ITEM NO FDP #130021
MEETING DATE July 23, 2013
STAFF Pete Wray

ADMINISTRATIVE TYPE I HEARING

STAFF REPORT

PROJECT: Harmony Technology Park Third Filing, Second Replat – Custom Blending, Project Development Plan/Final Development Plan - FDP #130021

APPLICANT: Cathy Mathis
TB Group
444 Mountain Ave.
Berthoud, CO

OWNER: Custom Blending
3461 Precision Drive
Fort Collins, CO 80528

PROJECT DESCRIPTION:

This is a request is for a combined Project Development Plan/Final Plan for a building expansion to the Custom Blending facility located at 3461 Precision Drive. Custom Blending is a manufacturer of spices, seasonings and flavoring extracts and the impetus for the expansion is to create space primarily for the manufacture of extracts in-house. The approximate 31,700 square foot existing Custom Blending building is located on 3 acres, in Lot 2 in the Harmony Technology Park Third Filing.

The proposed addition to the east of the existing building would contain approximately 35,000 square feet, and expand into a portion of Lot 3. This project will include replat to combine Lot 2 and Lot 3. The proposed expansion is anticipated to be 40-50% production/warehouse and approximately 3,000 to 5,000 square feet of office space. The new building will be expanding over the existing 44-space employee parking lot. Project build-out will provide new access drives on the south and east sides of the building and new parking area on the east side of the building.

RECOMMENDATION: Approval of the FDP

EXECUTIVE SUMMARY:

The FDP complies with procedural requirements of the Land Use Code (LUC) in Article 2; the expansion and replat are subject to Administrative (Type 1) review. The FDP

complies with the applicable zoning standards of LUC Section 4.26 – Harmony Corridor District. And, the FDP complies with the General Development standards in Article 3.

COMMENTS:

1. Zoning History:

- The property was annexed in 1994 as part of the 155 acre Harmony Farm Annexation and zoned Harmony Corridor (HC) District.
- The property including Lot 2 and 3 is part of the Harmony Technology Park, Third Filing, and Second Replat, last amended in 2008.

Current surrounding zoning and land uses are as follows:

Direction	Zone District	Existing Land Uses
North	Harmony Corridor (HC)	Vacant land, Lot 2, Harmony Tech. Park, Second Filing
South	Harmony Corridor (HC) Low Density Mixed-use Neighborhood (LMN)	Vacant land, Tract A, Harmony Tech. Park, Third Filing – Drainage/Utility Easement Fossil Ridge H. S., Rock Creek Dr. South Side
East	Harmony Corridor (HC)	Vacant land, Lot 4, Harmony Tech. Park, Third Filing
West	Harmony Corridor (HC)	Vacant land, Lot 1, Harmony Tech. Park, Third Filing, First Replat

2. Compliance with Article 3 of the Land Use Code - General Development Standards

Staff finds that the project complies with all applicable Article 3 standards. Following are some key examples:

Division 3.2 – Site Planning and Design Standards

A. Section 3.2.1 (D) – *Tree Planting Standards*

These standards require full tree stocking and street trees included in landscape plan.

The proposed landscape plan complies with the standard in that landscape areas are provided in adequate numbers, locations, and dimensions to allow full tree stocking along all high use or high visibility

sides of buildings per Section 3.2.1 (D)(1)(c). The proposed landscape plan provides deciduous shade trees in two varieties within the parkway along Precision Drive and spaced at intervals ranging between 30 and 35 feet in compliance with the standard in Section *3.2.1(D)(2)(a).*

B. Section 3.2.1(E) – Interior and Parking Lot Perimeter Landscaping

This standard requires perimeter parking areas are screened from the street and abutting uses by providing sufficient ground plane and tree canopy plantings to screen at least 75% of the light from headlights, to a minimum height of 30" for at least 70% of the length of the parking area along the street.

The landscape plan complies with the landscape standards for perimeter, building foundation, and interior parking-island planting.

C. *Section 3.2.2 (C) – Development Standards*

This standard requires to the maximum extent feasible separation of pedestrians and vehicles, direct pedestrian connections to street, and provide bicycle facilities.

The proposed expansion project maintains building orientation fronting Precision Drive with entrances that face and open directly to walkways that connect to public sidewalks along the street. Pedestrian and bicycle movement and access on site are separate from vehicle and truck drive aisles and parking, loading areas. The proposed project provides 4 new bicycle parking spaces (2 existing).

D. Section 3.2.2 (K) (2) *Nonresidential Parking Requirements*

This standard requires that a maximum number of standard parking spaces, based on the square footage of the gross leasable area and of the occupancy of specified uses, not exceed 45 standard spaces. In addition, two accessible parking spaces and 4 fixed bicycle spaces are required.

The project includes 45 off-street parking spaces and 3 accessible spaces; six bike parking spaces are also provided (2 existing and 4 new) in compliance with Section 3.2.2 (C) (4).

E. Section 3.2.4 – Site Lighting

The Lighting Plan indicates that both pole and building mounted light fixtures will feature fully shielded and down-directional luminaires. In

addition, there will be no illumination exceeding 0.1 (one-tenth) foot-candle as measured 20 feet from the property line.

F. *Section 3.2.5 – Trash Enclosures*

Trash enclosures are provided in sufficient quantity to serve the project. As required, enclosures will be properly sized to accommodate both trash and recycling containers. Exterior materials will match the buildings.

G. *Section 3.4.3 – Water Quality*

This standard references the requirements set forth in the *Stormwater Criteria Manual*. The development is required to meet the City's new Low Impact Development (LID) requirements which include 50% of the land area draining through an infiltration device and 25% of all private parking and drive aisles be porous pavement.

Staff determined that the proposed project complies with the LID requirements, and 25% of the parking and drive aisles are not required to be porous pavement, since 50% of the existing site drains through and infiltration device, thus meeting the equal to or better criteria option. All surface stormwater drainage is passed through infiltration devices, prior to entering the existing regional detention pond located in Tract A, part of the Harmony Technology Park overall development plan.

H. *Section 3.5.1 – Building and Project Compatibility – Architectural Character*

This standard requires that new developments adjacent to existing developed areas shall be compatible with the established architectural character by using a design that is complementary.

This proposed project is surrounded by vacant land within the larger Harmony Technology Park, and compatible complimentary with existing light industrial businesses along Harmony Road to the north.

The proposed building expansion reflects similar architectural exterior façade treatments, mass and scale and building height as the existing building. Exterior materials include precast concrete, 3-coat stucco, and brick veneer to match existing building design and color schemes.

The proposed building expansion and site plan locates truck loading, storage tanks, and trash collection enclosures to the sides and rear of the building and away from the public street, as required in *Section 3.5.1 (I).*

These facilities are screened from adjacent sites through such means as walls, enclosures, and interior and perimeter landscape plantings.

I. Section 3.5.3 (B) (C) (D) (E) - *Mixed-Use, Institutional, and Commercial Buildings*

This standard requires architectural design that provides variation in massing and character and interest tailored specifically to the site and its context, orienting building entrances with direct pedestrian connections to the street.

The proposed building expansion maintains overall building orientation to Precision Drive and building entrances face and open directly onto a connecting walkway to the street, without crossing a drive aisle or parking area. The proposed main vehicular access to the expansion site will utilize a new entrance off of Precision Drive. The drive will be 30' wide to accommodate Poudre Fire Authority requirements for a fire lane. Employee parking spaces will be provided to the sides of the existing and proposed building expansion. A truck loading dock and trash enclosure are provided on the south end of the buildings.

The proposed design of the facility expansion will combine the exterior aesthetic of the existing building while incorporating the new process functions of Custom Blending's future. The proposed exterior materials will be identical to the existing facility to create a cohesive addition that presents as a single facility from the exterior. Building wall articulation and façade treatments from the existing building are continued with the proposed expansion, utilizing change in plane, variation of building materials, texture and color. These building treatments provide a distinctive façade base and top that accentuates the entrances facing the street and ground plane. Other side and rear facades differentiate base and top treatments with planters, raised docks, window alignment, walls and variation of building materials and texture, and color.

The proposed building expansion will act a screen from the public R.O.W. by placing required service uses to the south. The addition allows for improved site circulation and access from the existing conditions.

J. *Section 3.6.4 – Transportation Level of Service Requirements*

This standard requires all development plans shall adequately provide vehicular, pedestrian and bicycle facilities necessary to maintain the adopted transportation level of Service (LOS) standards, and provide a transportation impact study.

A transportation impact study dated June 4, 2013 was provided to City staff. The conclusions form the study show that with full development of the Custom Blending building expansion, the future level of service at key intersections will be acceptable. The proposed building expansion can be built without additional geometry or other street improvements. Based upon Fort Collins bicycle LOS criteria, there are no destination areas within 1,320 feet of the Custom Blending Expansion site. Currently, this area is served by Transfort Routes 16 and 17 and as a result, transit service is acceptable.

3. Compliance with Article 4 of the Land Use Code - General Commercial (CG) District Standards in Division 4.21

Staff finds that the project complies with all applicable Article 4 standards. Following are some key examples:

A. Purpose: *The Harmony Corridor District is intended to implement the design concepts and land use vision of the Harmony Corridor Plan -- that of creating an attractive and complete mixed-use area with a major employment base.*

The proposed project is consistent with the stated purpose of the zone district, representing a primary use located in an existing employment park, which provides a campus-like setting, with platted lots, streets, sidewalks, and infrastructure already in place.

B. Permitted Land Uses - Section 4.26 (B) (2) (d) 2

The proposed uses of light industrial and offices are permitted in the H-C zoning, subject to Administrative Type I Review, including replatting of lots.

C. Land Use Standards – Section 4.26(D)(1) *All development in the H-C Harmony Corridor District shall also comply with the Harmony Corridor design standards as adopted by the city and the following specific standards to the extent that such standards apply to the property proposed for development.*

The proposed project complies with the applicable Harmony Corridor Design Standards, included in the LUC.

Land Use/Dimensional Standards – *Section 4.26 (D) (3) (a) Maximum height for all nonresidential buildings, including those containing mixed-use dwelling units, shall be six (6) stories.*

The proposed building expansion height is 31feet, consistent with the existing building.

Land Use Standards – Section 4.26 (D) (3) (b) *All new structures greater than eighty thousand (80,000) square feet in gross leasable area shall be subject to Planning and Zoning Board review.*

The proposed building expansion includes a total gross leasable area of approximately 35,000 square feet, subject to an administrative Type I review.

Land Use Standards – Section 4.26 (D) (3) (c) *Any building addition that exceeds eighty thousand (80,000) square feet in gross leasable area and exceeds twenty-five (25) percent of the gross leasable area of the existing building shall be subject to Planning and Zoning Board review.*

The proposed building expansion includes a total gross leasable area of approximately 35,000 square feet, subject to an administrative Type I review.

D. Development Standards – Section 4.26(E)(2)(c) *All commercial/retail and industrial uses, except for off-street parking and loading, shall be conducted or carried out entirely within completely enclosed buildings or structures.*

The existing and proposed building expansion does not include any outdoor storage. Two external tank storage areas adjacent to the building are fully enclosed.

E. Building Design – Section 4.26(E)(3)(a) *To the extent reasonably feasible, industrial buildings shall provide a primary entrance that faces and opens directly onto the abutting street sidewalk or a walkway, plaza or courtyard that has direct linkage to the street sidewalk without requiring pedestrians to cross any intervening driveways or parking lots.*

The existing building and primary entrance that faces and opens north and connecting directly to Precision Drive will be maintained. The proposed building expansion will have a secondary employee entrance with sidewalk connection also to Precision Drive.

4. <u>Neighborhood Meeting:</u>

The LUC does not require that a neighborhood meeting be held for development proposals that are not subject to a Planning and Zoning Board (Type 2) review. Therefore, a City-sponsored and facilitated neighborhood information meeting

was not held for this project. There are no known impacts or issues with any adjacent development.

5. Findings of Fact and Conclusion:

In evaluating Harmony Technology Park Third Filing, Second Replat – Custom Blending, Project Development Plan/Final Development Plan - FDP #130021, staff makes the following findings of fact:

A. The FDP complies with the process located in Division 2.2 – Common Development Review Procedures for Development Applications of Article 2 – Administration.

B. The FDP complies with relevant standards located in Article 3 – General Development Standards.

C. The FDP complies with relevant standards located in Division 4.26, Harmony Corridor of Article 4 – Districts.

RECOMMENDATION:

Staff recommends approval of the Harmony Technology Park Third Filing, Second Replat – Custom Blending, Project Development Plan/Final Development Plan - FDP #130021.

ATTACHMENTS:

1. Cover Sheet with vicinity map
2. Plat – Sheet 2
3. Site Plan
4. Landscape Plan
6. Building Elevations
7. Traffic Study

UTILITY PLANS FOR
HARMONY TECHNOLOGY PARK THIRD FILING, SECOND REPLAT
FORT COLLINS, COLORADO

A TRACT OF LAND, BEING A REPLAT OF LOTS 2 & 3 OF THE HARMONY TECHNOLOGY PARK 3RD FILING, LOCATED IN THE NORTHWEST QUARTER OF SECTION 4, TOWNSHIP 6 NORTH, RANGE 68 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO

JUNE 19, 2013

PROJECT CONTACTS:

OWNER & OWNER'S REPRESENTATIVE:
Custom Blending
3461 Precision Drive
Fort Collins, CO 80528
Contact: Jeff Reed (Owner's Rep.)
(970) 556-0406

ARCHITECT:
Ware Malcomb
6251 Greenwood Plaza Blvd.,
Bldg. 6, Suite 100
Centennial, CO 80111
Contact: Jan Davis (303) 689-1503
Matt Chaiken (303) 689-1505

TRAFFIC ENGINEER:
Delich Associates
2272 Glen Haven Drive
Loveland, CO 80538
Contact: Matt Delich
(970) 669-2061

PLANNER/LANDSCAPE ARCHITECT:
TB Group
444 Mountain Avenue
Berthoud, CO 80513
Contact: Cathy Mathis
(970) 344-8358

GEOTECHNICAL ENGINEER:
Soilogic, Inc.
1435 Hilltop Circle
Fort Collins, CO 80550
Contact: Wolf von Carlowitz
(970) 674-3430

CIVIL ENGINEER:
Aspen Engineering
19 Old Town Square, Suite 238
Fort Collins, CO 80524
Contact: John Gooch
(970) 419-4344

UTILITY ENTITY CONTACTS:

CITY OF FORT COLLINS WATER/ WASTEWATER
Contact: Roger Buffington
(970) 221-6854

FORT COLLINS LOVELAND WATER DISTRICT/ SOUTH FORT COLLINS SANITATION DISTRICT:
Contact: Terry Farrill
(970) 226-3104

CITY OF FORT COLLINS STORMWATER
Contact: Glen Schleuter
(970) 224-6065

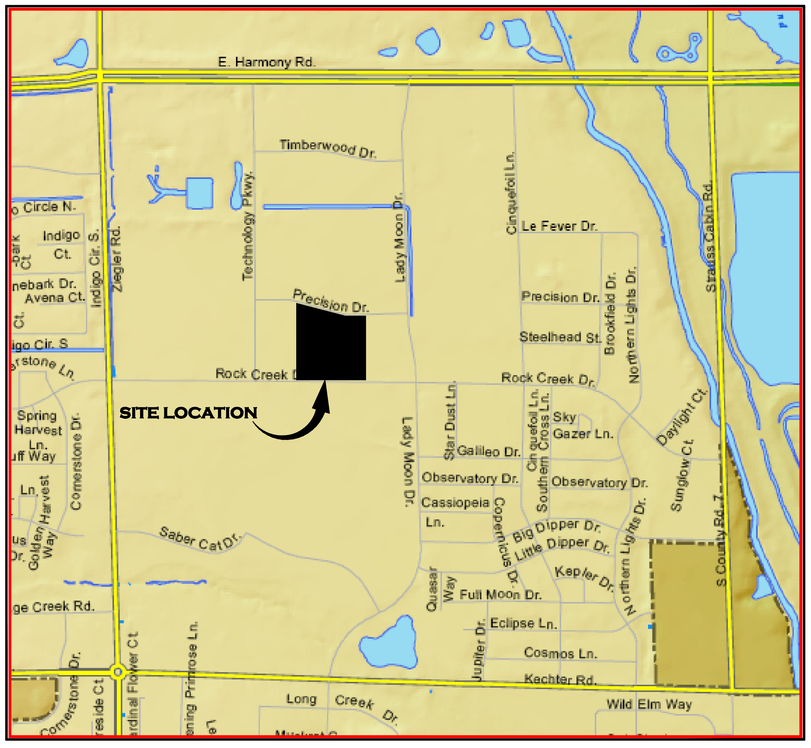
CITY OF FORT COLLINS LIGHT AND POWER
Contact: Rob Irish
(970) 224-6167

XCEL ENERGY - GAS & ELECTRIC
Contact: Terry Stencel
(970) 225-7848

CENTURY LINK
Contact: Bob Rulli
(970) 490-7503

COMCAST
Contact: Don Kapperman
(970) 567-0245

POUDRE FIRE AUTHORITY
Contact: Jim Lynxwiler
(970) 416-2869



N
ASPEN

VICINITY MAP

Refer to the "Geotechnical Subsurface Exploration Report, Custom Blending Facility, Fort Collins, CO, Soilogic Project No. 07-1098", dated January 10, 2008, by Soilogic, Inc. for site excavation, grading, and paving recommendations.

DRAWING/ SHEET INDEX

COLORADO 811 — KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

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.

FORT COLLINS - LOVELAND WATER DISTRICT
SOUTH FORT COLLINS SANITATION DISTRICT

Mr. Michael D. DiTullio, Manager — Date

Mr. Terry Farrill, P.E., District Engineer — Date

All changes, addendums, additions, deletions and modifications to these drawings must be approved, in writing, by the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ City Engineer _____ Date

CHECKED BY: _____ Water & Wastewater Utility _____ Date

CHECKED BY: _____ Stormwater Utility _____ Date

CHECKED BY: _____ Parks & Recreation _____ Date

CHECKED BY: _____ Traffic Engineer _____ Date

CHECKED BY: _____ Environmental Planner _____ Date

THESE PLANS HAVE BEEN REVIEWED BY THE LOCAL ENTITY FOR CONCEPT ONLY. THE REVIEW DOES NOT IMPLY RESPONSIBILITY BY THE REVIEWING DEPARTMENT, THE LOCAL ENTITY ENGINEER, OR THE LOCAL ENTITY FOR ACCURACY AND CORRECTNESS OF THE CALCULATIONS. FURTHERMORE, THE REVIEW DOES NOT IMPLY THAT QUANTITIES OF ITEMS ON THE PLANS ARE THE FINAL QUANTITIES REQUIRED. THE REVIEW SHALL NOT BE CONSTRUED IN ANY REASON AS ACCEPTANCE OF FINANCIAL RESPONSIBILITY BY THE LOCAL ENTITY FOR ADDITIONAL QUANTITIES OF ITEMS SHOWN THAT MAY BE REQUIRED DURING THE CONSTRUCTION PHASE.

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE CITY OF FORT COLLINS AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR THE ACCURACY OF ALL DESIGN, REVISIONS, AND RECORD CONDITIONS THAT I HAVE NOTED ON THESE PLANS

JOHN R. GOOCH, P.E.

COLORADO REGISTRATION No.

ASPEN ENGINEERING
19 Old Town Square, Suite 238
Fort Collins, CO 80524
970-419-4344

REV. #	DESCRIPTION OF REVISION:	DATE:	REVISED BY:	APPROVED BY:
1				
2				
3				
4				
5				
6				

CHECKED BY: J.Gooch
DESIGNED BY: J.Gooch
DRAWN BY: D.Wood

PROJECT/ LOCATION: HARMONY TECHNOLOGY PARK THIRD FILING, SECOND REPLAT, FORT COLLINS, COLORADO

DRAWING: COVER SHEET

PRELIMINARY — NOT FOR CONSTRUCTION — COLORADO REGISTERED PROFESSIONAL ENGINEER

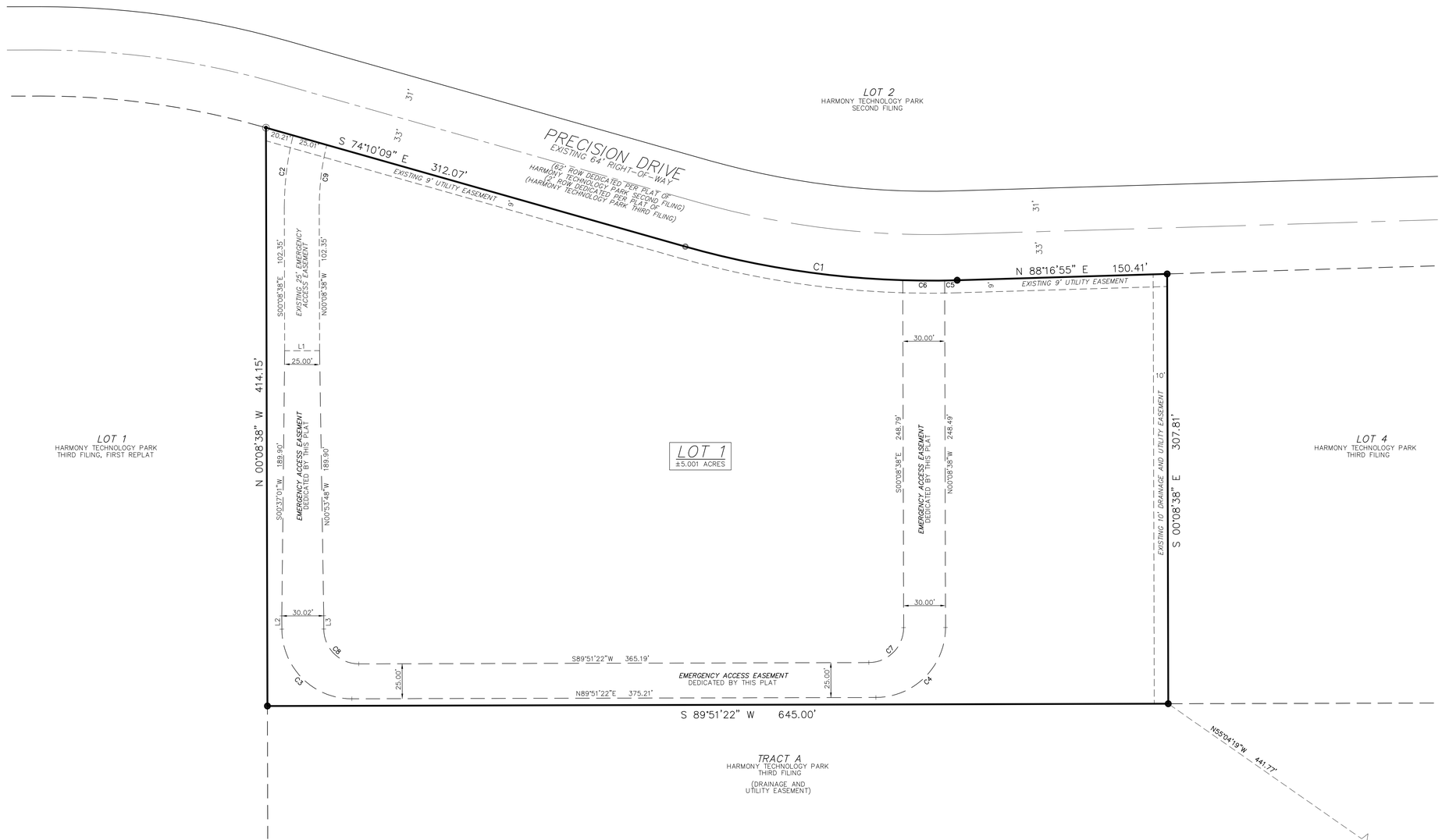
PROJECT NO: 101-001
DATE: 06/19/13

SHEET No: C-001

1 OF 12

HARMONY TECHNOLOGY PARK THIRD FILING, SECOND REPLAT

BEING A REPLAT OF LOTS 2 AND 3, HARMONY TECHNOLOGY PARK THIRD FILING,
BEING LOCATED WITHIN THE NORTHWEST ONE-QUARTER OF SECTION 4, TOWNSHIP 6 NORTH,
RANGE 68 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO.



