City of Chicago

O2022-2354

Office of the City Clerk

Document Tracking Sheet

Meeting Date:	7/20/2022
Sponsor(s):	Misc. Transmittal
Type:	Ordinance
Title:	Zoning Reclassification Map No. 12-I at 2833 W 47th St, 2749-2757, 2749-2745 W 47th St and 4717-4723 S California Ave - App No. 21090
Committee(s) Assignment:	Committee on Zoning, Landmarks and Building Standards

#21090
INTRO DATE
JULY 20, 2022

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHICAGO:

SECTION 1. That the Chicago Zoning Ordinance be amended by changing all of the C3-3, Commercial, Manufacturing and Employment District, B3-1, Community Shopping District and M1-2, Limited Manufacturing/Business Park District symbols and indications as shown on Map No. 12-I in the area bounded by:

> West 47th Street; a line 49.9 feet east of and parallel to South California Avenue; a line 97.85 feet south of and parallel to West 47th Street; a line 99.9 feet east of and parallel to South California Avenue; West 47th Street; a line 149.9 feet east of and parallel to South California Avenue; a line 97.85 feet south of and parallel to West 47th Street; South Fairfield Avenue; a line 273.62 feet south and parallel to West 47th Street; a line 127.8 feet west of and parallel to South Fairfield Avenue; a line 249.71 feet south of and parallel to West 47th Street; South California Avenue; West 47th Place; a line 350 feet west of and parallel to South California Avenue; a line 311 feet south of and parallel to West 47th Street; and a line 329 feet west of and parallel to South California Avenue

to those of a C3-3, Commercial, Manufacturing and Employment District.

SECTION 2. That the Chicago Zoning Ordinance be amended by changing all of the C3-3, Commercial, Manufacturing and Employment District symbols and indications as shown on Map No. 12-I in the area bounded by:

> West 47th Street; a line 49.9 feet east of and parallel to South California Avenue; a line 97.85 feet south of and parallel to West 47th Street; a line 99.9 feet east of and parallel to South California Avenue; West 47th Street; a line 149.9 feet east of and parallel to South California Avenue; a line 97.85 feet south of and parallel to West 47th Street; South Fairfield Avenue; a line 273.62 feet south and parallel to West 47th Street; a line 127.8 feet west of and parallel to South Fairfield Avenue; a line 249.71 feet south of and parallel to West 47th Street; South California Avenue; West 47th Place; a line 350 feet west of and parallel to South California Avenue; a line 311 feet south of and parallel to West 47th Street; and a line 329 feet west of and parallel to South California Avenue

to those of Business Planned Development No. ____ which is hereby established in the area described above, subject to such use and bulk regulations as are set forth in the Plan of Development herewith attached and made a part thereof and to no others.

SECTION 3. This Ordinance shall be in force and effect from and after its passage and due publication.

Address: 2833 W. 47th Street; 2749-2757 and 2749-2745 W. 47th Street and 4717-4723 S. California Avenue

PLANNED DEVELOPMENT STATEMENTS

1. The area delineated herein as Planned Development Number TBD, (Planned Development) consists of approximately 236,165 square feet of property which is depicted on the attached Planned Development Boundary and Property Line Map (Property) and is owned or controlled by the Applicant, Healthy Brighton Title Holding Corporation, an Illinois not-for-profit corporation.

2. The requirements, obligations and conditions contained within this Planned Development shall be binding upon the Applicant, its successors and assigns and, if different than the Applicant, the legal title holders and any ground lessors. All rights granted hereunder to the Applicant shall inure to the benefit of the Applicant's successors and assigns and, if different than the Applicant, the legal title holder and any ground lessors. Furthermore, pursuant to the requirements of Section 17-8-0400 of the Chicago Zoning Ordinance, the Property, at the time of application for amendments, modifications or changes (administrative, legislative or otherwise) to this Planned Development are made, shall be under single ownership or designated control. Single designated control is defined in Section 17-8-0400.

3. All applicable official reviews, approvals or permits are required to be obtained by the Applicant or its successors, assignees or grantees. Any dedication or vacation of streets or alleys or grants of easements or any adjustment of the right-of-way shall require a separate submittal to the Department of Transportation on behalf of the Applicant or its successors, assigns or grantees.

   Any requests for grants of privilege, or any items encroaching on the public way, shall be in compliance with the Planned Development.

   Ingress or egress shall be pursuant to the Planned Development and may be subject to the review and approval of the Departments of Planning and Development and Transportation. Closure of all or any public street or alley during demolition or construction shall be subject to the review and approval of the Department of Transportation.

   Pursuant to a negotiated and executed Perimeter Restoration Agreement ("Agreement") by and between the Department of Transportation's Division of Infrastructure Management and the Applicant, the Applicant shall provide improvements and restoration of all public way adjacent to the property, which may include, but not be limited to, the following as shall be reviewed and determined by the Department of Transportation's Division of Infrastructure Management:

   - Full width of streets
   - Full width of alleys
   - Curb and gutter
   - Pavement markings
   - Sidewalks
   - ADA crosswalk ramps
   - Parkway & landscaping

The Perimeter Restoration Agreement must be executed prior to any Department of Transportation and Planned Development Part II review permitting. The Agreement shall reflect that all work must comply with current Rules and Regulations and must be designed and constructed in accordance with the Department of Transportation's Construction Standards for work in the Public Way and in compliance with the Municipal Code of Chicago Chapter 10-20. Design of said improvements should follow the Department of Transportation's Rules and Regulations for Construction in the Public Way as well as The Street and Site Plan Design Guidelines. Any variation in scope or design of public way improvements and restoration must be approved by the Department of Transportation.

4. This Plan of Development consists of 17 Statements: a Bulk Regulations Table; an Existing Zoning Map; an Existing Land-Use Map; an Existing Aerial Map; a Planned Development Boundary and Property Line Map; a Sub-Area Map; Site Plan;; Landscape Plan; Landscape Plan Schedules; Building Elevations (North, South, East and West); 3D Massing (Northeast, Southeast and Southwest) prepared by Urban Works and dated (date of Plan Commission presentation); Sustainable Matrix; Traffic Impact Study prepared by Terra Engineering Ltd. And dated (date of plan Commission presentation) and Project Narrative submitted herein. Full-sized copies of the Site Plan, Landscape Plan and Building Elevations are on file with the Department of Planning and Development. In any instance where a provision of this Planned Development conflicts with the Chicago Building Code, the Building Code shall control. This Planned Development conforms to the intent and purpose of the Chicago Zoning Ordinance, and all requirements thereto, and satisfies the established criteria for approval as a Planned Development. In case of a conflict between the terms of this Planned Development Ordinance and the Chicago Zoning Ordinance, this Planned Development shall control.

5. In each of the following Sub-Areas, the following uses shall be permitted in this Planned Development:

   Sub-Area A: Medical Service; Day Care (Adult); Restaurant, Limited; Outdoor patio (if located at grade level); Retail Sales, General; and Accessory Parking.

   Sub-Area B: Medical Service; Day Care (Adult); Restaurant, Limited; Outdoor patio (if located at grade level); Retail Sales, General; and Accessory Parking.

   Sub-Area C: Accessory Parking.

   Sub-Area D: Medical Service; Office; Retail Sales, General and Community Garden.

6. On-Premise signs and temporary signs, such as construction and marketing signs, shall be permitted within the Planned Development, subject to the review and approval of the Department of Planning and Development. Off-Premise signs are prohibited within the boundary of the Planned Development.

7. For purposes of height measurement, the definitions in the Chicago Zoning Ordinance shall apply. The height of any building shall also be subject to height limitations, if any, established by the Federal Aviation Administration.

8. The maximum permitted floor area ratio (FAR) for the Property shall be in accordance with the attached Bulk Regulations and Data Table. For the purpose of FAR calculations and measurements, the definitions in the Zoning Ordinance shall apply. The permitted FAR identified in the Bulk Regulations and Data Table has been determined using a net site area of 191,925 square feet and a base FAR of 2.0.

9. Upon review and determination, Part II Review, pursuant to Section 17-13-0610, a Part II Review Fee shall be assessed by the Department of Planning and Development. The fee, as determined by staff at the time, is final and binding on the Applicant and must be paid to the Department of Revenue prior to the issuance of any Part II approval.

10. The Site and Landscape Plans shall be in substantial conformance with the Landscape Ordinance and any other corresponding regulations and guidelines, including Section 17-13-0800. Final landscape plan review and approval will be by the Department of Planning and Development. Any interim reviews associated with site plan review or Part II reviews, are conditional until final Part II approval.

11. The Applicant shall comply with Rules and Regulations for the Maintenance of Stockpiles promulgated by the Commissioners of the Departments of Streets and Sanitation, Fleet and Facility Management and Buildings, under Section 13-32-085, or any other provision of the Municipal Code of Chicago.

12. The terms and conditions of development under this Planned Development ordinance may be modified administratively, pursuant to Section 17-13-0611-A, by the Zoning Administrator upon the application for such a modification by the Applicant, its successors and assigns and, if different than the Applicant, the legal title holders and any ground lessors.

13. The Applicant acknowledges that it is in the public interest to design, construct and maintain the project in a manner which promotes, enables and maximizes universal access throughout the Property. Plans for all buildings and improvements on the Property shall be reviewed and approved by the Mayor's Office for People with Disabilities to ensure compliance with all applicable laws and regulations related to access for persons with disabilities and to promote the highest standard of accessibility.

14. The Applicant acknowledges that it is in the public interest to design, construct, renovate and maintain all buildings in a manner that provides healthier indoor environments, reduces operating costs and conserves energy and natural resources. The Applicant shall obtain the number of points necessary to meet the requirements of the Chicago Sustainable Development Policy, in effect at the time the Part II review process is initiated for each improvement that is subject to the aforementioned Policy and must provide documentation verifying compliance.

15. The Applicant acknowledges that it is the policy of the City to maximize opportunities for Minority and Women-owned Business Enterprises ("M/WBEs") and city residents to compete for contracts and jobs on construction projects approved through the planned development process. To assist the city in promoting and tracking such M/WBE and city resident participation, an applicant for planned development approval shall provide information at three points in the city approval process. First, the applicant must submit to DPD, as part of its application for planned development approval, an M/WBE Participation Proposal. The M/WBE Participation Proposal must identify the applicant's goals for participation of certified M/WBE firms in the design, engineering and construction of the project, and of city residents in the construction work. The city encourages goals of (i) 26% MBE and 6% WBE participation (measured against the total construction budget for the project or any phase thereof), and (ii) 50% city resident hiring (measured against the total construction work hours for the project or any phase thereof). The M/WBE Participation Proposal must include a description of the Applicant's proposed outreach plan designed to inform M/WBEs and city residents of job and contracting opportunities. Second, at the time of the Applicant's submission for Part II permit review for the project or any phase thereof, the Applicant must submit to DPD (a) updates (if any) to the Applicant's preliminary outreach plan, (b) a description of the Applicant's outreach efforts and evidence of such outreach, including, without limitation, copies of certified letters to M/WBE contractor associations and the ward office of the alderman in which the project is located and receipts thereof; (c) responses to the Applicant's outreach efforts, and (d) updates (if any) to the applicant's M/WBE and city resident participation goals. Third, prior to issuance of a Certificate of Occupancy for the project or any phase thereof, the Applicant must provide DPD with the actual level of M/WBE and city resident participation in the project or any phase thereof, and evidence of such participation. In addition to the forgoing, DPD may request such additional information as the department determines may be necessary or useful in evaluating the extent to which M/WBEs and city residents are informed of and utilized in planned development projects. All such information will be provided in a form acceptable to the Zoning Administrator. DPD will report the data it collects regarding projected and actual employment of M/WBEs and city residents in planned development projects twice yearly to the Chicago Plan Commission and annually to the Chicago City Council and the Mayor.

16. This Planned Development shall be governed by Section 17-13-0612. Should this Planned Development ordinance lapse, the Zoning Administrator shall initiate a Zoning Map Amendment to rezone the property to (underlying zoning that formed the basis of this Planned Development).

17. Prior to the Part II Approval (Section 17-13-0610 of the Chicago Zoning Ordinance) in Sub-Area D, the Applicant shall submit a site plan, landscape plan and building elevations for the specific Sub-Area(s) for review and approval by the Department of Planning and Development (DPD). Review and approval by DPD is intended to assure that specific development components substantially conform with the Planned Development (PD) and to assist the City in monitoring ongoing development. Sub-Area Site Plan Approval Submittals (Section 17-13-0800) need only include that portion of the Property for which approval is being sought by the Applicant. If the Applicant is seeking approval for a portion of the Property that represents less than an entire Sub-Area, the Applicant shall also include a site

plan for that area of the Property which is bounded on all sides by either public Rights-of-Way or the boundary of the nearest Sub-Area. The site plan provided shall include all dimensioned and planned street Rights-of-Way.

No Part II Approval for any portion of the Property shall be granted until Site Plan approval has been granted. Following approval by DPD, the approved Sub-Area Site Plan Approval Submittals, supporting data and materials shall be made part of the main file and shall be deemed to be an integral part of the PD.

After approval of the Sub-Area Site Plan, changes or modifications may be made pursuant to the provisions of Statement 17. In the event of any inconsistency between approved plans and the terms of the PD, the terms of the PD shall govern. Any Sub Area Site Plan Approval Submittals shall, at a minimum, provide the following information:

- fully-dimensioned site plan (including a footprint of the proposed improvements);
- fully-dimensioned building elevations;
- fully-dimensioned landscape plan(s); and,
- statistical information applicable to the subject Sub-Area, including floor area, the applicable floor area ratio, uses to be established, building heights and setbacks.

Sub Area Site Plan Approval Submittals shall include all other information necessary to illustrate substantial conformance to the PD.

BUSINESS PLANNED DEVELOPMENT NO. TBD
BULK REGULATIONS AND DATA TABLE

Gross Site Area (sf):	236,165
Area of Public Right-of-Way (sf):	44,241
Net Site Area (sf):	191,924
Subarea A (sf):	69,758
Subarea B (sf):	68,962
Subarea C (sf):	43,620
Subarea D (sf):	9,584
Maximum Floor Area Ratio:	2.00
Subarea A:	.50
Subarea B:	1.00
Subarea C:	0.00
Subarea D:	2.00
Minimum Setbacks:	
Sub-Area A and B:	
West 47th Street	14'-8"
South California Avenue	8'-7"
48th Place	21'-5 5/8"
Western boundary	115'-3"
Sub-Area C and D:	
West 47th Street	20'-7"
South Fairfield Avenue	6'-0"
Southern boundary	8'-3"
South California Avenue	6'-0"
Maximum Building Height:	
Subarea A:	34' to top of parapet wall
Subarea B:	34' to top of parapet wall
Subarea C:	N/A
Subarea D:	N/A

Applicant: Healthy Brighton Title Holding Corporation, an Illinois not-for-profit corporation
Address: 2833 W. 47th Street; 2759-2757 and 2749-2745 W. 47th Street and 4717-4723 S. California Ave.
Introduced: July 20, 2022
Plan Commission: TBD

Minimum Number of Off-Street Parking and Loading:

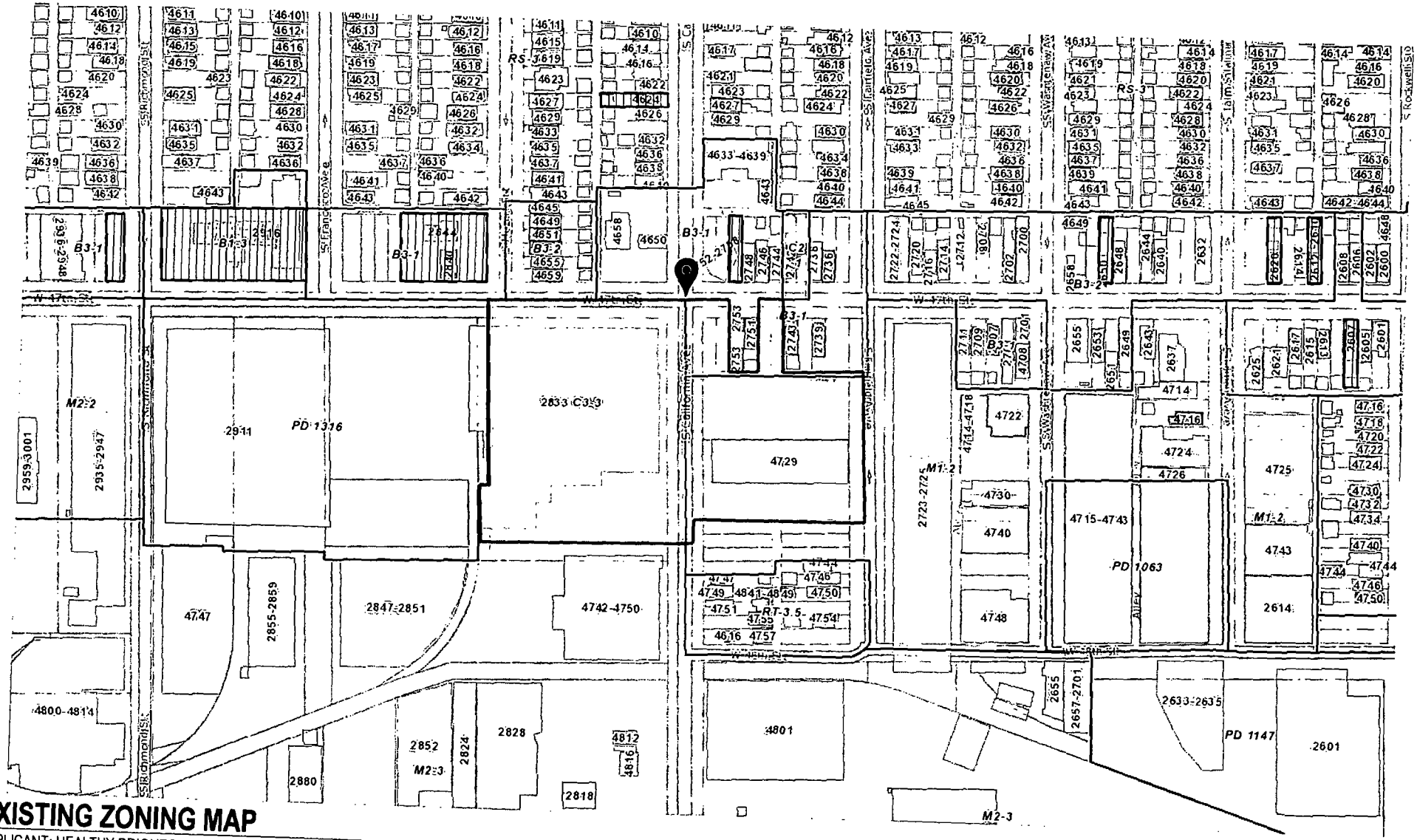
Subarea A:			
	Cars	Bikes	Loading
TOTAL	69	18	1

