduce the parking demand. We could also offer incentives at such an event—for example, a reduced ticket price—for patrons that carpool. All of this would most likely mean that we would need fewer than 165 parking spaces for such an event.

  (Note that even a very different mix of ride types would generate need for no more than 165 parking spaces. For example, if we assume that most attendees to such an event came in cars as couples, rather than as families, we might assume 18% (30 cars) of the cars attending would bring only one person; 67% (110 cars) would bring two; 9% (15 cars) would bring three; and 6% (10 cars) would bring four people. This again totals 165 cars/parking spaces for a 330 person event.)

In summary, Figure 1 shows a maximum use scenario under which both of our largest parking uses—the Early Childhood Center and the Community Hall—are at maximum capacity. This scenario would require a maximum of approximately 173 parking spaces.

b. Typical Weekday/School Year Use Scenario – Requires Approx. 166 Spaces

Figure 2:
Parking Space Usage for a School-Year Weekday
With Normal Early Childhood Center Use,
Normal Programming in All Spaces,
and an Evening Community Hall Event
(See Appendix B p. 12 for Detailed Supporting Data)

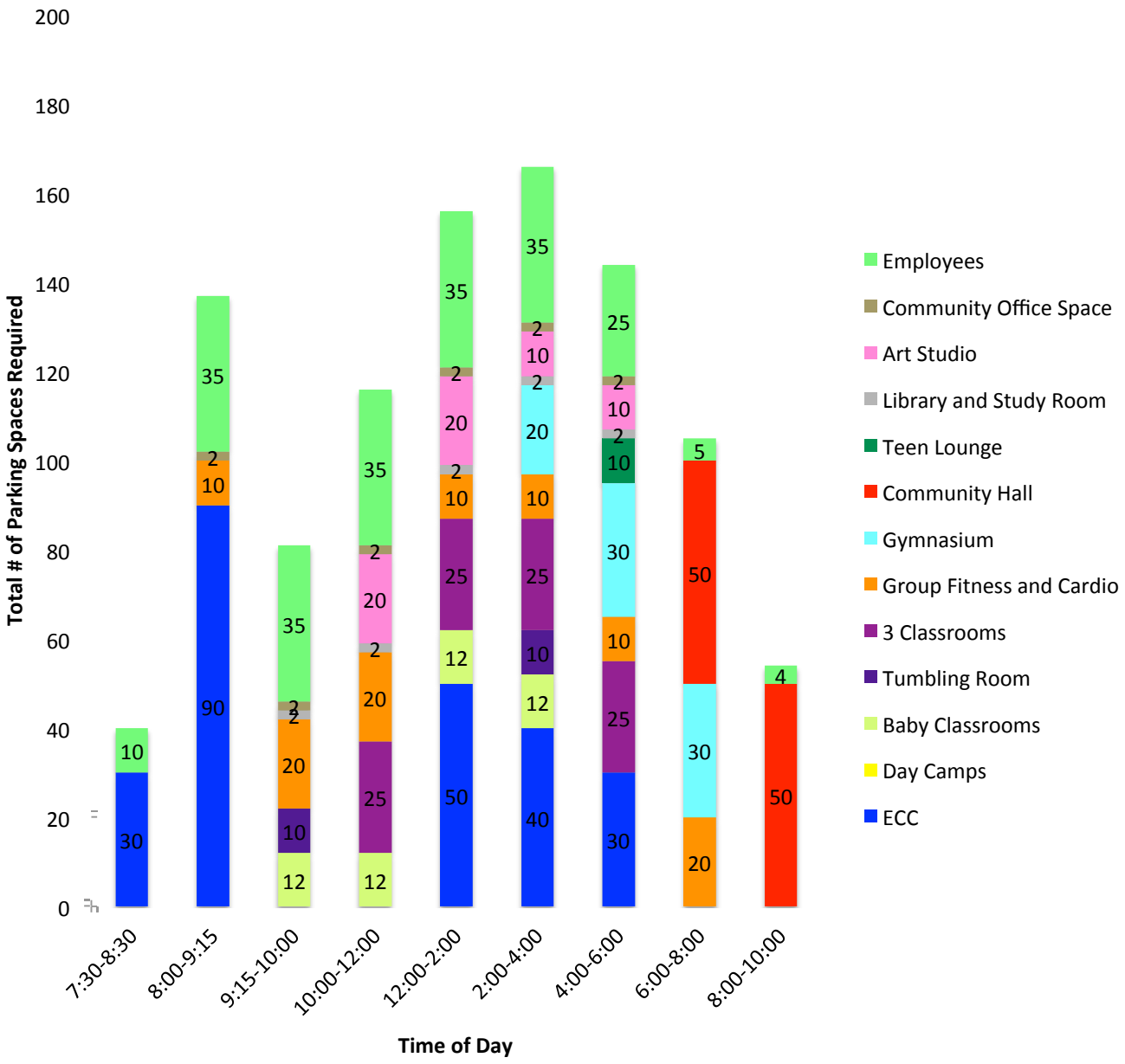


Figure 2 shows a far more typical Boulder JCC weekday during the school year. The parking needs for a typical day are lower than for the "Maximum Use" scenario. The day begins with Early Childhood Center drop-offs in the early morning and the arrival of our employees. Although programming in our various classroom, fitness, and gymnasium spaces adds some parking demand on-and-off throughout the day, the Early Childhood Center pickup/drop-off at mid-day again accounts for the greatest parking need. Figure 2 assumes an evening event in the Community Hall that requires 50 parking spaces. In this typical school year weekday scenario, our maximum parking need would be approximately 166 spaces.