LEGEND *NOTE: SYMBOLS SHOWN HEREON ARE NOT TO SCALE*

- ◉ INDICATES FOUND 1/2" REBAR WITH CAP, PLS 14823
- ● INDICATES SET 5/8" REBAR WITH PLASTIC CAP, PLS 37968
- ○ INDICATES FOUND NAIL AND TAG, PLS 14823 IN WALK

NORTH

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD	
C1	643.00'	196.94'	17°32'56"	S82°56'37"E	196.17'
C2	212.50'	52.38'	14°07'26"	S06°55'07"W	52.25'
C3	50.00'	78.54'	90°00'00"	S45°08'38"E	70.71'
C4	50.00'	78.54'	90°00'00"	N44°51'22"E	70.71'
C5	643.00'	8.95'	0°47'52"	S88°40'51"W	8.95'
C6	643.00'	30.00'	2°40'25"	N89°35'00"W	30.00'
C7	25.00'	39.27'	90°00'00"	S44°51'22"W	35.36'
C8	25.00'	39.27'	90°00'00"	N45°08'38"W	35.36'
C9	187.50'	45.41'	13°52'37"	N06°47'43"E	45.30'

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N89°51'22"E	25.00'
L2	S00°08'38"E	9.50'
L3	N00°08'38"W	9.50'

ROBERT M. EDMONDS, PLS 37968
SHEET 2 OF 2

DATE: MAY 20, 2013
SCALE: 1"=40' | BK: 101
DWG: RME | CHK: RME
PLAT: 06N68W04-105

CLIENT:
ASPEN ENGINEERING

EDMONDS LAND SURVEYING, INC.
PO BOX 641 KERSEY, CO 80644
PHONE (970) 686-6970
FAX (970) 284-6802
www.EdmondsLandSurveying.com

REVISIONS

HARMONY TECHNOLOGY PARK THIRD FILING, SECOND REPLAT
BEING A PART OF THE NW¼ SECTION 4,
TOWNSHIP 6 NORTH, RANGE 68 WEST OF THE 6th P.M.;
CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO.

PROJECT NO.:
13-0386

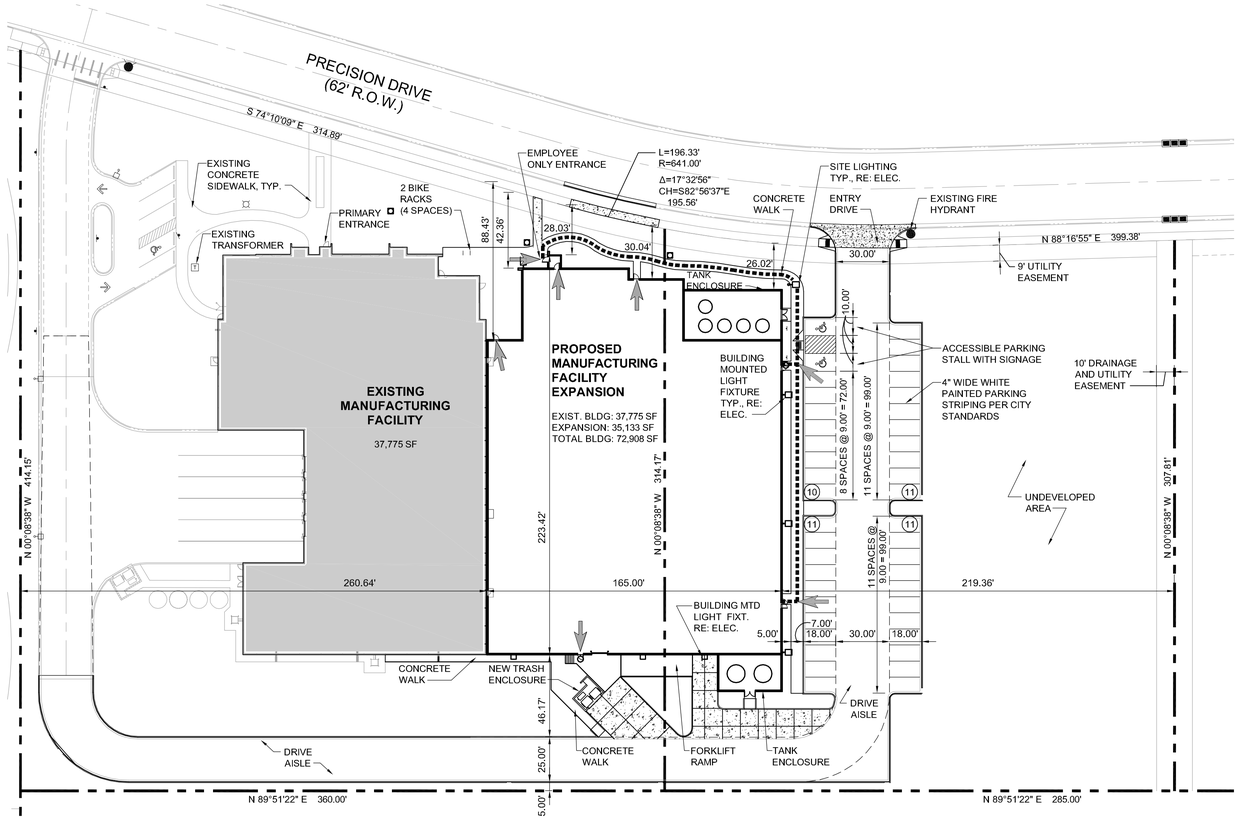
2
SHEET 2 OF 2

HARMONY TECHNOLOGY PARK THIRD FILING
SECOND REPLAT
PROJECT DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN

architecture
planning
interiors
graphics
site development

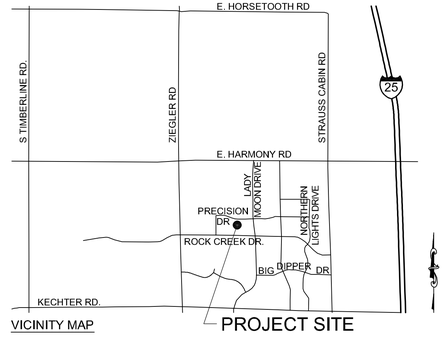
6251 greenwood plaza boulevard
building 6, suite 100
greenwood village, colorado 80111
p 720.488.2626 f 720.488.2625

WARE MALCOMB
Leading Design for Commercial Real Estate



SITE PLAN
SCALE: 1" = 40'-0"

0 20' 40' 80'



VICINITY MAP — PROJECT SITE

STATISTICAL INFORMATION

EXISTING ZONING: HARMONY CORRIDOR (H-C) ZONE DISTRICT		
GENERAL ZONE LOT INFORMATION	SQUARE FEET	ACRES
LOTS 2 & 3 SIZE (GROSS PROJECT AREA)	217,850.91	5.00
BUILDING COVERAGE	64,102.80 (29.42%); .29 F.A.R.	
DRIVEWAY AND PARKING	52,847.96 (24.26%)	
PUBLIC R.O.W.	0.00 (0.00%)	
OPEN SPACE AND/OR LANDSCAPING	100,900.15 (46.32%)	
LOTS 2 & 3 SIZE (NET PROJECT AREA)	217,850.91	5.00
TOTAL	217,850.91 (100%)	
PRIMARY AND SIDE STREET DESIGNATIONS	HARMONY ROAD AND PRECISION DRIVE	
DESIGN ELEMENTS		
TOTAL FLOOR AREA	64,103 S.F. GROUND FLOOR = 0.29 F.A.R.	
PRIMARY USE	MANUFACTURING	
BUILDING HEIGHT, STORIES (MAX)	6 ALLOWED	2 PROVIDED
BUILDING HEIGHT, FEET	N/A	31'-0" PROVIDED
PARKING	REQUIRED	PROVIDED
STANDARD SPACES (60 EMPLOYEES)	45	45
ACCESSIBLE	2	3
TOTAL	47	48
BICYCLE (FIXED)	4	6 (2 EXIST., 4 NEW)
LOADING SPACES	N/A	5 - LOADING DOCK

LEGAL DESCRIPTION:

A TRACT OF LAND, BEING A REPLAT OF LOTS 2 & 3 OF THE HARMONY TECHNOLOGY PARK 3RD FILING, LOCATED IN THE NORTHWEST QUARTER OF SECTION 4, TOWNSHIP 6 NORTH, RANGE 68 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO

SITE LEGEND

- POLE MOUNTED LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS.
- WALLPACK LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
- (1) PARKING STALL COUNT TOTAL.
- FIRE HYDRANT (VERIFY LOCATION WITH CIVIL DRAWINGS)
- ON-GRADE BUILDING ENTRY/EXIT
- ACCESSIBLE PATH OF TRAVEL

GENERAL NOTES:

1. REFER TO UTILITY PLAN FOR LOCATION OF UTILITIES AND DRAINAGE FACILITIES.
2. ALL SETBACKS AND LAND USE REQUIREMENTS SHALL CONFIRM TO CITY OF FORT COLLINS, COLORADO ZONING AND LAND USE REGULATIONS IN EFFECT AS OF THE DATE OF APPROVAL OF THIS PROJECT DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN BY CITY OF FORT COLLINS, COLORADO.
3. SIDEWALKS AND RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICAN WITH DISABILITIES ACT. HANDICAP ACCESSIBLE ROUTES SHALL SLOPE NO MORE THAN 1:20 IN THE DIRECTION OF TRAVEL AND NO MORE THAN 1:48 CROSS SLOPE.
4. SIGNAGE TO COMPLY WITH CITY OF FORT COLLINS SIGN CODE. ALL SIGNS SHALL BE REQUIRED TO APPLY FOR A SIGN PERMIT.
5. ALL ROOF-MOUNTED MECHANICAL, ELECTRICAL, OPTICAL AND ELECTRONIC EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW.
6. PROPOSED GRADES SHALL MATCH OR IMPROVE EXISTING GRADES TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING WHILE PROVIDING A SMOOTH TRANSITION BETWEEN ALL ADJACENT UNDISTURBED GRADES AND PROPOSED GRADES.

OWNER'S CERTIFICATION OF APPROVAL:

THE UNDERSIGNED DOES/DO HEREBY CERTIFY THAT I/WE ARE THE LAWFUL OWNERS OF REAL PROPERTY DESCRIBED ON THIS SITE PLAN AND DO HEREBY CERTIFY THAT I/WE ACCEPT THE CONDITIONS AND RESTRICTIONS SET FORTH ON SAID SITE PLAN.

IN WITNESS WHEREOF, WE HAVE HEREUNTO SET OUR HANDS AND SEALS THIS _____ DAY OF _____, 2013,

_____
(PRINTED NAME)

NOTARIAL CERTIFICATE

STATE OF COLORADO)

COUNTY OF LARIMER)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME BY _____ THIS _____ DAY OF _____, 2013.

MY COMMISSION EXPIRES: _____ _____
NOTARY PUBLIC

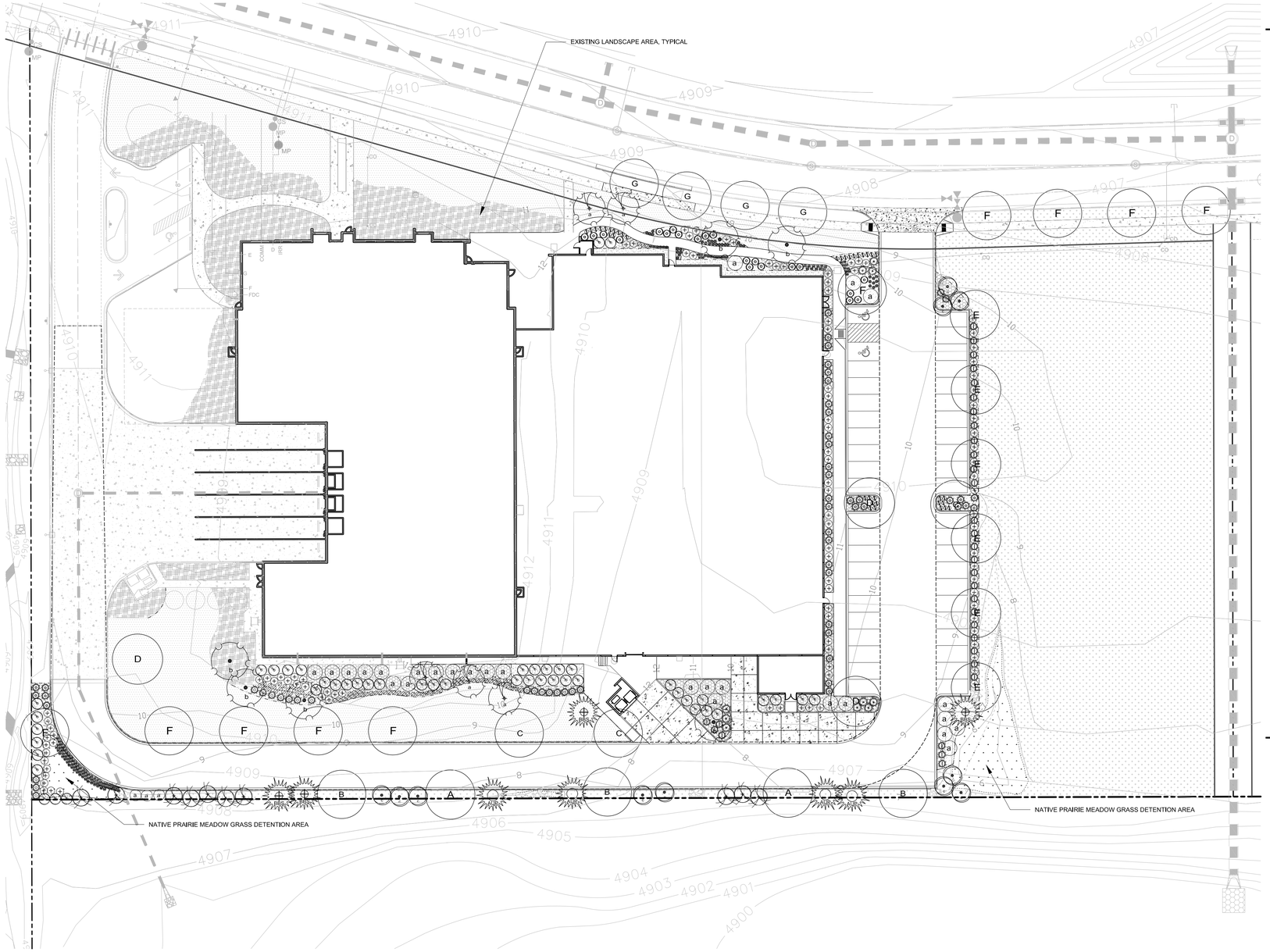
(SEAL)

PLANNING APPROVAL:

BY THE DIRECTOR OF COMMUNITY DEVELOPMENT AND NEIGHBORHOOD SERVICES OF THE CITY OF FORT COLLINS, COLORADO THIS _____ DAY OF _____,A.D., 20_____.

_____
DIRECTOR OF COMMUNITY DEVELOPMENT AND NEIGHBORHOOD SERVICES

A1
JUNE 19, 2013



Landscape Plan

0' 30' 45' 60'

SCALE 1" = 30'-0"

NORTH

Plant List

KEY	QTY	RATIO	COMMON NAME	BOTANICAL NAME	HEIGHT	WIDTH	SIZE	INSTALLATION NOTES
SHADE / CANOPY TREES -		**30**						
A	2	2.9%	COFFEETREE, KENTUCKY (SEEDLES)	Gymnocladus dioicus 'Espresso'	55'	50'	2" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
B	3	4.3%	GINKGO, AUTUMN GOLD	Ginkgo biloba 'Autumn Gold' (Male only var.)	50'	30'	2" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
C	3	4.3%	HONEYLOCUST, IMPERIAL	Gleditsia triacanthos inermis 'Imperial'	45'	35'	2" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
D	3	4.3%	LINDEN, REDMOND	Tilia americana 'Redmond'	35'	25'	2" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
E	6	8.6%	OAK, BUR	Quercus macrocarpa	50'	50'	2" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
F	9	12.9%	OAK, ENGLISH	Quercus robur	40'	40'	2" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
G	4	5.7%	OAK, SHUMARD RED	Quercus shumardii	50'	50'	2" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
EVERGREEN TREES -		**8**						
	4	5.7%	PINE, AUSTRIAN	Pinus nigra	40'	40'	6'-8' BB	FULL SPECIMEN, EVENLY AND WELL BRANCHED W/ STRAIGHT TRUNK & TOP LEADER
	4	5.7%	SPRUCE, BAKERI	Picea pungens 'Bakeri'	35'	20'	6'-8' BB	FULL SPECIMEN, EVENLY AND WELL BRANCHED W/ STRAIGHT TRUNK & TOP LEADER
ORNAMENTAL TREES -		**32**						
	5	7.1%	CRABAPPLE, SPRING SNOW	Malus spp. 'Spring Snow'	20'	20'	6' Multi-Stem	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
b	6	8.6%	LILAC, JAPANESE LILAC TREE	Syringa reticulata	20'	20'	1.5" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	11	15.7%	MAPLE, TARTARIAN	Acer tataricum	15'	15'	4' Multi-Stem	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADERs
	10	14.3%	OAK, GAMBLE	Quercus gambelii	12'	9'	4' Multi-Stem	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADERs
EVERGREEN SHRUBS -		**100**						
	10	-	JUNIPER, BLUE CHIP	Juniperus horizontalis 'Blue Chip'	1'	6'	5 Gallon	6" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	32	-	JUNIPER, ARCADIA	Juniperus sabina 'Arcadia'	2.5'	5'	5 Gallon	12" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	20	-	JUNIPER, CALGARY CARPET	Juniperus sabina 'Calgary Carpet'	2'	5'	5 Gallon	12" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	38	-	PINE, MUGO SLOWMOUND	Pinus mugo 'slowmound'	3'	5'	5 Gallon	18" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
DECIDUOUS SHRUBS -		**200**						
	102	-	DOGWOOD, ISANTI	Cornus stolonifera 'Insanti'	4'	4'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	21	-	LILAC, DWARF KOREAN	Syringa meyeri 'Palibin'	4'	4'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	47	-	PLUM, PURPLE LEAF	Prunus x cistena	8'	6'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
a	30	-	SERVICEBERRY	Amelanchier alnifolia	15'	8'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
PERENNIALS / GRASSES -		**250**						
	36	-	DAY LILY, AUTUMN RED	Hemerocallis spp 'Autumn Red'	3'	2'	1 Gallon	WELL ROOTED AND ESTABLISHED
	74	-	GRASS, FEATHER REED	Calamagrostis acutiflora 'Karl Foerster'	4'	2'	1 Gallon	WELL ROOTED AND ESTABLISHED
	34	-	GRASS, HEAVY METAL BLUE SWITCH	Panicum virgatum 'Heavy Metal'	3'	18"	1 Gallon	WELL ROOTED AND ESTABLISHED
	106	-	GRASS, RED SWITCH SHENANDOAH	Panicum virgatum 'Shenandoah'	3'	18"	1 Gallon	WELL ROOTED AND ESTABLISHED

19,680 S.F. — IRRIGATED TURF
DURA-TURF FESCUE BLEND - SOD/SEED

610 S.F. — TAN CRUSHER FINES
5" DEPTH STABILIZED

4,536 S.F. — SMOOTH RIVER COBBLE
SHRUB BED AREAS TO RECEIVE MINIMUM 4"- 6" COBBLE OVER WEED BARRIER FABRIC

4,347 S.F. — PIONEER RAINBOW ROCK
MINIMUM 4" DEPTH OF 1.5" - 3" ANGULAR STONE WITH BROWN AND GOLD HUES OVER WEED BARRIER FABRIC

40,533 S.F. — LOW-GROW NON-IRRIGATED NATIVE GRASS MIX
PAWNEE BUTTE SEED MIX - SEE NOTES OR APPROVED EQUAL

2,357 S.F. — NON-IRRIGATED NATIVE PRAIRIE MEADOW GRASS MIX
ARKANSAS VALLEY SEED MIX - SEE NOTES OR APPROVED EQUAL

Annual Hydrozone Table

ZONE	AREA	WATER USE	GALLONS
HIGH	N/A	18 GAL/SF	0 GAL.
MODERATE	18,333 SF	10 GAL/SF	183,330 GAL.
LOW	6,317	3 GAL/SF	18,951 GAL.
VERY LOW	3,390	0 GAL/SF	0 GAL
TOTAL / AVERAGE	28,040 SF	202,281 GAL	7.2 GAL/SF

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SEAL

PROJECT TITLE

Harmony Technology Park
Third Filing Second Replat,

PDP/Final Plan

Ft Collins, Colorado

PREPARED FOR

CBI REAL ESTATE
HOLDINGS, LLC
3461 Precision Drive
Fort Collins, CO 80528

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REVISIONS	DATE
CITY COMMENTS	06-19-13