Subarea B:			
	Cars	Bikes	Loading
TOTAL	66	14	1

Subarea C:			
	Cars	Bikes	Loading
TOTAL	94	0	0

Subarea D:			
	Cars	Bikes	Loading
TOTAL	0	0	0

Footnote 1: Per the survey, there is 77,223 square feet in the exiting right-of-way adjacent to the Property. The Applicant proposes to dedicate 17,136 square feet of the Property to the existing right-of-way resulting in a total Area of Public Rights-of-Way of 94,359 square feet



EXISTING ZONING MAP

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS: 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE
INTRODUCED: JULY 20, 2022
PLAN COMMISSION: _____

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EXISTING LAND USE MAP

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
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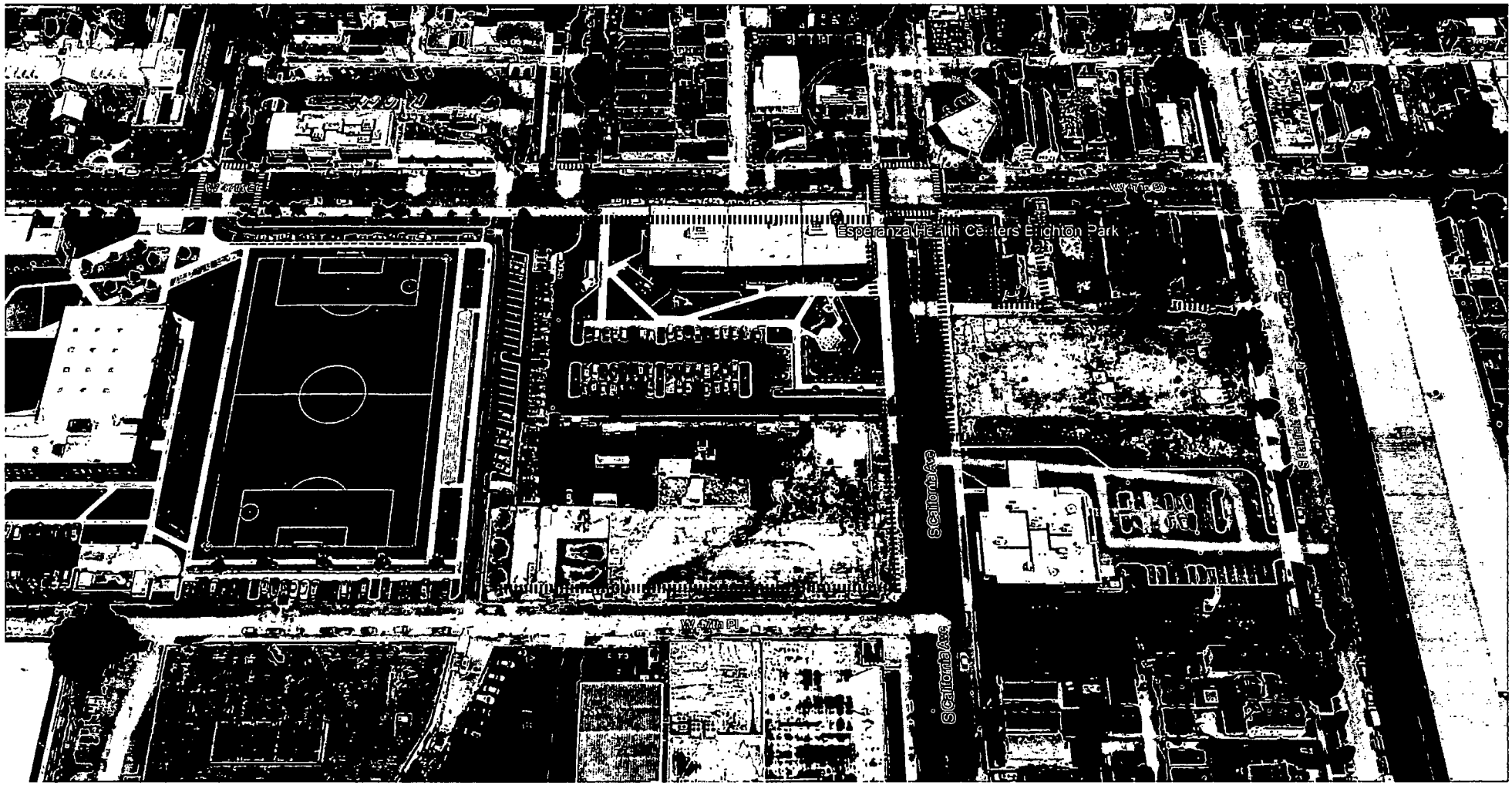

EXISTING AERIAL MAP

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS: 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE
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PROJECT SITE

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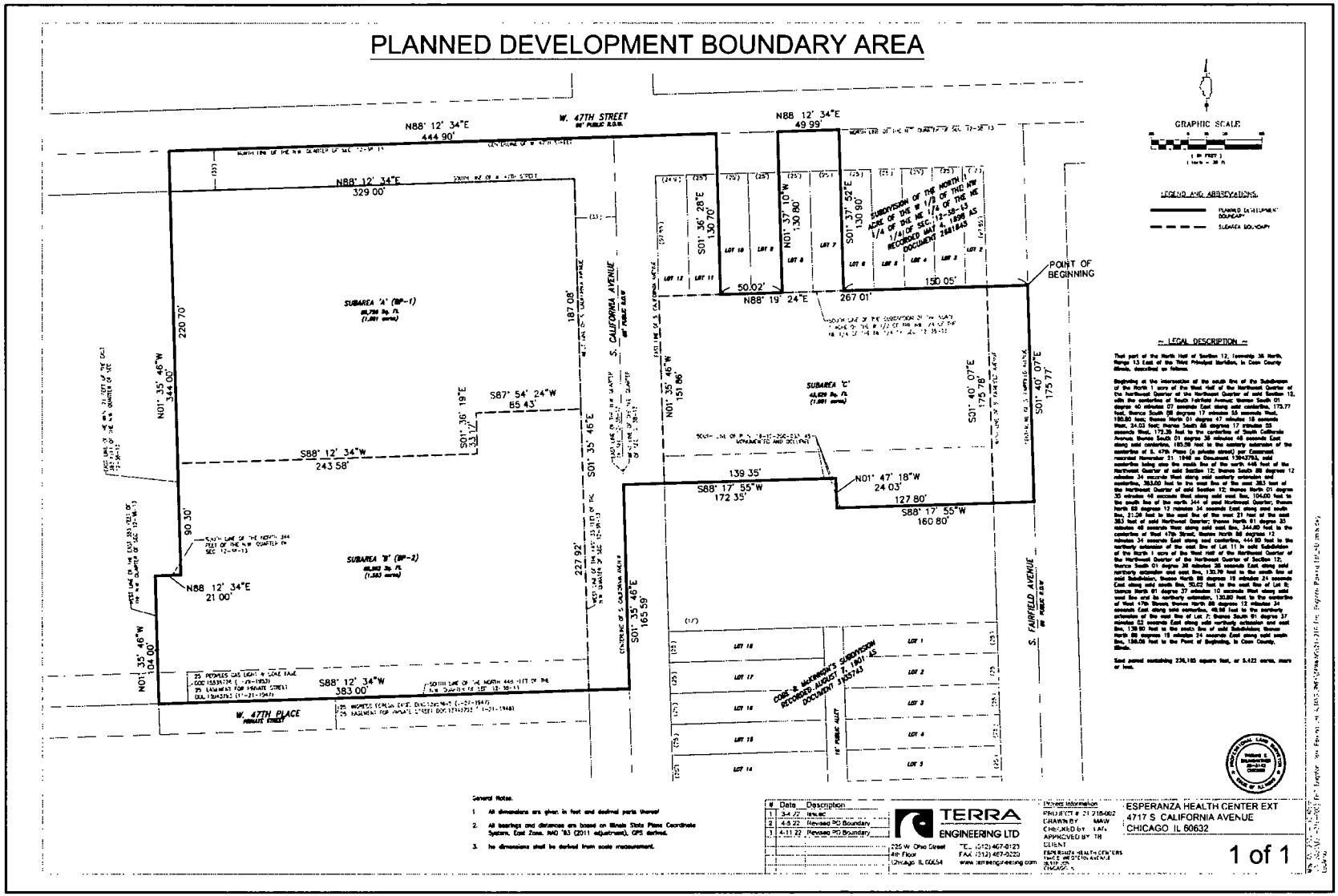

PD BOUNDARY MAP

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS: 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE
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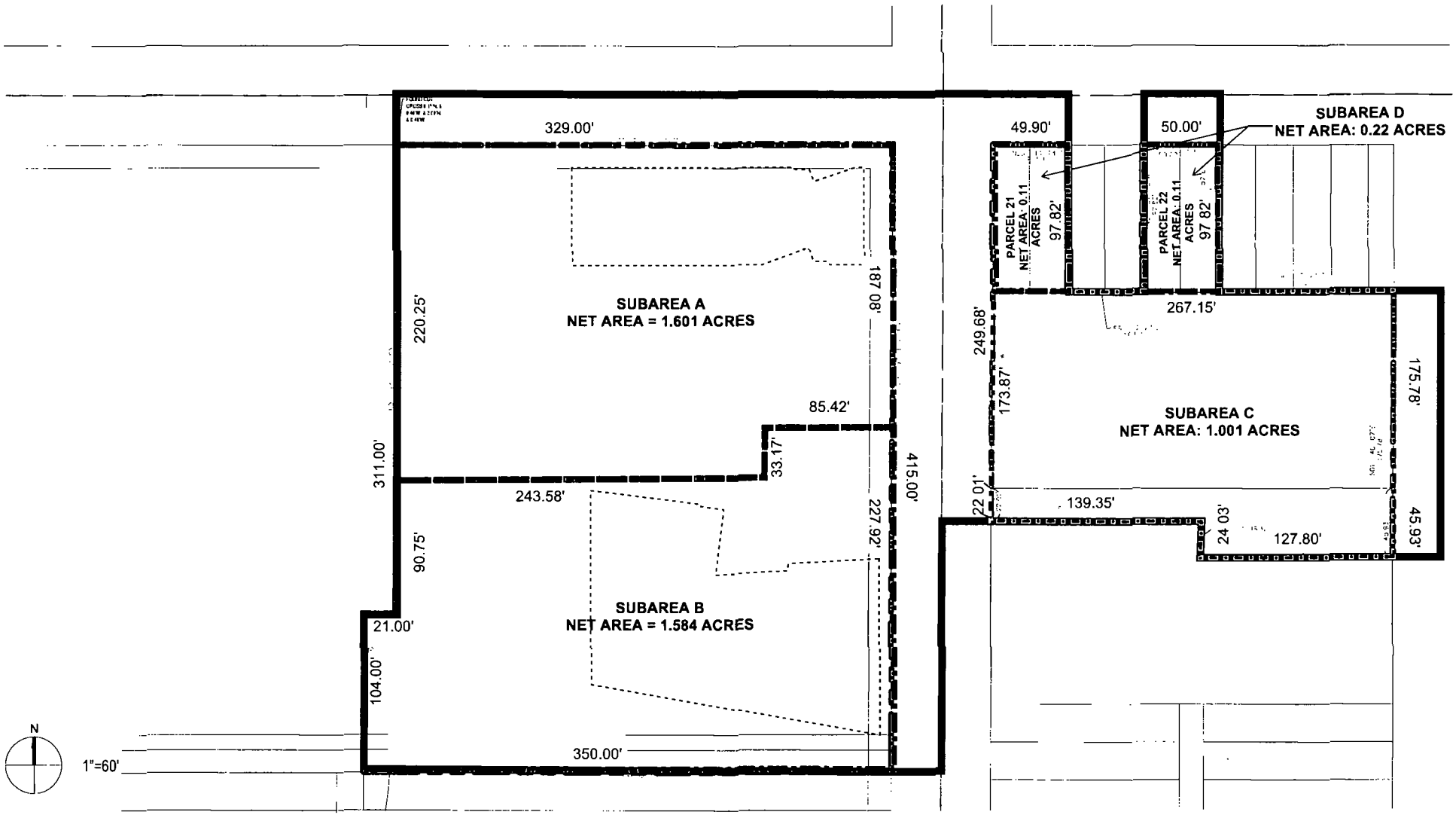

SUB AREA MAP

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS: 2833 W. 47TH STREET, 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE
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PD BOUNDARY LINE

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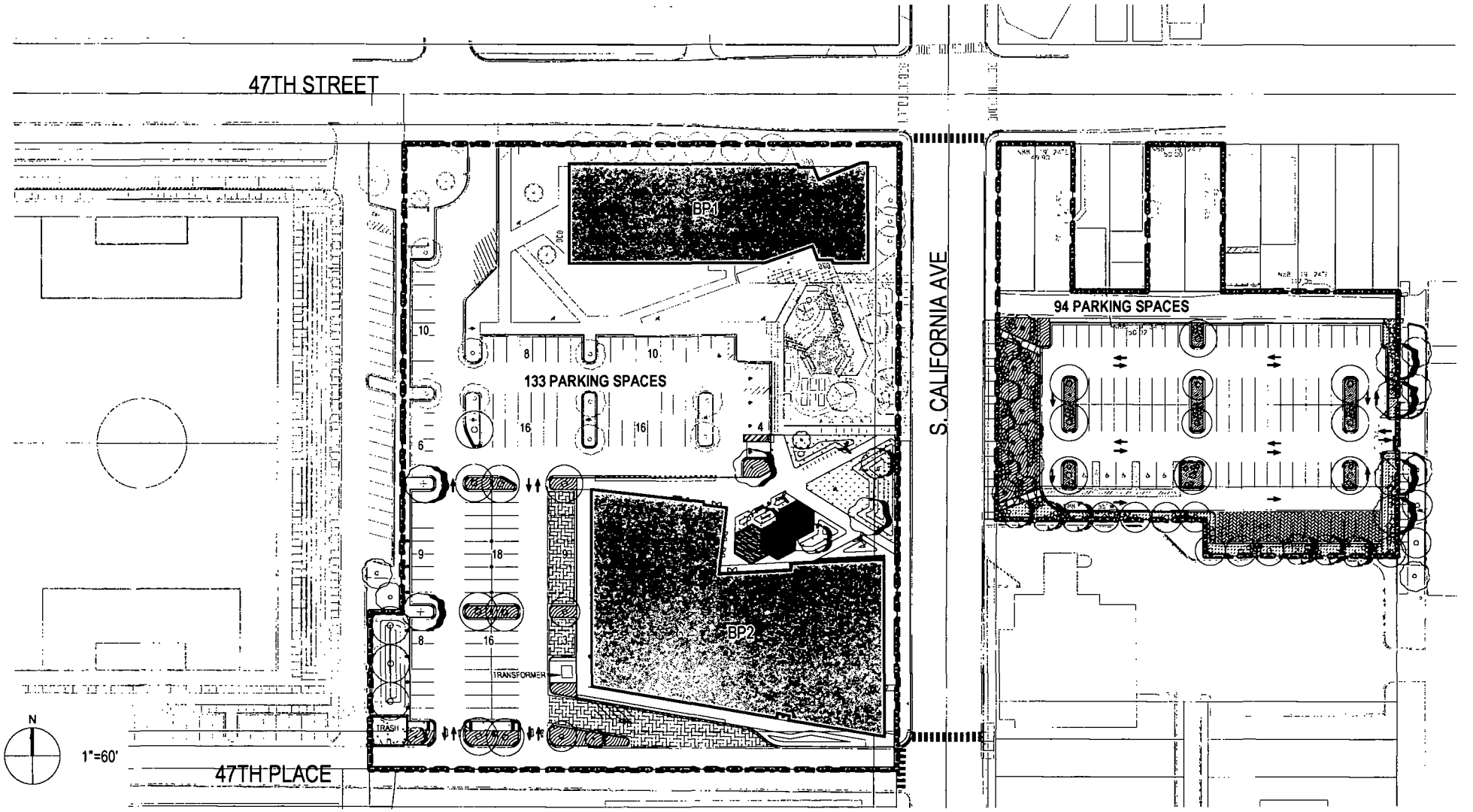

SITE PLAN

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS: 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE
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PROPERTY LINE