c. Typical Weekday/Summer Use Scenario – Requires Approx. 161 Spaces

Figure 3:
Parking Space Usage for a Summer Weekday
With Normal Early Childhood Center Summer Use,
Normal Summer Camp Use,
Normal Programming in all Spaces
And an Evening Community Hall Event
(See Appendix B p. 12 for Detailed Supporting Data)

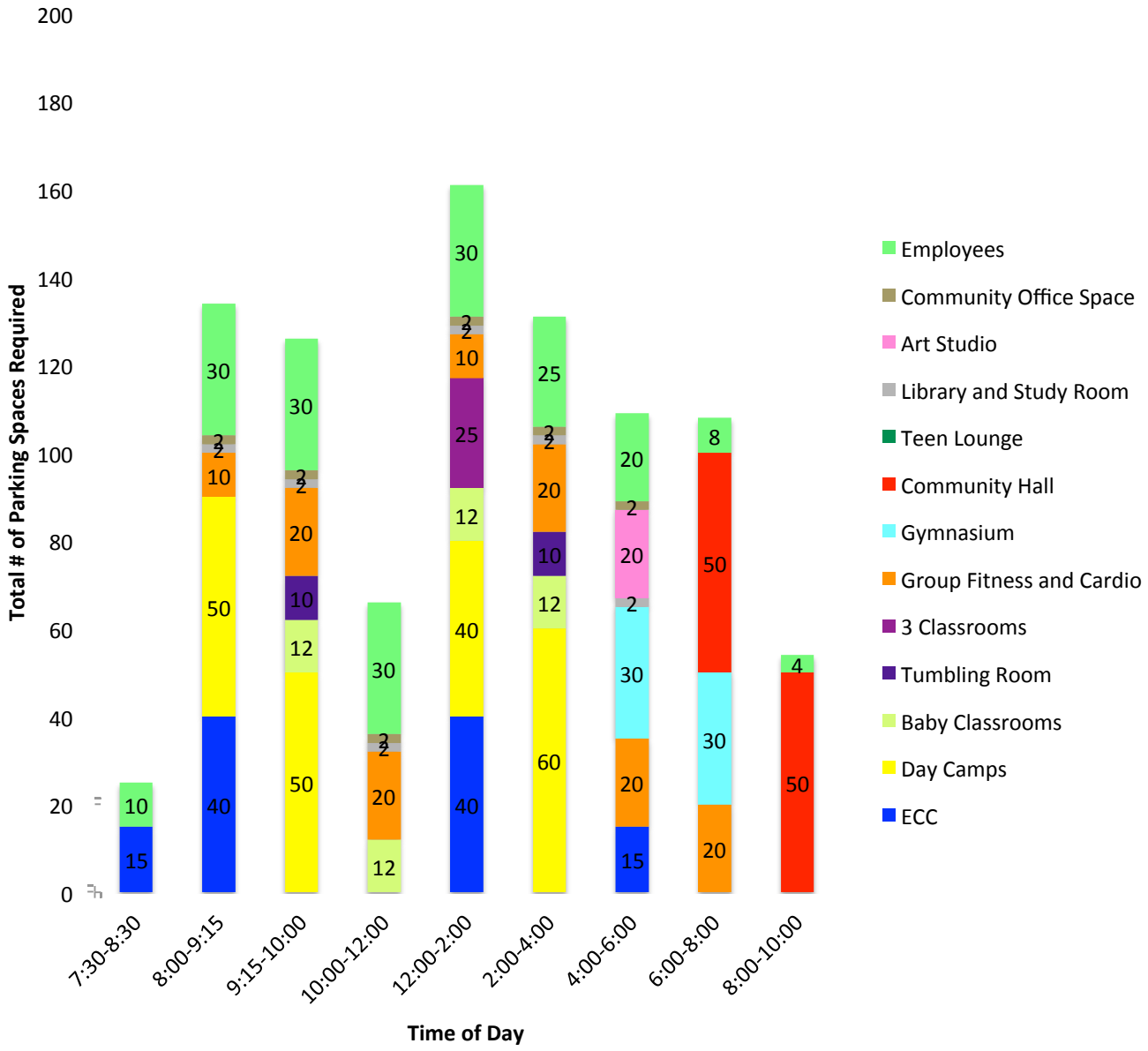


Figure 3 shows a typical summer day. As noted, during the summer our Early Childhood Center is open at a reduced capacity—roughly 40-50 percent (or 75 students). At the same time, we operate a summer camp for elementary-aged children and teens. As a result, Figure 3 shows usage in the morning for ECC and summer camp drop-offs. Figure 3 also shows a Community Hall event requiring 50 parking spaces in the evening, just to illustrate that such events do not overlap with either the ECC or the summer camp. In this typical summer weekday scenario, our maximum parking need would be approximately 161 spaces.