DATE

05-22-13

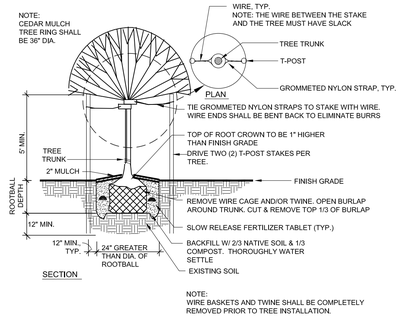
SHEET TITLE

Landscape Plan

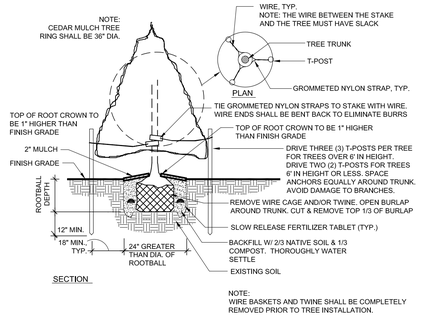
SHEET INFORMATION

LS 1

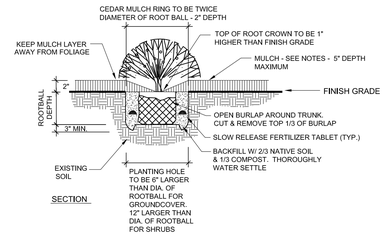
Planting Details



DECIDUOUS TREE PLANTING DETAIL



CONIFER TREE PLANTING DETAIL



GROUND COVER & SHRUB PLANTING DETAIL

Landscape Notes

1. LANDSCAPE AREAS SHALL BE MAINTAINED, INCLUDING MOWING, WATERING AND FERTILIZING BY CONTRACTOR, UP TO FINAL ACCEPTANCE. AT SUCH TIME OWNER WILL BE RESPONSIBLE FOR ALL MAINTENANCE. LANDSCAPE AND IRRIGATION WILL BE WARRANTED FOR ONE (1) FULL YEAR AFTER FINAL ACCEPTANCE.
2. ANY DISCREPANCIES WITH THE DRAWINGS AND SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. CONTRACTOR TO VERIFY ALL FIELD CONDITIONS, EASEMENTS, PROPERTY LINES, ETC, PRIOR TO STARTING WORK. SHOULD ANY DISCREPANCIES, OMISSIONS, OR ERRORS OCCUR, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY.
4. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES 48 HRS. PRIOR TO ANY EXCAVATION OR PLANTING.
5. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.
6. PER THE CODE REQUIRED TREE UTILITY SEPARATIONS IN 3.2.1 K, STREET AND ORNAMENTAL TREES SHALL BE PLANTED NO CLOSER THAN FORTY (40) FEET AND FIFTEEN (15) FEET RESPECTIVELY FROM STREET LIGHTS, NO TREES SHALL BE PLANTED WITHIN TEN (10) FEET FROM WATER AND SEWER LINES, FOUR (4) FEET FROM GAS, TELEPHONE AND ELECTRIC UTILITIES, SIX (6) FEET FROM STORM SEWER LINES ,SIX (6) FEET FROM WATER AND SEWER SERVICE LINES AND EIGHT (8) FEET FROM ANY DRIVEWAY OR CURBCUT. TREE/UTILITY AND TRAFFIC CONTROL DEVICE SEPARATIONS SHALL NOT BE USED AS A MEANS OF AVOIDING THE PLANTING OF REQUIRED STREET TREES
7. MINIMUM CLEARANCE OF THREE (3) FEET ON EACH SIDE OF FIRE DEPARTMENT CONNECTION (FDC). NO VEGETATION OTHER THAN TURF OR GROUND COVERS PLANTED IN FRONT OF FDC.
8. ANY OBJECT WITHIN THE SIGHT DISTANCE EASEMENT MORE THAN 30 INCHES ABOVE THE FLOWLINE ELEVATION OF THE ADJACENT STREET SHALL CONSTITUTE A SIGHT OBSTRUCTION, AND SHALL BE REMOVED OR LOWERED, SUCH OBJECTS INCLUDE BUT ARE NOT LIMITED TO BERMS, BUILDINGS, PARKED VEHICLES ON PRIVATE PROPERTY, CUT SLOPES, HEDGES, TREES, BUSHES, UTILITY CABINETS, OR TALL CROPS, MAILBOX CLUSTERS MUST BE INSTALLED A MINIMUM OF 2 FEET FROM BACK OF WALK AND NOT CAUSE ANY SIGHT OBSTRUCTION, IN NO CASE SHALL ANY PERMANENT OBJECT ENCROACH INTO THE LINE-OF-SIGHT OF ANY PART OF THE SIGHT-DISTANCE TRIANGLE, STREET TREES REQUIRED ARE EXCEPTED FROM THIS REQUIREMENT, TREES ARE PERMITTED IF PRUNED UP TO 8 FEET, IN ADDITION TO THE SIGHT DISTANCE TRIANGLE REQUIREMENTS, A CLEAR SPACE ZONE IS REQUIRED WITHIN ALL CURB RETURNS (MEASURED FROM POINT OF CURB TO POINT OF CURB RETURN) WHERE NO TREES, SHRUBS, AESTHETIC STRUCTURES/FEATURES, MONUMENT SIGNS, OR OBJECTS THAT HAVE THE POTENTIAL TO HINDER DRIVER VISIBILITY, AND/OR PEDESTRIAN AND BICYCLE SAFETY, ARE ALLOWED. SEE LARIMER COUNTY URBAN AREA STREET STANDARDS SECTION 7.4.1.C. FOR ADDITIONAL INFORMATION.
9. IF TREES OR SHRUBS ARE LOCATED ON TOP OF FIELD VERIFIED UTILITIES, CONTRACTOR SHALL NOTIFY OWNER BEFORE ANY DIGGING HAS COMMENCED. VERIFY WITH OWNER IF AND WHICH SHRUBS/TREES SHALL BE TAKEN OUT OF PROJECT/CONTRACT.
10. TO THE MAXIMUM EXTENT FEASIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION ACTIVITY SHALL BE CONSERVED FOR LATER USE ON AREAS REQUIRING REVEGETATION AND LANDSCAPING.
11. EXCAVATED MATERIAL TO BE USED AS FILL WILL HAVE ALL ROCKS, DEBRIS, WASTE MATERIAL, FROZEN MATERIAL, VEGETATION LARGER THAN 3" IN ANY DIMENSION REMOVED BEFORE PLACEMENT AND COMPACTION OF SOIL.
12. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS AND A SMOOTH TRANSITION BETWEEN ALL ADJACENT EXISTING GRADES AND PROPOSED GRADES
13. PRIOR TO FINE GRADING, DURA-TURF TALL FESCUE SOD OR DURA-TURF TALL FESCUE SEEDED AREAS AND PLANTING BEDS, SHALL BE THOROUGHLY LOOSENED AND TILLED TO A 6" DEPTH. REMOVE ALL UNSUITABLE TOPSOIL, INCLUDING ALL ROCKS LARGER THAN 3 INCHES IN ANY DIRECTION, ALL CONCRETE, TRASH, DEBRIS, WEEDS, ROOTS AND OTHER WASTE MATERIALS.
14. AFTER FINE GRADING AND REMOVAL OF UNSUITABLE MATERIALS THE SOIL IN ALL LANDSCAPE AREAS, INCLUDING PARKWAYS AND MEDIANS, SHALL BE THOROUGHLY LOOSENED TO A DEPTH OF NOT LESS THAN EIGHT (8) INCHES AND SOIL AMENDMENT SHALL BE THOROUGHLY INCORPORATED INTO THE SOIL OF ALL LANDSCAPE AREAS TO A DEPTH OF AT LEAST SIX (6) INCHES BY TILLING,DISCING OR OTHER SUITABLE METHOD, AT A RATE OF AT LEAST THREE (3) CUBIC YARDS OF SOIL AMENDMENT PER ONE THOUSAND (1,000) SQUARE FEET OF LANDSCAPE AREA.
15. UNIFORMLY COMPACT AND FINE GRADE THESE SOD / GRASS AREAS AND PLANTING BEDS TO A SMOOTH SURFACE, FREE FROM IRREGULAR SURFACE CHANGES. CUT OUT SOFT SPOTS, FILL IN LOW SPOTS AND TRIM HIGH SPOTS TO COMPLY WITH REQUIRED GRADE TOLERANCES.
16. ONCE COMPACTED AND FINE GRADED ALL ROCKS, DEBRIS, WASTE MATERIAL AND VEGETATION MATERIAL LARGER THAN 1/2" WILL BE RAKED FROM THE SURFACE AND REMOVED FROM SITE.
17. DURA-TURF TALL FESCUE BLEND TO BE 100% COLORADO GROWN SPECIFICALLY FOR LOW WATER LAWN APPLICATIONS WITH MINIMUM THREE (3) IMPROVED VARIETIES, HAVING A HEALTHY VIGOROUS ROOT SYSTEM, ONCE TURF IS LAID IT SHALL BE PROPERLY ROLLED, COMPACTED AND PUSHED TOGETHER TO ELIMINATE ANY GAPS BETWEEN ROLL EDGES, APPLY FERTILIZER IN THESE AREAS PER SOD FARM'S RECOMMENDATION.
18. ALL PLANT MATERIALS ARE SIZED AND OUTLINED IN PLANT LIST, ALL PLANTS TO BE PLANTED IN AMENDED SOIL AND STAKED AS SHOWN IN DETAILS. ALL PLANT MATERIAL SHALL MEET OR EXCEED THE CODE OF STANDARDS CURRENTLY RECOMMENDED BY THE COLORADO NURSERY ACT FOR NUMBER ONE GRADE,
19. IF PLANTS ARE IN NEED OF REPLACEMENT DUE TO DECLINING HEALTH, DISEASE, OR DEATH, THE PLANTS MUST BE REPLACED WITH THE ORIGINAL SPECIES UNLESS APPROVED BY THE CITY.
20. CHANGES IN PLANT SPECIES OF PLANT LOCATIONS FROM WHAT IS LISTED ON THE LANDSCAPE PLAN WILL REQUIRE THE APPROVAL OF THE CITY PRIOR TO INSTALLATION OF REPLACEMENT, OVERALL QUANTITY AND QUALITY TO BE CONSISTENT WITH THE APPROVED PLANS, IN THE EVENT OF CONFLICT WITH THE QUANTITIES INCLUDED IN THE PLANT LIST, SPECIES AND QUANTITIES SHALL BE PROVIDED.
21. A PERMIT MUST BE OBTAINED FROM THE CITY FORESTER BEFORE ANY TREES OR SHRUBS AS NOTED ON THIS PLAN ARE PLANTED, PRUNED OR REMOVED ON THE PUBLIC RIGHT-OF-WAY. THIS INCLUDES ZONES BETWEEN THE SIDEWALK AND CURB, MEDIANS AND OTHER CITY PROPERTY, THIS PERMIT SHALL APPROVE THE LOCATION AND SPECIES TO BE PLANTED. FAILURE TO OBTAIN THIS PERMIT MAY RESULT IN REPLACING OR RELOCATING TREES AND A HOLD ON CERTIFICATE OF OCCUPANCY.
22. ALL TREES AND SHRUBS TO BE BALLED AND BURLAPPED, OR CONTAINERIZED.
23. ALL EXISTING TREES TO REMAIN UNLESS OTHERWISE NOTED
24. ALL PLANT MATERIAL SHALL HAVE ALL WIRE, TWINE, BASKETS, BURLAP, AND ALL OTHER NON-BIODEGRADABLE CONTAINMENT MATERIAL REMOVED FROM THE TRUNK AND/OR ROOT BALL OF THE PLANT, PRIOR TO PLANTING.
25. ALL SHRUB BEDS SHALL HAVE MINIMUM 4" DEPTH SHREDDED CEDAR MULCH - NATURAL COLOR AND/OR WASHED SMOOTH COBBLE. A CONTINUOUS LAYER OF TYPAR LANDSCAPE FABRIC OR APPROVED EQUAL SHALL BE INSTALLED IN ALL SHRUB BEDS WITH 6" OVERLAP AT SEAMS WITH 4" STAPLES 4' O.C. IN ALL DIRECTIONS.
26. EDGING BETWEEN GRASS TYPES AND SHRUB BEDS / ROCK COBBLE SHALL BE HEAVY DUTY STEEL EDGER MIN. ¼" X 4" WITH MACHINE ROLLED TOP AND SHALL BE SET LEVEL WITH THE TOP OF THE ADJACENT SOD. NO EDGING SHALL BE USED BETWEEN CEDAR MULCH AND COBBLE TRANSITIONS.
27. PARKWAY LANDSCAPING INCLUDING TREES SHALL BE MAINTAINED BASED ON CITY CODES AND POLICIES.

Native Grass Seed Mix

NATIVE GRASS - NATIVE PRAIRIE MEADOW GRASS MIX:

1. SEED SHALL BE AS MANUFACTURED BY PAWNEE BUTTE SEED, INC OR ARKANSAS VALLEY SEEDS.
2. SEED SHALL BE A MIXTURE THAT MATCHES THE FOLLOWING:

COMMON NAME	%	LBS.P.L.S./ACRE
SIDEOATS GRAMA	17.5%	2.8
BUFFALOGRASS	38.8%	6.2
BLUE GRAMA	3.7%	0.6
INLAND SALTGRASS	5.6%	0.9
BOTTLEBRUSH SQUIRRELTAIL	11.3%	1.8
PRAIRIE JUNEGRASS	1.2%	0.2
WESTERN WHEATGRASS	20.0%	3.2
ALKALI SACATON	1.9%	0.3

3. DRILLED APPLICATION RATE: 16.0 LBS (PLS) PER ACRE (0.37 LBS / 1000 SF) IN TWO PERPENDICULAR DIRECTIONS.
4. NATIVE SEED AREAS: ADEQUATE TEMPORARY IRRIGATION OR BY WATER TRUCK WILL BE PROVIDED FOR THE ESTABLISHMENT AND MAINTENANCE FOR THESE SEEDED AREAS, AND THAT NATIVE GRASSES SHALL BE MAINTAINED IN A CONDITION OF ACCEPTABLE HEIGHT, FREE OF WEEDS, TRASH AND DEBRIS, AND SHALL NOT REPRESENT A FIRE HAZARD NOR BECOME A NUISANCE SITE FOR WATER OR WIND EROSION.

MULCH IN ALL NATIVE SEED AREAS:

1. IMMEDIATELY FOLLOWING THE RAKING OPERATION, ADD STRAW MULCH TO THE SEEDED AREAS.
2. APPLY STRAW MULCH AT A MINIMUM OF 1.5 TONS PER ACRE OF AIR DRY MATERIAL. SPREAD STRAW MULCH UNIFORMLY OVER THE AREA WITH MECHANICAL MULCH SPREADER / CRIMPER. DO NOT MULCH WHEN WIND VELOCITY EXCEEDS 10 MPH.
3. WHEREVER THE USE OF CRIMPING EQUIPMENT IS PRACTICAL, PLACE MULCH IN THE MANNER NOTED ABOVE AND ANCHOR IT INTO THE SOIL. USE A DISC SUCH AS A MULCH TILLER, WITH A FLAT SERRATED DISC AT LEAS ¼ INCH IN THICKNESS, HAVING DULL EDGES, AND SPACE NO MORE THAN 9 INCHES APART, WITH DISCS OF SUFFICIENT DIAMETER TO PREVENT THE FRAME OF THE EQUIPMENT FROM DRAGGING THE MULCH. ANCHOR MULCH A MINIMUM DEPTH OF 2 INCHES AND ACROSS THE SLOPE WHERE PRACTICAL WITH NO MORE THAN TWO PASSES OF THE ANCHORING EQUIPMENT.
4. IMMEDIATELY UPON COMPLETION OF THE MULCHING AND BINDING OPERATION, THE SEEDED AREAS SHALL BE IRRIGATED, KEEPING THE TOP 2 INCHES OF SOIL EVENLY MOIST UNTIL SEED HAS UNIFORMLY GERMINATED AND GROWN TO A HEIGHT OF 2-INCHES.
5. WATERING APPLICATION SHALL BE DONE IN A MANNER WHICH WILL PROVIDE UNIFORM COVERAGE BUT WHICH WILL NOT CAUSE EROSION, MOVEMENT, OR DAMAGE TO THE FINISHED SURFACE.

Irrigation Notes

1. ENTIRE IRRIGATION SYSTEM AND ASSOCIATED IRRIGATION TAP(S) TO BE SIZED, DESIGNED AND BUILT BY CONTRACTOR. IRRIGATION CONTRACTOR SHALL VERIFY P.S.I. AND GPM AVAILABLE, SYSTEM SHALL BE DESIGNED TO MEET THE AVAILABLE P.S.I. AND GPM, IF NECESSARY CONTACT THE WATER DISTRICT PRIOR TO BEGINNING DESIGN TO OBTAIN AVAILABLE PRESSURES.
2. ALL INDICATED SOD GRASS AREAS ARE TO BE IRRIGATED BY A PERMANENT UNDERGROUND AUTOMATIC IRRIGATION SYSTEM. TURF AREAS LESS THAN 25 FEET IN WIDTH ARE TO BE IRRIGATED WITH POP-UP SPRAY HEADS AND AREAS GREATER THAN 25 FEET SHALL USE A ROTOR POP-UP SPRAY SYSTEM.
3. ALL TREES, SHRUBS AND PERENNIALS OUTSIDE OF IRRIGATED TURF AREAS, ARE TO BE IRRIGATED WITH A PERMANENT DRIP OR BUBBLER IRRIGATION SYSTEM.
4. IRRIGATION SYSTEM WITH RAIN SENSOR AND NECESSARY SLEEVING WILL BE DESIGNED AND BUILT BY CONTRACTOR AND ADJUSTED TO A LOW WATER REQUIREMENT, BASED ON THE NEEDS OF SELECTED PLANT MATERIAL.
5. QUICK COUPLERS SHALL BE PROVIDED AT EACH POINT OF CONNECTION AND AT REGULAR SPACING ALONG THE IRRIGATION MAINLINE, SPACING OF QUICK COUPLES SHALL NOT EXCEED 200 FEET. LOCATE QUICK COUPLING VALVE AT A POINT OF EASY ACCESS.
6. FINAL LOCATION OF IRRIGATION HEADS MUST BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLANTING. HEAD LOCATION SHALL BE COORDINATED IN THE FIELD WITH EXISTING SITE CONDITIONS AND PLANT MATERIAL.
7. ALL IRRIGATION TRENCHES SHALL BE PROPERLY WATERED AND COMPACTED TO AVOID FUTURE SETTLING. ANY SETTLING DURING WARRANTY PERIOD WILL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
8. COORDINATE ALL IRRIGATION WORK WITH EXISTING UTILITIES AND RESPECTIVE TRADES.
9. ALL IRRIGATION SLEEVING SHALL BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR. IRRIGATION CONTRACTOR SHALL COORDINATE SLEEVING LOCATIONS WITH GENERAL CONTRACTOR. ALL IRRIGATION SLEEVING TO BE STAKED IN THE FIELD OR LOCATED ON DIMENSIONED "AS-BUILT" DRAWING BY THE GENERAL CONTRACTOR TO ALLOW FUTURE USE AND LOCATION.

General Notes:

1. ALL SIGNS SHALL BE REQUIRED TO APPLY FOR SIGN PERMIT.
2. PROPOSED GRADES SHALL MATCH OR IMPROVE EXISTING GRADES TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING WHILE PROVIDING A SMOOTH TRANSITION BETWEEN ALL ADJACENT UNDISTURBED GRADES AND PROPOSED GRADES.
3. JOB SITE TO BE KEPT CLEAN AT ALL TIMES AND CONSTRUCTION AREAS ARE TO BE MAINTAINED FOR SAFETY.
4. SOILS DISTURBED ADJACENT TO WORK AREA, INCLUDING AREAS OUTSIDE OF CONSTRUCTION LIMITS, DUE TO NEW CONSTRUCTION ARE TO BE REGRADED AND SURFACE CONDITIONS REPAIRED EQUIVALENT TO THAT CONDITION PRIOR TO START OF WORK.
5. PROTECT EXISTING SURFACES AND SOILS, BOTH INSIDE AND OUTSIDE OF CONSTRUCTION LIMITS, DURING CONSTRUCTION. IF GRADES, CONCRETE OR ASPHALT ARE DAMAGED DUE TO CONSTRUCTION OPERATIONS OR WEATHER THE CONTRACTOR IS RESPONSIBLE FOR REPAIR TO THAT EQUIVALENT TO EXISTING CONDITIONS AT NO EXPENSE TO THE OWNER / CITY.
6. CONTRACTOR IS RESPONSIBLE FOR SETUP OF BARRICADES, WARNING SIGNAGE, OR OTHER PROTECTIVE DEVICES IF ANY EXCAVATIONS ARE LEFT EXPOSED AFTER ON-SITE WORK HOURS.
7. THE CONTRACTOR SHALL NOT PURPOSEFULLY PROCEED WITH ANY CONSTRUCTION PER PLANS PROVIDED WHEN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT WERE NOT CONSIDERED OR CHANGED AFTER PLANS WERE SUBMITTED. CONTRACTOR SHALL NOTIFY OWNER OR OWNER'S REPRESENTATIVE AND THE CITY OF LOVELAND IF SITUATION ARISES AND REVISIONS ARE NECESSARY.
8. THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND OTHER POLLUTANTS FROM ENTERING ANY STORM WATER SEWER SYSTEM OR, ADJACENT WATER WAYS, ETC., DURING THE DEMOLITION OR CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE AND EXPENSE FOR THE CORRECTION OF ANY ADVERSE IMPACTS TO THE STORM WATER SEWER SYSTEM OR, ADJACENT WATER WAYS, WETLANDS ETC., RESULTING FROM THE WORK DONE AS PART OF THIS PROJECT/CONTRACT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE PRIOR TO BIDDING AND CONSTRUCTION, OF BECOMING AWARE OF ALL EXISTING AND PROPOSED UTILITIES, PIPES, STRUCTURES, ETC. CALL UNCC THREE DAYS BEFORE SCHEDULED WORK AT 811 OR 1-800-922-1987.

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Third Filing Second Replat,

PDP/Final Plan

Ft Collins, Colorado

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CITY COMMENTS	06-19-13

DATE

05-22-13

SHEET TITLE

Landscape Notes

SHEET INFORMATION

LS 2

HARMONY TECHNOLOGY PARK THIRD FILING
SECOND REPLAT

PROJECT DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN

architecture
planning
interiors
graphics
site development

6251 greenwood plaza boulevard
building 6, suite 100
greenwood village, colorado 80111
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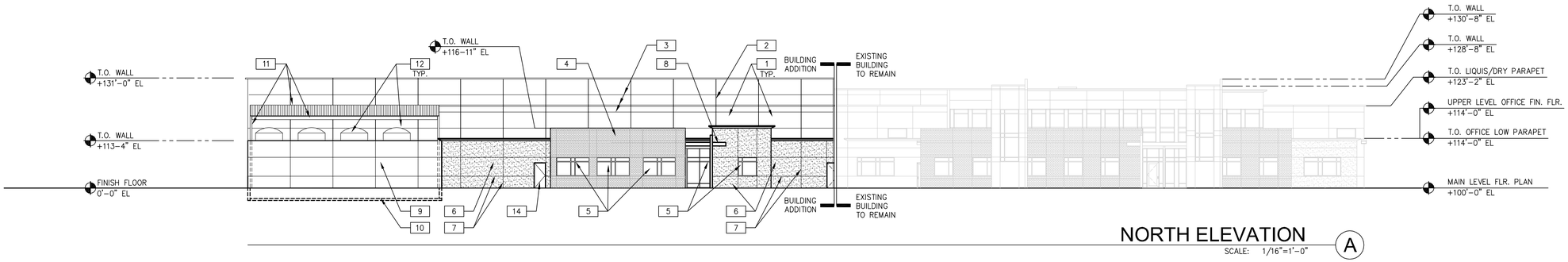
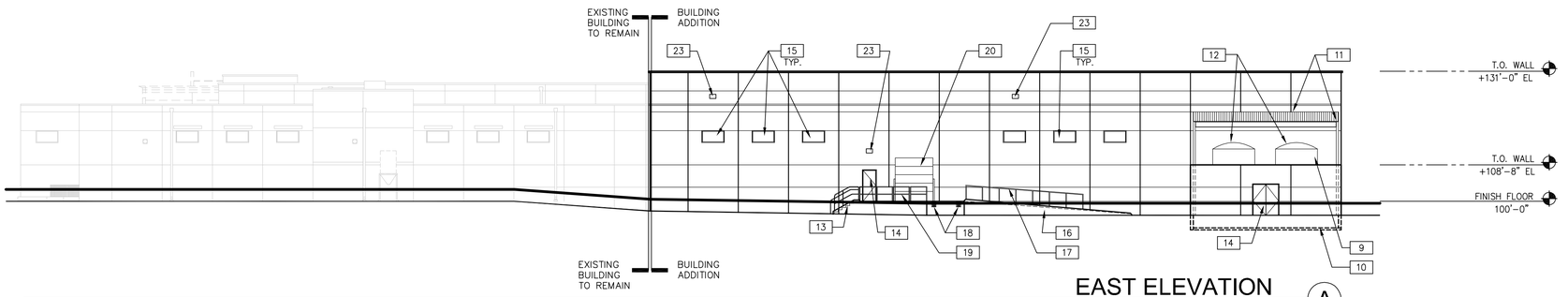
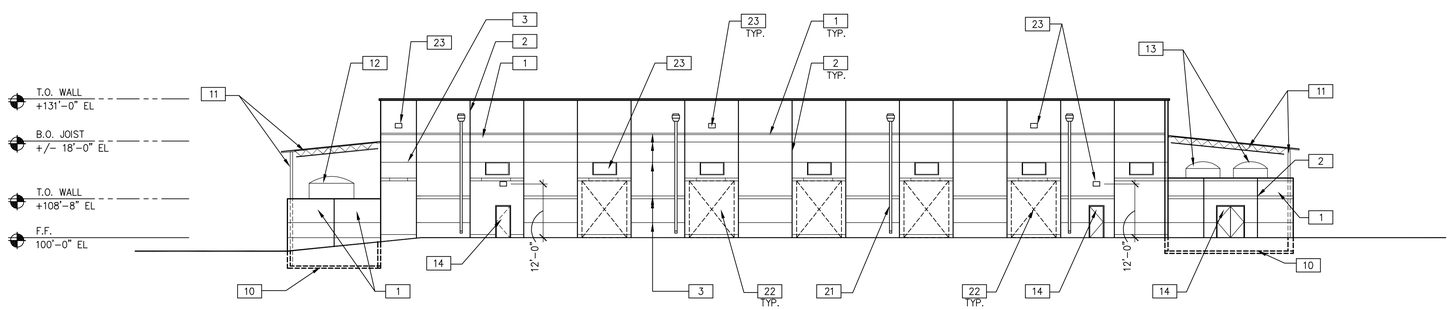
WARE MALCOMB
Leading Design for Commercial Real Estate



NORTH ELEVATION
SCALE: 1/16"=1'-0" A



EAST ELEVATION
SCALE: 1/16"=1'-0" A



SOUTH ELEVATION
SCALE: 1/16"=1'-0" A

ELEVATION NOTES

GENERAL NOTE:
ALL PAINT COLORS & EXTERIOR MATERIALS TO MATCH EXISTING FACILITY.

1. EXTERIOR INSULATED PRECAST CONCRETE WALL PANEL (PAINTED)
2. PRECAST CONCRETE PANEL – PANEL JOINT
3. PRECAST CONCRETE PANEL – 1 1/2 " REVEAL
4. EXTERIOR BRICK VENEER – RUNNING BOND – COLOR & BRICK TYPE TO MATCH EXISTING
5. ALUMINUM STOREFRONT SYSTEM WITH 1" THICK INSULATED GLAZING.
6. 3 COAT STUCCO – PAINTED TO MATCH EXISTING BUILDING STUCCO FINISH
7. STUCCO REVEAL
8. PAINTED STEEL TUBE CANOPY TO MATCH EXISTING BUILDING CANOPY SYSTEM
9. PROCESS TANK ENCLOSURE – PAINTED PRECAST CONCRETE PANELS TO MATCH BUILDING PANELS.
10. POURED IN PLACE CONCRETE PIT ENCLOSURE
11. TANK ENCLOSURE ROOF STRUCTURE – PAINTED STEEL FRAME WITH CORRUGATED METAL DECKING
12. PROCESS TANK
13. POURED IN PLACE CONCRETE ACCESS STAIR
14. HOLLOW METAL DOOR & FRAME – PAINTED
15. CLEAR ANODIZED STOREFRONT CLERESTORY WINDOW
16. POURED IN PLACE CONCRETE RAMP – PAINT EXTERIOR FACE TO MATCH BUILDING FIELD COLOR
17. PAINTED STEEL GUARD RAIL
18. EXTERIOR RUBBER TRUCK BUMPER
19. PAINTED STEEL GUARD RAIL – REMOVEABLE
20. FACTORY FINISHED SECTIONAL OVERHEAD DOOR
21. 10" X 10" OPEN FACED OVERFLOW DOWNSPOUT WITH 8" RD. DOWNSPOUT PAINTED TO MATCH BUILDING
22. KNOCK OUT PANEL FOR FUTURE OPENINGS
23. LIGHT FIXTURE – RE: PHOTOMETRIC

A2
JUNE 19, 2013

DELICH ASSOCIATES Traffic & Transportation Engineering
2272 Glen Haven Drive Loveland, Colorado 80538
Phone: (970) 669-2061 Fax: (970) 669-5034

MEMORANDUM

TO: Dan Berlin, Custom Blending
John Gooch, Aspen Engineering
Jeff Reed, Agora West Real Estate
City of Fort Collins

FROM: Matt Delich

DATE: June 4, 2013

SUBJECT: Custom Blending Expansion Transportation Impact Study
(File: 1345ME01)

This memorandum addresses the transportation impacts of the proposed Custom Blending Expansion. The existing Custom Blending building is located at 3461 Precision Drive in Fort Collins. The site location is shown in Figure 1. Custom Blending is a food/spice manufacturing operation. The scope of this study was discussed with the Fort Collins Traffic Operations Engineer. A brief memorandum was requested. The Base Assumptions form is provided in Appendix A.