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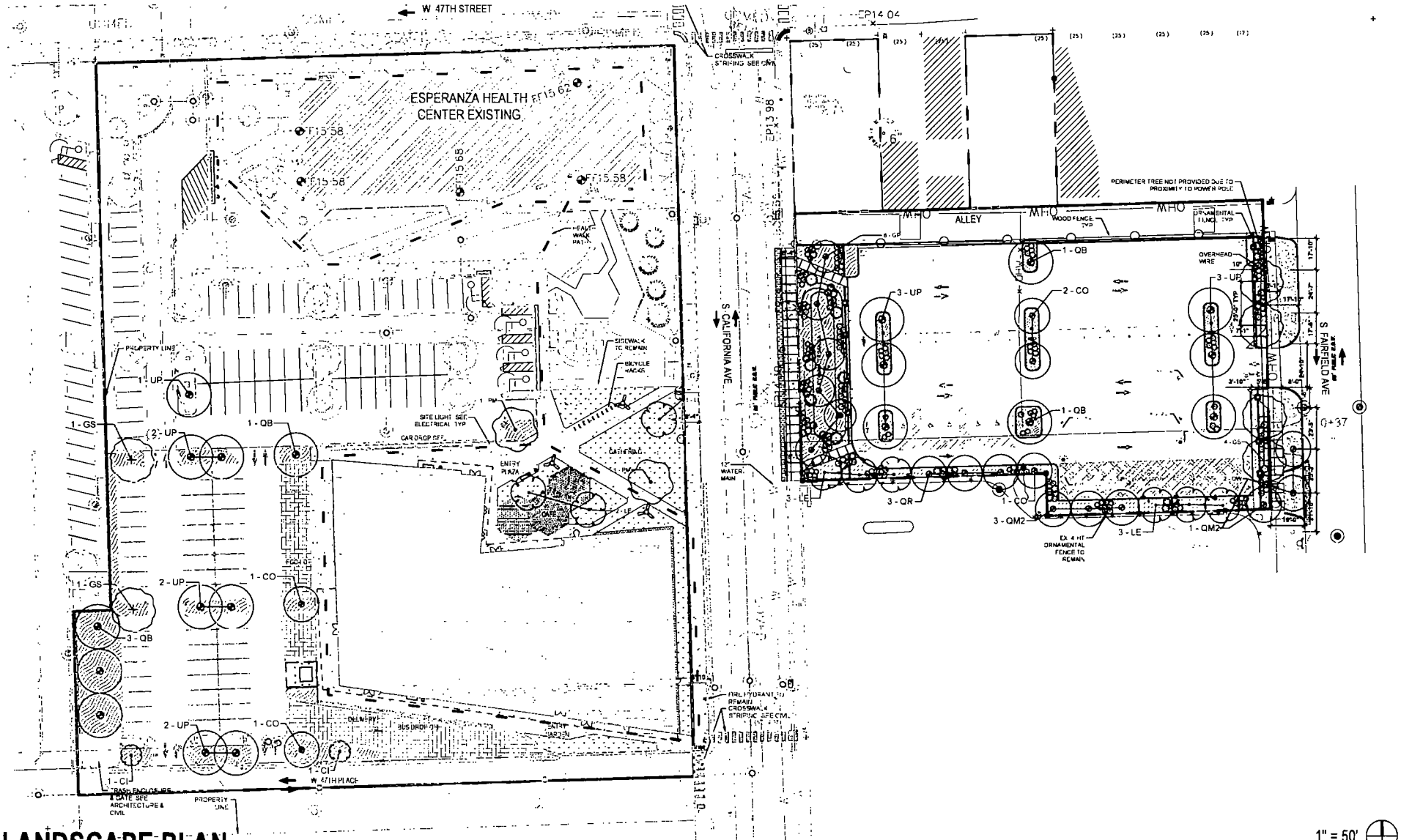

LANDSCAPE PLAN

1" = 50'

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP

ADDRESS: 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE

INTRODUCED: JULY 20, 2022

PLAN COMMISSION: _____

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LEGEND

SYMBOL	01 GENERAL DESCRIPTION
	PERENNIAL MATRIX 30% 5 GAL SHRUBS @ 36" OC 70% PERENNIAL QUARTS @ 12" OC, BULBS THROUGHOUT @ 12" OC
	CONCRETE PAVEMENT, SEE CIVIL
	PAVER A. PERMEABLE PARKING LOT PAVER, SEE CIVIL
	PAVER B: PERMEABLE PLAZA PAVER
	ANGULAR GRANITE GRAVEL
	HARDWOOD BARK MULCH
	TURF
	6' W BENCH
	LITTER RECEPTACLE
	PEDESTRIAN LIGHT POLE
	BIKE RACK
	ORNAMENTAL FENCE, 4' HT
	WOOD FENCE, 6' HT
	HEALTH WALK (0 25 MILE LOOP)
	EXISTING TREE TO REMAIN

TREE SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
CO	CELTIS OCCIDENTALIS	COMMON HACKBERRY	2.5" CAL.	B&B
CI	CRATAEGUS CRUS-GALLI INERMIS	THORNLESS COCKSPUR HAWTHORN	2.5" CAL.	B&B
GP	GINKGO BILOBA `PRINCETON SENTRY`	PRINCETON SENTRY MAIDENHAIR TREE	2.5" CAL.	B&B
GS	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE'	SKYLINE HONEY LOCUST	2.5" CAL.	B&B
LE	LIRIODENDRON TULIPIFERA 'JFS-OZ' TM	EMERALD CITY TULIP POPLAR	2.5" CAL.	B&B
PM	PLATANUS X ACERIFOLIA `MORTON CIRCLE` TM	EXCLAMATION LONDON PLANE TREE	2.5" CAL.	B&B
QB	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	B&B
QM2	QUERCUS MUEHLENBERGII	CHINKAPIN OAK	2.5" CAL.	B&B
QR	QUERCUS RUBRA	RED OAK	2.5" CAL.	B&B
QW	QUERCUS X WAREI 'LONG' TM	REGAL PRINCE OAK	2.5" CAL.	B&B
UP	ULMUS X 'MORTON GLOSSY' TM	TRIUMPH ELM	2.5" CAL.	B&B

LANDSCAPE PLAN SCHEDULES

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
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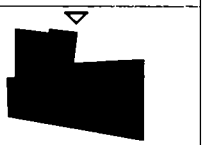
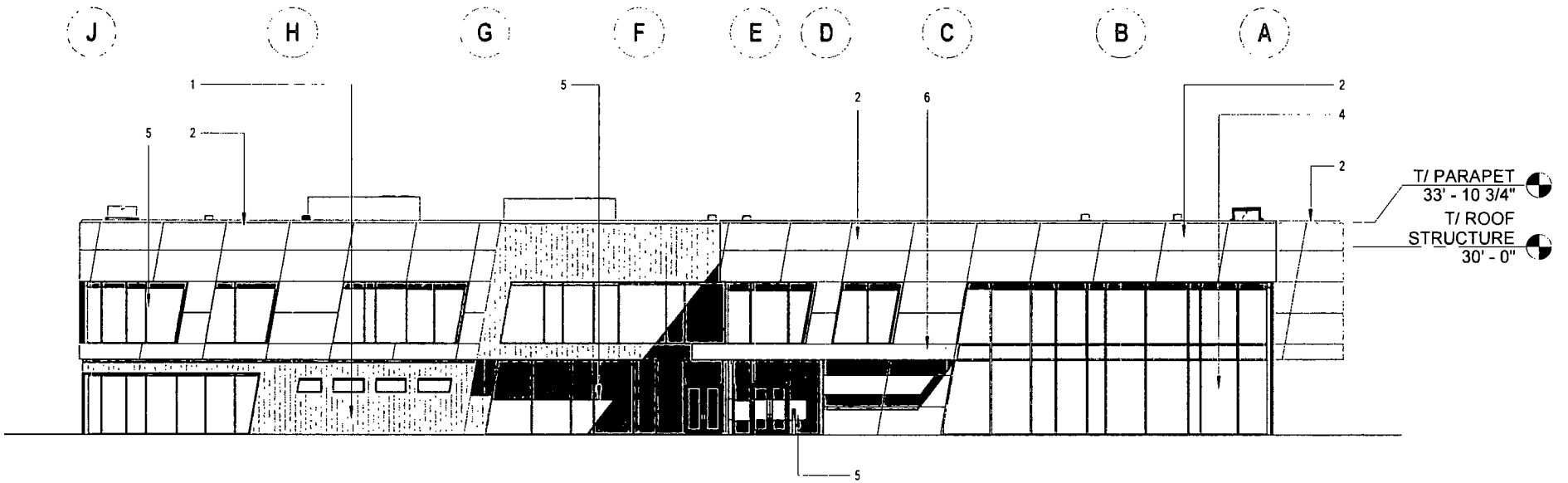
KEY NOTES

1. RIBBED METAL RAINSCREEN PANELS
2. ACM RAINSCREEN PANELS
3. ___ (NO. NOT IN USE)
4. GLASS CURTAIN WALL
5. GLASS STOREFRONT
6. PANELIZED METAL

KEY PLAN





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

EXTERIOR ELEVATIONS

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
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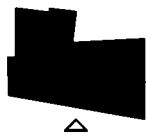

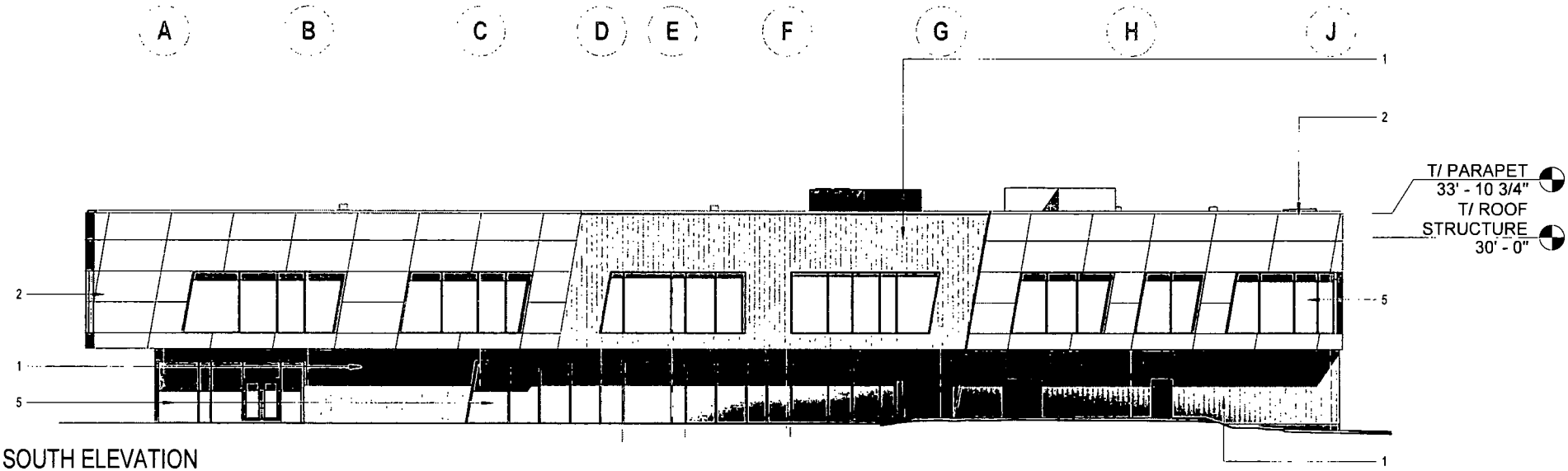

1 SOUTH ELEVATION
SCALE 1/16" = 1'-0"

EXTERIOR ELEVATIONS

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
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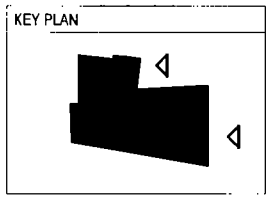
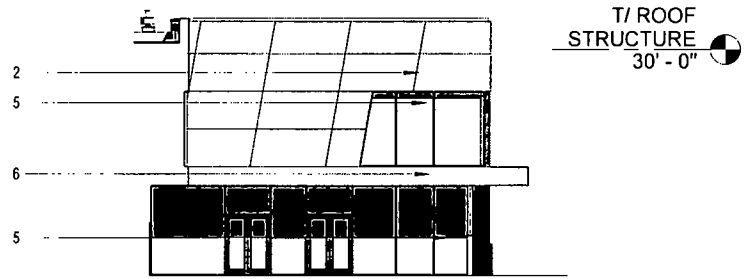
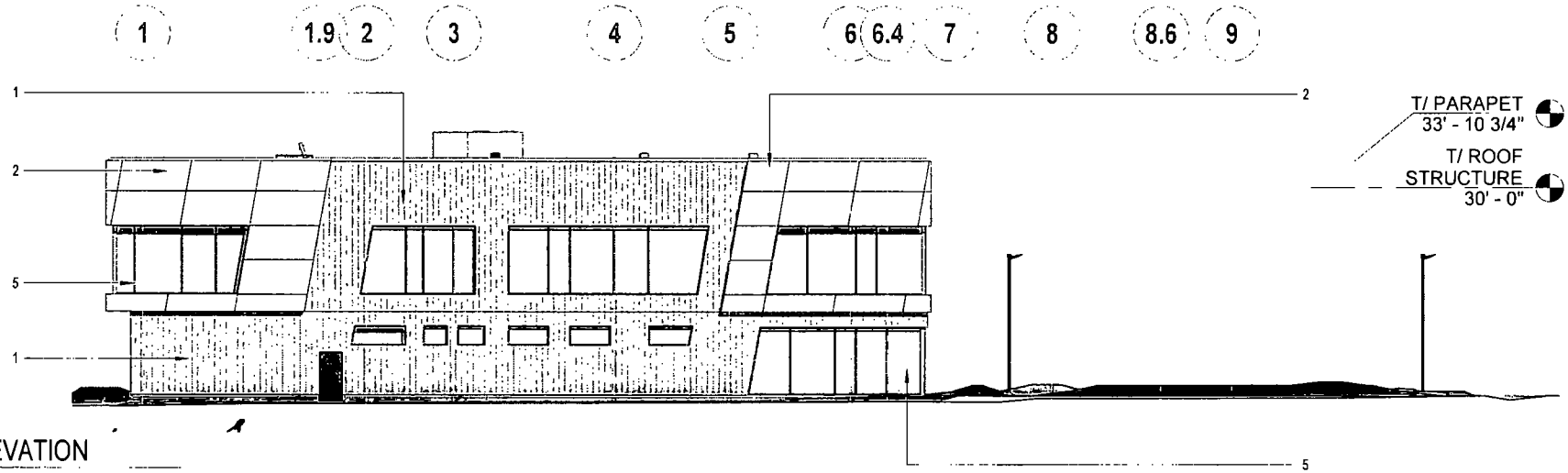




1 PARTIAL EAST ELEVATION
SCALE: 1/16" = 1'-0"



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

EXTERIOR ELEVATIONS

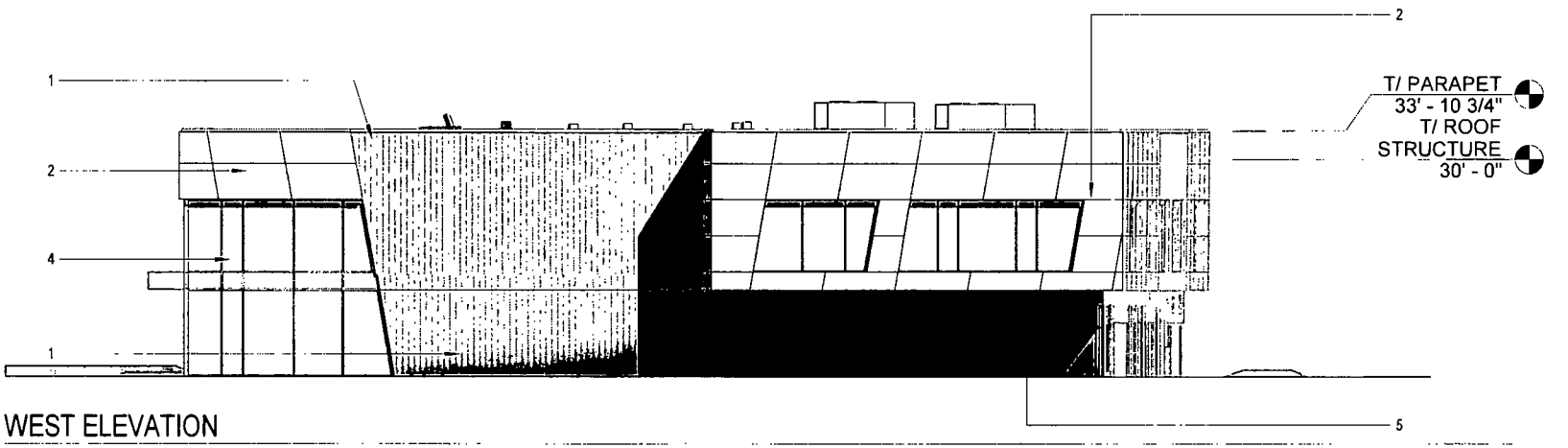
APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS: 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET, AND 4717-4723 S. CALIFORNIA AVENUE
INTRODUCED: JULY 20, 2022
PLAN COMMISSION: _____

UrbanWorks
ARCHITECTURE INTERIORS PLANNING
125 S. Clark St. Suite 2070
Chicago, IL 60603

KEY NOTES

1. RIBBED METAL RAINSCREEN PANELS
2. ACM RAINSCREEN PANELS
3. ___ (NO. NOT IN USE)
4. GLASS CURTAIN WALL
5. GLASS STOREFRONT
6. PANELIZED METAL

KEY PLAN



1 WEST ELEVATION
SCALE 1/16" = 1'-0"

EXTERIOR ELEVATIONS

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS. 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET, AND 4717-4723 S. CALIFORNIA AVENUE
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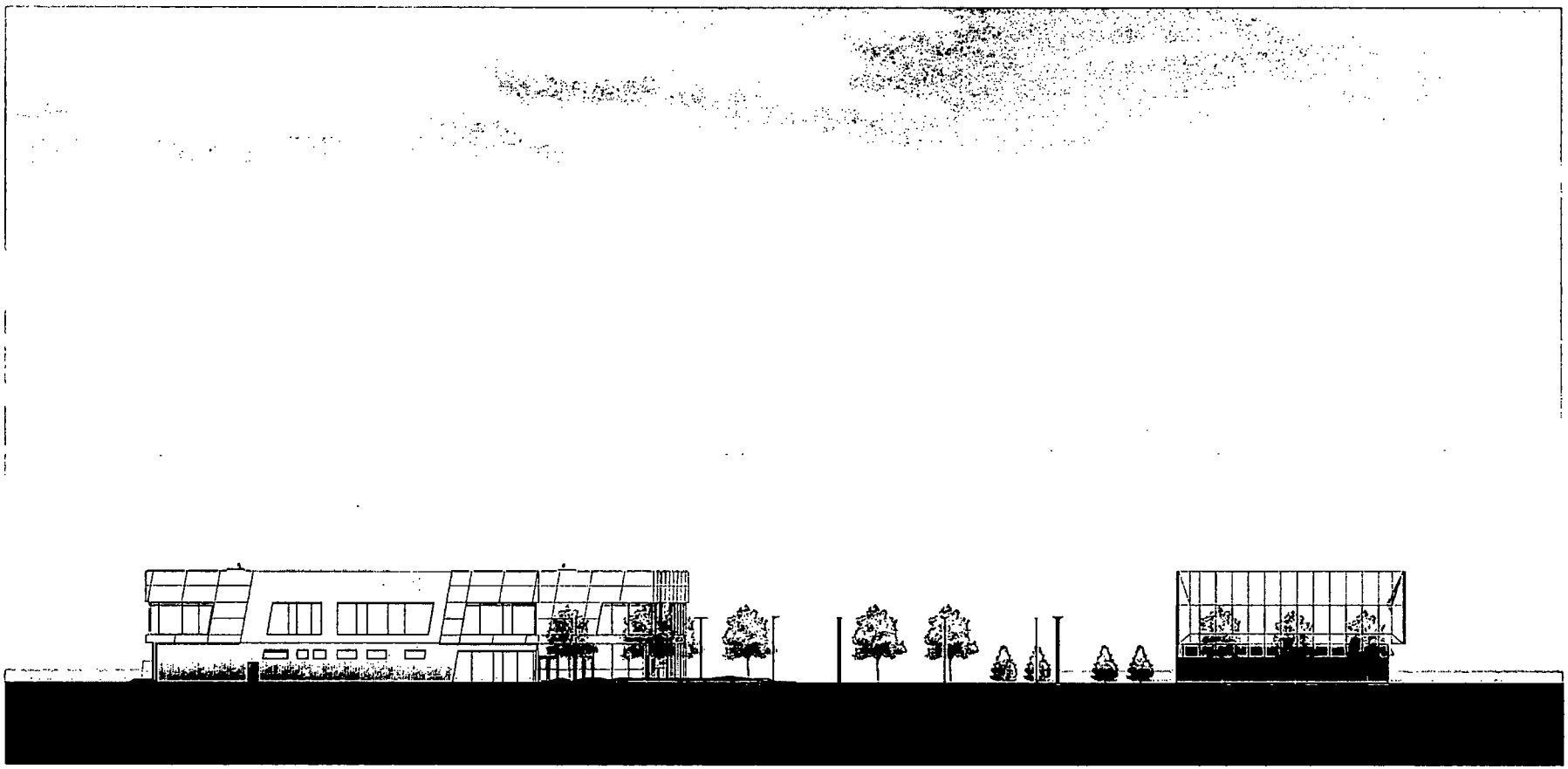