APPENDIX A:
DETAILED EXPLANATION OF SPECIFIC PARKING USES

As explained above, our three primary uses that affect parking are our Early Childhood Center, our summer camp, and our Community Hall. In this Appendix we describe those three uses in detail. In addition, we describe each of our other uses in detail. As noted, however, even in combination all of the other uses of the JCC's facility are relatively small compared to these three primary uses.

a. Three Primary Uses: Early Childhood Center, Summer Camp, and Community Hall

(1) Early Childhood Center: The ECC will serve families with children from 6 weeks old to pre-kindergarten. The total capacity of the school at any given time will be 150 students. These students will be picked up and dropped off at different times depending on their choice of half-day, extended day, or full-day. Many of these students are siblings and many carpool as well. This function requires 30 spaces between 7:30-8:30am (for early drop-off), 90 spaces between 8:30-9:15am (for regular drop-off) and about 70 spaces between 12-2pm (for pick-up). It also requires 30 spaces between 2-4pm and 30 spaces between 4-6 pm (as some families choose extended day options). The spaces will be used for about 20 minutes to allow time for parents to walk their children into the building and leave.

During the summer our ECC operates at 40-50% capacity. We therefore estimate needing 15 spaces between 7:30-8:30am and 40 spaces between 8:30-9:15am (for drop-off), 40 spaces between 12-2pm (for pickup), and 15 spaces between 4-6pm (for late pickup).

(2) Summer Camp: The Boulder JCC operates a day camp during the summer for elementary and middle school children. The camp utilizes much of the space in the building, meaning that we offer limited other (adult) programming.

When we reach capacity, we anticipate that our elementary age camp will serve approximately 150 campers (many siblings of Early Childhood Center summer attendees and many siblings of other campers). We will start our camp slightly later than our Summer ECC to ease parking demand and traffic flow. Depending on the number of children, we will stagger the starts of these programs to ensure safety in the parking lots.

(3) Community Hall: The Community Hall's primary use will be in the evening when larger events and rentals will use the space. The largest of the JCC programs currently attract about 120 people, but most events are closer to 50 people. If a larger event is planned we will ensure that no other events that require parking will occur during the same time. During the summer, the Community Hall will be used for camp during the day, so no additional parking will be necessary. The largest events will be rentals that will take place on Friday night and Saturday when the JCC does not have any other programming, so the entire parking lot will be allocated to the Community Hall, as indicated in the Maximum Use Scenario.

b. Other Uses

Adult Classroom Space: The two classrooms on the first floor and the adult gathering space on the second floor provide space to hold meetings, educational lectures, films, receptions, and other cultural events. Each of the three rooms can hold 25 people. Meetings are scattered throughout the day. At any given time, we anticipate that these rooms will require up to 50 spaces, but they will not be scheduled to start at the same time as the primary drop-off and pick-up times of the ECC. During the summer, we will not host many events in these rooms. Instead, in the summer these rooms will be used for camp.

Gymnasium: During the day in the school-year from 9am-3pm the gymnasium will be used as activity space for the ECC, so no additional spaces will be necessary. From 3pm-6pm, the gym will be used for afterschool programming that will require approximately 20 parking spaces. From 6pm-8pm the gymnasium will be used for leagues. We

anticipate that about 30 cars will be parked at this time. (If the gymnasium generates more than 30 parking spaces in the evening, we will ensure that such gymnasium use does not occur if a large Community Hall event is taking place, so that the two uses do not simultaneously generate parking demand.) During the summer, the gymnasium will be used for our day camps.

Group Fitness and Small Cardio Rooms: These two small fitness rooms hold 20 and 12 people, respectively. We plan to use the Group Fitness room for small classes throughout the day. Most of the attendees will be parents dropping off or picking up their children at our ECC or summer camp. During those drop-off and pickup times, therefore, we estimate needing 8-10 additional parking spaces for the group fitness room; during other times we estimate needing 15-20 spaces. The Small Cardio Room will be used primarily by staff and for personal training sessions. The vast majority of personal training attendees will be parents dropping off or picking up their children from our ECC or summer camp. We therefore estimate needing only 1-2 additional spaces for this cardio room.

Baby Classrooms: There are classes that run throughout the day from 9:30-4pm. Each of these classes has at most 12 baby participants (parent and child). There are two classrooms where this programming will take place and they rarely occur at the same time. We therefore anticipate that there will be at most 12 cars parked for these activities at any given time. During the summer the programming is limited as the day camps use these classrooms. There is little to no programming on the weekends in these rooms.

Tumbling Room: The tumbling room is shared between the ECC, Baby Classes, and Open (public) Tumbling Times. There will be up to 2 tumbling classes a day (but not every day and not on weekends). At most, at any given time, we anticipate 10 cars parked to use this space.