Figure 2 shows the current geometry at the key intersections in the area. There are sidewalks along both sides of Lady Moon Drive between Rock Creek Drive and Precision Drive. There are sidewalks along both sides of Rock Creek Drive between Technology Parkway and Lady Moon Drive. There are also sidewalks along the south side of Precision Drive between the existing Custom Blending site and Lady Moon Drive. There are bicycle lanes along Lady Moon Drive, Rock Creek Drive, and the existing short segment of Technology Parkway.

Figure 3 shows recent peak hour counts at the Ziegler/Rock Creek, Rock Creek/Technology, Rock Creek/Lady Moon, and Lady Moon/Precision intersections. City staff agreed that no new traffic counts would be required. Raw traffic data is provided in Appendix B. Since the traffic counts were obtained on different days, the volumes at the intersections were adjusted/balanced and are shown in Figure 4. Table 1 shows the current morning and afternoon peak hour operation of the key intersections. Calculation forms are provided in Appendix C. A description of level of service for signalized and unsignalized intersections from the 2010 Highway Capacity Manual and a table showing the Fort Collins Motor Vehicle LOS Standards (Intersections) are also provided in Appendix C. The key intersections operate acceptably during the peak hours with existing control and geometry.

Figure 5 shows the site plan for the Custom Blending Expansion. The Custom Blending Expansion will be approximately 38,000 square feet. Access to the expansion site will be primarily via a full-movement access to/from Precision Drive. Trip

Generation, 9th Edition, ITE was used as the reference document in calculating the trip generation. Land use code 130, Industrial Park was used for the Custom Blending Expansion. Table 2 shows the trip generation for the Custom Blending Expansion. The Custom Blending Expansion is expected to generate 260 daily trip ends, 31 morning peak hour trip ends, and 32 afternoon peak hour trip ends.

Directional distribution of the generated trips was determined for the Custom Blending Expansion site and is shown in Figure 6. Figure 7 shows the site generated peak hour traffic assignment of the Custom Blending Expansion.

Figure 8 shows the short range (2018) background morning and afternoon peak hour traffic at the key intersections. Background traffic volume forecasts for the short range (2018) future were obtained by reviewing traffic studies for other developments in this area and reviewing historic counts in the area. Traffic volumes from the Banner Health Medical Campus and 5043 Technology Parkway were used in the traffic forecasts. Table 3 shows the short range (2018) background morning and afternoon peak hour operation at the key intersections. Calculation forms are provided in Appendix D. The key intersections will operate acceptably with the existing control and geometry in the short range (2018) future.

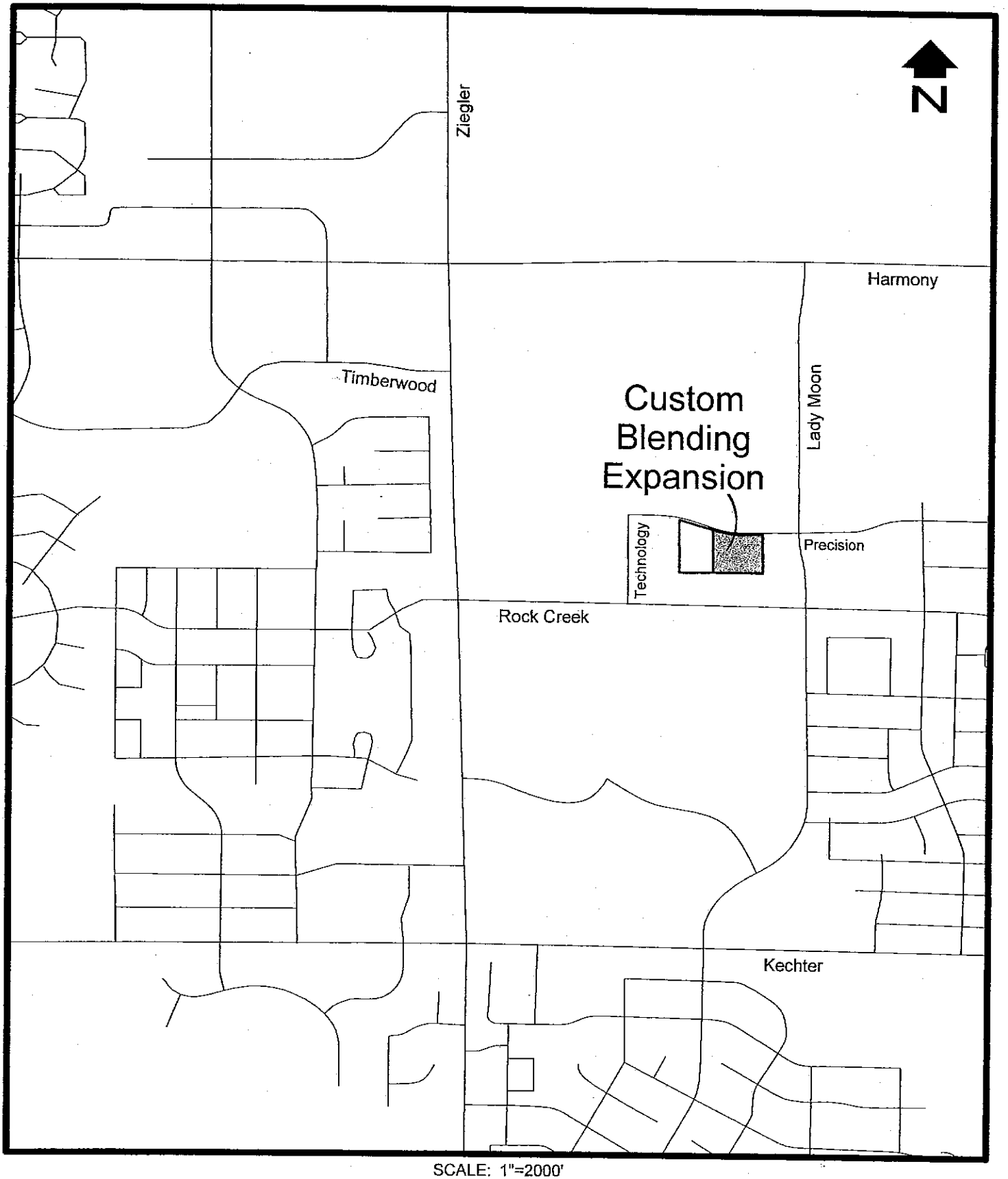
Figure 9 shows the short range (2018) total morning and afternoon peak hour traffic at the key intersections. Table 4 shows the short range (2018) total morning and afternoon peak hour operation at the key intersections. Calculation forms are provided in Appendix E. The key intersections will operate acceptably during the morning and afternoon peak hours with the existing control and geometry.

The Custom Blending Expansion site is in an area within which the City requires pedestrian and bicycle level of service evaluations. Appendix F shows a map of the area that is within 1320 feet of the Custom Blending Expansion site. The Custom Blending Expansion site is located within an area termed as "other," which sets the pedestrian level of service threshold at LOS C for all measured categories. There are two destination areas within 1320 feet of the proposed Custom Blending Expansion: 1) the residential neighborhood to the southeast and 2) the residential apartments to the east. Appendix F contains a Pedestrian LOS Worksheet.

Based upon Fort Collins bicycle LOS criteria, there are no destination areas within 1320 feet of the Custom Blending Expansion site.

Currently, this area is served by Transfort Routes 16 and 17. The transit service is acceptable.

It is concluded that, with full development of the Custom Blending Expansion, the future level of service at the key intersections will be acceptable. The Custom Blending Expansion can be built without additional geometry or other street improvements.

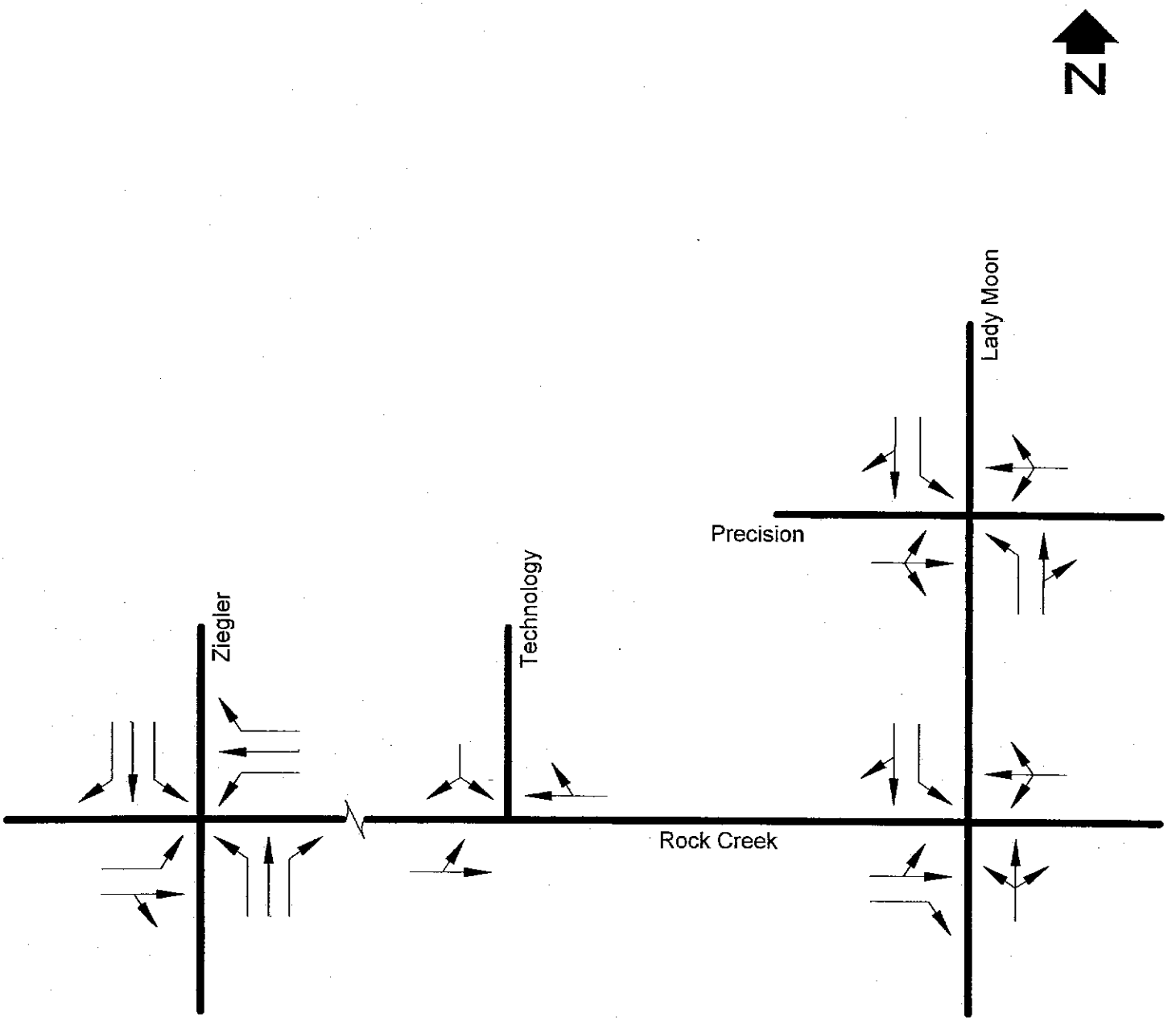


SCALE: 1"=2000'

SITE LOCATION

Figure 1

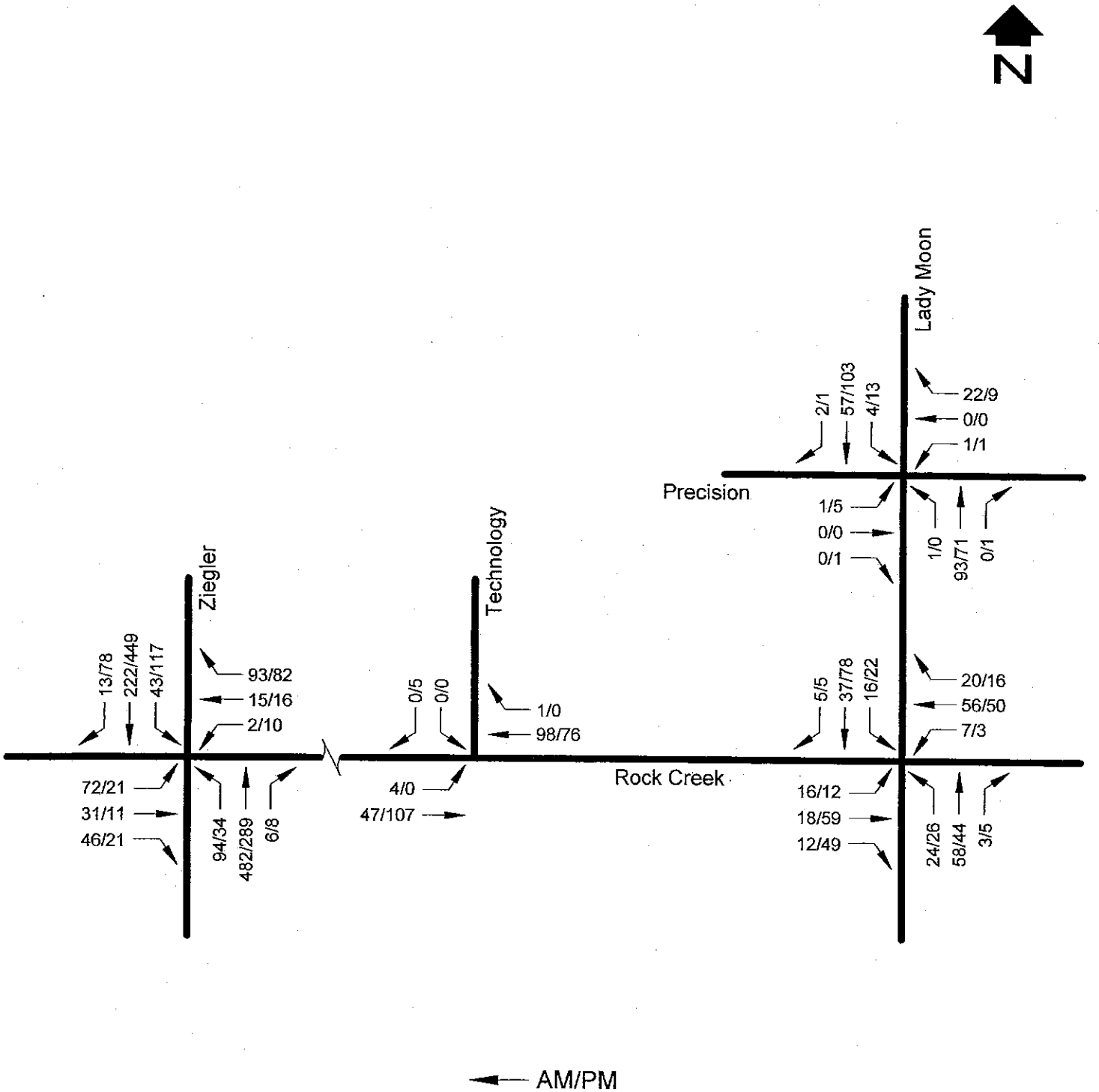
DELICH ASSOCIATES



CURRENT INTERSECTION GEOMETRY Figure 2

DELICH ASSOCIATES

Custom Blending Expansion TIS, June 2013

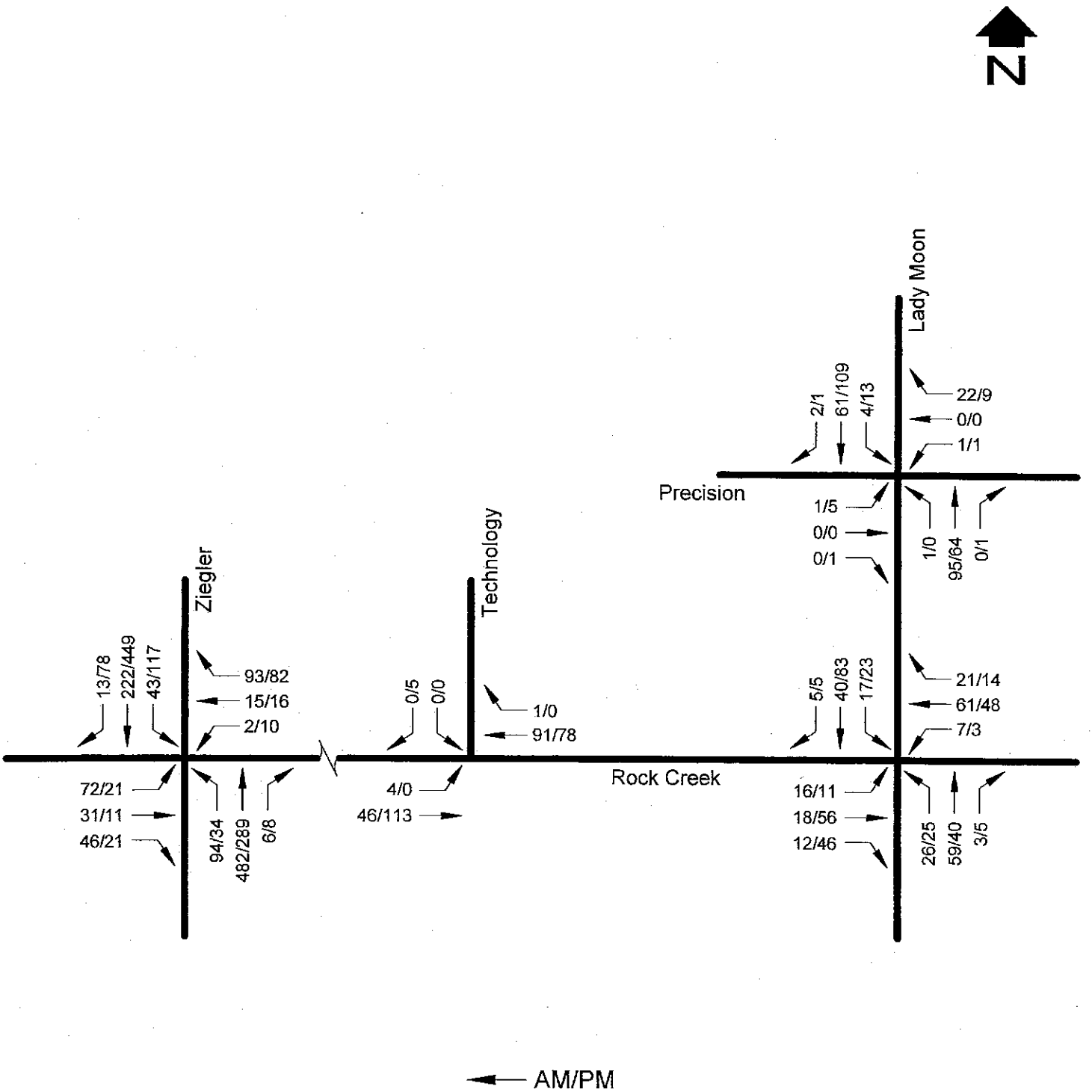


RECENT PEAK HOUR TRAFFIC

Figure 3

DELICH ASSOCIATES

Custom Blending Expansion TIS, June 2013



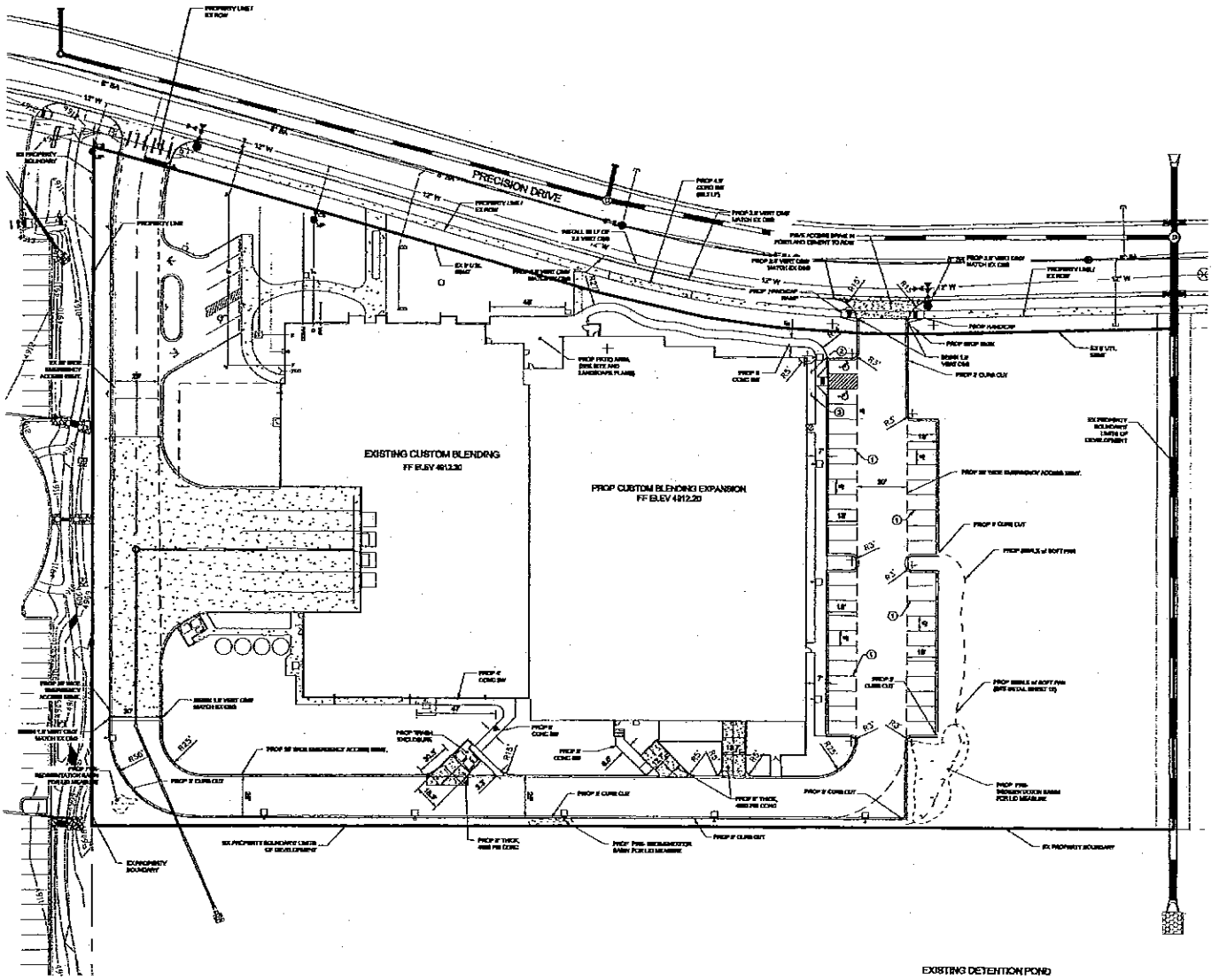
ADJUSTED/BALANCED RECENT PEAK HOUR TRAFFIC

Figure 4

TABLE 1 Current Peak Hour Operation			
Intersection	Movement	Level of Service	
		AM	PM
Ziegler/Rock Creek (signal)	EB LT/T/RT	B	B
	EB APPROACH	A	A
	WB LT	B	B
	WB T	B	B
	WB RT	B	B
	WB APPROACH	B	B
	NB LT	A	A
	NB T	B	B
	NB RT	A	A
	NB APPROACH	B	B
	SB LT	A	A
	SB T	B	B
	SB RT	A	A
	SB APPROACH	A	B
	OVERALL	B	B
Rock Creek/Technology (stop sign)	SB LT/RT	A	A
	EB LT/T	A	A
Rock Creek/Lady Moon (all-way stop)	EB LT/T	A	A
	EB RT	A	A
	EB APPROACH	A	A
	WB LT/T/RT	A	A
	NB LT/T/RT	A	A
	SB LT	A	A
	SB T/RT	A	A
	SB APPROACH	A	A
	OVERALL	A	A
Lady Moon/Precision (stop sign)	EB LT/T/RT	B	B
	WB LT/T/RT	A	A
	NB LT	A	A
	SB LT	A	A

N

SCALE: 1"=100'