1 STREETSCAPE EAST ELEVATION
SCALE: 1/32" = 1'-0"

STREETSCAPE ELEVATION

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS: 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE
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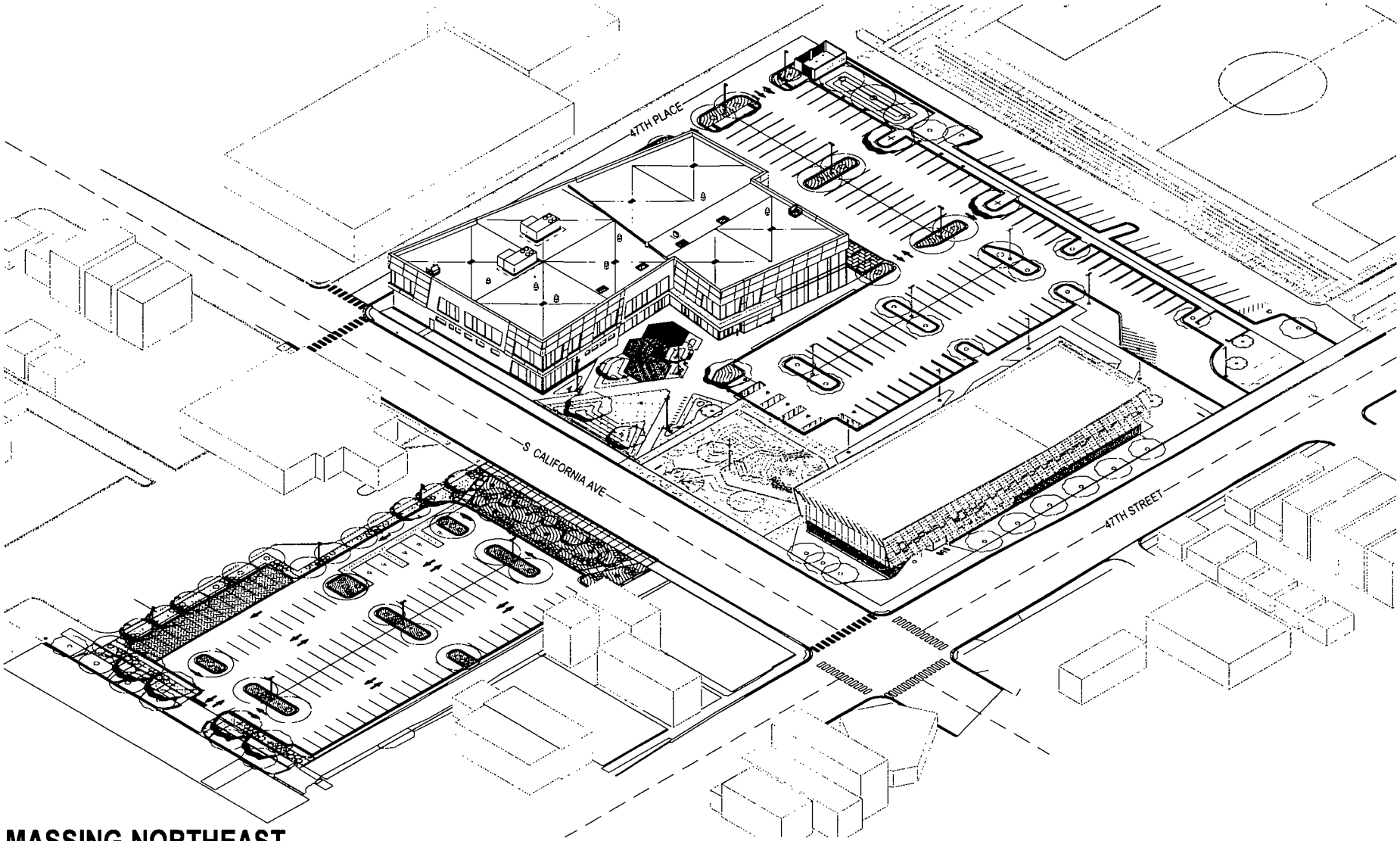

3D MASSING NORTHEAST

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS: 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE
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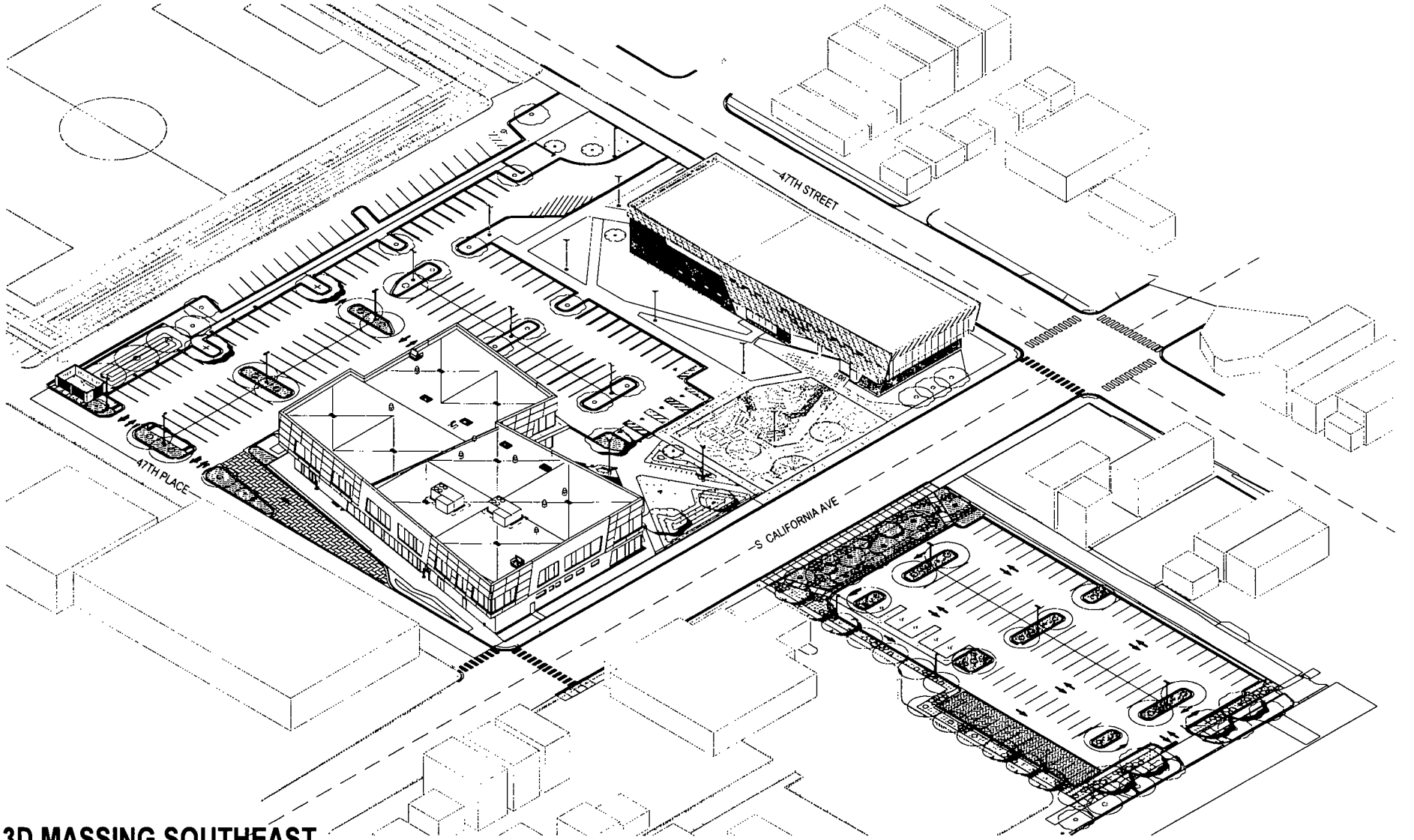

3D MASSING SOUTHEAST

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS: 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE
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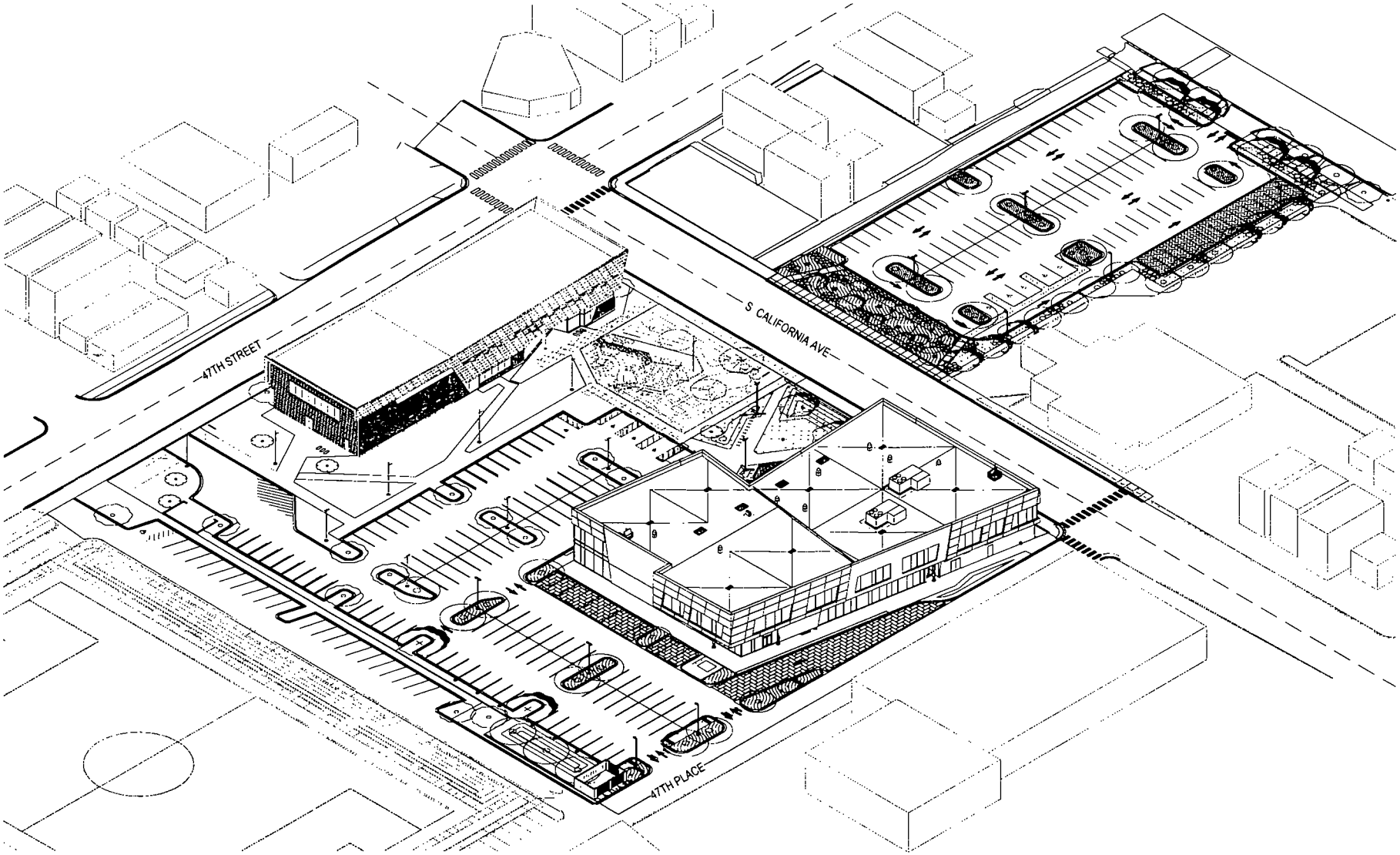

3D MASSING SOUTHWEST

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
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Chicago Sustainable Development Policy 2017.01.12

CHICAGO DEPARTMENT OF PLANNING & DEVELOPMENT (DPD)

Compliance Options	Points Required		Sustainable Strategies Menu: Health	Energy							Stormwater					
Compliance Paths	Starting Points	Number of Optional Points Required (New Construction / Substantial Rehab / Moderate Rehab)	1.1 Achieve WELL Building Standard	2.1 Designed to earn the Energy Star — EHC plans to implement	2.2 Exceed Energy Code (5%) — EHC plans to implement	2.3 Exceed Energy Code (10%) (Choose one)	2.4 Exceed Energy Code (25%) (Choose one)	2.5 Exceed Energy Code (40%) (Choose one)	2.6 Onsite Renewable Energy (3%) (Choose one)	2.7 Onsite Renewable Energy (5%) (Choose one)	3.1 Exceed Stormwater Ordinance by 25% (Choose one)	3.2 Exceed Stormwater Ordinance by 50% (Choose one)	3.3 100% Stormwater Infiltration (Choose one)	3.4 Sump Pump Capture & Reuse	3.5 100-year detention for lot-to-lot buildings	3.6 100-year Detention for Bypass
Options Without Certification																
All Options Available	0	Approx 110 PTS	[illegible]	(30)	(20)	30	40	50	10	20	10	20	40	5	5	5
Options With Certification																
LEED Platinum	95	5 / 0 / 0	40	NA	NA	NA	NA	NA	NA	NA	10	20	40	5	5	5
LEED Gold	90	10 / 0 / 0	40	NA	NA	NA	NA	50	10	20	10	20	40	5	5	5
LEED Silver	80	20 / 0 / 0	40	NA	NA	NA	40	50	10	20	10	20	40	5	5	5
Green Globes 4-Globes	90	10 / 0 / 0	40	NA	NA	NA	NA	50	10	20	10	20	40	5	5	5
Green Globes 3-Globes	80	20 / 0 / 0	40	NA	NA	NA	40	50	10	20	10	20	40	5	5	5
Green Globes 2-Globes	70	30 / 0 / 0	40	NA	NA	NA	40	50	10	20	10	20	40	5	5	5
Living Building Challenge	100	0 / 0 / 0	40	NA	NA	NA	NA	NA	NA	NA	10	20	40	5	5	5
Living Building Challenge Petal	90	10 / 0 / 0	40	NA	20	30	40	50	NA	NA	10	20	40	5	5	5
Enterprise Green Communities*	80	20 / 0 / 0	40	NA	NA	NA	NA	NA	10	20	10	20	40	5	5	5
PassiveHouse	70	30 / 0 / 0	40	NA	NA	NA	NA	NA	10	20	10	20	40	5	5	5

Compliance Paths	Landscapes				Green Roofs		Water		Transportation							Solid Waste	Work Force	Wildlife	
	4.1 Working Landscapes — EHC plans to implement	4.2 Natural Landscapes	4.3 Tree Planting — EHC plans to implement	4.4 Achieve Sustainable Sites Certification	5.1 Green Roof 50-100% (Choose one)	5.2 Green Roof 100% (Choose one)	6.1 Indoor Water Use Reduction (25%) (Choose one) — OK - could achieve 40% if nec	6.2 Indoor Water Use Reduction (40%) (Choose one)	7.1 Proximity to Transit Service	7.2 Bikeshare Sponsorship — EHC plans to implement	7.3 Bike Parking Residential	7.4 Bike Parking Commercial & Industrial — OK - code required	7.5 EV Charging Stations	7.6 EV Charger Readiness — OK - code required	7.7 CTA Digital Displays — EHC plans to implement	8.1 80% Waste Diversion — EHC plans to implement	8.2 Workforce Development — EHC plans to implement	9.1 Bird Protection (Basic) (Choose one)	9.2 Bird Protection (Enhanced) (Choose one)
Options Without Certification																			
All Options Available	(5)	5	(5)	20	10	20	(10)	20	5	(5)	5	(5)	10	(5)	(5)	(10)	(10)	5	10
Options With Certification																			
LEED Platinum	NA	NA	NA	20	10	20	NA	NA	NA	5	NA	NA	NA	5	5	NA	10	5	10
LEED Gold	5	NA	5	20	10	20	NA	NA	NA	5	NA	NA	10	5	5	10	10	5	10
LEED Silver	5	5	5	20	10	20	NA	20	NA	5	NA	NA	10	5	5	10	10	5	10
Green Globes 4-Globes	5	NA	5	20	10	20	NA	NA	NA	5	NA	NA	10	5	5	10	10	5	10
Green Globes 3-Globes	5	NA	5	20	10	20	NA	NA	NA	5	NA	NA	10	5	5	10	10	5	10
Green Globes 2-Globes	5	5	5	20	10	20	NA	20	NA	5	NA	NA	10	5	5	10	10	5	10
Living Building Challenge	NA	NA	NA	20	NA	NA	NA	NA	NA	NA	NA	NA	10	5	NA	NA	10	5	10
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PassiveHouse	5	5	5	20	10	20	10	20	5	5	5	5	10	5	5	10	10	5	10