Teen Lounge: The teen lounge will mostly be used in afterschool programming and some evening activities. Many of these teens do not drive, so they will be dropped off. We anticipate that this program will serve about 20 teens during the afterschool time with about 10 cars parking at any given time.

Library and Study Room: The heaviest use of the library is from our ECC. Other than these children, most of the use comes from people in the building for other reasons. We have about 300 check-outs a year. Therefore, we anticipate at any given time that there will be at most 2 additional people parked to check-out, meet, or study in the library. In addition, the Library has a small Study Room. We expect at most 10 cars once or twice a day if meetings are held in this room.

Art Studio: The small art studio will be used for art-related classes. In the mornings we will hold art classes for adults, which may require up to 20 parking spaces. In the afternoons this art studio will be used for kids art classes. The majority of students will be attendees at our ECC or summer camp that stay for additional class time. In addition, attendees to these afternoon or after school classes will often be siblings of ECC or summer camp children, and/or will carpool with other students. We therefore expect to need 10 parking spaces for the art studio classes in the afternoons.

Community Office Space: The new Boulder JCC will provide office space to several affiliated organizations. For example, the JCC is home to Jewish Family Service. JFS operates with 1.25 employees and anticipates the same as they move into the new building. Most of their services are provided out of the building in senior centers around Boulder County. The programs they operate are joint programming with the Boulder JCC and included in the estimates for parking in our adult classrooms. We have similarly accounted for the possibility of other future users of our community office space by accounting for them as employees in our parking estimates.

c. Proposed Future Expansion

In our City submission we have indicated the future expansions that we envision for the JCC. Here we provide descriptions of the parking needs of these possible future expansions. We anticipate that with these future expansions, the JCC would require a total of 200 parking spaces, 40 more than needed prior to expansion for typical use and 20 more than needed prior to expansion for maximum use.

Swimming Pool: The Boulder JCC swimming pool will be an outdoor pool that will operate from Memorial Day to Labor Day. During the limited part of the school year that the pool is open, the pool will be used by our Early Childhood Center. During the summer, it will be used by our day camp, swim team, as well as JCC members. It will also be open to JCC members in the evening and on weekends. Based on current projections we anticipate that in mornings we would allow swim team and camp to use the pool from 7:30-11:00am, and the pool being open to JCC members from 11:00am-6:00pm. The early morning swim team use will require 20 parking spaces between 7:30-8:30. The membership use from 11:00am-6:00pm will require between 15 and 30 parking spaces—many pool users are likely to also be ECC or summer camp parents. Finally, we will close the pool when a large event (e.g., a bar/bat mitzvah or wedding) is scheduled in the Community Hall.

Fitness Area: In the future we have set aside space to house a 2000 - 3000 SF fitness area. Hours of operation are anticipated to be 9:00am-8:00pm. We see this area being used by many of our parents that drop off their children in our Early Childhood Center as well as other members of the community surrounding the JCC. With this size facility we anticipate that at any given time there will be up to 20 additional cars on top of the cars that park for other reasons and utilize the facility.

2 additional early childhood classes: With the growth of our Early Childhood Center and the demand we see currently, we anticipate that we might need to build two additional classrooms. These classrooms would provide space for an additional 24 children, again with many siblings, carpools, and alternative transportation methods.

3 Additional Classrooms: With the growth of our camps, we may need additional space to house them during the summer. These additional classrooms would provide gathering spaces for the campers. These additional classrooms would not require additional parking spaces, because they would not increase the size of our camp—merely provide more spaces for our camp experience.

APPENDIX B: SUPPORTING DATA TABLES

Figure 1: Maximum Use Scenario

Mon.-Fri. School-Year with Maximum Use Assumptions									
	# of Cars Parked During Time-Frame Listed								
Type	**7:30-8:30am**	**8:30-9:15am**	**9:15-10am**	**10- 12pm**	**12-2pm**	**2-4pm**	**4-6pm**	**6-8pm**	**8-10pm**
Early Childhood Center	30	90			50	40	30		
Day Camps									
Baby Classrooms			12	12	12	12			
Tumbling Room		ECC*	10	ECC*	ECC*	10			
3 Classrooms				50		25	25		
Group Fitness and Cardio		10	20	20	10	10	10		
Gymnasium		ECC*	ECC*	ECC*		20	30		
Community Hall					50			165	165
Teen Lounge							10		
Library and Study Room			2	2	2	2	10		
Art Studio			20	20		10	10		
Community Office Space		2	2	2	2	2	2		
Employees	10	35	35	35	35	35	35	8	8
TOTALS	40	137	101	141	161	166	162	173	173
		*ECC means that the early childhood center will be using it therefore there are no additional cars							