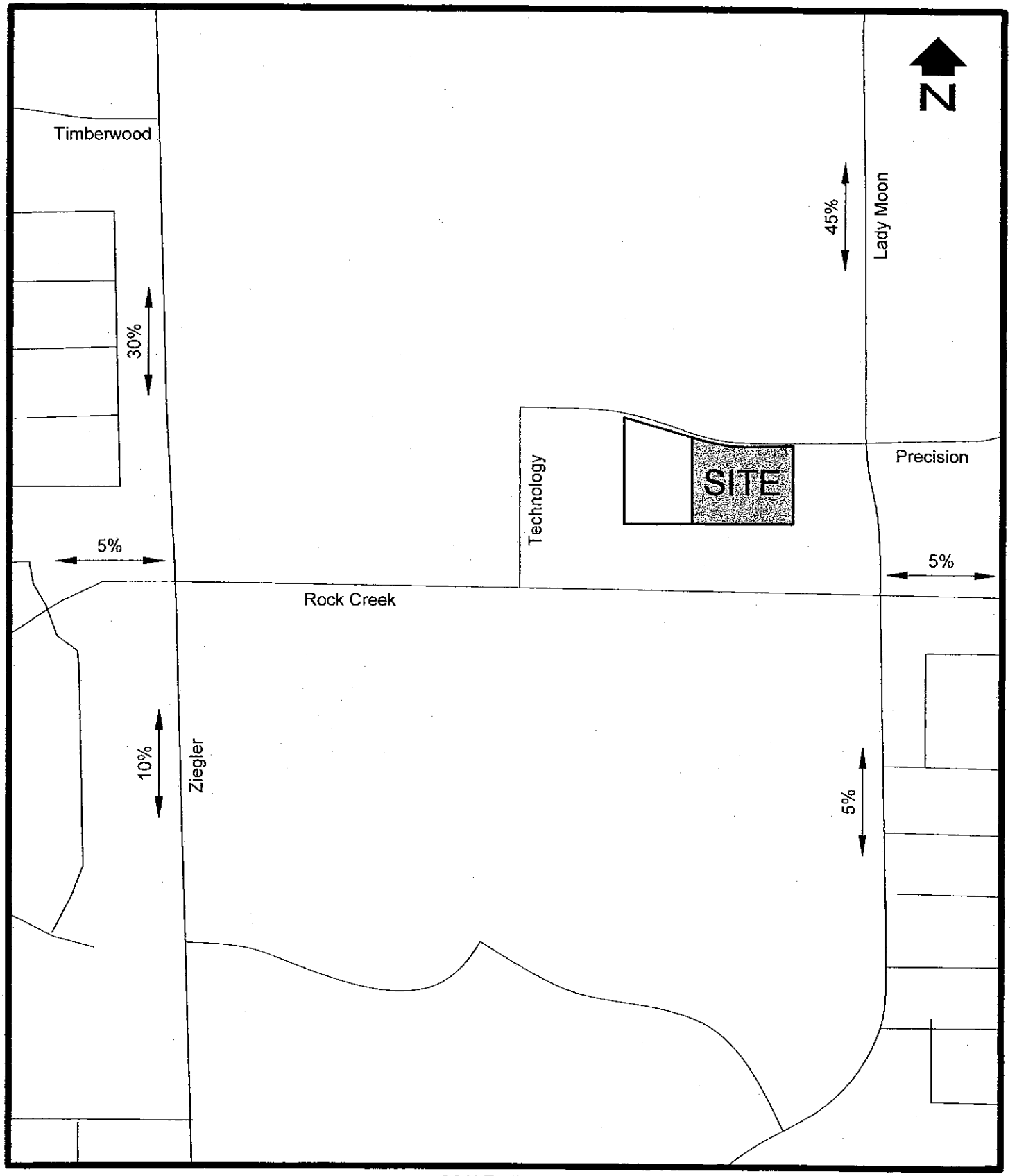
SITE PLAN

Figure 5

DELICH ASSOCIATES

TABLE 2
Trip Generation

Code	Use	Size	AWDTE		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	In	Rate	Out	Rate	In	Rate	Out
130	Industrial Park	38.0 KSF	6.83	260	0.67	25	0.15	6	0.18	7	0.67	25

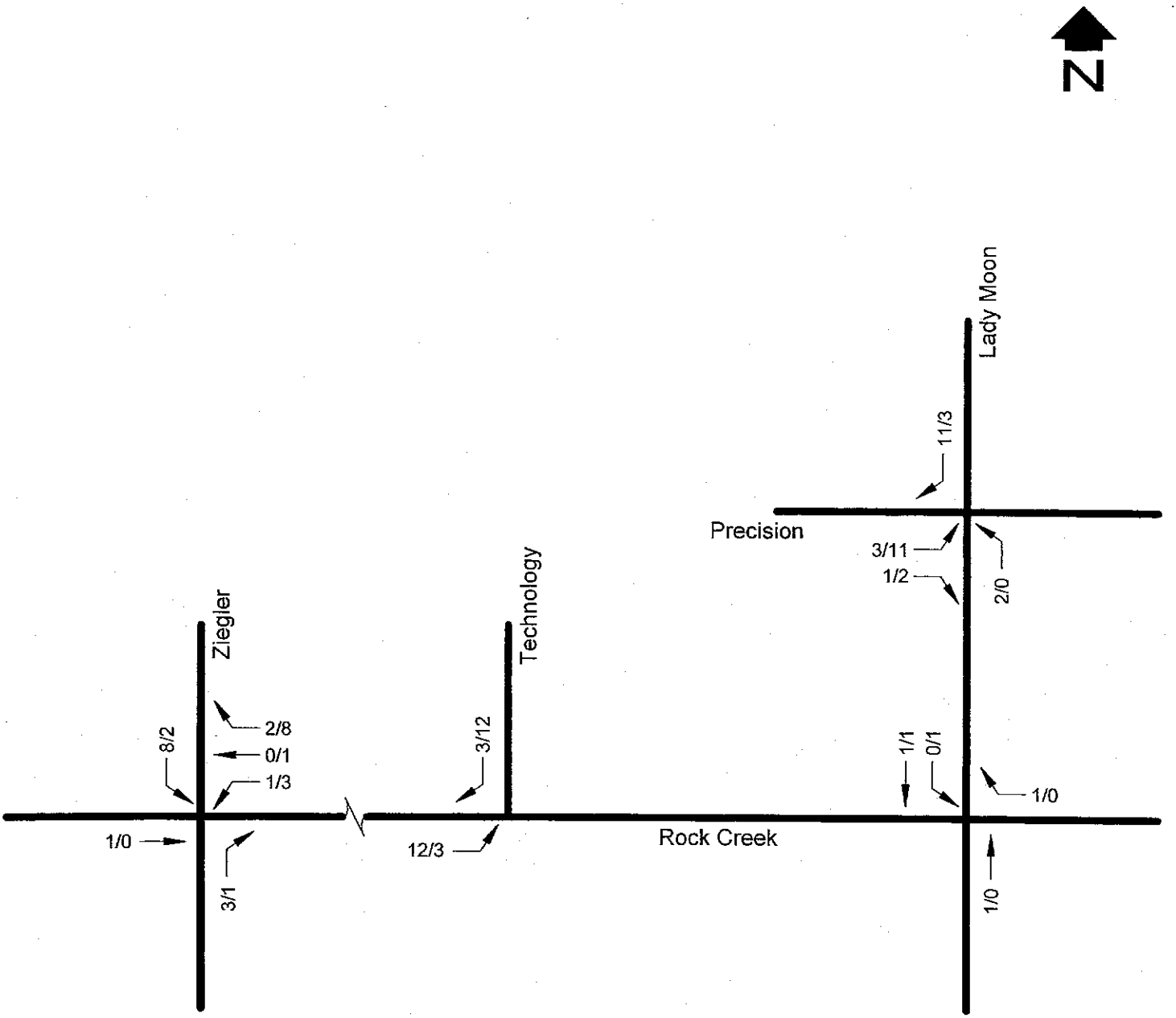


SCALE: 1"=2000'

TRIP DISTRIBUTION

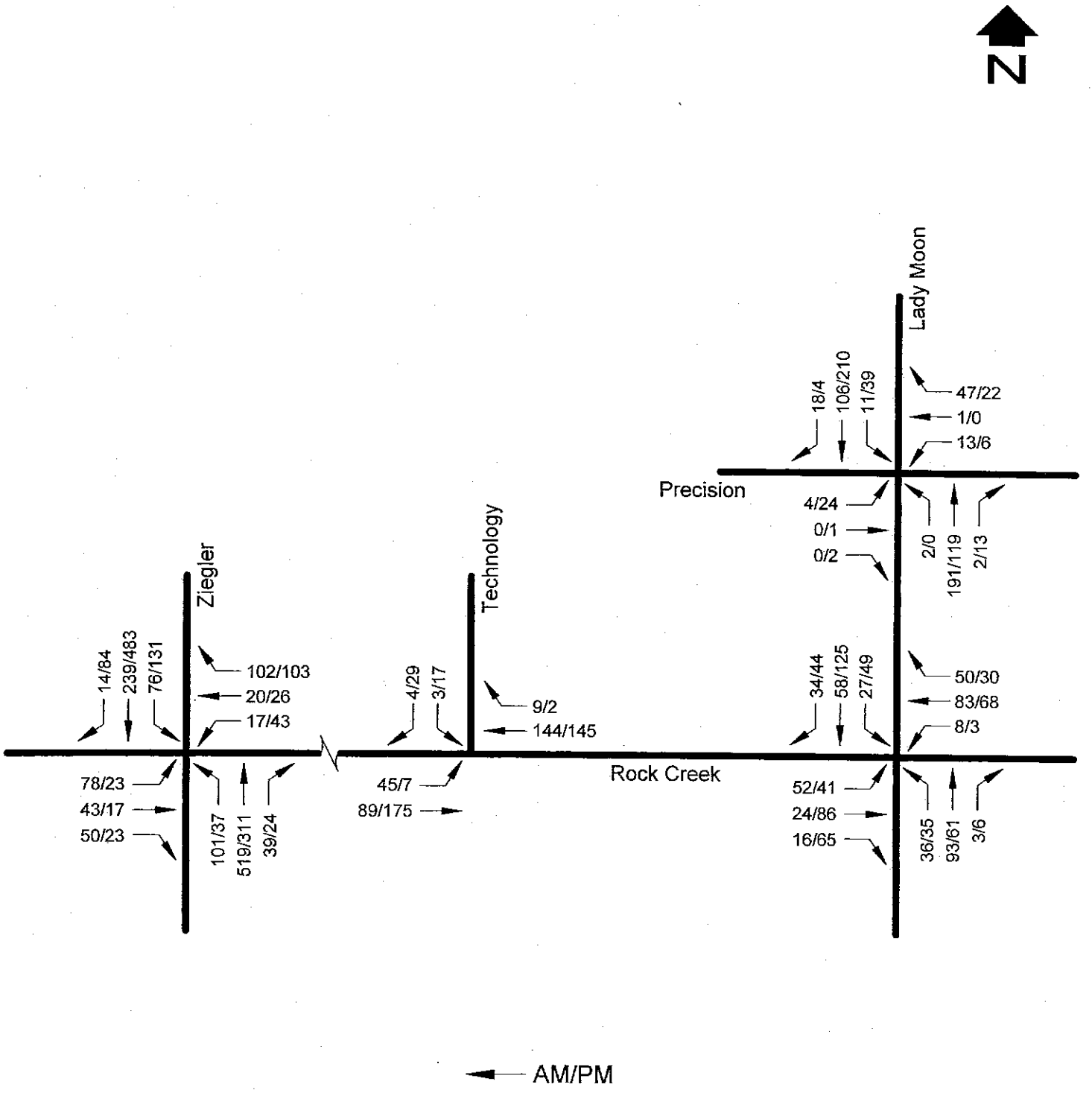
Figure 6

DELICH ASSOCIATES



SITE GENERATED PEAK HOUR TRAFFIC

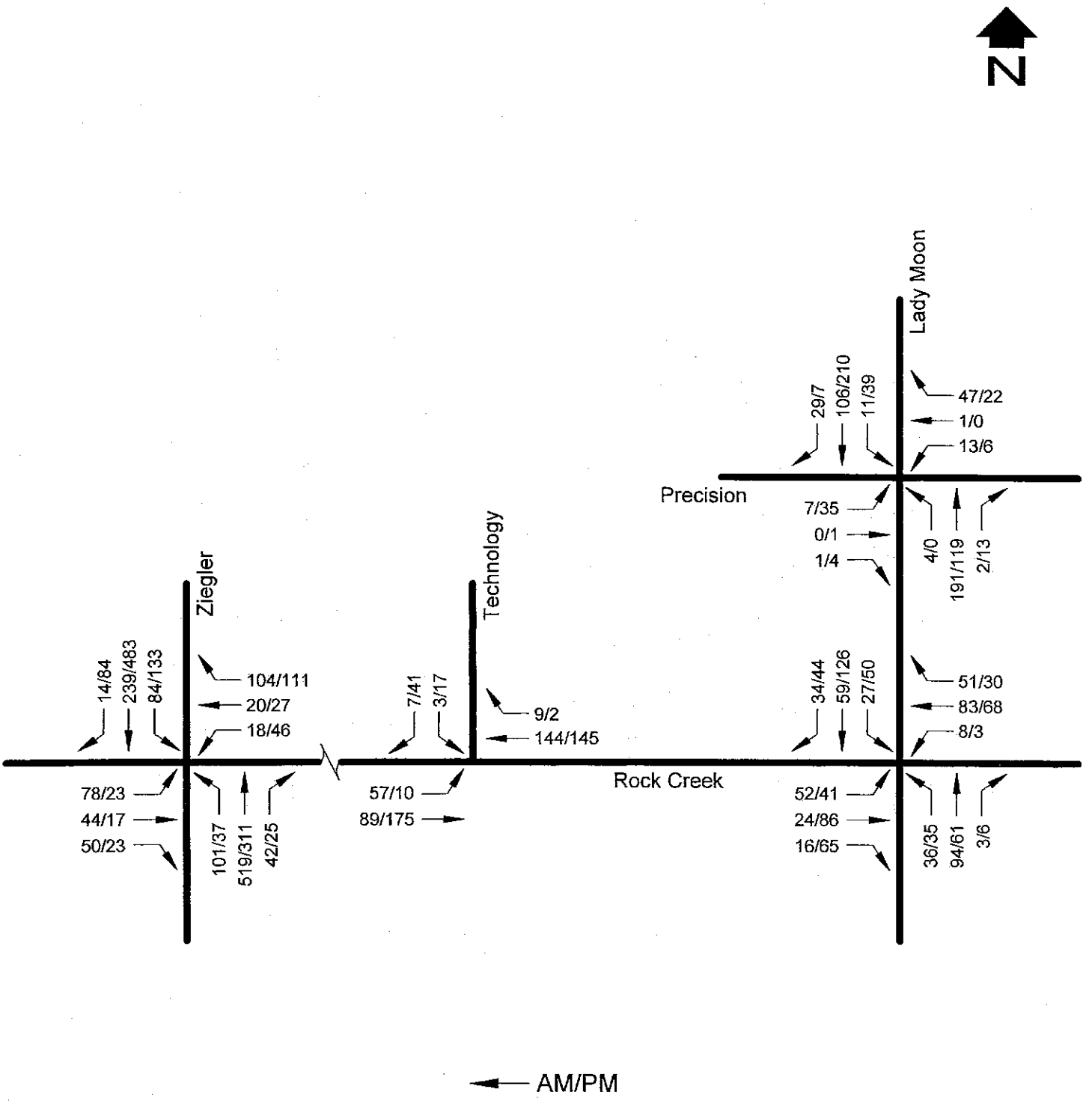
Figure 7



SHORT RANGE (2018) BACKGROUND PEAK HOUR TRAFFIC

Figure 8

TABLE 3 Short Range (2018) Background Peak Hour Operation			
Intersection	Movement	Level of Service	
		AM	PM
Ziegler/Rock Creek (signal)	EB LT/T/RT	B	B
	EB APPROACH	A	A
	WB LT	B	B
	WB T	B	B
	WB RT	B	B
	WB APPROACH	B	B
	NB LT	A	A
	NB T	B	B
	NB RT	A	A
	NB APPROACH	B	B
	SB LT	A	A
	SB T	B	B
	SB RT	A	A
	SB APPROACH	A	B
	OVERALL	B	B
Rock Creek/Technology (stop sign)	SB LT/RT	B	B
	EB LT/T	A	A
Rock Creek/Lady Moon (all-way stop)	EB LT/T	A	B
	EB RT	A	A
	EB APPROACH	A	A
	WB LT/T/RT	A	B
	NB LT/T/RT	B	B
	SB LT	A	A
	SB T/RT	A	B
	SB APPROACH	A	B
	OVERALL	A	B
Lady Moon/Precision (stop sign)	EB LT/T/RT	B	B
	WB LT/T/RT	B	B
	NB LT	A	A
	SB LT	A	A



SHORT RANGE (2018) TOTAL PEAK HOUR TRAFFIC

Figure 9

TABLE 4 Short Range (2018) Total Peak Hour Operation			
Intersection	Movement	Level of Service	
		AM	PM
Ziegler/Rock Creek (signal)	EB LT/T/RT	B	B
	EB APPROACH	A	A
	WB LT	B	B
	WB T	B	B
	WB RT	B	B
	WB APPROACH	B	B
	NB LT	A	A
	NB T	B	B
	NB RT	A	A
	NB APPROACH	B	B
	SB LT	A	A
	SB T	B	B
	SB RT	A	A
	SB APPROACH	A	B
	OVERALL	B	B
Rock Creek/Technology (stop sign)	SB LT/RT	A	B
	EB LT/T	A	A
Rock Creek/Lady Moon (all-way stop)	EB LT/T	A	B
	EB RT	A	A
	EB APPROACH	A	A
	WB LT/T/RT	B	B
	NB LT/T/RT	B	B
	SB LT	A	A
	SB T/RT	A	B
	SB APPROACH	A	B
	OVERALL	A	B
Lady Moon/Precision (stop sign)	EB LT/T/RT	B	B
	WB LT/T/RT	B	B
	NB LT	A	A
	SB LT	A	A

APPENDIX A

Attachment A
Transportation Impact Study
Base Assumptions

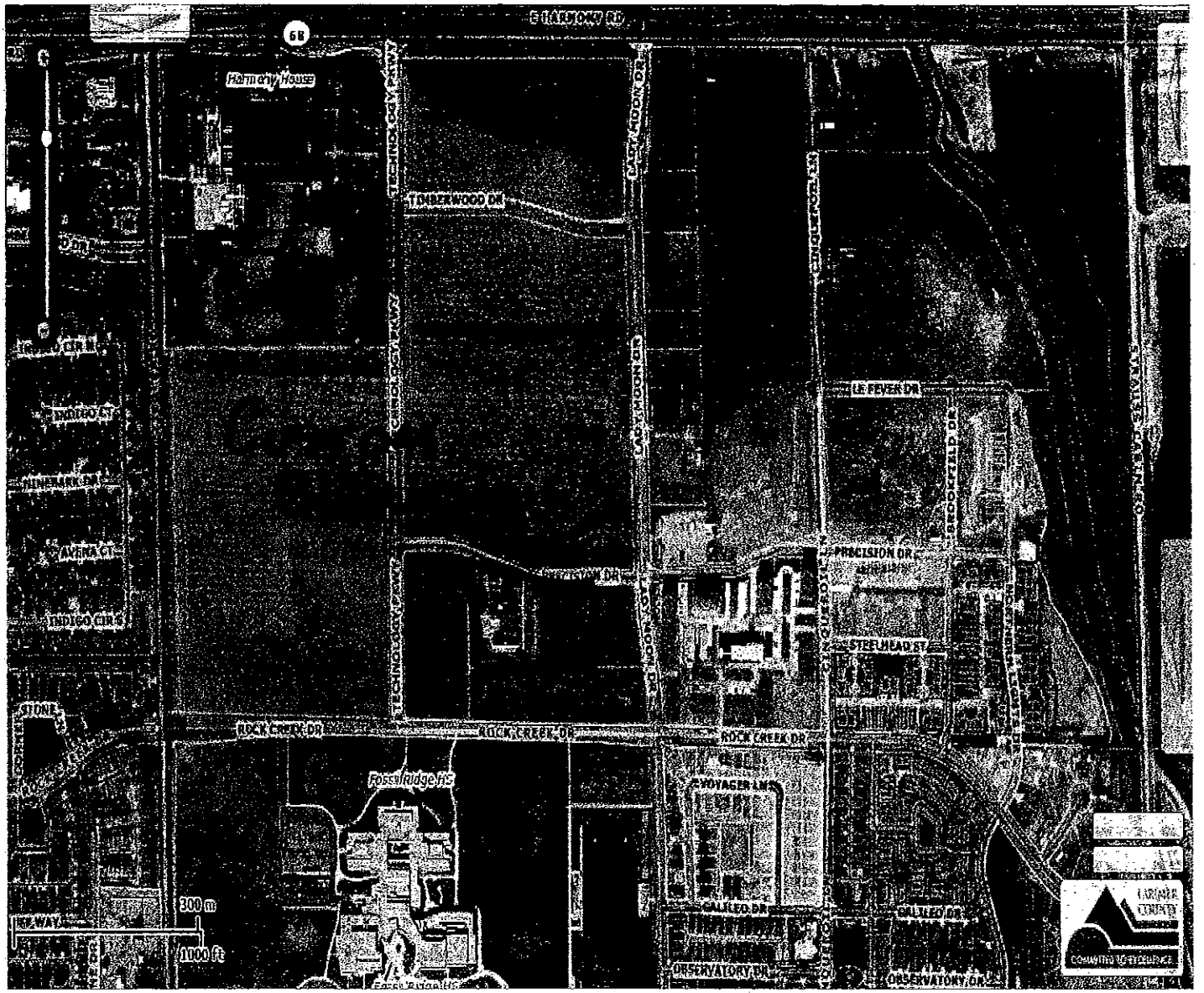
Project Information			
Project Name	CUSTOM BLENDING EXPANSION		
Project Location	NW QUADRANT OF ROCK CREEK/LADY MOON		
TIS Assumptions			
Type of Study	Full: NO		Intermediate: MAYBE
Study Area Boundaries	North: PRECISION		South: ROCK CREEK
	East: LADY MOON		West: ZIEGLER
Study Years	Short Range: 2018		Long Range: N/A
Future Traffic Growth Rate	1.5% PLUS	KNOWN PROJECTS*	
Study Intersections	1. All access drives – NO		5. ZIEGLER/ROCK CREEK
	2. LADY MOON/PRECISION		6.
	3. LADY MOON/ROCK CREEK		7.
	4. ROCK CREEK/TECH PKWY		8.
Time Period for Study	AM: 7:00-9:00	PM: 4:00-6:00	Sat Noon: NO
Trip Generation Rates	PER T.G., 9TH ED (ATTACHED)		
Trip Adjustment Factors	Passby: N/A		Captive Market: N/A
Overall Trip Distribution	SEE ATTACHED SKETCH		
Mode Split Assumptions	N/A		
Committed Roadway Improvements	NOT AWARE OF ANY		
Other Traffic Studies	* 5042 TECH PARKWAY BANNER HOSPITAL		
Areas Requiring Special Study	USE AVAILABLE COUNTS – NO NEW COUNTS		

Date: MAY 24, 2013

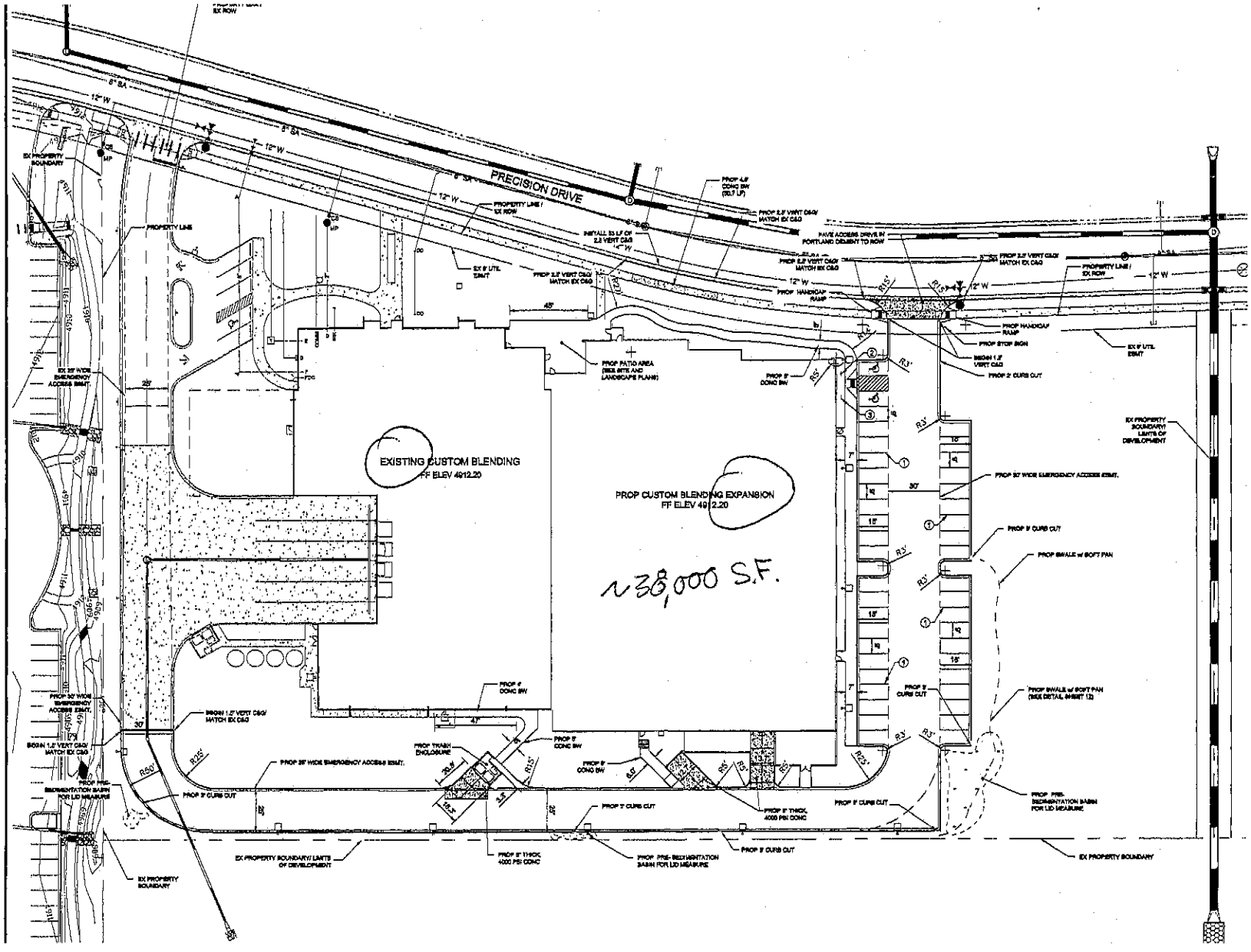
Traffic Engineer: DELICH ASSOCIATES

Local Entity Engineer: [signature] 5/30/13

1345 BAF



SITE LOCATION



SITE PLAN

NORTH

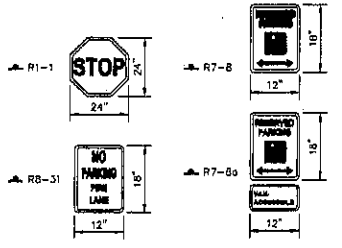
SCALE: 1" = 30'

0' 30' 60'

NOTES

1. ALL DIMENSIONS ARE TO FLOWLINE, UNLESS NOTED OR SHOWN
2. ALL INTERIOR CURB AND GUTTER SHALL HAVE A 1' PAN FRO FLOWLINE, WITH 0.5' WIDTH FROM FLOWLINE TO TOP-BACK-OF PLAN FOR LOCATION OF OUTFALL CURB AND GUTTER.
3. ALL DRAINAGE CHASES THROUGH THE INTERIOR MEDIAN ISLAN FLOWLINE WIDTH OF 2'.
4. ALL SIDEWALK CULVERTS SHALL BE CONCRETE, UNLESS NOTE ALL CURB CUTS SHALL HAVE 1' TRANSITION TAPERS FROM 6" CURB ON EACH SIDE OF THE CURB CUT.
5. ALL DRIVE ACCESS SHALL BE PAVED IN PORTLAND CEMENT FI RIGHT-OF-WAY/ PROPERTY LINE.
6. ALL INTERIOR DRIVE AISLES SHALL BE MINIMUM OF 24' WIDE.
7. THE EMERGENCY ACCESS EASEMENT (EMA) IS 25'-30' WIDE, 25' (MIN.) AND 50' (MIN.) RADII FOR INTERIOR AND OUTER RA
8. PAINTED PARKING STALLS SHALL BE 4" WIDE STRIPES AND EF
9. STRIPING DIMENSIONS SHOWN ARE FROM CENTER OF STRIPE, U
10. INSTALLATION OF SIGNAGE AND SIGN POSTS SHALL BE IN AC LARIMER COUNTY URBAN AREA STREET STANDARDS.
11. SEE SHEET 2 FOR MASTER LEGEND & ABBREVIATIONS.
12. REFER TO THE GEOTECHNICAL SUBSURFACE EXPLORATION REI 2008, BY SOILOGIC, INC. FOR PAVING RECOMMENDATIONS.