*only available to affordable housing projects funded by DPD's Housing Bureau

Planned Development Projects (PD) - New Construction	**100 points required**
TIF Funded Development Projects (TIF) - New Construction*	**100 points required**
DPD Housing, Multi-family (>5 units) Projects (DPD-H MF) - New Construction	**100 points required**
PD, TIF, DPD-H MF and Class L - Renovation Projects*	
Moderate Renovation Projects	**25 points required**
Substantial Renovation Projects	**50 points required**

*does not apply to TIF assistance of less than $1M (including but not limited to TIF-NIP, TIF Purchase Rehab, Streamlined TIF and SBIF programs)

Moderate Renovation Projects = projects including partial or minor upgrades to building sytems and minor repairs to the exterior envelope
Substantial Renovation Projects = projects including new and/or upgraded building systems and extensive repairs to the exterior envelope

SUSTAINABLE MATRIX

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP
ADDRESS: 2833 W. 47TH STREET, 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE
INTRODUCED: JULY 20, 2022
PLAN COMMISSION: ____________

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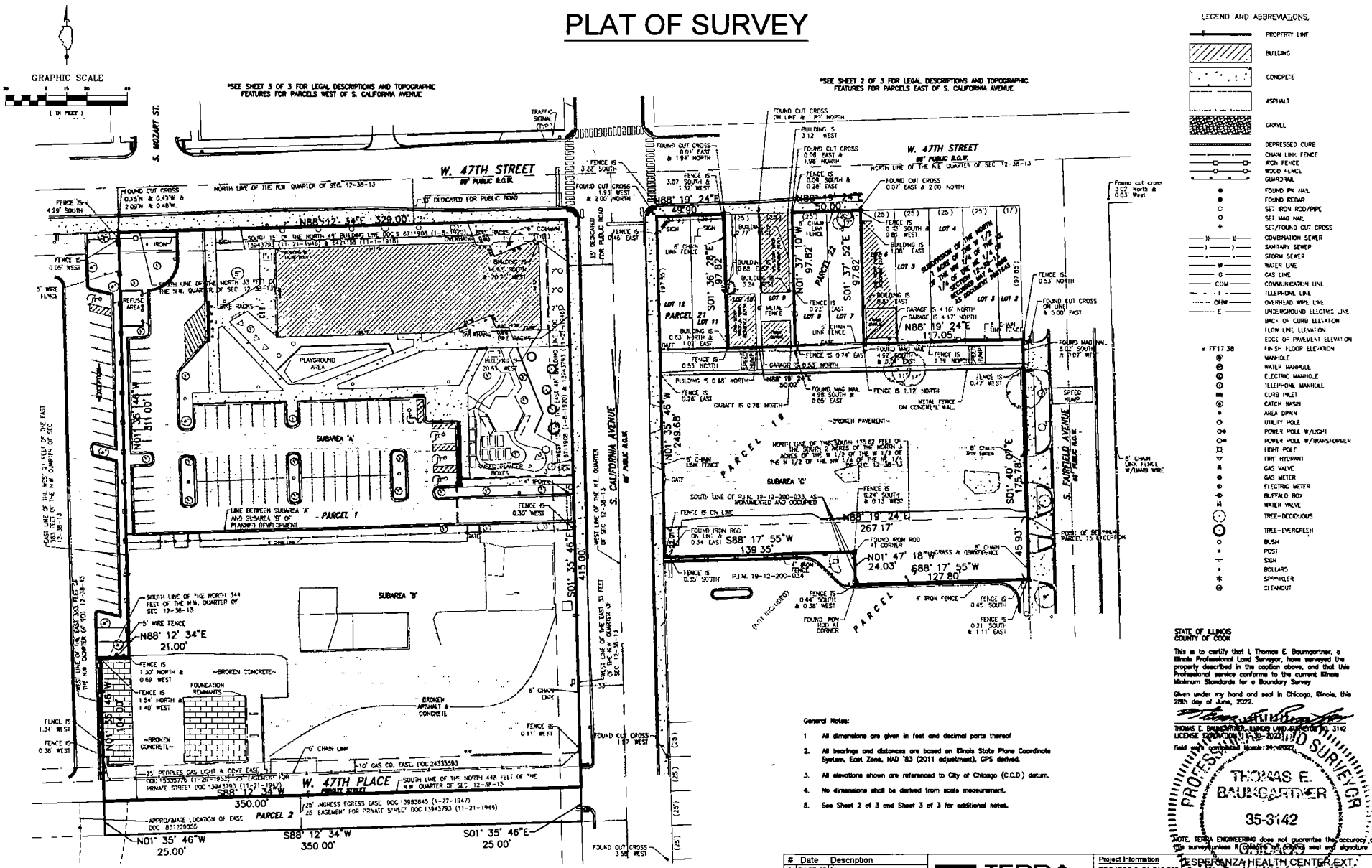
Chicago IL 60603

PLAT OF SURVEY



LEGEND AND ABBREVIATIONS

- PROPERTY LINE
- BUILDING
- CONCRETE
- ASPHALT
- GRAVEL
- DEPRESSED CURB
- CHAIN LINK FENCE
- IRON FENCE
- WOOD FENCE
- GUARDRAIL
- FOUND PK NAIL
- FOUND REBAR
- SET IRON ROD/PIPE
- SET MAG NAIL
- SET/FOUND CUT CROSS
- COMBINATION SEWER
- SANITARY SEWER
- STORM SEWER
- WATER LINE
- GAS LINE
- COMMUNICATION LINE
- TELEPHONE LINE
- OHW OVERHEAD WIRE LINE
- UNDERGROUND ELECTRIC LINE
- BACK OF CURB ELEVATION
- FLOW LINE ELEVATION
- EDGE OF PAVEMENT ELEVATION
- x FF17.38 FINISH FLOOR ELEVATION
- MANHOLE
- WATER MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- CURB INLET
- CATCH BASIN
- AREA DRAIN
- UTILITY POLE
- POWER POLE W/LIGHT
- HONEY POLE W/TRANSFORMER
- LIGHT POLE
- FIRE HYDRANT
- GAS VALVE
- GAS METER
- ELECTRIC METER
- BUFFALO BOX
- WATER VALVE
- TREE-DECIDUOUS
- TREE-EVERGREEN
- BUSH
- POST
- SIGN
- BOLLARS
- SPRINKLER
- CLEANOUT

General Notes:

1. All dimensions are given in feet and decimal parts thereof
2. All bearings and distances are based on Illinois State Plane Coordinate System, East Zone, NAD '83 (2011 adjustment), GPS derived.
3. All elevations shown are referenced to City of Chicago (C.C.D.) datum.
4. No dimensions shall be derived from scale measurement.
5. See Sheet 2 of 3 and Sheet 3 of 3 for additional notes.

STATE OF ILLINOIS
COUNTY OF COOK

This is to certify that I, Thomas E. Baumgartner, a Illinois Professional Land Surveyor, have surveyed the property described in the caption above, and that this Professional service conforms to the current Illinois Minimum Standards for a Boundary Survey

Given under my hand and seal in Chicago, Illinois, this 28th day of June, 2022.

THOMAS E. BAUMGARTNER, ILLINOIS LAND SURVEYOR NO. 3142
LICENSE EXPIRATION 11-30-2022

Field work completed March 24, 2022.

THOMAS E. BAUMGARTNER
35-3142

NOTE: TERRA ENGINEERING does not guarantee the accuracy of the survey unless it contains an original seal and signature

I FURTHER STATE that the accompanying plat is a scaled representation of the physical situation which I found in the field and shows the location of visible evidence of utilities which I found at the time of my survey of these premises, and underground based on supplied plans. No attempt has been made as part of this survey to excavate, uncover or expose these facilities to field check the existence, size, depth, condition, capacity or exact location of those facilities. For more information concerning these utilities, please contact the appropriate public agencies or utility company

#	Date	Description
1	04-05-22	Issued
2	06-28-22	Rev to show PD Sub Areas

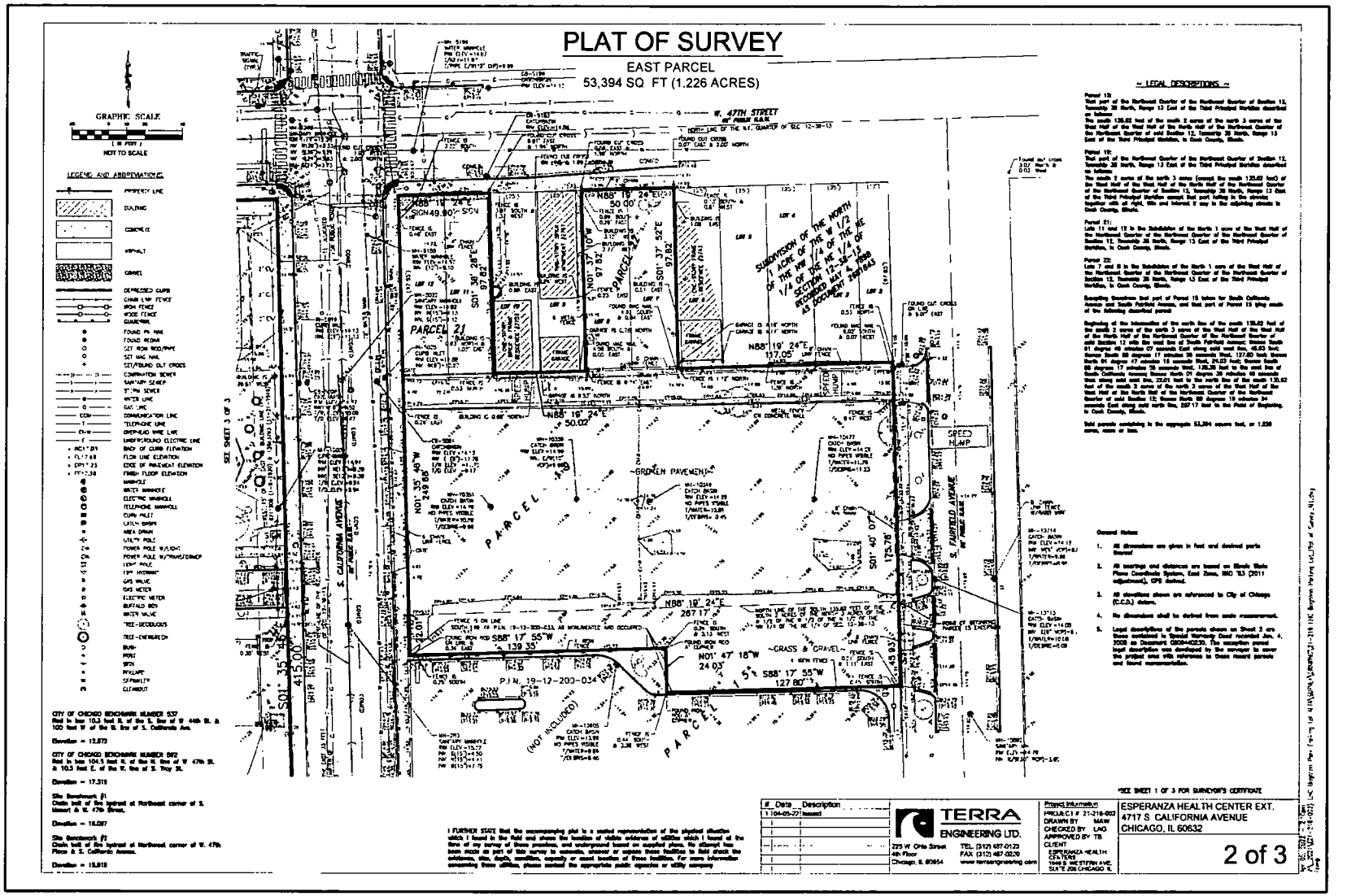
TERRA ENGINEERING LTD.
225 W Ohio Street
4th Floor
Chicago, IL 60654
TEL (312) 467-0123
FAX (312) 467-0220
www.terraengineering.com

Project Information
PROJECT # 21-216-002
DRAWN BY MAW
CHECKED BY LAG
APPROVED BY TB
CLIENT
ESPERANZA HEALTH CENTERS
1940 S. WESTERN AVE.
SUITE 205 CHICAGO, IL

ESPERANZA HEALTH CENTER EXT.
4717 S. CALIFORNIA AVENUE
CHICAGO, IL 60632

1 of 3

Jun 30, 2022 - 8:32am
V:_2021\(21-216-002) ENG Brighton Park Parking Lot\ALTA\SURVEY\DRAWINGS\21-216 ENG Brighton Park Parking Lot_Plat of Survey_ALT.dwg



PLAT OF SURVEY

APPLICANT: HEALTHY BRIGHTON TITLE HOLDING CORPORATION NFP

ADDRESS: 2833 W. 47TH STREET; 2759-2757 AND 2749-2745 W. 47TH STREET; AND 4717-4723 S. CALIFORNIA AVENUE

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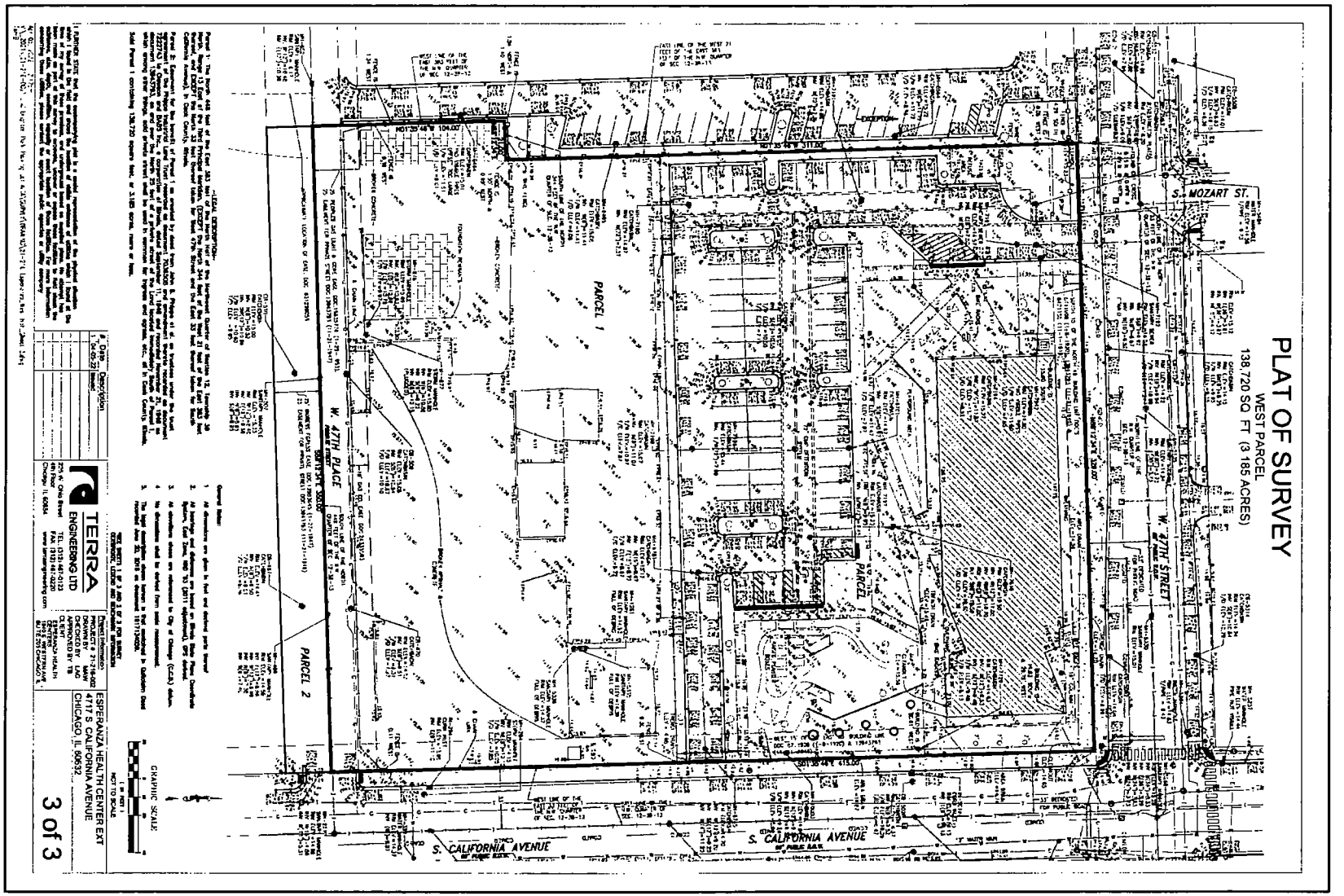
125 S Clark St Suite 2070
Chicago, IL 60603



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PLAN COMMISSION: _____

UrbanWorks
ARCHITECTURE INTERIORS PLANNING
125 S Clark St Suite 2070
Chicago, IL 60603

#21090
INTRO DATE
JULY 20, 2022

CITY OF CHICAGO

APPLICATION FOR AN AMENDMENT TO
THE CHICAGO ZONING ORDINANCE

1. ADDRESS of the property Applicant is seeking to rezone:
2833 W. 47th Street; 2749-2757 and 2749-2745 W. 47th Street and 4717-4723 S. California Avenue

2. Ward Number that property is located in: 14

3. APPLICANT Healthy Brighton Title Holding Corporation NFP, an Illinois not-for-profit corporation

ADDRESS 1940 Western Ave., #205 CITY Chicago

STATE IL ZIP CODE 60608 PHONE (773) 640 - 5792

EMAIL rgadia@esperanzachicago.org CONTACT PERSON Ryan Gadia

4. Is the applicant the owner of the property? YES X NO
If the applicant is not the owner of the property, please provide the following information regarding the owner and attach written authorization from the owner allowing the application to proceed.

OWNER

ADDRESS CITY

STATE ZIP CODE PHONE

EMAIL CONTACT PERSON

5. If the Applicant/Owner of the property has obtained a lawyer as their representative for the rezoning, please provide the following information:

ATTORNEY Lenny D. Asaro, Partner, FAEGRE DRINKER BIDDLE & REATH LLP

ADDRESS 320 S. Canal, Suite 3330

CITY Chicago STATE IL ZIP CODE 60606

PHONE 312-356-5111 FAX 312-569-3000 EMAIL lenny.asaro@faegredrinker.com

6. If the applicant is a legal entity (Corporation, LLC, Partnership, etc.) please provide the names of all owners as disclosed on the Economic Disclosure Statements.