Figure 2: Typical School Year Weekday

Mon.-Fri. School-Year Weekday with Typical Use									
	# of Cars Parked During Time-Frame Listed								
Type	**7:30-8:30am**	**8:30-9:15am**	**9:15-10am**	**10- 12pm**	**12-2pm**	**2-4pm**	**4-6pm**	**6-8pm**	**8-10pm**
Early Childhood Center	30	90			50	40	30		
Day Camps									
Baby Classrooms			12	12	12	12			
Tumbling Room		ECC*	10	ECC*	ECC*	10			
3 Classrooms				25	25	25	25		
Group Fitness and Cardio		10	20	20	10	10	10	20	
Gymnasium		ECC*	ECC*	ECC*		20	30	30	
Community Hall								50	50
Teen Lounge							10		
Library and Study Room			2	2	2	2	2		
Art Studio				20	20	10	10		
Community Office Space		2	2	2	2	2	2		
Employees	10	35	35	35	35	35	25	5	4
TOTALS	40	137	81	116	156	166	144	105	54
		*ECC means that the early childhood center will be using it therefore there are no additional cars							

Figure 3: Typical Summer Weekday

Mon.-Fri. Summer Weekday with Typical Use									
	# of Cars Parked During Time-Frame Listed								
Type	**7:30-8:30am**	**8:30-9:15am**	**9:15-10am**	**10- 12pm**	**12-2pm**	**2-4pm**	**4-6pm**	**6-8pm**	**8-10pm**
Early Childhood Center	15	40			40		15		
Day Camps		50	50		40	60			
Baby Classrooms			12	12	12	12			
Tumbling Room		ECC*	10	ECC*	ECC*	10			
3 Classrooms		CAMP**	CAMP**	CAMP**	25	CAMP**			
Group Fitness and Cardio		10	20	20	10	20	20	20	
Gymnasium		CAMP**	CAMP**	CAMP**	CAMP **	CAMP**	30	30	
Community Hall		CAMP**	CAMP**	CAMP**	CAMP**	CAMP**		50	50
Teen Lounge		CAMP**	CAMP**	CAMP**	CAMP**	CAMP**			
Library and Study Room		2	2	2	2	2	2		
Art Studio		CAMP**	CAMP**	CAMP**	CAMP**	CAMP**	20		
Community Office Space		2	2	2	2	2	2		
Employees	10	30	30	30	30	25	20	8	4
TOTALS	25	134	126	66	161	131	109	108	54
		*ECC means that the early childhood center will be using it therefore there are no additional cars ** Our day camps use most of the building during the summer, precluding other classes and uses							

MEMORANDUM

TO: Planning Board
FROM: Jessica Vaughn, Case Manager
DATE: August 2, 2013
SUBJECT: Informational Item: Lot Line Elimination for 1707 Walnut St.
TECHNICAL DOCUMENT REVIEW: Final Plat for the elimination of the existing lot line between Lot 7 and 8 to create one lot at 1707 Walnut St. The project site is zoned Downtown-2. Case no. TEC2013-00034.

Attached is the disposition of the staff approval for a Technical Document Review to allow the elimination of the existing lot line between Lots 7 and 8, Block 72, Original Town of Boulder subdivision as shown in Attachment B. This replat will eliminate the current lot line from the City records and create one new lot, Lot 7A, from the two existing lots.

Vicinity Map

Pursuant to section 9-12-4, B.R.C. 1981, the city manager shall notify planning board of the disposition of a replat application.

Questions about the project or decision should be directed to Jessica Vaughn at (303) 441-4161 or vaughnj@bouldercolorado.gov.

Attachments.
Attachment A: Staff Disposition
Attachment B: Original Town of Boulder Lot Line Elimination Plat

CITY OF BOULDER
Planning and Development Services

1739 Broadway, Third Floor • P.O. Box 791, Boulder, CO 80306-0791
phone 303-441-1880 • fax 303-441-3241 • web boulderplandevelop.net

CITY OF BOULDER PLANNING DEPARTMENT
NOTICE OF DISPOSITION

You are hereby advised that the following action was taken by the Planning Department based on the standards and criteria of the Land Use Regulations as set forth in Chapter 9-12, B.R.C. 1981, as applied to the proposed development.

DECISION:	**APPROVED**
PROJECT NAME:	**1707 Walnut St. Lot Line Elimination**
DESCRIPTION:	**LOT LINE ELIMINATION request to remove the existing lot line between Lots 7 and 8, Block 72, Original Town of Boulder subdivision to create one lot totaling 14,096 sq. ft.**
LOCATION:	**1707 Walnut St.**
COOR:	**N03W06**
LEGAL DESCRIPTION:	**Lot 7 and 8, Block 72, Boulder Plat, City of Boulder, County of Boulder, State of Colorado**
APPLICANT:	**Kevin Knapp**
OWNER:	**1707 Walnut Partners LLC, a Colorado limited liability company**
APPLICATION:	**TEC2013-00034**
ZONING:	**Downtown-2 (DT-2)**
CASE MANAGER:	**Jessica Vaughn**

THIS IS NOT A SITE SPECIFIC DEVELOPMENT PLAN APPROVAL AND NO VESTED PROPERTY RIGHT IS CREATED BY THIS APPROVAL.