SIGNAGE LEGEND



LEGEND

- PROPOSED CURB AND GUTTER
- PROPERTY LINE
- CURB RAMP
- LIGHT POLE
- WALL MOUNTED LIGHT OR GROUND LIGHT PEDESTAL
- ① 4" WHITE SOLID LINE
- ② INSTALL HANDICAP

City of F
UTILITY

APPROVED: _____

CHECKED BY: Water

CHECKED BY: S

CHECKED BY: Pa

TRIP GENERATION (T.G., 9TH)

BUILDING SIZE - ~38,000 S.F.

INDUSTRIAL PARK (CODE 130)

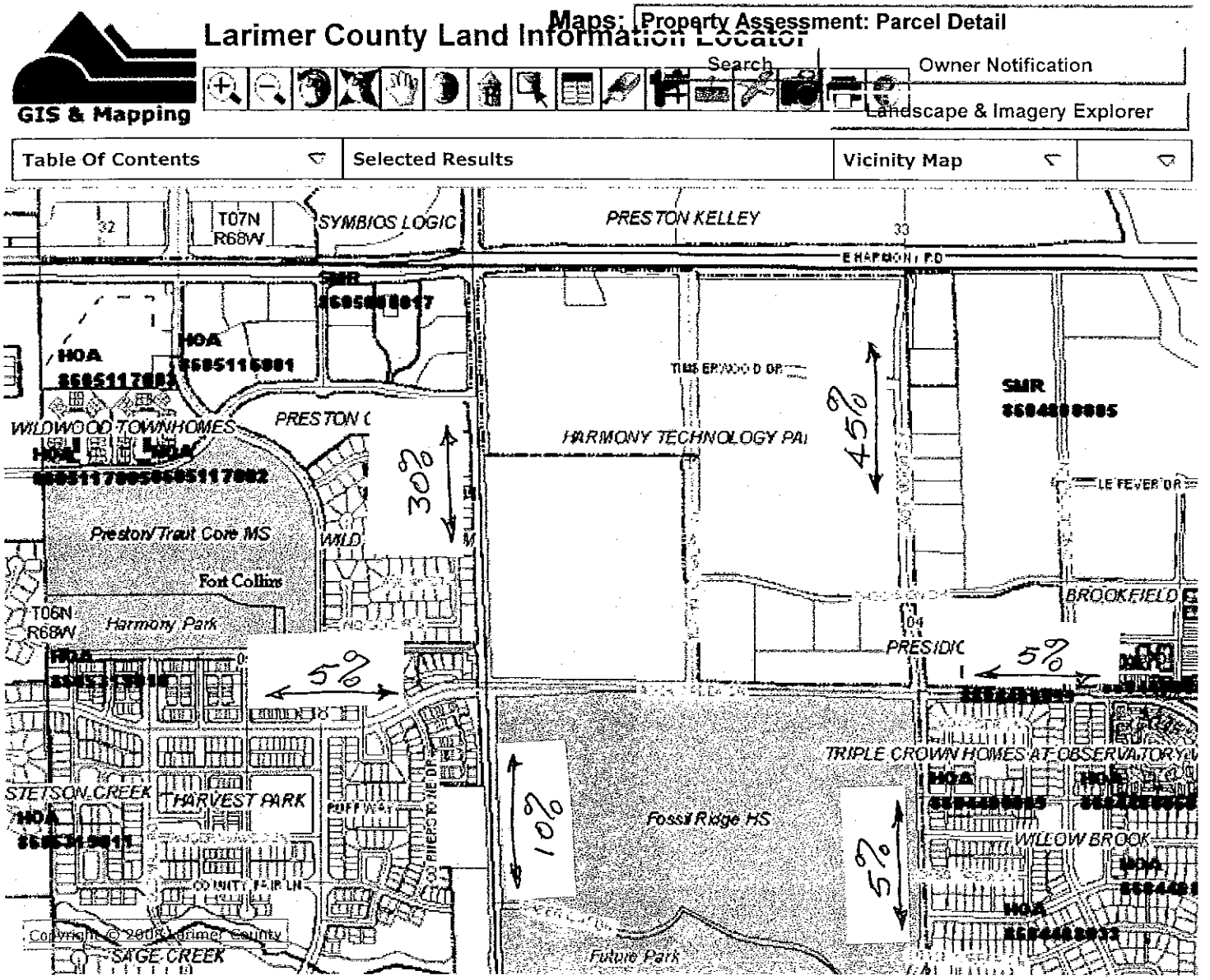
DAILY - (6.83) - 260

AM (0.82) - 31

IN - (82%) - 25
OUT - (18%) - 6

PM (0.85) - 32

IN - (21%) - 7
OUT (79%) - 25



TRIP DISTRIBUTION

APPENDIX B

DELICH ASSOCIATES
2272 GLEN HAVEN DRIVE
LOVELAND, CO 80538
Phone: (970) 669-2061

TABULAR SUMMARY OF VEHICLE COUNTS

Date: 3-27-13 Observer: City of Fort Collins

Day: Wednesday Jurisdiction: Fort Collins

Intersection: Ziegler/Rock Creek

R = right turn
S = straight
L = left turn

Time	Northbound: Ziegler				Southbound: Ziegler				Total	Eastbound: Rock Creek				Westbound: Rock Creek				Total	Total
Begins	L	S	R	Total	L	S	R	Total	north/south	L	S	R	Total	L	S	R	Total	east/west	All
7:30	25	116	2	143	9	58	4	71	214	45	14	28	87	2	8	23	33	120	334
7:45	13	144	2	159	8	95	2	105	264	6	6	10	22	0	1	20	21	43	307
8:00	40	135	1	176	12	42	2	56	232	4	4	6	14	0	3	26	29	43	275
8:15	16	87	1	104	14	27	5	46	150	7	7	2	16	0	3	24	27	43	193
7:30-8:30	94	482	6	582	43	222	13	278	860	62	31	46	139	2	15	93	110	249	1109
PHF	0.59	0.84	0.75	0.83	0.77	0.58	0.65	0.66		0.34	0.55	0.41	0.4	0.25	0.47	0.89	0.83		
4:30	10	78	3	91	23	97	11	131	222	5	1	4	10	5	4	26	35	45	267
4:45	14	81	1	96	23	103	23	149	245	6	3	2	11	2	2	20	24	35	280
5:00	5	59	3	67	28	112	14	154	221	7	4	8	19	1	5	16	22	41	262
5:15	5	71	1	77	43	137	30	210	287	3	3	7	13	2	5	20	27	40	327
4:30-5:30	34	289	8	331	117	449	78	644	975	21	11	21	53	10	16	82	108	161	1136
PHF	0.61	0.89	0.67	0.86	0.68	0.82	0.65	0.77		0.75	0.69	0.66	0.7	0.5	0.8	0.79	0.77		

DELICH ASSOCIATES
2272 GLEN HAVEN DRIVE
LOVELAND, CO 80538
Phone: (970) 669-2061

TABULAR SUMMARY OF VEHICLE COUNTS

Date: 11-28-12 Observer: Joe

Day: Wednesday Jurisdiction: Fort Collins

Intersection: Lady Moon/Rock Creek

R = right turn
S = straight
L = left turn

Time	Northbound: Lady Moon				Southbound: Lady Moon				Total	Eastbound: Rock Creek				Westbound: Rock Creek				Total	Total
Begins	L	S	R	Total	L	S	R	Total	north/south	L	S	R	Total	L	S	R	Total	east/west	All
7:30	9	15	1	25	5	10	1	16	41	4	8	0	12	1	19	6	26	38	79
7:45	6	15	1	22	2	11	2	15	37	5	4	3	12	5	15	6	26	38	75
8:00	5	17	1	23	7	11	2	20	43	2	1	6	9	0	12	6	18	27	70
8:15	4	11	0	15	2	5	0	7	22	5	5	3	13	1	10	2	13	26	48
7:30-8:30	24	58	3	85	16	37	5	58	143	16	18	12	46	7	56	20	83	129	272
PHF	0.67	0.85	0.75	0.85	0.57	0.84	0.63	0.73		0.8	0.56	0.5	0.88	0.35	0.74	0.83	0.8		
4:30	5	6	0	11	8	11	2	21	32	2	14	12	28	1	14	3	18	46	78
4:45	7	17	2	26	4	19	0	23	49	5	9	9	23	1	14	4	19	42	91
5:00	7	9	2	18	4	29	1	34	52	3	20	16	39	1	8	4	13	52	104
5:15	7	12	1	20	6	19	2	27	47	2	16	12	30	0	14	5	19	49	96
4:30-5:30	26	44	5	75	22	78	5	105	180	12	59	49	120	3	50	16	69	189	369
PHF	0.93	0.65	0.63	0.72	0.69	0.67	0.63	0.77		0.6	0.74	0.77	0.77	0.75	0.89	0.8	0.91		

DELICH ASSOCIATES
2272 GLEN HAVEN DRIVE
LOVELAND, CO 80538
Phone: (970) 669-2061

TABULAR SUMMARY OF VEHICLE COUNTS

Date: 2-16-11 **Observer: Joe**

Day: Wednesday **Jurisdiction: Fort Collins**

Intersection: Rock Creek/Technology

R = right turn
S = straight
L = left turn

Time	Northbound:				Southbound: Technology				Total	Eastbound: Rock Creek				Westbound: Rock Creek				Total	Total
Begins	L	S	R	Total	L	S	R	Total	north/south	L	S	R	Total	L	S	R	Total	east/west	All
7:30				0	0		0	0	0	0	12		12		30	0	30	42	42
7:45				0	0		0	0	0	1	13		14		22	1	23	37	37
8:00				0	0		0	0	0	3	12		15		26	0	26	41	41
8:15				0	0		0	0	0	0	10		10		20	0	20	30	30
7:30-8:30	0	0	0	0	0	0	0	0	0	4	47	0	51	0	98	1	99	150	150
PHF				n/a	n/a		n/a	n/a		0.33	0.9		0.85		0.82	0.25	0.83		
4:30				0	0		0	0	0	0	24		24		18	0	18	42	42
4:45				0	0		5	5	5	0	22		22		20	0	20	42	47
5:00				0	0		0	0	0	0	31		31		19	0	19	50	50
5:15				0	0		0	0	0	0	30		30		19	0	19	49	49
4:30-5:30	0	0	0	0	0	0	5	5	5	0	107	0	107	0	76	0	76	183	188
PHF				n/a	n/a		0.25	0.25		n/a	0.86		0.86		0.95	n/a	0.95		

DELICH ASSOCIATES
2272 GLEN HAVEN DRIVE
LOVELAND, CO 80538
Phone: (970) 669-2061

TABULAR SUMMARY OF VEHICLE COUNTS

Date: 11-28-12 Observer: Joe

Day: Wednesday Jurisdiction: Fort Collins

Intersection: Lady Moon/Precision

R = right turn
S = straight
L = left turn

Time	Northbound: Lady Moon				Southbound: Lady Moon				Total	Eastbound: Precision				Westbound: Precision				Total	Total
Begins	L	S	R	Total	L	S	R	Total	north/south	L	S	R	Total	L	S	R	Total	east/west	All
7:30	0	25	0	25	1	16	0	17	42	0	0	0	0	0	0	6	6	6	48
7:45	0	26	0	26	1	15	1	17	43	1	0	0	1	0	0	6	6	7	50
8:00	1	24	0	25	1	19	1	21	46	0	0	0	0	1	0	4	5	5	51
8:15	0	18	0	18	1	7	0	8	26	0	0	0	0	0	0	6	6	6	32
7:30-8:30	1	93	0	94	4	57	2	63	157	1	0	0	1	1	0	22	23	24	181
PHF	0.25	0.89	n/a	0.9	1	0.75	0.5	0.75		0.25	n/a	n/a	0.25	0.25	n/a	0.92	0.96		
4:30	0	11	0	11	1	21	0	22	33	1	0	0	1	0	0	4	4	5	38
4:45	0	26	0	26	5	23	0	28	54	2	0	0	2	0	0	2	2	4	58
5:00	0	16	0	16	2	33	0	35	51	1	0	0	1	1	0	1	2	3	54
5:15	0	18	1	19	5	26	1	32	51	1	0	1	2	0	0	2	2	4	55
4:30-5:30	0	71	1	72	13	103	1	117	189	5	0	1	6	1	0	9	10	16	205
PHF	n/a	0.68	0.25	0.69	0.65	0.78	0.25	0.84		0.63	n/a	0.25	0.75	0.25	n/a	0.56	0.63		

APPENDIX C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	31	46	2	15	93	94	482	6	43	222	13
Number	7	4	14	3	8	18	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	190.0	193.7	190.0	193.7	186.3	186.3	186.3	186.3	193.7	186.3	186.3	186.3
Lanes	0	1	0	1	1	1	1	1	1	1	1	1
Cap, veh/h	318	0	179	323	326	277	666	765	677	434	713	606
Arrive On Green	0.15	0.18	0.15	0.18	0.18	0.18	0.10	0.41	0.41	0.07	0.38	0.38
Sat Flow, veh/h	919	-618	1020	1353	1863	1583	1774	1863	1647	1774	1863	1583
Grp Volume(v), veh/h	121	0	84	2	18	104	111	567	7	51	261	15
Grp Sat Flow(s),veh/h/ln	1502	0	1583	1353	1863	1583	1774	1863	1647	1774	1863	1583
Q Serve(g_s), s	2.2	0.0	0.0	0.1	0.3	2.3	1.3	10.1	0.1	0.6	3.9	0.2
Cycle Q Clear(g_c), s	2.8	0.0	0.0	2.9	0.3	2.3	1.3	10.1	0.1	0.6	3.9	0.2
Prop In Lane	0.70		0.64	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	0	0	323	326	277	666	765	677	434	713	606
V/C Ratio(X)	0.32	0.00	0.00	0.01	0.06	0.37	0.17	0.74	0.01	0.12	0.37	0.02
Avail Cap(c_a), veh/h	1092	0	0	985	1237	1052	993	2974	2629	674	2832	2407
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	0.0	15.8	13.4	14.3	5.4	9.8	6.8	7.2	8.7	7.5
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.1	0.8	0.1	6.4	0.0	0.1	1.5	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	1.0	0.0	0.0	0.0	0.1	0.8	0.3	4.7	0.0	0.2	1.6	0.1
Lane Grp Delay (d), s/veh	14.1	0.0	0.0	15.8	13.5	15.1	5.5	16.1	6.8	7.3	10.1	7.6
Lane Grp LOS	B			B	B	B	A	B	A	A	B	A
Approach Vol, veh/h		205			124			685			327	
Approach Delay, s/veh		8.3			14.9			14.3			9.6	
Approach LOS		A			B			B			A	

Timer												
Assigned Phs		4			8		1	6		5	2	
Phs Duration (G+Y+Rc), s		11.9			11.9		6.8	21.6		5.7	20.5	
Change Period (Y+Rc), s		6.0			6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s		25.0			25.0		10.0	61.5		7.0	58.5	
Max Q Clear Time (g_c+I1), s		4.8			4.9		3.3	12.1		2.6	5.9	
Green Ext Time (p_c), s		1.2			1.2		0.1	3.0		0.0	3.0	

Intersection Summary		
HCM 2010 Ctrl Delay		12.3
HCM 2010 LOS		B

Notes

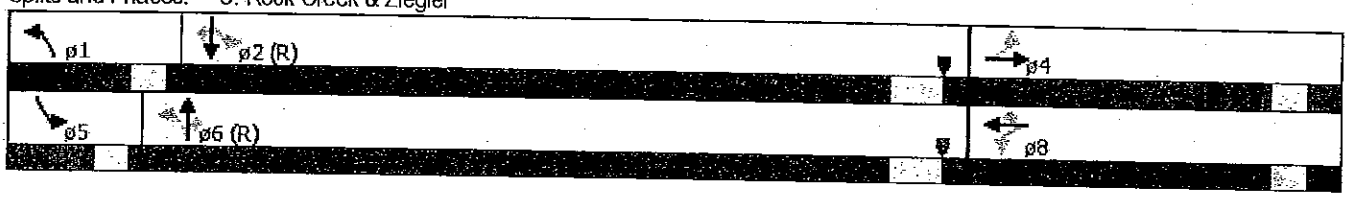
Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	C-Min	None	None	C-Min	None
Maximum Split (s)	14	65	31	11	68	31
Maximum Split (%)	12.7%	59.1%	28.2%	10.0%	61.8%	28.2%
Minimum Split (s)	11	32.5	30	11	31.5	31
Yellow Time (s)	3	4.5	3	3	4.5	3
All-Red Time (s)	1	2	3	1	2	3
Minimum Initial (s)	4	7	4	4	7	4
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		19	17		18	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	66	80	35	66	77	35
End Time (s)	80	35	66	77	35	66
Yield/Force Off (s)	76	28.5	60	73	28.5	60
Yield/Force Off 170(s)	76	9.5	43	73	10.5	42
Local Start Time (s)	31	45	0	31	42	0
Local Yield (s)	41	103.5	25	38	103.5	25
Local Yield 170(s)	41	84.5	8	38	85.5	7

Intersection Summary

Cycle Length	110
Control Type	Actuated-Coordinated
Natural Cycle	75

Offset: 35 (32%), Referenced to phase 2:SBTL and 6:NBTL, Start of Red

Splits and Phases: 3: Rock Creek & Ziegler



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	11	21	10	16	82	34	289	8	117	449	78
Number	7	4	14	3	8	18	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)	0.99		0.96	0.97		0.99	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	190.0	193.7	190.0	193.7	186.3	186.3	186.3	186.3	193.7	186.3	186.3	186.3
Lanes	0	1	0	1	1	1	1	1	1	1	1	1
Cap, veh/h	300	0	251	404	328	277	436	667	590	614	751	636
Arrive On Green	0.15	0.18	0.15	0.18	0.18	0.18	0.06	0.36	0.36	0.11	0.40	0.40
Sat Flow, veh/h	802	-996	1425	1372	1863	1574	1774	1863	1647	1774	1863	1579
Grp Volume(v), veh/h	38	0	25	12	19	96	40	325	9	138	528	92
Grp Sat Flow(s),veh/h/ln	1559	0	1435	1372	1863	1574	1774	1863	1647	1774	1863	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.3	2.0	0.5	5.1	0.1	1.5	8.9	1.4
Cycle Q Clear(g_c), s	0.8	0.0	0.0	1.1	0.3	2.0	0.5	5.1	0.1	1.5	8.9	1.4
Prop In Lane	0.66		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	392	0	0	404	328	277	436	667	590	614	751	636
V/C Ratio(X)	0.10	0.00	0.00	0.03	0.06	0.35	0.09	0.49	0.02	0.22	0.70	0.14
Avail Cap(c_a), veh/h	1150	0	0	1109	1285	1086	748	1556	1376	846	1556	1320
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.8	0.0	0.0	13.6	12.9	13.6	7.2	9.4	7.8	5.4	9.4	7.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.1	0.7	0.1	2.5	0.0	0.2	5.5	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	0.3	0.0	0.0	0.1	0.1	0.7	0.2	2.2	0.0	0.4	3.9	0.4
Lane Grp Delay (d), s/veh	11.9	0.0	0.0	13.6	13.0	14.4	7.3	11.9	7.9	5.6	14.8	7.6
Lane Grp LOS	B			B	B	B	A	B	A	A	B	A
Approach Vol, veh/h		63			127			374			758	
Approach Delay, s/veh		7.2			14.1			11.3			12.3	
Approach LOS		A			B			B			B	

Timer												
Assigned Phs		4			8		1	6		5	2	
Phs Duration (G+Y+Rc), s		11.6			11.6		5.4	19.0		7.1	20.7	
Change Period (Y+Rc), s		6.0			6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s		25.0			25.0		8.0	30.5		8.0	30.5	
Max Q Clear Time (g_c+I1), s		2.8			4.0		2.5	7.1		3.5	10.9	
Green Ext Time (p_c), s		0.7			0.6		0.0	3.3		0.1	3.2	

Intersection Summary			
HCM 2010 Ctrl Delay		11.9	
HCM 2010 LOS		B	

Notes

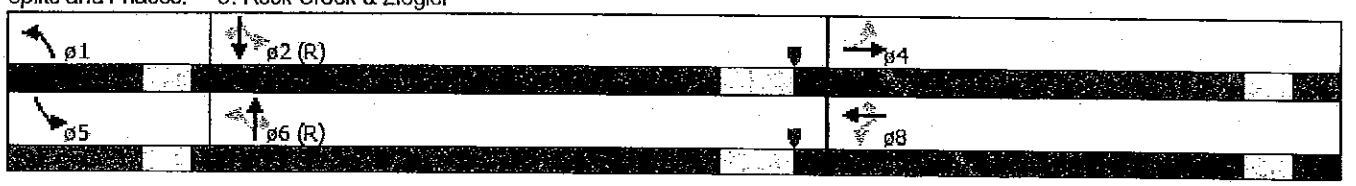
Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	C-Min	None	None	C-Min	None
Maximum Split (s)	12	37	31	12	37	31
Maximum Split (%)	15.0%	46.3%	38.8%	15.0%	46.3%	38.8%
Minimum Split (s)	11	32.5	30	11	31.5	31
Yellow Time (s)	3	4.5	3	3	4.5	3
All-Red Time (s)	1	2	3	1	2	3
Minimum Initial (s)	4	7	4	4	7	4
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		19	17		18	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	7	19	56	7	19	56
End Time (s)	19	56	7	19	56	7
Yield/Force Off (s)	15	49.5	1	15	49.5	1
Yield/Force Off 170(s)	15	30.5	64	15	31.5	63
Local Start Time (s)	31	43	0	31	43	0
Local Yield (s)	39	73.5	25	39	73.5	25
Local Yield 170(s)	39	54.5	8	39	55.5	7