Applicant is an Illinois not-for-profit corporation

7. On what date did the owner acquire legal title to the subject property? 2833 W. 47th Street: June 20, 2018; 2759-2757 and 2749-2745 W. 47th Street and 4717-4723 S. California Avenue: June 3, 2022

8. Has the present owner previously rezoned this property? If yes, when?

No

9. Present Zoning District C3-3; B3-1 and M1-2 Proposed Zoning District C3-3, Commercial, Manufacturing and Employment District then to a Business Planned Development

10. Lot size in square feet (or dimensions) 236,165 sq. ft.

11. Current Use of the property Medical Service; vacant land

12. Reason for rezoning the property Applicant owns and operates Esperanza Health Centers ("Esperanza"). Currently, Esperanza operates a health center at southwest corner of 47th and California known as Bright Park 1. South of Brighton Park 1, Esperanza intends to develop another health center, Brighton Park 2 with parking located across the street on the east side of S. California Ave.

13. Describe the proposed use of the property after the rezoning. Indicate the number of dwelling units; number of parking spaces; approximate square footage of any commercial space; and height of the proposed building. (BE SPECIFIC)

Medical Service: Day Care (Adult); Restaurant, Limited; Outdoor patio (if located at grade level); Retail Sales, General; Accessory Parking and Community Garden.

14. The Affordable Requrements Ordinance (ARO) requires on-site affordable housing units and/or a financial contribution for residential housing projects with ten or more units that receive a zoning change which, among other triggers, increases the allowable floor area, or, for existing Planned Developments, increases the number of units (see attached fact sheet or visit www.cityofchicago.org/ARO for more information). Is this project subject to the ARO?

YES_____ NO X

COUNTY OF COOK
STATE OF ILLINOIS

Ryan Gadia, CPA, Treasurer, being first duly sworn on oath, states that all of the above statements and the statements contained in the documents submitted herewith are true and correct.

Signature of Applicant

Subscribed and Sworn to before me this 24 day of June, 2022.

Notary Public

CAROL SANTOS
Official Seal
Notary Public - State of Illinois
My Commission Expires Aug 24, 2025

For Office Use Only

Date of Introduction: _____

File Number: _____

Ward: _____

WRITTEN NOTICE

AFFIDAVIT

(Section 17-13-0107)

July 1, 2022

Honorable Thomas M. Tunney
Chairman, Committee on Zoning
121 North LaSalle Street
Room 304, City Hall
Chicago, Illinois 60602

Re: Zoning Amendment Application/Planned Development Application
2833 W. 47th Street; 2759-2757 and 2749-2745 W. 47th Street and 4717-4723 S. California Ave., Chicago, IL

The undersigned, **LENNY D. ASARO**, Attorney-Partner, Faegre Drinker Biddle & Reath, LLP, on behalf of the Applicant, Healthy Brighton Title Holding Corporation, an Illinois not-for-profit corporation, being first duly sworn on oath deposes and states the following:

The undersigned certifies that he has complied with the requirements of Section 17-13-0107 of the Chicago Zoning Ordinance, by causing written notices to be sent to such property owners who appear to be the owners of the property within the subject area not solely owned by the Applicant, and to the owners of all property within 250 feet in each direction of the lot line of the subject property, exclusive of public roads, streets, alleys and other public ways, or a total distance limited to 400 feet. Said written noticewas sent by First Class U.S. Mail, no more than 30 days before filing the application.

The undersigned certifies that the notice contained the address of the property sought to be rezoned; a statement of the intended use of the property; the name and address of the applicant; the name and address of the owner; and a statement that the applicant intends to file the application for a change in zoning on approximately **July 20, 2022**.

The undersigned certifies that the applicant has made a bona fide effort to determine the addresses of the parties to be notified under Section 17-13-0107 of the Chicago Zoning Ordinance, and that the accompanying list of names and addresses of surrounding property owners within 250 feet of the subject site is a complete list containing the names and addresses of the people required to be served.

Lenny D. Asaro

Signature

Official Seal
Cynthia L Mables
Notary Public State of Illinois
My Commission Expires 12/10/2024

Subscribed and Sworn to before me this 30th day of June, 2022.

Cynthia L. Mables

Notary Public

faegre drinker

faegredrinker.com

Lenny D. Asaro
Partner
lenny.asaro@faegredrinker.com
+1 312 356 5111 direct

Faegre Drinker Biddle & Reath LLP
311 South Wacker Drive, Suite 4300
Chicago, Illinois 60606
+1 312 212 6500 main
+1 312 212 6501 fax

July 11, 2022

VIA FIRST CLASS U.S. MAIL

Re: Zoning Amendment Application/Planned Development Application
2833 W. 47th Street; 2759-2757 and 2749-2745 W. 47th Street and 4717-4723 S. California Ave., Chicago, IL

Dear Property Owner:

In accordance with the requirements for an Amendment to the Chicago Zoning Ordinance, specifically Section 17-13-0107, please be informed that on or about **July 20, 2022**, the undersigned will file an application for a change in zoning from: C3-3, Commercial, Manufacturing and Employment District; B3-1, Community Shopping District and M1-2, Limited Manufacturing/Business Park District to C3-3, Commercial, Manufacturing and Employment District and then to a Business Planned Development on behalf of **Healthy Brighton Title Holding Corporation,** an Illinois not-for-profit corporation (the "Applicant") for the property located at 2833 W. 47th Street; 2759-2757 and 2749-2745 W. 47th Street and 4717-4723 S. California Ave. (the "Property"). The Applicant is the owner of the Property.

The Applicant intends to develop the Property into a medical service building known as Brighton Park 2 together with adult day care, limited restaurant, retail sales, parking community garden and accessory and incidental uses related thereto.

The Applicant is located at 1940 S. Western Ave., Chicago, IL 60608. **The contact person for this application is attorney Lenny D. Asaro, Partner, Faegre Drinker Biddle & Reath LLP, 311 S. Wacker Drive, Suite 4300, Chicago, IL 60606; Phone: 312-356-5111.**

Please note that the Applicant is ***not*** seeking to rezone or purchase your property. The Applicant is required by law to send this notice because you own property within 250 feet of the Property to be rezoned.

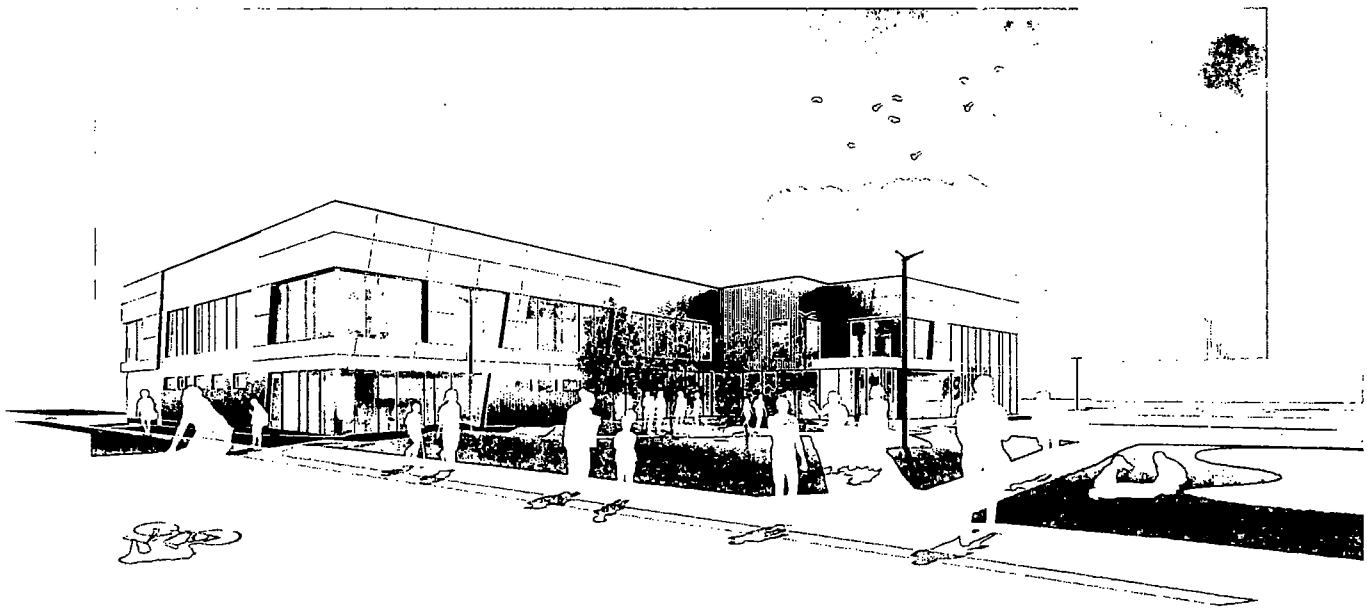
Very truly yours,

Lenny D. Asaro

Lenny D. Asaro
Partner
Faegre Drinker Biddle & Reath LLP

TERRA ENGINEERING LTD.

ESPERANZA HEALTH CENTER
BRIGHTON PARK EXPANSION
TRAFFIC IMPACT STUDY



PROJECT ADDRESS

California Avenue and 47th Place

Chicago, IL 60632

PREPARED BY

Michael C. Hutchinson, P.E., PTOE

Senior Traffic Engineer

PREPARED FOR

UrbanWorks Architecture

125 South Clark Street, Suite 2070,

Chicago, Illinois 60603

DRAFT REPORT DATE

May 5, 2022

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

SECTION I

EXECUTIVE SUMMARY

TERRA Engineering has been asked to evaluate the potential traffic impact adding a new facility to the already existing Esperanza Healthcare Center (EHC). The current facility is located on the southwest corner of 47th Street at California Avenue. The site plan would build an additional facility on the south portion of the site. The two buildings will have a combined 136 parking spaces, with six (6) of the spaces being handicapped spaces. In addition to this parking at the site, a parcel on the east side of California Avenue will be acquired and developed as an additional parking lot with 104 parking spaces.

Existing traffic was collected on December 14, 2021. This existing estimated traffic was modeled in Synchro traffic analysis software to analyze how the traffic operates in the existing conditions. Most intersections performed at acceptable levels, with the exception the eastbound movement of 47th Street at Francisco Avenue and the eastbound left movement on California Avenue at 47th Place. The signalized intersection of 47th Street at California Avenue on average performs at LOS C which is considered acceptable.

The number of new vehicle trips that would be generated by the site were calculated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, for a Clinic Land Use and the Gross Floor Area (GFA) projection. These proposed trips were also compared to the data collected at the site and calibrated to estimate trips throughout the course of a typical day. The newly generated trips were added and distributed throughout the study area and modeled in Synchro. The results show some movements degrade a LOS grade. One specific area of concern was the eastbound traffic along 47th Place at California Avenue which is already severely congested at the dismissal of the adjacent high school. This movement can experience queues which block the proposed south driveway from EHC onto 47th Place. Traffic may have trouble exiting onto 47th Place during this time period and there is a potential that parents may use the EHC parking lot as a cut-through during these peak times.

Another key recommendation of the study would be to use the parking lot on the east side of California Avenue as the primary parking location for staff at the EHC site. Both the east and west lots appear necessary to handle the estimated parking needs for the site. Utilizing the east lot for staff parking would reduce the number of pedestrians required to cross California Avenue throughout the day which should help to increase safety when compared to having visitors and patients who turnover more often parking in the east lot.

SECTION II

INTRODUCTION/SITE BACKGROUND

TERRA Engineering has been asked to evaluate the potential traffic impact of expanding the currently existing Esperanza Health Center (EHC) to include a new 43,600 square-foot facility, additional parking to its existing parking lot, and adding a parking lot across the street. The complete address of the currently existing building is 4700 California Avenue, Chicago Illinois. The current building is located on the southwest corner of 47th Street and California Avenue. The south half of the lot between the existing developed building and parking area and 47th Place is currently undeveloped. Additionally, another lot across California Avenue from the existing building is proposed to be a future parking lot located on the east side of California Avenue.

Currently, the existing parking lot contains 67 parking spaces, three (3) of which are reserved Americans with Disabilities (ADA) spaces. The driveway connecting to California Avenue will be closed to vehicle traffic and a new site will be constructed to the south of the existing lot, which will contain a new building, additional parking spaces and a driveway which exits to the south to 47th Place. The new total parking on this site will be 123 spaces with six (6) ADA spaces

The proposed parking lot on the east side of California Avenue will contain approximately 104 parking spaces. Visitors parking in this lot will be required to cross California Avenue to get to the EHC buildings. The east parking lot will include only access from South Fairfield Avenue, the existing curb cuts along California Avenue will be removed.

SECTION III

STUDY AREA

The existing site is in the Brighton Park neighborhood. It is roughly bounded by 47th Street to the north, Mansueto High School to the west, California Avenue to the east, and 47th Place to the south. The proposed overflow parking lot on the east side of California Avenue is roughly bounded by California Avenue to the west, an alleyway to the north, Fairfield Avenue to the east, and the Davita Kidney Care to the south. The project location is shown in Figure 1. The streets in the study area are described as follows:

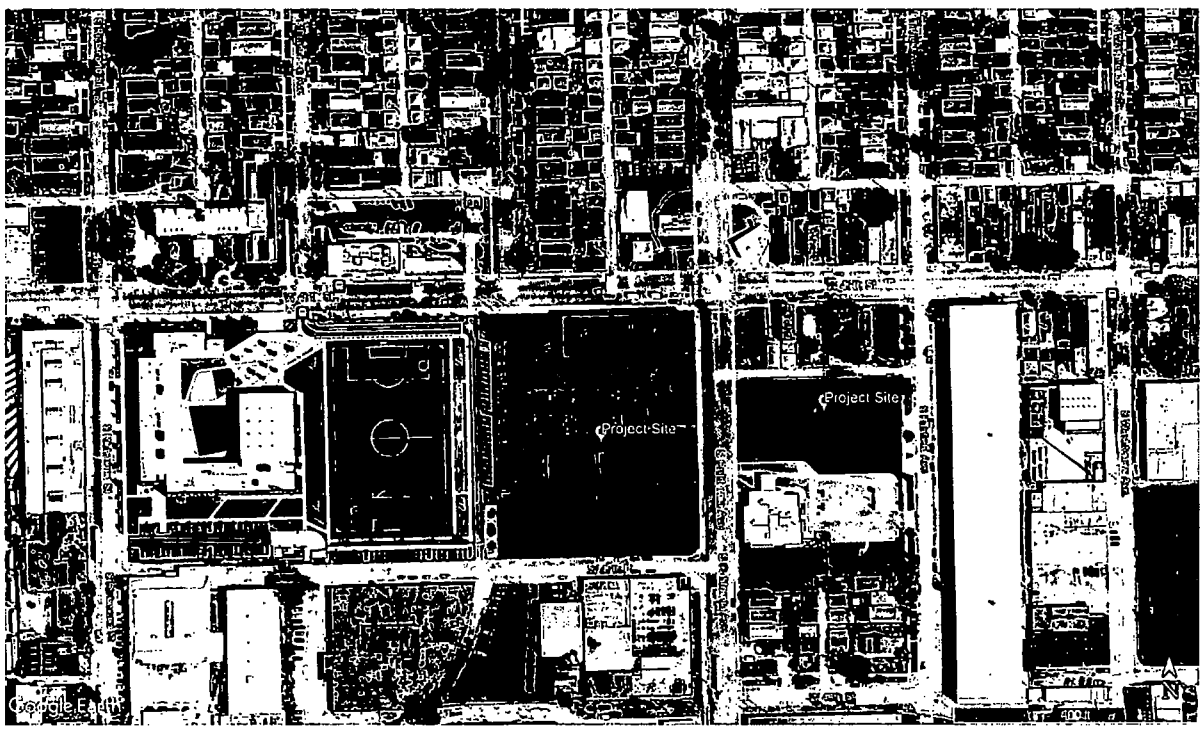


Figure 1 - Project site

47th Street is a two lane (one lane in each direction) road running in the east-west direction, which has an additional parking lane on the outside of the drive lane. It serves a mix of residential and commercial areas, as well as the Donald J Marquez Elementary school, Mansueto High School. The Illinois Department of Transportation (IDOT) functionally classifies 47th Street Minor Arterial. It intersects with important roads such as Archer Avenue, Kedzie Ave, California Avenue, and Western Avenue. The posted speed limit on 47th Street is 30 miles per hour (mph), but near the project site there exist schools and

the posted speed limit is 20 mph on school days when children are present. Sidewalks exists on both sides of 47th Street. The CTA 47th Street has stops on 47th Street near the site and the 94 (California) bus which serves the Western Orange Line Station has stops to the east of the site on 47th Street. There are no designated bike lanes on 47th Street.

California Avenue is a two-lane (one lane in each direction) road running in the north-south direction. It primarily serves residential and commercial areas. IDOT functionally classifies California Avenue as a Major Collector. It intersects with important roads I-55, Archer Avenue, 43rd Street, 51st Street, and 55th Street. It intersects with 47th Street near the project site and forms a signalized intersection. There is no posted speed limit on California Avenue near the project site, so the speed limit is assumed to be dictated by city ordinance. There are no designated bike lanes on California Avenue. The lanes on California Avenue are approximately 20-feet wide, which allows for on-street parking, and an additional lane for travel in areas where parking is prohibited and near intersections.

47th Place is a two lane (one lane in each direction) road running in the east-west direction, which allows parking on both sides of the roadway but dead-ends about 800 feet to the west of California Avenue. It serves a mix of commercial buildings, and the driveway exits and parking areas for Mansueto High School. It intersects with California Avenue as a minor street stop-controlled intersection. Sidewalks exists on both sides of 47th Street near Mansueto high School but only on the south side of the roadway east of the school.

Mozart Street is a two-lane, one-way road allowing travel in the southward direction. It primarily serves residential areas. IDOT functionally classifies it as a local road. Mozart Street connects to 47th Street, forming a four-legged intersection in which the Esperanza Health Center driveway forms the south leg, though the driveway is offset sightly to the east. There is no posted speed limit near the project site, so the speed limit is assumed to be dictated by city ordinance. Sidewalks exists on both sides of Mozart Street. On-street parking is allowed on both sides of the street by permit only.