Approved On: August 29, 2013
Date

By:
David Driskell, Executive Director of Community Planning and Sustainability

ORIGINAL TOWN OF BOULDER LOT LINE ELIMINATION

FOR THE ELIMINATION OF A LOT LINE BETWEEN LOT 7 AND LOT 8, BLOCK 72, ORIGINAL TOWN OF BOULDER
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 30, TOWNSHIP 1 NORTH,
RANGE 70 WEST OF THE 6TH P.M.,
CITY OF BOULDER, COUNTY OF BOULDER, STATE OF COLORADO
TOTAL AREA = 14,096 SQ.FT. OR 0.32 ACRES

SHEET 1 OF 1

Legal Descriptions

Existing Legal Description (1707 WALNUT STREET)
LOTS 7 AND 8,
BLOCK 72,
BOULDER,
COUNTY OF BOULDER,
STATE OF COLORADO.

RESULTING LEGAL DESCRIPTION
ALL OF LOT 7 AND LOT 8, BLOCK 72, BOULDER PLAT BEING A PART OF THE SOUTHWEST QUARTER OF SECTION 30, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHERLY CORNER COMMON TO LOTS 8 & 9, BLOCK 72, BOULDER PLAT AND A POINT ON THE NORTHERLY RIGHT OF WAY LINE OF WALNUT STREET, SAID POINT BEING THE POINT OF BEGINNING;

THENCE SOUTH 75°03'15" WEST, A DISTANCE OF 100.58 FEET, TO A POINT ON THE EASTERLY RIGHT-OF-WAY OF 17TH STREET;
THENCE ALONG SAID EASTERLY RIGHT-OF-WAY, NORTH 14°54'21" WEST, A DISTANCE OF 140.19 FEET;
THENCE DEPARTING SAID RIGHT-OF-WAY AND ALONG THE SOUTHERLY LINE OF THE ALLEY, NORTH 75°01'37" EAST, A DISTANCE OF 100.48 FEET TO THE NORTHERLY CORNER COMMON TO LOTS 8 & 9;
THENCE DEPARTING SAID ALLEY, SOUTH 14°56'51" EAST, A DISTANCE OF 140.24 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINING 14,096 SQ.FT. OR 0.32 ACRES, MORE OR LESS.

Statement of Ownership

KNOW ALL MEN BY THESE PRESENTS THAT THE UNDERSIGNED 1000 ALPINE, LLC, A COLORADO LIMITED LIABILITY COMPANY; 1707 PARTNERS, LLC, A COLORADO LIMITED LIABILITY COMPANY; AND KATHERINE PAYNE ARE THE OWNERS AND PROPRIETORS, AS THEIR INTERESTS APPEAR, OF LOT 7 AND LOT 8, BLOCK 72, BOULDER, COUNTY OF BOULDER, STATE OF COLORADO, COMMONLY KNOWN AS 1707 WALNUT STREET.

1000 ALPINE, LLC, A COLORADO LIMITED LIABILITY COMPANY

BY: DEVELEMENT ALPINE, LLC, A COLORADO LIMITED LIABILITY COMPANY

BY: _____
SCOTT HOLTON, MANAGER

ACKNOWLEDGEMENT

STATE OF COLORADO)
)SS.
COUNTY OF BOULDER)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20___, BY SCOTT HOLTON, MANAGER OF DEVELEMENT ALPINE, LLC, A COLORADO LIMITED LIABILITY COMPANY, MANAGER OF 1000 ALPINE, LLC, A COLORADO LIMITED LIABILITY COMPANY.

WITNESS MY HAND AND SEAL.
MY COMMISSION EXPIRES: _____

[SEAL] _____
NOTARY PUBLIC

1707 PARTNERS, LLC,
A COLORADO LIMITED LIABILITY COMPANY

BY: _____
SCOTT HOLTON, MANAGER

ACKNOWLEDGEMENT

STATE OF COLORADO)
)SS.
COUNTY OF BOULDER)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20___, BY SCOTT HOLTON, MANAGER OF 1707 PARTNERS, LLC, A COLORADO LIMITED LIABILITY COMPANY.

WITNESS MY HAND AND SEAL.
MY COMMISSION EXPIRES: _____

[SEAL] _____
NOTARY PUBLIC

BY: _____
KATHERINE PAYNE

ACKNOWLEDGEMENT

STATE OF COLORADO)
)SS.
COUNTY OF BOULDER)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20___, BY KATHERINE PAYNE.

WITNESS MY HAND AND SEAL.
MY COMMISSION EXPIRES: _____

[SEAL] _____
NOTARY PUBLIC

Lender's Consent and Subordination

THE UNDERSIGNED, A BENEFICIARY UNDER A CERTAIN DEED OF TRUST ENCUMBERING THE PROPERTY, HEREBY EXPRESSLY CONSENTS TO AND JOINS IN THE EXECUTION AND RECORDING OF THIS SUBDIVISION PLAT, DEDICATION AND EASEMENTS SHOWN HEREON AND MAKES THE DEED OF TRUST SUBORDINATE HERETO. THE UNDERSIGNED REPRESENTS THAT HE OR SHE HAS FULL POWER AND AUTHORITY TO EXECUTE THIS LENDER'S CONSENT AND SUBORDINATION ON BEHALF OF THE LENDER STATED BELOW.