Intersection Summary

Cycle Length		80
Control Type	Actuated-Coordinated	
Natural Cycle		75

Offset: 56 (70%), Referenced to phase 2:SBTL and 6:NBTL, Start of Red

Splits and Phases: 3: Rock Creek & Ziegler



Intersection	
Intersection Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	4	46	91	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	90	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	51	107	1	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	108	0	-	0	169	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	61	-
Follow-up Headway	2.218	-	-	-	3.518	3.318
Pot Capacity-1 Maneuver	1483	-	-	-	821	946
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	962	-
Time blocked-Platoon, %		-	-	-		
Mov Capacity-1 Maneuver	1483	-	-	-	819	946
Mov Capacity-2 Maneuver	-	-	-	-	819	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	959	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	0

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1483	-	-	-	0
HCM Lane V/C Ratio	0.003	-	-	-	+
HCM Control Delay (s)	7.435	0	-	-	0
HCM Lane LOS	A	A			A
HCM 95th %tile Q(veh)	0.01	-	-	-	+

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	113	78	1	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	86	95	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	131	82	1	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	83	0	-	0	214	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	131	-
Follow-up Headway	2.218	-	-	-	3.518	3.318
Pot Capacity-1 Maneuver	1514	-	-	-	774	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	895	-
Time blocked-Platoon, %		-	-	-		
Mov Capacity-1 Maneuver	1514	-	-	-	774	976
Mov Capacity-2 Maneuver	-	-	-	-	774	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	895	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1514	-	-	-	976
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	8.7
HCM Lane LOS	A				A
HCM 95th %tile Q(veh)	0	-	-	-	0.018

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	16	18	12	7	61	21	26	59	3	17	40	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	21	14	8	72	25	31	69	4	20	47	6
Number of Lanes	0	1	1	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	8.1	8.8	9	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	30%	47%	0%	8%	100%	0%
Vol Thru, %	67%	53%	0%	69%	0%	89%
Vol Right, %	3%	0%	100%	24%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	88	34	12	89	17	45
LT Vol	59	18	0	61	0	40
Through Vol	3	0	12	21	0	5
RT Vol	26	16	0	7	17	0
Lane Flow Rate	104	40	14	105	20	53
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.146	0.059	0.017	0.144	0.031	0.073
Departure Headway (Hd)	5.069	5.327	4.387	4.935	5.537	4.957
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	709	674	817	729	648	724
Service Time	3.09	3.048	2.109	2.954	3.258	2.678
HCM Lane V/C Ratio	0.147	0.059	0.017	0.144	0.031	0.073
HCM Control Delay	9	8.4	7.2	8.8	8.4	8.1
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.5	0.2	0.1	0.5	0.1	0.2

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	56	46	3	48	14	25	40	5	23	83	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.89	0.85	0.93	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	66	54	4	54	16	27	47	6	27	98	6
Number of Lanes	0	1	1	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	8.2	8.8	9	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	36%	16%	0%	5%	100%	0%
Vol Thru, %	57%	84%	0%	74%	0%	94%
Vol Right, %	7%	0%	100%	22%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	67	46	65	23	88
LT Vol	40	56	0	48	0	83
Through Vol	5	0	46	14	0	5
RT Vol	25	11	0	3	23	0
Lane Flow Rate	80	79	54	74	27	104
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.116	0.115	0.067	0.105	0.042	0.146
Departure Headway (Hd)	5.244	5.242	4.456	5.126	5.631	5.089
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	684	685	804	699	636	705
Service Time	3.274	2.966	2.18	3.154	3.36	2.817
HCM Lane V/C Ratio	0.117	0.115	0.067	0.106	0.042	0.148
HCM Control Delay	9	8.6	7.5	8.8	8.6	8.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.4	0.4	0.2	0.4	0.1	0.5

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	0	0	1	0	22	1	95	0	4	61	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	1	0	26	1	112	0	5	72	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	209	196	73	196	198	112	74	0	0	112	0	0
Stage 1	82	82	-	114	114	-	-	-	-	-	-	-
Stage 2	127	114	-	82	84	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	748	699	989	763	698	941	1526	-	-	1478	-	-
Stage 1	926	827	-	891	801	-	-	-	-	-	-	-
Stage 2	877	801	-	926	825	-	-	-	-	-	-	-
Time blocked-Platoon, %								-	-		-	-
Mov Capacity-1 Maneuver	725	696	989	761	695	941	1526	-	-	1478	-	-
Mov Capacity-2 Maneuver	725	696	-	761	695	-	-	-	-	-	-	-
Stage 1	925	824	-	890	800	-	-	-	-	-	-	-
Stage 2	852	800	-	923	822	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	9	0	0

Minor Lane / Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1526	-	-	725	931	1478	-	-
HCM Lane V/C Ratio	0.001	-	-	0.002	0.029	0.003	-	-
HCM Control Delay (s)	7.361	-	-	10	9	7.444	-	-
HCM Lane LOS	A			B	A	A		
HCM 95th %tile Q(veh)	0.002	-	-	0.005	0.09	0.01	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	0	1	1	0	9	0	64	1	13	109	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	1	1	0	11	0	75	1	15	128	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	240	235	129	236	236	76	129	0	0	76	0	0
Stage 1	159	159	-	76	76	-	-	-	-	-	-	-
Stage 2	81	76	-	160	160	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	714	666	921	718	665	985	1457	-	-	1523	-	-
Stage 1	843	766	-	933	832	-	-	-	-	-	-	-
Stage 2	927	832	-	842	766	-	-	-	-	-	-	-
Time blocked-Platoon, %								-	-		-	-
Mov Capacity-1 Maneuver	701	659	921	712	658	985	1457	-	-	1523	-	-
Mov Capacity-2 Maneuver	701	659	-	712	658	-	-	-	-	-	-	-
Stage 1	843	758	-	933	832	-	-	-	-	-	-	-
Stage 2	917	832	-	833	758	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	9	0	1

Minor Lane / Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1457	-	-	730	949	1523	-	-
HCM Lane V/C Ratio	-	-	-	0.01	0.012	0.01	-	-
HCM Control Delay (s)	0	-	-	10	8.8	7.388	-	-
HCM Lane LOS	A			B	A	A		
HCM 95th %tile Q(veh)	0	-	-	0.029	0.038	0.03	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

UNSIGNALIZED INTERSECTIONS

Level-of-Service	Average Total Delay sec/veh
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

SIGNALIZED INTERSECTIONS

Level-of-Service	Average Total Delay sec/veh
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Table 4-3
Fort Collins (City Limits)
Motor Vehicle LOS Standards (Intersections)

Intersection type	Land Use (from structure plan)			
		Other corridors within:		
	Commercial corridors	Mixed use districts	Low density mixed use residential	All other areas
Signalized intersections (overall)	D	E*	D	D
Any Leg	E	E	D	E
Any Movement	E	E	D	E
Stop sign control (arterial/collector or local—any approach leg)	N/A	F**	F**	E
Stop sign control (collector/local—any approach leg)	N/A	C	C	C

* mitigating measures required
** considered normal in an urban environment

APPENDIX D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	78	43	50	17	20	102	101	519	39	76	239	84
Number	7	4	14	3	8	18	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	190.0	193.7	190.0	193.7	186.3	186.3	186.3	186.3	193.7	186.3	186.3	186.3
Lanes	0	1	0	1	1	1	1	1	1	1	1	1
Cap, veh/h	290	0	166	306	359	305	635	799	706	419	782	665
Arrive On Green	0.17	0.19	0.17	0.19	0.19	0.19	0.09	0.43	0.43	0.08	0.42	0.42
Sat Flow, veh/h	826	-315	864	1329	1863	1583	1774	1863	1647	1774	1863	1583
Grp Volume(v), veh/h	142	0	110	20	24	115	119	611	46	89	281	99
Grp Sat Flow(s),veh/h/ln	1527	0	1610	1329	1863	1583	1774	1863	1647	1774	1863	1583
Q Serve(g_s), s	2.7	0.0	0.0	0.6	0.5	2.9	1.6	12.7	0.7	1.2	4.7	1.8
Cycle Q Clear(g_c), s	3.7	0.0	0.0	4.3	0.5	2.9	1.6	12.7	0.7	1.2	4.7	1.8
Prop In Lane	0.65		0.54	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	391	0	0	306	359	305	635	799	706	419	782	665
V/C Ratio(X)	0.36	0.00	0.00	0.07	0.07	0.38	0.19	0.76	0.07	0.21	0.36	0.15
Avail Cap(c_a), veh/h	947	0	0	810	1065	905	904	2561	2264	587	2438	2072
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	18.3	15.0	16.0	6.0	11.0	7.6	7.8	9.0	8.2
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.1	0.8	0.1	6.9	0.2	0.3	1.3	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	1.3	0.0	0.0	0.2	0.2	1.1	0.5	5.8	0.3	0.4	1.9	0.6
Lane Grp Delay (d), s/veh	15.7	0.0	0.0	18.3	15.1	16.7	6.1	17.9	7.8	8.1	10.3	8.6
Lane Grp LOS	B			B	B	B	A	B	A	A	B	A
Approach Vol, veh/h		252			159			776			469	
Approach Delay, s/veh		8.8			16.7			15.5			9.5	
Approach LOS		A			B			B			A	

Timer												
Assigned Phs		4			8		1	6		5	2	
Phs Duration (G+Y+Rc), s		13.8			13.8		7.1	25.0		6.7	24.6	
Change Period (Y+Rc), s		6.0			6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s		25.0			25.0		10.0	61.5		7.0	58.5	
Max Q Clear Time (g_c+I1), s		5.7			6.3		3.6	14.7		3.2	6.7	
Green Ext Time (p_c), s		1.5			1.5		0.1	3.8		0.1	3.8	

Intersection Summary		
HCM 2010 Ctrl Delay		12.9
HCM 2010 LOS		B

Notes

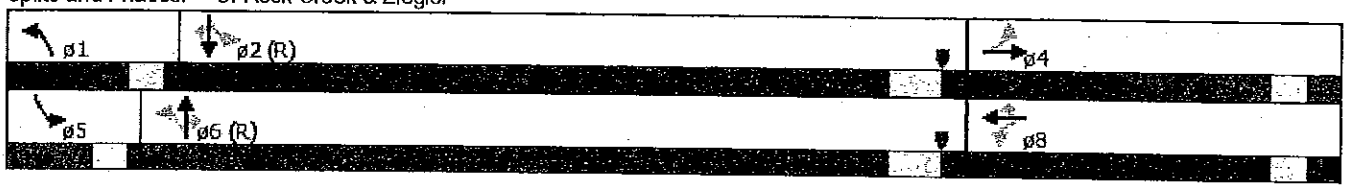
Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	C-Min	None	None	C-Min	None
Maximum Split (s)	14	65	31	11	68	31
Maximum Split (%)	12.7%	59.1%	28.2%	10.0%	61.8%	28.2%
Minimum Split (s)	11	32.5	30	11	31.5	31
Yellow Time (s)	3	4.5	3	3	4.5	3
All-Red Time (s)	1	2	3	1	2	3
Minimum Initial (s)	4	7	4	4	7	4
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		19	17		18	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	66	80	35	66	77	35
End Time (s)	80	35	66	77	35	66
Yield/Force Off (s)	76	28.5	60	73	28.5	60
Yield/Force Off 170(s)	76	9.5	43	73	10.5	42
Local Start Time (s)	31	45	0	31	42	0
Local Yield (s)	41	103.5	25	38	103.5	25
Local Yield 170(s)	41	84.5	8	38	85.5	7

Intersection Summary

Cycle Length		110
Control Type	Actuated-Coordinated	
Natural Cycle		75

Offset: 35 (32%), Referenced to phase 2:SBTL and 6:NBTL, Start of Red

Splits and Phases: 3: Rock Creek & Ziegler



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	17	23	43	26	103	37	311	24	131	483	84
Number	7	4	14	3	8	18	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		0.96	0.97		0.99	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	190.0	193.7	190.0	193.7	186.3	186.3	186.3	186.3	193.7	186.3	186.3	186.3
Lanes	0	1	0	1	1	1	1	1	1	1	1	1
Cap, veh/h	272	0	230	410	367	310	406	696	615	588	773	656
Arrive On Green	0.17	0.20	0.17	0.20	0.20	0.20	0.06	0.37	0.37	0.10	0.42	0.42
Sat Flow, veh/h	688	-535	1167	1366	1863	1575	1774	1863	1647	1774	1863	1580
Grp Volume(v), veh/h	47	0	35	51	31	121	44	349	28	154	568	99
Grp Sat Flow(s),veh/h/ln	1579	0	1503	1366	1863	1575	1774	1863	1647	1774	1863	1580
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.6	2.8	0.6	6.0	0.4	1.8	10.6	1.6
Cycle Q Clear(g_c), s	1.0	0.0	0.0	2.3	0.6	2.8	0.6	6.0	0.4	1.8	10.6	1.6
Prop In Lane	0.57		0.78	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	409	0	0	410	367	310	406	696	615	588	773	656
V/C Ratio(X)	0.11	0.00	0.00	0.12	0.08	0.39	0.11	0.50	0.05	0.26	0.73	0.15
Avail Cap(c_a), veh/h	1051	0	0	998	1168	988	680	1415	1251	788	1415	1200
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	0.0	14.7	13.6	14.5	7.8	10.0	8.3	5.9	10.2	7.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.1	0.8	0.1	2.6	0.1	0.2	6.1	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	0.3	0.0	0.0	0.4	0.2	1.0	0.2	2.4	0.2	0.5	4.9	0.6
Lane Grp Delay (d), s/veh	12.4	0.0	0.0	14.9	13.7	15.3	7.9	12.6	8.4	6.1	16.3	8.1
Lane Grp LOS	B			B	B	B	A	B	A	A	B	A
Approach Vol, veh/h		82			203			421			821	
Approach Delay, s/veh		7.1			14.9			11.8			13.4	
Approach LOS		A			B			B			B	

Timer												
Assigned Phs		4			8		1	6		5	2	
Phs Duration (G+Y+Rc), s		13.2			13.2		5.6	21.0		7.3	22.7	
Change Period (Y+Rc), s		6.0			6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s		25.0			25.0		8.0	30.5		8.0	30.5	
Max Q Clear Time (g_c+I1), s		3.0			4.8		2.6	8.0		3.8	12.6	
Green Ext Time (p_c), s		1.0			1.0		0.0	3.6		0.1	3.5	

Intersection Summary			
HCM 2010 Ctrl Delay		12.8	
HCM 2010 LOS		B	

Notes

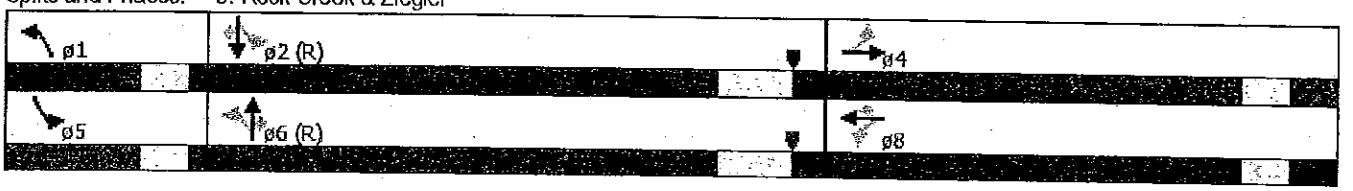
Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	C-Min	None	None	C-Min	None
Maximum Split (s)	12	37	31	12	37	31
Maximum Split (%)	15.0%	46.3%	38.8%	15.0%	46.3%	38.8%
Minimum Split (s)	11	32.5	30	11	31.5	31
Yellow Time (s)	3	4.5	3	3	4.5	3
All-Red Time (s)	1	2	3	1	2	3
Minimum Initial (s)	4	7	4	4	7	4
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		19	17		18	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	7	19	56	7	19	56
End Time (s)	19	56	7	19	56	7
Yield/Force Off (s)	15	49.5	1	15	49.5	1
Yield/Force Off 170(s)	15	30.5	64	15	31.5	63
Local Start Time (s)	31	43	0	31	43	0
Local Yield (s)	39	73.5	25	39	73.5	25
Local Yield 170(s)	39	54.5	8	39	55.5	7

Intersection Summary

Cycle Length		80
Control Type	Actuated-Coordinated	
Natural Cycle		75

Offset: 56 (70%), Referenced to phase 2:SBTL and 6:NBTL, Start of Red

Splits and Phases: 3: Rock Creek & Ziegler



Intersection	
Intersection Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	45	89	144	9	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	90	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	99	169	11	4	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	180	0	-	0	380	175
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	205	-
Follow-up Headway	2.218	-	-	-	3.518	3.318
Pot Capacity-1 Maneuver	1396	-	-	-	622	868
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	829	-
Time blocked-Platoon, %		-	-	-		
Mov Capacity-1 Maneuver	1396	-	-	-	597	868
Mov Capacity-2 Maneuver	-	-	-	-	597	-
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	796	-

Approach	EB	WB	SB
HCM Control Delay, s	3	0	10

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1396	-	-	-	727
HCM Lane V/C Ratio	0.038	-	-	-	0.011
HCM Control Delay (s)	7.68	0	-	-	10
HCM Lane LOS	A	A			B
HCM 95th %tile Q(veh)	0.118	-	-	-	0.034

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	7	175	145	2	17	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	86	95	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	203	153	2	20	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	155	0	-	0	374	154
Stage 1	-	-	-	-	154	-
Stage 2	-	-	-	-	220	-
Follow-up Headway	2.218	-	-	-	3.518	3.318
Pot Capacity-1 Maneuver	1425	-	-	-	627	892
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	817	-
Time blocked-Platoon, %		-	-	-		
Mov Capacity-1 Maneuver	1425	-	-	-	623	892
Mov Capacity-2 Maneuver	-	-	-	-	623	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	812	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1425	-	-	-	769
HCM Lane V/C Ratio	0.006	-	-	-	0.07
HCM Control Delay (s)	7.541	0	-	-	10
HCM Lane LOS	A	A			B
HCM 95th %tile Q(veh)	0.017	-	-	-	0.227

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	52	24	16	8	83	50	36	93	3	27	58	34
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	28	19	9	98	59	42	109	4	32	68	40
Number of Lanes	0	1	1	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	9.3	10	10.3	8.9
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	27%	68%	0%	6%	100%	0%
Vol Thru, %	70%	32%	0%	59%	0%	63%
Vol Right, %	2%	0%	100%	35%	0%	37%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	76	16	141	27	92
LT Vol	93	24	0	83	0	58
Through Vol	3	0	16	50	0	34
RT Vol	36	52	0	8	27	0
Lane Flow Rate	155	89	19	166	32	108
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.237	0.145	0.025	0.243	0.052	0.156
Departure Headway (Hd)	5.495	5.845	4.794	5.269	5.946	5.181
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	649	610	740	677	599	687
Service Time	3.561	3.615	2.564	3.334	3.712	2.947
HCM Lane V/C Ratio	0.239	0.146	0.026	0.245	0.053	0.157
HCM Control Delay	10.3	9.6	7.7	10	9	8.9
HCM Lane LOS	B	A	A	A	A	A
HCM 95th-tile Q	0.9	0.5	0.1	0.9	0.2	0.6

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	41	86	65	3	68	30	35	61	6	49	125	44
Peak Hour Factor	0.85	0.85	0.85	0.85	0.89	0.85	0.93	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	101	76	4	76	35	38	72	7	58	147	52
Number of Lanes	0	1	1	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	9.8	10.1	10.3	10.3
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	34%	32%	0%	3%	100%	0%
Vol Thru, %	60%	68%	0%	67%	0%	74%
Vol Right, %	6%	0%	100%	30%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	127	65	101	49	169
LT Vol	61	86	0	68	0	125
Through Vol	6	0	65	30	0	44
RT Vol	35	41	0	3	49	0
Lane Flow Rate	116	149	76	115	58	199
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.192	0.242	0.105	0.185	0.097	0.298
Departure Headway (Hd)	5.922	5.933	5.063	5.769	6.179	5.49
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	609	610	712	625	583	658
Service Time	3.93	3.633	2.763	3.777	3.879	3.19
HCM Lane V/C Ratio	0.19	0.244	0.107	0.184	0.099	0.302
HCM Control Delay	10.3	10.5	8.4	10.1	9.5	10.5
HCM Lane LOS	B	B	A	B	A	B
HCM 95th-tile Q	0.7	0.9	0.4	0.7	0.3	1.2

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	0	0	13	1	47	2	191	2	11	106	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	15	1	55	2	225	2	13	125	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	420	393	135	392	403	226	146	0	0	227	0	0
Stage 1	161	161	-	231	231	-	-	-	-	-	-	-
Stage 2	259	232	-	161	172	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	544	543	914	567	536	813	1436	-	-	1341	-	-
Stage 1	841	765	-	772	713	-	-	-	-	-	-	-
Stage 2	746	713	-	841	756	-	-	-	-	-	-	-
Time blocked-Platoon, %								-	-		-	-
Mov Capacity-1 Maneuver	502	537	914	562	530	813	1436	-	-	1341	-	-
Mov Capacity-2 Maneuver	502	537	-	562	530	-	-	-	-	-	-	-
Stage 1	840	758	-	771	712	-	-	-	-	-	-	-
Stage 2	693	712	-	833	749	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12	10	0	1

Minor Lane / Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1436	-	-	502	736	1341	-	-
HCM Lane V/C Ratio	0.002	-	-	0.009	0.098	0.01	-	-
HCM Control Delay (s)	7.511	-	-	12.2	10.4	7.711	-	-
HCM Lane LOS	A			B	B	A		
HCM 95th %tile Q(veh)	0.005	-	-	0.028	0.323	0.029	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	24	1	2	6	0	22	0	119	13	39	210	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	1	2	7	0	26	0	140	15	46	247	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	502	496	249	491	492	148	252	0	0	155	0	0
Stage 1	341	341	-	148	148	-	-	-	-	-	-	-
Stage 2	161	155	-	343	344	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	480	475	790	488	478	899	1313	-	-	1425	-	-
Stage 1	674	639	-	855	775	-	-	-	-	-	-	-
Stage 2	841	769	-	672	637	-	-	-	-	-	-	-
Time blocked-Platoon, %								-	-		-	-
Mov Capacity-1 Maneuver	455	460	790	474	463	899	1313	-	-	1425	-	-
Mov Capacity-2 Maneuver	455	460	-	474	463	-	-	-	-	-	-	-
Stage 1	674	618	-	855	775	-	-	-	-	-	-	-
Stage 2	817	769	-	647	616	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13	10	0	1

Minor Lane / Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1313	-	-	470	754	1425	-	-
HCM Lane V/C Ratio	-	-	-	0.068	0.044	0.032	-	-
HCM Control Delay (s)	0	-	-	13.2	10	7.61	-	-
HCM Lane LOS	A			B	B	A		
HCM 95th %tile Q(veh)	0	-	-	0.217	0.137	0.1	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

APPENDIX E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	78	44	50	18	20	104	101	519	42	84	239	84
Number	7	4	14	3	8	18	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	190.0	193.7	190.0	193.7	186.3	186.3	186.3	186.3	193.7	186.3	186.3	186.3
Lanes	0	1	0	1	1	1	1	1	1	1	1	1
Cap, veh/h	288	0	166	304	360	306	636	798	705	422	787	669
Arrive On Green	0.17	0.19	0.17	0.19	0.19	0.19	0.09	0.43	0.43	0.08	0.42	0.42
Sat Flow, veh/h	821	-302	857	1328	1863	1583	1774	1863	1647	1774	1863	1583
Grp Volume(v), veh/h	142	0	111	21	24	117	119	611	49	99	281	99
Grp Sat Flow(s),veh/h/ln	1527	0	1612	1328	1863	1583	1774	1863	1647	1774	1863	1583
Q Serve(g_s), s	2.7	0.0	0.0	0.7	0.5	3.0	1.6	12.8	0.8	1.3	4.7	1.8
Cycle Q Clear(g_c), s	3.8	0.0	0.0	4.4	0.5	3.0	1.6	12.8	0.8	1.3	4.7	1.8
Prop In Lane	0.65		0.53	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	391	0	0	304	360	306	636	798	705	422	787	669
V/C Ratio(X)	0.36	0.00	0.00	0.07	0.07	0.38	0.19	0.77	0.07	0.23	0.36	0.15
Avail Cap(c_a), veh/h	938	0	0	800	1056	897	902	2537	2243	581	2416	2053
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	0.0	0.0	18.4	15.1	16.1	6.0	11.2	7.7	7.9	9.0	8.2
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.1	0.8	0.1	6.9	0.2	0.3	1.3	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	1.3	0.0	0.0	0.2	0.2	0.1	0.5	5.9	0.3	0.4	1.9	0.6
Lane Grp Delay (d), s/veh	15.8	0.0	0.0	18.5	15.2	16.9	6.2	18.1	7.9	8.2	10.3	8.6
Lane Grp LOS	B			B	B	B	A	B	A	A	B	A
Approach Vol, veh/h		253			162			779			479	
Approach Delay, s/veh		8.9			16.9			15.6			9.5	
Approach LOS		A			B			B			A	