Francisco Avenue is a two-lane, one-way road running in the northwardly direction. From 47th Street, to the alleyway north of the McDonald's lot, a distance of approximately 160 feet, Francisco Avenue is a two-way street (one lane in each direction). Francisco Avenue primarily serves residential areas, and intersects with 47th Street, forming a four-legged intersection in which the south leg is the Mansueto High School entrance. IDOT functionally classifies it as a local road. There is no posted speed limit on near the project site, so the speed limit is assumed to be dictated by city ordinance. Sidewalks exists on both sides of Mozart Street. On-street parking is allowed on both sides of the street by permit only.

SECTION IV

EXISTING TRAFFIC CONDITIONS

Traffic data was collected on Tuesday, December 14, 2021, at the following locations:

- 47th Street at Francisco Avenue
- 47th Street at McDonald's / Mansueto High School gated driveway
- 47th Street at Mozart Street
- 47th Street at California Avenue
- California Avenue at Esperanza Health Center driveway
- 47th Place at Mansueto High school exit driveway
- 47th Place at California Avenue

The data was collected from 7:00 AM to 7:00 PM to include the morning and evening peak hours of traffic colloquially called "rush hour," and the midday peak hour of traffic that occurs around noon. This data is included in Appendix A.

The peak hours of traffic for each intersection did not always coincide with other intersections. Although the peak hour of traffic at each intersection do not always occur simultaneously, using the volumes from the hour of highest observed traffic volume at each intersection provides a slightly more conservative calculation for intersection performance. Table 1 shows the starting time of peak hour of traffic for each intersection in the study area. Figure 2 shows the vehicle volume for each turning movement for each peak hour of traffic. Figure 3 shows the pedestrian volumes during the peak hour of vehicular traffic.

Table 1 - Peak Hours of Traffic

	AM	Midday	PM
47th St & Francisco Ave	8:15 AM	1:00 PM	5:30 PM
47th St & McDonald's	7:15 AM	12:15 PM	4:30 PM
47th St & Mozart St	7:15 AM	12:15 PM	4:30 PM
47th St & California Ave	7:15 AM	1:00 PM	4:30 PM
California Ave & Esperanza	7:15 AM	1:00 PM	3:15 PM
California Ave & 47th Pl	7:15 AM	1:00 PM	3:15 PM
47th Pl & Mansueto High School	7:15 AM	11:45 AM	3:00 PM

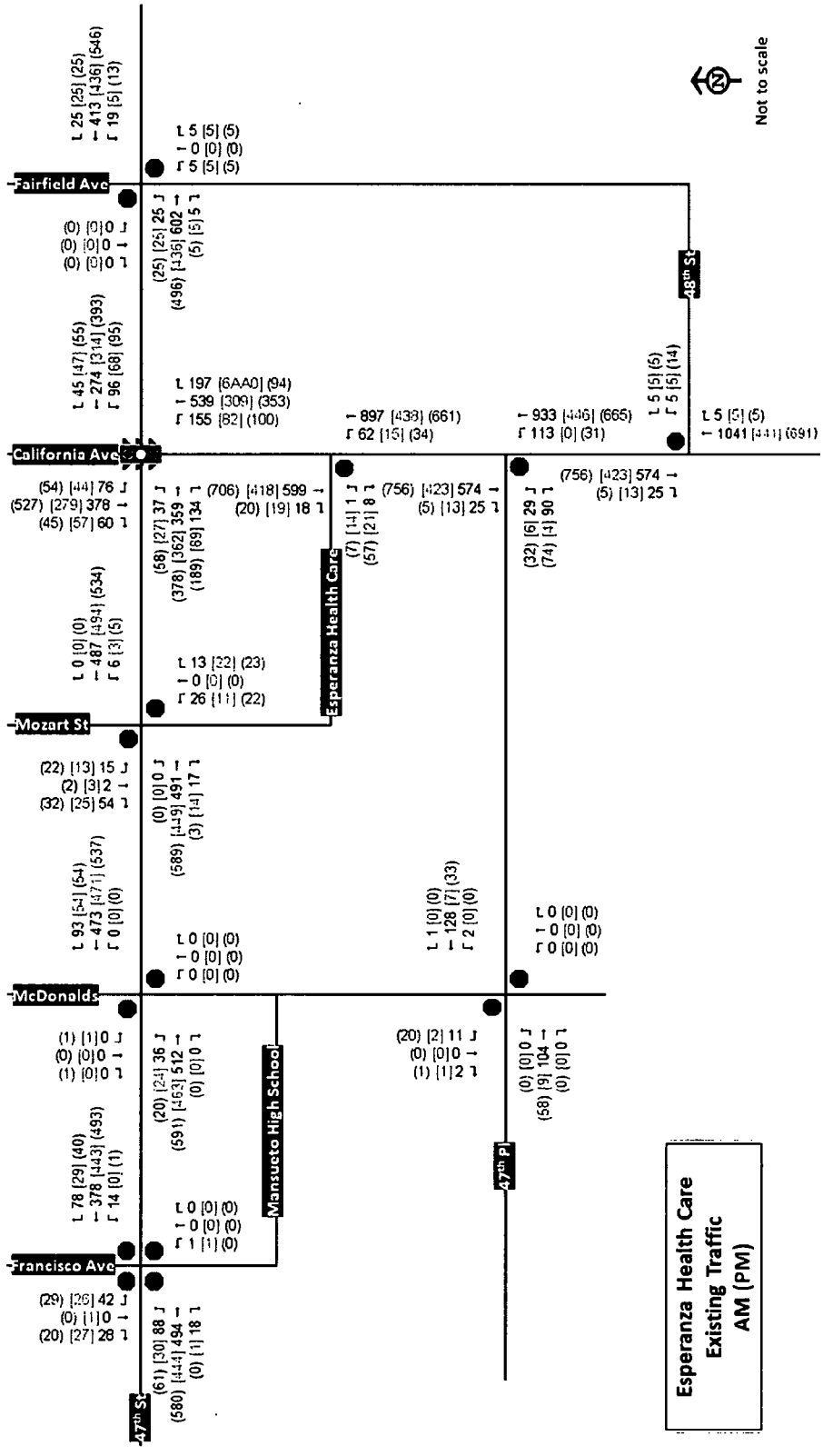


Figure 2 - Existing vehicle volumes

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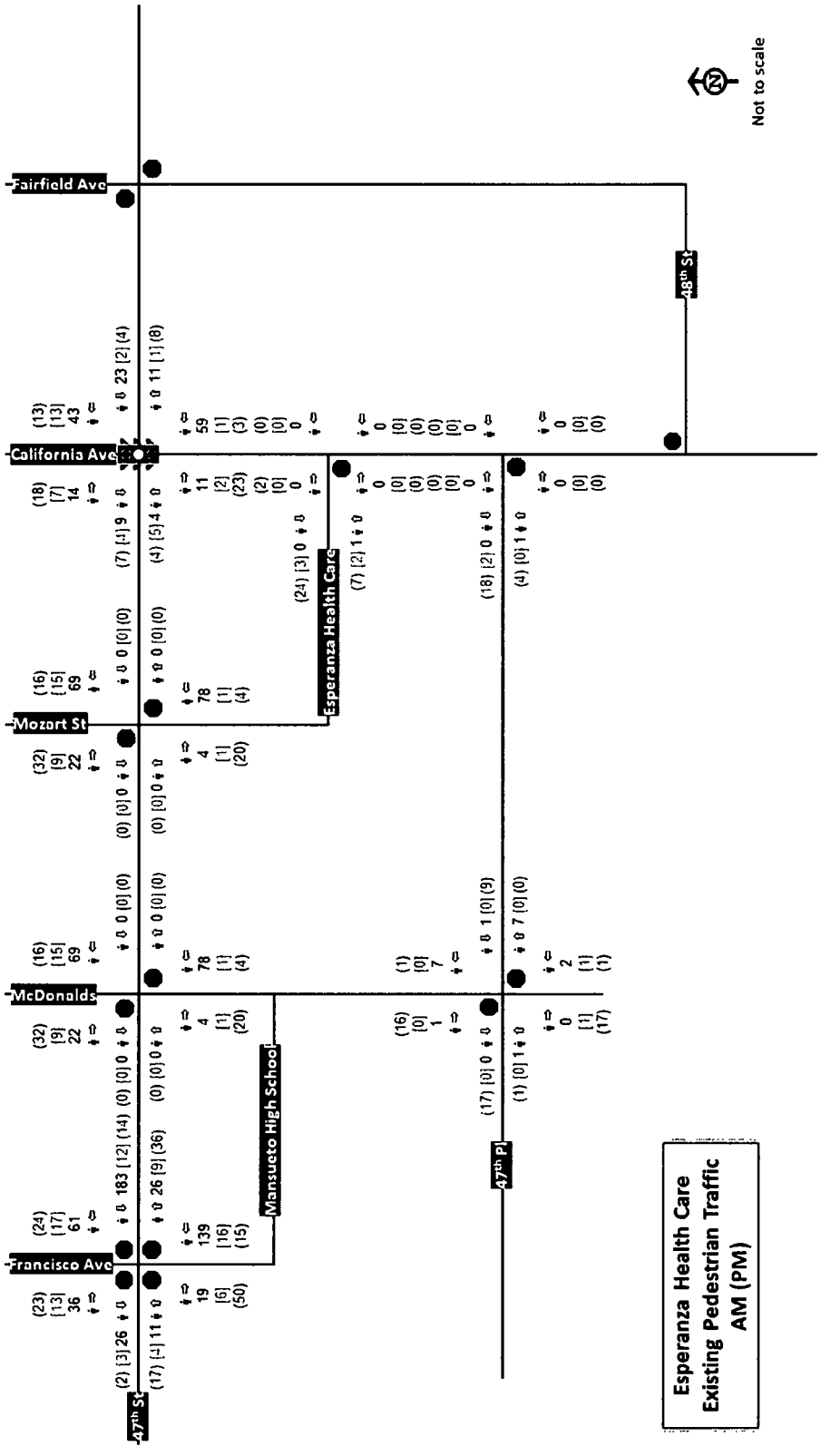

Figure 3 - Existing pedestrian volumes

TERRA ENGINEERING LTD.

The proposed plan for the Esperanza Healthcare Center east parking lot was changed after the traffic impact study draft was completed. The healthcare center originally proposed an auxiliary parking on the east side of California Avenue with a driveway connecting to California Avenue. However, the plan has been altered such that the driveway to the auxiliary parking lot will not connect to California Avenue, but instead only connects to Fairfield Avenue. Intersections connecting the driveway to the study area include 47th Street and Fairfield Avenue and California Avenue at 48th Street. Traffic data was not collected at these two intersections for the report. Near the project area, 47th Street is a short, 280-foot road which runs in the east-west direction and connects to Fairfield Avenue, which runs in the north-south direction and connects to 47th Street. North of 47th Street, Fairfield Avenue is a one-way northbound street serving a residential area. Because 47th Street and Fairfield Avenue are low-volume local roads near the study area, TERRA assumed a small number of vehicles entering and exiting 47th Street and Fairfield Avenue during the study periods.

The existing traffic counts were collected at the site during the ongoing COVID-19 pandemic which has theoretically reduced the amount of travel by the general public at the time of the study. Many businesses, offices, and schools are not operating at full capacity and many people are working from home. Vaccines have been created to reduce the spread and severity of the disease, but the pandemic has not yet been declared an endemic. It is unclear if or when traffic volumes will return to pre-pandemic levels. volumes collected during traffic data collection may not be representative of traffic on a "typical" day around the study area under what was previously considered "normal" as many people may be travelling less during this time. It is necessary to verify that the numbers used for evaluation take into consideration the potential operation if traffic returns to pre-pandemic levels. This required that TERRA consider potential adjustments to the existing traffic based on other available sources of data in the area.

In December 2015, prior to the COVID-19 pandemic, TERRA counted 47th Street at California Avenue as part of a traffic impact study for the Mansueto High School. TERRA counted the intersection on December 16, 2015, from 6:00 AM to 6:00 PM, for a total of a 12-hour count at the intersection.

Table 2 compares TERRA's December 2015 count from 6:00 AM to 6:00 PM, to TERRA's December 2021 count from 7:00 AM to 7:00 PM.

Table 2 - Comparison of 2015 and 2021 Traffic Data		
Road Segment	Dec 2015	Dec 2021
47th St & California Ave (north leg)	12,791 vehicles	10,742 vehicles
47th St & California Ave (east leg)	11,350 vehicles	10,776 vehicles
47th St & California Ave (south leg)	16,452 vehicles	12,781 vehicles
47th St & California Ave (west leg)	13,067 vehicles	11,273 vehicles

The volumes on the east leg of the intersection closely match, while there is greater discrepancy on the other legs. However, during the 2015 count, Kedzie Avenue was closed south of 48th Place, causing vehicles that would normally travel to the intersection to detour by traveling eastbound on 47th Street and then southbound on California Avenue. Intuitively, drivers that normally turn on Kedzie Avenue from Archer Avenue to go past 48th Place, would instead turn on California Avenue. The detour would likely not cause vehicles to travel to the east leg of 47th Street at California Avenue. The discrepancy with three (3) of the road segments but not one (1) of them is better explained by the detour than a pandemic where a vaccine has been available for approximately a year. Because the volumes on the east leg of 47th Street at California Avenue closely match, TERRA did not adjust its traffic data to account for reduced travel.

Level of Service and Delay

Delay is one of the main components of measuring the service of an interrupted flow roadway. The principal measure of this delay is control delay which is defined by the Highway Capacity Manual (HCM) as "a quantitative stratification of a performance measure or measures representing quality of service."

The Level of Service (LOS) designation was created as a tool to help laypersons and decision makers determine the difference in operating conditions for a particular location. There are six representative levels of service defined for each type of facility which can be analyzed, and they are designated using letters A through F. These letters are an attempt to translate "complex numerical performance results into a simple A-F system representative of travelers' perceptions of the quality of service." LOS calculations are provided for different modes of travel such as motorized vehicle, pedestrian, bicycle and transit modes. Safety of the intersection is not included in the analysis of LOS. Level of Service is defined separately for signalized intersections and unsignalized intersections as shown in Table 3.

LOS is a measure of the acceptability of the amount of delay and is therefore considered slightly subjective as what is acceptable in a major metropolitan area may not be acceptable in a smaller city or rural area. A residential neighborhood similar to this would also not find long delays acceptable on a daily basis without extenuating circumstances. These delays are computed as the average control delay per vehicle arriving at the intersection. For signalized intersections, delays are evaluated for the overall intersection; at intersections without traffic signals, delay is analyzed for each movement separately and only includes side street traffic and left turns from the major street.

Another factor evaluated when determining traffic operations at an intersection is the volume to capacity (v/c) ratio of the critical lane group. This ratio compares the rate of flow to the available capacity of the intersection and is considered a measure of the degree of saturation. Sustainable values of a v/c ratio range from 0.01 to 1.0. Values in excess of 1.0 indicate a possible excess of capacity and are considered to be LOS F.

In a dense urban area, it is generally acceptable to provide LOS D in all areas but consider LOS E in certain situations where traffic demand is very high on major arterial routes. Occasionally, side streets will be allowed to operate at LOS F when volume and demand on the side street is considered very low and servicing these vehicles would cause a greater negative impact on the progression of through traffic on the main route.

Table 3 - Vehicular Level of Service for Control Delay			
Level of Service	Control Delay per Vehicle (seconds / vehicle) Signalized	Unsignalized	Interpretation
A	0 - 10	0 - 10	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	10 - 20	10 - 15	Minor control delay at signalized intersections; traffic operates at an unimpeded level with slightly restricted movement within the traffic stream.
C	20 - 35	15 -25	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	35 - 55	25 - 35	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	55 - 80	35 - 50	High control delay; average travel speed no more than 33 percent of free flow speed.
F	> 80	> 50	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

The peak hours of traffic from the collected traffic volumes were modeled in Synchro 11 modeling software for analysis. The analysis was conducted for the currently existing conditions during the peak hours of traffic in the morning, midday, and afternoon. Using the highest overall hourly total volumes at each intersection provides a worst-case calculation. This provides a slightly more conservative analysis of the traffic, but also results in volumes that don't precisely add up between intersections. Since the volumes during AM peak hour of traffic and the volumes during the PM peak hour of traffic were both higher than the midday peak hour of traffic, the midday traffic was not analyzed. Table 4 provides the results of the analysis, summarizing the Level of Service, delay, and the v/c ratio for the existing intersection conditions while the full model analysis is provided in Appendix B.

Table 4 - Existing Traffic Analysis	Weekday AM Peak			Weekday PM Peak		
	LOS	Delay	v/c	LOS	Delay	v/c
47th St & Francisco Ave						
Northbound	B	10.1	0.01	-	-	-
Eastbound	D	29.8	0.86	E	38.0	0.92
Westbound	C	17.6	0.69	C	22.7	0.78
Southbound	B	10.4	0.14	B	10.3	0.10
47th St & McDonald's						
Southbound	-	-	-	C	19.2	0.01
Eastbound Left	A	8.9	0.04	A	8.9	0.02
47th St & Mozart St						
Northbound	D	26.2	0.20	D	26.6	0.23
Westbound Left	A	8.6	0.01	A	8.8	0.01
Southbound	C	17.0	0.21	C	24.5	0.23
47th St & California Ave						
Signalized Intersection	E	77.9	1.96	E	62.5	1.95
California Ave & Esperanza						
Northbound Left	A	9.2	0.07	A	9.5	0.04
Eastbound	C	17.5	0.03	C	19.9	0.22
California Ave & 47th Pl						
Northbound Left	A	9.4	0.13	A	9.7	0.04
Eastbound Left	F	82.1	0.80	E	40.5	0.54
47th St & Fairfield Ave						
Northbound Left	C	18.4	0.04	C	15.7	0.03
Eastbound Left	A	8.4	0.03	A	8.2	0.02
Westbound Left	A	8.9	0.01	A	8.5	0.01
California Ave & 48th St						
Westbound	E	38.0	0.09	D	27.9	0.07
Southbound Left	B	10.9	0.01	A	9.2	0.01

From the Synchro model, most of the intersections perform at an acceptable Level of Service (LOS). The eastbound movement of 47th Street at Francisco Avenue performs at LOS E during the PM peak hour of traffic, and the volume-to-capacity ratio is 0.9, indicating it is near saturation. The average delay for eastbound vehicles is 38.0 seconds. It should be noted that the Synchro simulation conceptualizes 47th Street as a two-lane road (one lane in each direction), but in reality, the eastbound lane is wide enough that during high vehicle volume periods, drivers behave as if it were two (2) lanes, which would increase lane capacity and reduce queue lengths. Video footage from traffic counters show drivers did utilize eastbound 47th Street near Francisco Avenue as if it contained two lanes.