FIRST BANK

BY: _____
AUTHORIZED REPRESENTATIVE

ACKNOWLEDGEMENT

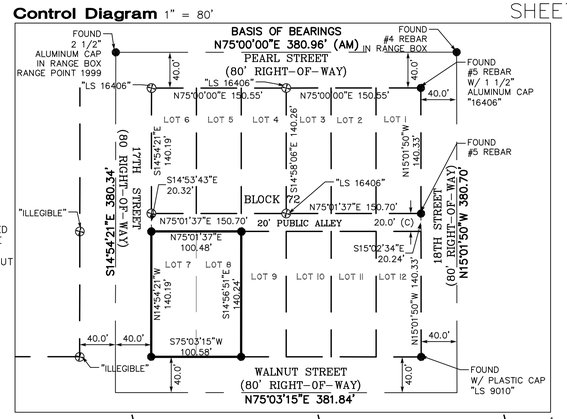
STATE OF COLORADO)
)SS.
COUNTY OF BOULDER)

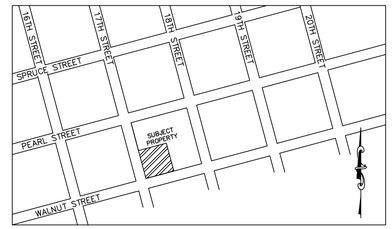
THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20___, BY _____ AS _____ OF FIRSTBANK.

WITNESS MY HAND AND SEAL.
MY COMMISSION EXPIRES: _____

[SEAL] _____
NOTARY PUBLIC

Control Diagram 1" = 80'





Vicinity Map
NOT TO SCALE

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

Lot Area Calculations

EXISTING LOT 7	7,047 SQ. FT.	0.16 ACRES
EXISTING LOT 8	7,049 SQ. FT.	0.16 ACRES
RESULTING LOT 7A	14,096 SQ. FT.	0.32 ACRES

Boundary Closure Report (LOT 7A)

Course: S75°03'15"W Length: 100.58'
Course: N14°54'21"W Length: 140.19'
Course: N75°01'37"E Length: 100.48'
Course: S14°56'51"E Length: 140.24'

Perimeter: 497.31' Area: 14096 Sq. Ft.
Error Closure: 0.00 Course: S55°09'01"E
Error North: −0.002 East: 0.002

Precision 1: 481490000.00

Boundary Closure Report (LOT 7)

Course: S75°03'15"W Length: 50.29'
Course: N14°54'21"W Length: 140.19'
Course: N75°01'37"E Length: 50.24'
Course: S14°55'36"E Length: 140.21'

Perimeter: 380.93' Area: 7047 Sq. Ft.
Error Closure: 0.00 Course: N00°53'31"W
Error North: 0.004 East: −0.000

Precision 1: 380930000.00

Boundary Closure Report (LOT 8)

Course: S75°03'15"W Length: 50.29'
Course: N14°55'36"W Length: 140.21'
Course: N75°01'37"E Length: 50.24'
Course: S14°56'51"E Length: 140.24'

Perimeter: 380.98' Area: 7049 Sq. Ft.
Error Closure: 0.01 Course: S23°59'24"E
Error North: −0.006 East: 0.003

Precision 1: 38098.00

Legend

●	FOUND MONUMENT AS DESCRIBED
⊕	FOUND BRASS TAG AS DESCRIBED
(AM)	AS MEASURED AT TIME OF SURVEY
(C)	CALCULATED FROM RECORD AND AS MEASURED INFORMATION
(P)	AS PER THE PLAT OF ORIGINAL TOWN OF BOULDER