Timer												
Assigned Phs		4			8		1	6		5	2	
Phs Duration (G+Y+Rc), s		13.9			13.9		7.1	25.2		6.9	24.9	
Change Period (Y+Rc), s		6.0			6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s		25.0			25.0		10.0	61.5		7.0	58.5	
Max Q Clear Time (g_c+I1), s		5.8			6.4		3.6	14.8		3.3	6.7	
Green Ext Time (p_c), s		1.5			1.5		0.1	3.8		0.1	3.9	

Intersection Summary			
HCM 2010 Ctrl Delay		13.0	
HCM 2010 LOS		B	

Notes

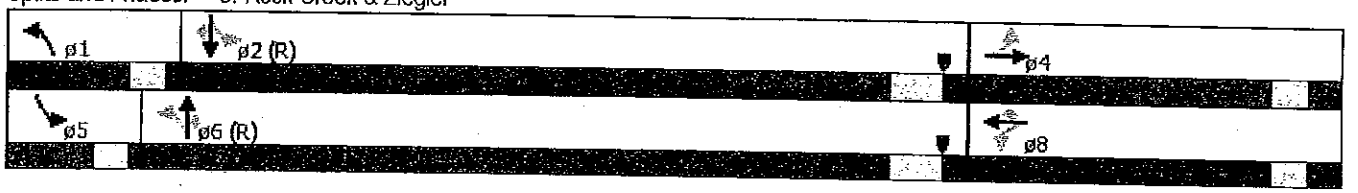
Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	C-Min	None	None	C-Min	None
Maximum Split (s)	14	65	31	11	68	31
Maximum Split (%)	12.7%	59.1%	28.2%	10.0%	61.8%	28.2%
Minimum Split (s)	11	32.5	30	11	31.5	31
Yellow Time (s)	3	4.5	3	3	4.5	3
All-Red Time (s)	1	2	3	1	2	3
Minimum Initial (s)	4	7	4	4	7	4
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		19	17		18	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	66	80	35	66	77	35
End Time (s)	80	35	66	77	35	66
Yield/Force Off (s)	76	28.5	60	73	28.5	60
Yield/Force Off 170(s)	76	9.5	43	73	10.5	42
Local Start Time (s)	31	45	0	31	42	0
Local Yield (s)	41	103.5	25	38	103.5	25
Local Yield 170(s)	41	84.5	8	38	85.5	7

Intersection Summary

Cycle Length	110
Control Type	Actuated-Coordinated
Natural Cycle	75

Offset: 35 (32%), Referenced to phase 2:SBTL and 6:NBTL, Start of Red

Splits and Phases: 3: Rock Creek & Ziegler



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	17	23	46	27	111	37	311	25	133	483	84
Number	7	4	14	3	8	18	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		0.96	0.97		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	190.0	193.7	190.0	193.7	186.3	186.3	186.3	186.3	193.7	186.3	186.3	186.3
Lanes	0	1	0	1	1	1	1	1	1	1	1	1
Cap, veh/h	275	0	234	417	377	319	402	692	612	583	771	654
Arrive On Green	0.18	0.20	0.18	0.20	0.20	0.20	0.06	0.37	0.37	0.10	0.41	0.41
Sat Flow, veh/h	690	-533	1156	1367	1863	1576	1774	1863	1647	1774	1863	1580
Grp Volume(v), veh/h	47	0	35	54	32	131	44	349	29	156	568	99
Grp Sat Flow(s),veh/h/ln	1568	0	1508	1367	1863	1576	1774	1863	1647	1774	1863	1580
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.6	3.0	0.6	6.1	0.5	1.9	10.8	1.6
Cycle Q Clear(g_c), s	1.0	0.0	0.0	2.4	0.6	3.0	0.6	6.1	0.5	1.9	10.8	1.6
Prop In Lane	0.57		0.77	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	0	0	417	377	319	402	692	612	583	771	654
V/C Ratio(X)	0.11	0.00	0.00	0.13	0.08	0.41	0.11	0.50	0.05	0.27	0.74	0.15
Avail Cap(c_a), veh/h	1033	0	0	987	1154	976	672	1398	1236	779	1398	1186
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	14.7	13.6	14.6	7.9	10.2	8.4	6.0	10.4	7.7
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.1	0.8	0.1	2.6	0.1	0.2	6.2	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	0.3	0.0	0.0	0.5	0.3	1.1	0.2	2.6	0.2	0.5	5.0	0.6
Lane Grp Delay (d), s/veh	12.3	0.0	0.0	14.9	13.7	15.4	8.0	12.8	8.6	6.2	16.6	8.2
Lane Grp LOS	B			B	B	B	A	B	A	A	B	A
Approach Vol, veh/h		82			217			422			823	
Approach Delay, s/veh		7.0			15.0			12.0			13.6	
Approach LOS		A			B			B			B	

Timer												
Assigned Phs		4			8		1	6		5	2	
Phs Duration (G+Y+Rc), s		13.5			13.5		5.6	21.1		7.4	22.9	
Change Period (Y+Rc), s		6.0			6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s		25.0			25.0		8.0	30.5		8.0	30.5	
Max Q Clear Time (g_c+I1), s		3.0			5.0		2.6	8.1		3.9	12.8	
Green Ext Time (p_c), s		1.1			1.0		0.0	3.6		0.1	3.5	

Intersection Summary			
HCM 2010 Ctrl Delay		13.0	
HCM 2010 LOS		B	

Notes

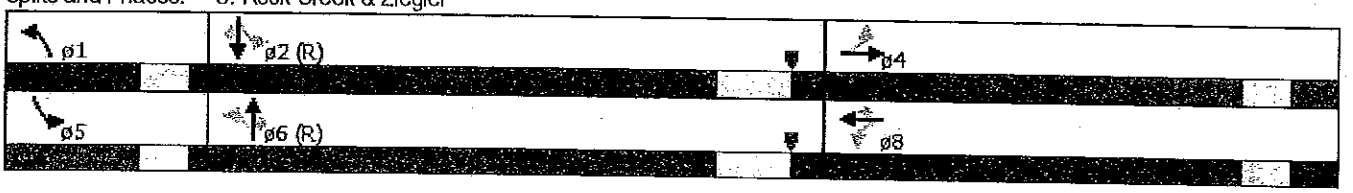
Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	C-Min	None	None	C-Min	None
Maximum Split (s)	12	37	31	12	37	31
Maximum Split (%)	15.0%	46.3%	38.8%	15.0%	46.3%	38.8%
Minimum Split (s)	11	32.5	30	11	31.5	31
Yellow Time (s)	3	4.5	3	3	4.5	3
All-Red Time (s)	1	2	3	1	2	3
Minimum Initial (s)	4	7	4	4	7	4
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		19	17		18	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	7	19	56	7	19	56
End Time (s)	19	56	7	19	56	7
Yield/Force Off (s)	15	49.5	1	15	49.5	1
Yield/Force Off 170(s)	15	30.5	64	15	31.5	63
Local Start Time (s)	31	43	0	31	43	0
Local Yield (s)	39	73.5	25	39	73.5	25
Local Yield 170(s)	39	54.5	8	39	55.5	7

Intersection Summary

Cycle Length	80
Control Type	Actuated-Coordinated
Natural Cycle	75

Offset: 56 (70%), Referenced to phase 2:SBTL and 6:NBTL, Start of Red

Splits and Phases: 3: Rock Creek & Ziegler



Intersection	
Intersection Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	57	89	144	9	3	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	90	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	99	169	11	4	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	180	0	-	0	408	175
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	233	-
Follow-up Headway	2.218	-	-	-	3.518	3.318
Pot Capacity-1 Maneuver	1396	-	-	-	599	868
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	806	-
Time blocked-Platoon, %		-	-	-		
Mov Capacity-1 Maneuver	1396	-	-	-	568	868
Mov Capacity-2 Maneuver	-	-	-	-	568	-
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	765	-

Approach	EB	WB	SB
HCM Control Delay, s	3	0	10

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1396	-	-	-	749
HCM Lane V/C Ratio	0.048	-	-	-	0.016
HCM Control Delay (s)	7.709	0	-	-	9.9
HCM Lane LOS	A	A			A
HCM 95th %tile Q(veh)	0.151	-	-	-	0.048

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	10	175	145	2	17	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	86	95	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	203	153	2	20	48

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	155	0	-	0	381	154
Stage 1	-	-	-	-	154	-
Stage 2	-	-	-	-	227	-
Follow-up Headway	2.218	-	-	-	3.518	3.318
Pot Capacity-1 Maneuver	1425	-	-	-	621	892
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	811	-
Time blocked-Platoon, %		-	-	-		
Mov Capacity-1 Maneuver	1425	-	-	-	615	892
Mov Capacity-2 Maneuver	-	-	-	-	615	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	804	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1425	-	-	-	788
HCM Lane V/C Ratio	0.008	-	-	-	0.087
HCM Control Delay (s)	7.547	0	-	-	10
HCM Lane LOS	A	A			B
HCM 95th %tile Q(veh)	0.025	-	-	-	0.284

Notes

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Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	52	24	16	8	83	51	36	94	3	27	59	34
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	28	19	9	98	60	42	111	4	32	69	40
Number of Lanes	0	1	1	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	9.3	10.1	10.3	8.9
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	27%	68%	0%	6%	100%	0%
Vol Thru, %	71%	32%	0%	58%	0%	63%
Vol Right, %	2%	0%	100%	36%	0%	37%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	133	76	16	142	27	93
LT Vol	94	24	0	83	0	59
Through Vol	3	0	16	51	0	34
RT Vol	36	52	0	8	27	0
Lane Flow Rate	156	89	19	167	32	109
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.239	0.145	0.025	0.245	0.053	0.158
Departure Headway (Hd)	5.499	5.853	4.803	5.273	5.95	5.188
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	649	609	739	677	599	687
Service Time	3.567	3.626	2.575	3.34	3.718	2.956
HCM Lane V/C Ratio	0.24	0.146	0.026	0.247	0.053	0.159
HCM Control Delay	10.3	9.6	7.7	10.1	9.1	8.9
HCM Lane LOS	B	A	A	B	A	A
HCM 95th-tile Q	0.9	0.5	0.1	1	0.2	0.6

Notes

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Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	41	86	65	3	68	30	35	61	6	50	126	44
Peak Hour Factor	0.85	0.85	0.85	0.85	0.89	0.85	0.93	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	101	76	4	76	35	38	72	7	59	148	52
Number of Lanes	0	1	1	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	9.8	10.1	10.3	10.3
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	34%	32%	0%	3%	100%	0%
Vol Thru, %	60%	68%	0%	67%	0%	74%
Vol Right, %	6%	0%	100%	30%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	127	65	101	50	170
LT Vol	61	86	0	68	0	126
Through Vol	6	0	65	30	0	44
RT Vol	35	41	0	3	50	0
Lane Flow Rate	116	149	76	115	59	200
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.192	0.242	0.106	0.185	0.099	0.299
Departure Headway (Hd)	5.926	5.938	5.068	5.774	6.18	5.493
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	608	608	711	625	584	658
Service Time	3.934	3.638	2.768	3.782	3.88	3.193
HCM Lane V/C Ratio	0.191	0.245	0.107	0.184	0.101	0.304
HCM Control Delay	10.3	10.5	8.4	10.1	9.6	10.5
HCM Lane LOS	B	B	A	B	A	B
HCM 95th-tile Q	0.7	0.9	0.4	0.7	0.3	1.3

Notes

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Intersection	
Intersection Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	7	0	1	13	1	47	4	191	2	11	106	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	1	15	1	55	5	225	2	13	125	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	432	404	142	403	420	226	159	0	0	227	0	0
Stage 1	168	168	-	235	235	-	-	-	-	-	-	-
Stage 2	264	236	-	168	185	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	534	536	906	558	525	813	1420	-	-	1341	-	-
Stage 1	834	759	-	768	710	-	-	-	-	-	-	-
Stage 2	741	710	-	834	747	-	-	-	-	-	-	-
Time blocked-Platoon, %								-	-		-	-
Mov Capacity-1 Maneuver	492	529	906	552	518	813	1420	-	-	1341	-	-
Mov Capacity-2 Maneuver	492	529	-	552	518	-	-	-	-	-	-	-
Stage 1	831	752	-	765	708	-	-	-	-	-	-	-
Stage 2	687	708	-	825	740	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12	10	0	1

Minor Lane / Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1420	-	-	522	732	1341	-	-
HCM Lane V/C Ratio	0.003	-	-	0.018	0.098	0.01	-	-
HCM Control Delay (s)	7.544	-	-	12	10.5	7.711	-	-
HCM Lane LOS	A			B	B	A		
HCM 95th %tile Q(veh)	0.01	-	-	0.055	0.325	0.029	-	-

Notes

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Intersection	
Intersection Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	35	1	4	6	0	22	0	119	13	39	210	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	1	5	7	0	26	0	140	15	46	247	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	504	498	251	494	495	148	255	0	0	155	0	0
Stage 1	343	343	-	148	148	-	-	-	-	-	-	-
Stage 2	161	155	-	346	347	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	478	474	788	486	476	899	1310	-	-	1425	-	-
Stage 1	672	637	-	855	775	-	-	-	-	-	-	-
Stage 2	841	769	-	670	635	-	-	-	-	-	-	-
Time blocked-Platoon, %								-	-		-	-
Mov Capacity-1 Maneuver	453	459	788	470	461	899	1310	-	-	1425	-	-
Mov Capacity-2 Maneuver	453	459	-	470	461	-	-	-	-	-	-	-
Stage 1	672	616	-	855	775	-	-	-	-	-	-	-
Stage 2	817	769	-	643	615	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14	10	0	1

Minor Lane / Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1310	-	-	473	752	1425	-	-
HCM Lane V/C Ratio	-	-	-	0.099	0.044	0.032	-	-
HCM Control Delay (s)	0	-	-	13.5	10	7.61	-	-
HCM Lane LOS	A			B	B	A		
HCM 95th %tile Q(veh)	0	-	-	0.329	0.137	0.1	-	-

Notes

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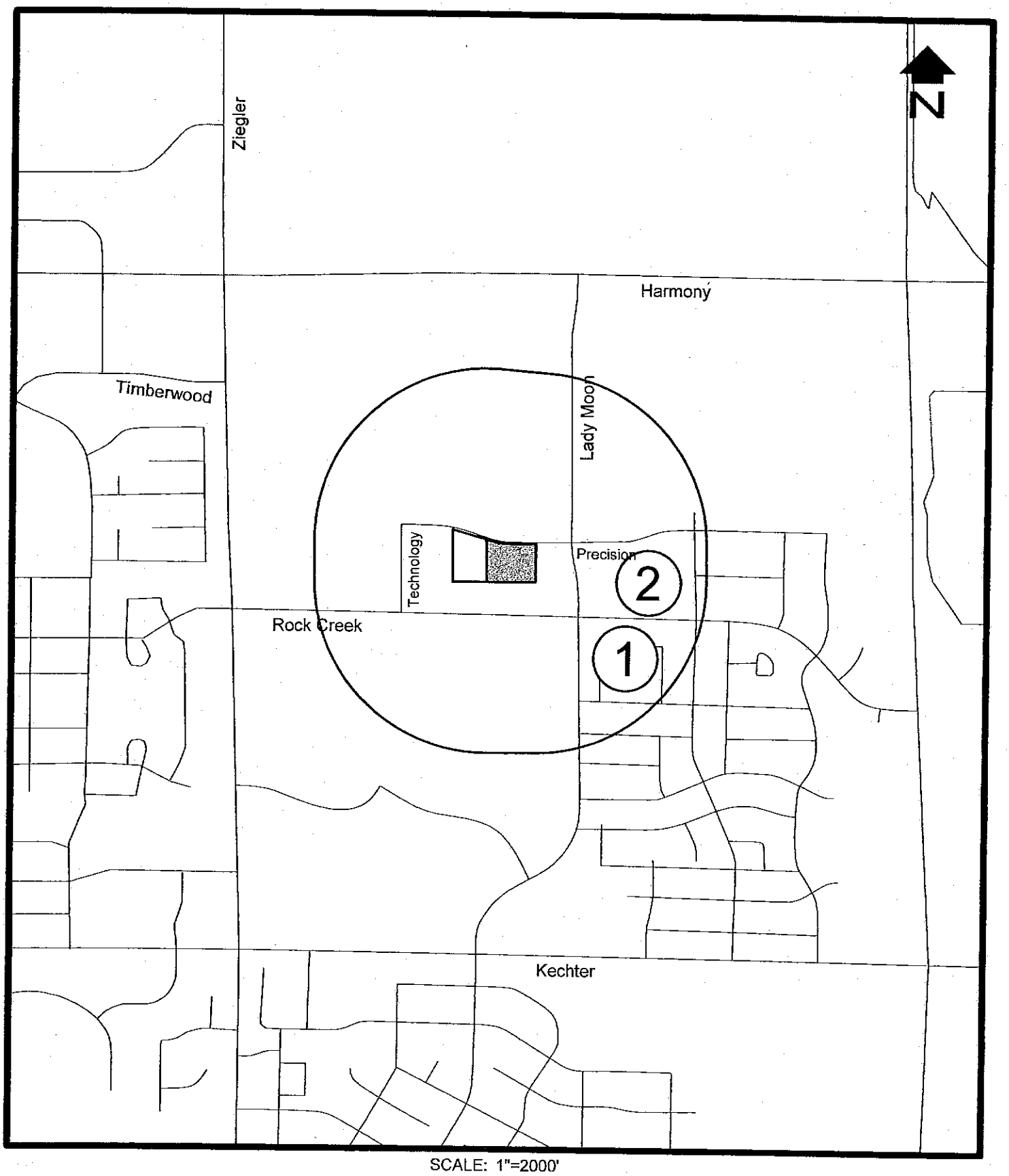
APPENDIX F



SCALE: 1"=2000'

PEDESTRIAN INFLUENCE AREA

DELICH ASSOCIATES

Pedestrian LOS Worksheet

Project Location Classification: OTHER

	Description of Applicable Destination Area Within 1320'	Destination Area Classification		Level of Service (minimum based on project location classification)				
				Directness	Continuity	Street Crossings	Visual Interest & Amenities	Security
1	OBSERVATORY VILLAGE	RESIDENTIAL	Minimum	C	C	C	C	C
			Actual	A	B	B	B	B
			Proposed	A	B	B	B	B
2	PRESIDIO APTS	RESIDENTIAL	Minimum	C	C	C	C	C
			Actual	A	B	B	B	B
			Proposed	A	B	B	B	B
3			Minimum					
			Actual					
			Proposed					
4			Minimum					
			Actual					
			Proposed					
5			Minimum					
			Actual					
			Proposed					
6			Minimum					
			Actual					
			Proposed					
7			Minimum					
			Actual					
			Proposed					
8			Minimum					
			Actual					
			Proposed					
9			Minimum					
			Actual					
			Proposed					
10			Minimum					
			Actual					
			Proposed					

City of Fort Collins

Planning, Development and Transportation
Planning
281 North College Ave.
P.O. Box 580
Fort Collins, CO 80522-0580
970.221.6750
970.224.6134 - fax
fcgov.com/developmentreview

July 9, 2013

Dear Property Owner:

On **Tuesday, July 23rd, 2013, at 5:00 p.m. (or shortly thereafter)**, in Conference Room A at 281 North College Avenue, Fort Collins, Colorado, a City of Fort Collins Hearing Officer will conduct an administrative public hearing to consider a development proposal in your neighborhood. The project is referred to as Harmony Technology Park, third Filing, Second Replat – Custom Blending, Combined Project Development Plan/Final Plan - FDP #130021.

This request is for a combined Project Development Plan/Final Plan for a building expansion to the Custom Blending facility located at 3461 Precision Drive. Custom Blending is a manufacturer of spices, seasonings and flavoring extracts. The impetus for the expansion is to create space primarily for the manufacture of extracts in-house. The approximate 31,700 square foot existing Custom Blending building is located on 3 acres, in Lot 2 in the Harmony Technology Park Third Filing. The proposed addition to the east of the existing building would contain approximately 35,000 square feet, and expand into a portion of Lot 3. This project will include re-platting to combine Lot 2 and Lot 3. The proposed expansion is anticipated to be 40-50% production/warehouse and approximately 3,000 to 5,000 square feet of office space.

The proposed light industrial uses are permitted in the Harmony Corridor (HC) zone district, subject to administrative review and public hearing. Additional information, including the subdivision plat, site plan, and building elevations (provided by the applicant), can be found at: www.fcgov.com/developmentreview/agendas.php.

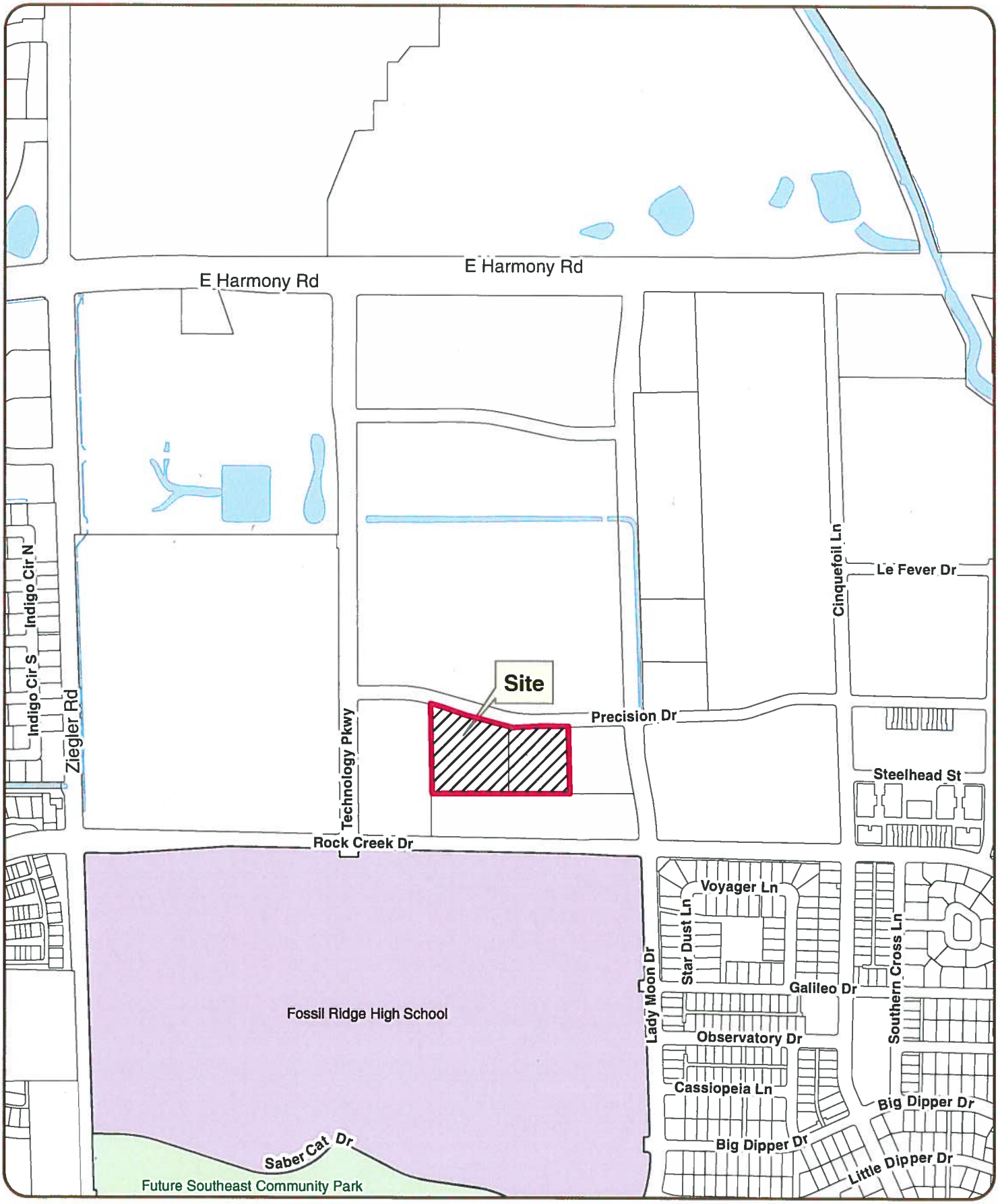
The City's Planning Staff and Hearing Officer consider your interest and input in this matter an important part of the City's review of the proposal. If you are unable to attend the public hearing, but would like to provide input, written comments are welcome via U.S. mail to the address above or you may e-mail me at pwray@fcgov.com.

The notification mailing list for this public hearing is derived from Larimer County Assessor records. Because of the lag time between home occupancy and record keeping, or because of rental situations, a few affected property owners may have been missed. Please feel free to notify your neighbors of this hearing so all may have the opportunity to attend.

Sincerely,

Pete Wray, AICP, Senior City Planner
Project Planner

The City of Fort Collins will make reasonable accommodations for access to City services, programs, and activities and will make special communication arrangements for persons with disabilities. Please call (970) 221-6750 for assistance.



1 inch = 600 feet

Harmony Technology Park, Third Filing, Second Replat - Custom Blending