Notes

1. FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NUMBER ABZ70344866.1, DATED MAY 09, 2013 AT 5:00 P.M., WAS ENTIRELY RELIED UPON FOR RECORDED INFORMATION REGARDING RIGHTS-OF-WAY, EASEMENTS AND ENCUMBRANCES IN THE PREPARATION OF THIS SURVEY. THE PROPERTY SHOWN AND DESCRIBED HEREON IS ALL OF THE PROPERTY DESCRIBED IN SAID TITLE COMMITMENT.
2. ACCORDING TO COLORADO LAW, YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS PLAT WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.
3. THIS PLAT IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
4. BASIS OF BEARINGS: AN ASSUMED BEARING OF N75°00'00"E ALONG THE CENTERLINE OF PEARL STREET, BETWEEN A FOUND #4 REBAR WITH A 2 1/2" ALUM. CAP LOCATED INSIDE OF A RANGE BOX AT THE CENTERLINE INTERSECTION OF 17TH STREET AND PEARL STREET AND A FOUND #4 REBAR LOCATED INSIDE OF A RANGE BOX AT THE CENTERLINE INTERSECTION OF 18TH STREET AND PEARL STREET AS SHOWN HEREON. ALL BEARINGS SHOWN HEREON ARE RELATIVE THERETO.
5. ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT AND/OR BOUNDARY MONUMENT OR ACCESSORY, COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUTE C.R.S. SEC 18-4-508. WHOEVER WILLFULLY DESTROYS, DEFACES, CHANGES, OR REMOVES TO ANOTHER PLACE
6. THE DISTANCE MEASUREMENTS SHOWN HEREON ARE U.S. SURVEY FOOT.
7. FLOOD INFORMATION: THE SUBJECT PROPERTY IS LOCATED IN ZONE X (UNSHADED), THE AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN ACCORDING TO THE FEMA FLOOD INSURANCE RATE MAP; MAP NO. 08013C0394J, DATED DECEMBER 18, 2012. FLOOD INFORMATION IS SUBJECT TO CHANGE.
8. DATES OF FIELDWORK: SEPTEMBER 17, 2012 (FLATIRONS SURVEYING JOB #12-60,469).
9. THE WORD "CERTIFY" AS SHOWN AND USED HEREON MEANS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THIS SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED.
10. THE TOTAL AREA OF THE SUBJECT PARCELS IS 14,096 SQ. FT. OR 0.32 ACRES, MORE OR LESS. AREA AS SHOWN HEREON IS A RESULTANT FACTOR, NOT A DETERMINATIVE FACTOR, AND MAY CHANGE SIGNIFICANTLY WITH MINOR VARIATIONS IN FIELD MEASUREMENTS OR THE SOFTWARE USED TO PERFORM THE CALCULATIONS. FOR THIS REASON, THE AREA IS SHOWN AS A "MORE OR LESS" FIGURE, AND IS NOT TO BE RELIED UPON AS AN ACCURATE FACTOR FOR REAL ESTATE SALES PURPOSES.
11. THE AREA OF EXISTING LOT 7 IS 7,047 SQ.FT. OR 0.16 ACRES. THE AREA OF EXISTING LOT 8 IS 7,049 SQ.FT. OR 0.16 AC. THE AREA OF RESULTING LOT 7A IS 14,096 SQ.FT. OR 0.32 ACRES.
12. THERE APPEAR TO BE NO EASEMENTS OF RECORD ON THE SUBJECT PARCELS AS PER THE ORIGINAL TOWN OF BOULDER PLAT, AND TITLE COMMITMENT NUMBER ABZ70344866.1.

Surveyor's Statement

I, JOHN B. GUYTON, A LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, HEREBY STATE FOR AND ON BEHALF OF FLATIRONS, INC., TO 1000 ALPINE, LLC, 1707 PARTNERS, LLC AND KATHERINE PAYNE, THAT A SURVEY OF THE ABOVE DESCRIBED PREMISES WAS CONDUCTED BY ME OR UNDER MY RESPONSIBLE CHARGE ON SEPTEMBER 17, 2012; THAT SAID SURVEY AND THE ATTACHED PRINT HEREON WERE MADE IN SUBSTANTIAL ACCORDANCE WITH C.R.S. 38-51-106 "LAND SURVEY PLAT".

JOHN B. GUYTON COLORADO P.L.S. #16406
CHAIRMAN & CEO, FLATIRONS, INC.

Approvals

_____ _____
DIRECTOR OF PLANNING

_____ _____
DIRECTOR OF PUBLIC WORKS AND UTILITIES

City Manager's Certificate

IN WITNESS WHEREOF, THE SAID CITY OF BOULDER HAS CAUSED ITS SEAL TO BE HEREUNTO AFFIXED BY ITS CITY MANAGER THIS __ DAY OF _____, 20__.

ATTEST:

_____ _____ _____
CITY CLERK CITY MANAGER

Clerk and Recorder's Certificate

STATE OF COLORADO)
)SS.
COUNTY OF BOULDER)

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED IN MY OFFICE AT _____ O'CLOCK, ___.M., THIS _____ DAY OF _____, 20__, AND IS RECORDED AT RECEPTION #_____.

FEES PAID: $_____

_____ _____
CLERK AND RECORDER DEPUTY

REVISION	DATE
1 -CITY COMMENTS	-06-19-2013 BDL
2 -CITY COMMENTS	07-23-2013 BDL
3 -CITY COMMENTS	07-29-2013 BDL
4	
5	
6	
7	
8	
9	

LOT LINE ADJUSTMENT
PREPARED FOR
ELEMENT PROPERTIES

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BOULDER, CO 80301
PH: (303) 443-7001
FAX: (303) 443-9830
3660 DOWNING ST
UNIT E
DENVER, CO 80205
PH: (303) 936-6997

DRAFT

(SEAL)

JOB NUMBER: 13-61,513
DATE: 04-17-2013
DRAWN BY: B. LUND
CHECKED BY: TAC/JZG/WW

SHEET 1 OF 1

BY:BLUND FILE:61513-LLADJ-C13-R1.DWG DATE:7/30/2013 4:05 PM