The eastbound left movement of California Avenue at 47th Place also appears to perform poorly. During the AM peak hour of traffic where the demand is 29 vehicles, it performs at LOS F, and during the PM peak hour of traffic where the demand is 32 vehicles, it performs at LOS E.

The signalized intersection of 47th Street at California Avenue performs at LOS E during both the AM and PM peak hours of traffic. However, looking at individual movements, all the left and through movements perform at LOS C or better. The eastbound right and northbound right during both peak hours traffic performs at LOS F, which brings the average LOS of the intersection to an LOS E. The v/c ratio of the eastbound rights and northbound rights are at least 1.2, indicating there is more demand for the turn than there is capacity. This is likely caused by the short storage space created by the "No Parking" signs near the intersections, and the heavy through volumes that cause right turns to wait longer for gaps in traffic to perform the turn.

In addition, during the AM peak hour of traffic, the 95th percentile queue length is 517 feet, which extends past the 47th Place. The 50th percentile queue length is 279 feet which extends past the Esperanza Healthcare Center driveway. However, like 47th Street at Francisco Avenue, the Synchro model conceptualizes California Avenue as a two-lane road (one lane in each direction). In reality, the northbound lanes are wide enough that during high vehicle volume periods, drivers treat the northbound lane as two (2) lanes. Video footage from traffic counters show drivers did utilize the northbound lanes as if it contained two (2) lanes, which would increase the capacity of the lanes and mitigate the queues.

There were observed instances from the video footage in which the northbound queues extended past the driveway of the Esperanza Healthcare center. However, there is low vehicle demand for the eastbound left turns on the intersection of California Avenue at the Esperanza Healthcare Center, and the movement performed at LOS C during both peak hours of traffic even with California Avenue being input as a two-lane road (one lane in each direction).

The westbound movements from California Avenue at 48th Street perform at LOS E, however it is expected that the volumes discharged from 48th Street are low.

SECTION V

COMPUTATION OF BACKGROUND TRAFFIC

Often when projecting traffic for a new development with a future opening date, it is necessary to project an increase in the existing traffic due to background growth in the area. This growth is typically from other sources including new developments and overall growth of the area. The project site is located within an established neighborhood. It does not appear there is much available space to spur new development. It is likely that some redevelopment could occur in the area as the retail space turns over and is reused, however it should not create a significant growth or change to the traffic volumes.

For this study, the growth rate for background traffic to be evaluated was assumed to be 0%, meaning that future traffic around the site would remain about the same as the existing traffic if the project was not built. The results of this assumption provide identical LOS results for a future no-build condition to those for existing traffic without the school.

SECTION VI

SITE LAYOUT

The proposed plan for the Esperanza Health Center (EHC) would be to use the current building in place. As mentioned in the Introduction/Site Background section, the current parking lot contains 67 parking spaces, three (3) of which are reserved handicapped spaces. The existing lot will be modified such that the existing EHC and the new EHC building will contain a combined 136 total parking spaces, six (6) of which are proposed as handicapped spaces. The current driveway connecting to California Avenue will be removed to allow for the building of the new facility and a new connection will be created to the south onto the vacated 47th Place. An overflow parking lot will be constructed on the east side of California Avenue and will contain approximately 104 parking spaces.

Figure 4 shows the proposed site plan for the Esperanza Health Center, and Figure 5 shows the location of the tentative proposed auxiliary parking lot.

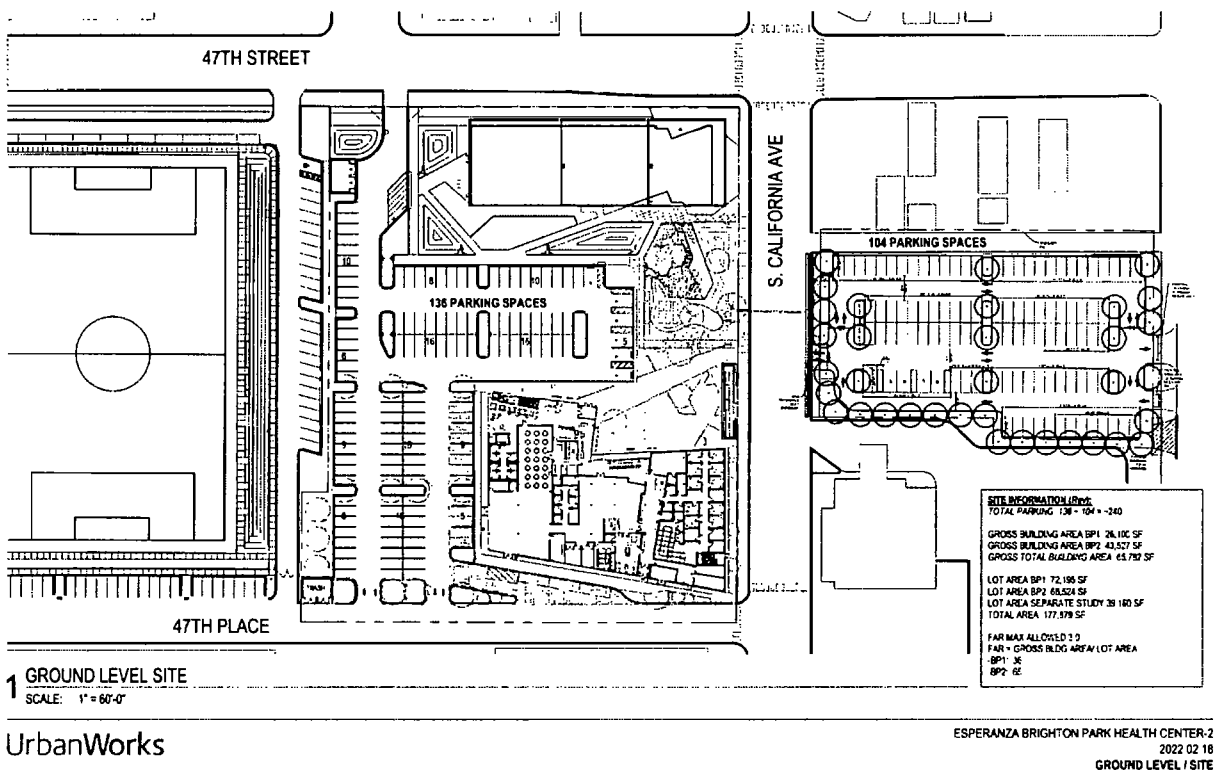

Figure 4 – Proposed site plan

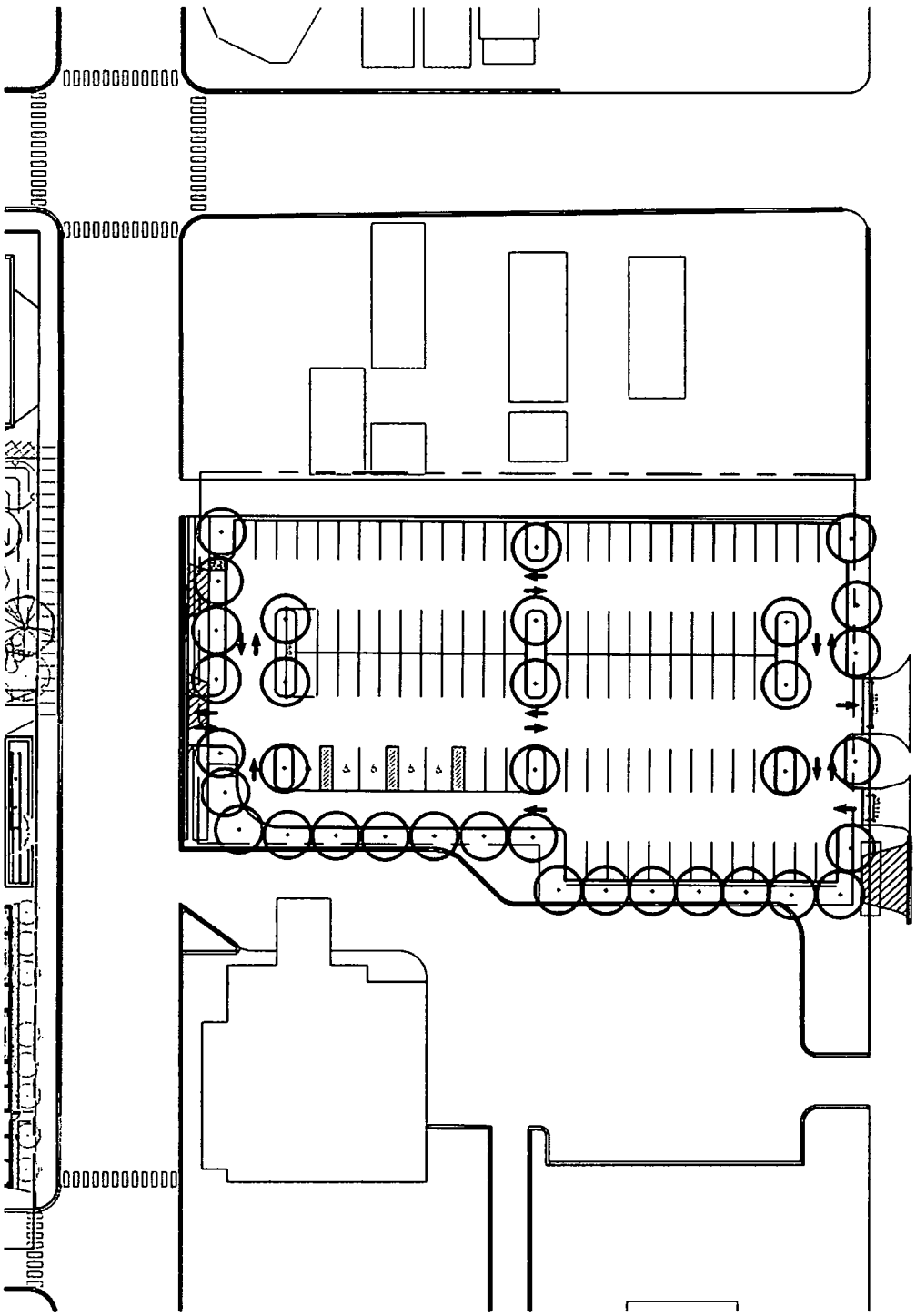

Figure 5 - Proposed lot east of California Ave

SECTION VII

TRIP GENERATION

When evaluating proposed traffic at a new development, it is necessary to estimate the number of new vehicle trips which will be created by the new uses at the site. This estimation of trips is normally generated using data obtained from traffic counts at other similar locations or by using the Institute of Transportation Engineers (ITE) Trip Generation Manual. The ITE Manual collects data at existing sites for all types of uses such as schools, hotels, shopping centers, apartment complexes, subdivisions, offices, etc. and compiles it into book form as a reference for designers. The data in the 10th edition is based on more than 5,000 trip generation studies which have been collected over several decades by transportation professionals.

For most land uses, the collected data is broken into many different independent variables which can be used to perform the calculations, including comparing the number of trips to the gross floor area of the building, or in the case of schools comparing the number of trips to students. Calculations can also be completed for an entire weekday, the traditional peak hours of adjacent street traffic (one hour between 7:00 AM and 9:00 AM or one hour between 4:00 PM and 6:00 PM), the peak hour of activity for the use type (known as AM Peak Generators or PM Peak Generators), Saturday traffic, or Sunday traffic.

For the proposed clinic, the trips generated by the Land Use could closely be modeled by Land Use code (630) of the Trip Generation Manual reads as follows:

Land Use (630) Clinic

"A clinic is any facility that provides limited diagnostic and outpatient care but is unable to provide prolonged in-house medical and surgical care. Clinics commonly have lab facilities, supporting pharmacies, and a wide range of services (compared to the medical office, which may only have specialized or individual physicians)."

TERRA could have estimated the number of trips the new building would generate by correlating the Gross Floor Area (GFA) of the existing building with the number of entering and exiting trips from the collected traffic data, and then extrapolating the number of vehicle trips the new building would generate. However, a preliminary viewing of traffic counter video revealed some trips into the site in the existing condition, especially during the AM peak hour of traffic, are caused by vehicles using the Esperanza Healthcare Center (EHC) to elude the traffic signal at 47th Street at California Avenue, or vehicles briefly

parking to drop students off at the Mansueto High School. In addition, during the time of traffic data collection, the undeveloped south lot was used as a drive thru Covid testing site, which was open from 8:00 AM to 4:00 PM. Vehicles would enter the Covid testing site from 47th Place, and exit into the EHC north lot, and would exit again to either the north onto 47th Street or to the east to California Avenue via the site driveways.

To calculate the number of vehicle trips the new EHC building would generate by using the Trip Generation Manual and using the GFA of the new EHC building as the independent variable. Normally, trip generation calculations are performed using both the average rate provided for the vehicle trips per unit, and the fitted curve equation which is developed from the plots of data collected. Using both methods also allows the engineer to compare the trips and choose the number that seems most likely based on the location and other factors should there be a difference in the total trips. Fitted curve equations are not provided for all the potential Land Use codes in the ITE manual, but trip generations were calculated from fitted curve equations if provided. A summary of calculations is provided in Table 5 with the full calculations provided in Appendix C.

It should be noted that the sites surveyed in the Trip Generation Manual were in Alberta (Canada), California, New Hampshire, Texas, and Vermont, where the level of transit use may be lower than Chicago's. Also, the range of GFA of the clinics surveyed ranged from approximately 1,000 square-feet to 32,000 square-feet. The new proposed EHC building is 43,572 square feet. The plots of data for vehicle trips versus GFA shows the relationship between vehicle trips and GFA is logarithmic, so for higher values of GFA, a fitted curve may be more accurate. However, for a conservative estimate, TERRA used the average rate for AM Peak Hour of Generator to estimate the site-generated trips during the AM peak hour of traffic, and the average rate for the PM Peak Hour of Generator to estimate the site-generated trips during the PM peak hour of traffic. The selected entering and exiting trips are highlighted in green in Table 5.

Table 5 - Trip Generation Data
Land Use (630) Clinic

	Average Rate		Fitted Curve	
	Enter	Exit	Enter	Exit
AM Peak 7am-9am	125	35	-	-
PM Peak 4pm-6pm	41	101	32	32
AM Peak Hour	132	96	87	87
PM Peak Hour	93	109	68	68

Because the surveys in the Trip Generation Manual are mostly in suburbs with little to no transit service, TERRA considered a reduction in vehicle trips to account for other modes of transportation the populace may use to get to the site. There is an existing bus line along 47th Street which provides bus service to multiple stops within proximity to the EHC. The 47th bus also services the CTA Orange Line station on Kedzie Avenue just south of 47th Street and both the Red Line Station and Green Line Station on 47th Street. Based on these factors, TERRA assumed a reduction of 20% to the calculated entering and exiting trips. The estimated vehicle trips generated by the new EHC building is tabulated in Table 6.

Table 6 – Estimated Site Trips with 20% reduction		
	Entering Trips (vehicles)	Exiting Trips (vehicles)
AM Peak	106	77
PM Peak	74	87

SECTION VIII

TRIP ASSIGNMENTS

The calculated trips for the new development need to then be assigned to the network to evaluate the future traffic created by the new EHC facility. To begin this process, TERRA evaluated the existing traffic patterns to gain an overall perception of how drivers in the current roadway system utilize the network. This process began by looking at the existing traffic, summing all the vehicles entering the network (study area) and calculating the percent of vehicles entering and exiting the network at each external intersection leg at each terminal intersection. These included the west leg of 47th Street at Francisco Avenue, the north and east legs of 47th Street at California Avenue, and the south leg of California Avenue at 47th Place. Local streets such as Francisco Avenue or Mozart Street were not considered, since vehicles in and out of local streets were small compared to arterial streets and trips generated by the site were not likely to enter the network from those legs.

Table 7 shows the percentage of vehicles entering and exiting the study area at each external intersection leg. Where vehicles currently entered and exited the network would provide a possible approximation of how vehicles generated by the site might enter and exit the network.

Table 7 - Percentage of Vehicles Entering/Exiting Network at External Intersections				
	AM Peak		PM Peak	
	Entering	Exiting	Entering	Exiting
47th St & Francisco Ave				
West Leg	23.3%	17.5%	25.6%	22.0%
47th St & California Ave				
North Leg	20.0%	26.7%	25.0%	20.0%
East Leg	16.1%	27.2%	21.7%	22.5%
California Ave & 47th Pl				
South Leg	40.6%	28.6%	27.8%	35.5%
Total	100.0%	100.0%	100.0%	100.0%

The new Esperanza Healthcare (EHC) lot will have 118 available standard parking spaces, not including handicapped spaces, in its main lot. An additional 100 parking spaces will be located in the lot east of California Avenue. During data collection, the greatest number of vehicles entering the EHC lot during the AM hours occurred at 7:30 AM where 110 vehicles entered the lot. The greatest number of vehicles entering the EHC lot during the PM hours occurred at 3:45 PM, in which 83 vehicles entered the lot.

Though some vehicles entering the EHC lot were using the lot as a cut-through path to avoid the 47th Place at California Avenue intersection or were loading or unloading students for the nearby Mansueto High School or were rideshare vehicles dropping passengers off at the EHC. If we assume the peak value of vehicles entering the EHC lot during the peak hour desire to park within the parking lot, this total will result in a conservative estimate for the number of filled parking spaces. The expansion of the parking lot provides more available parking spaces in the lot, this allows more of the parking demand from the existing condition to be met. This leaves only 20 available spaces in the EHC lot during the AM peak hour of traffic, and 47 available spaces during the PM peak hour of traffic for the trips generated by the expanded building.

It is also assumed that the new auxiliary lot will be utilized by staff for parking at the site, so trips need to be assigned to travel to this lot. There are existing staff trips already in the network which travel to the main lot and would choose a different route to go to the new lot east of California, however their removed trips would likely be replaced by new patient trips to main EHC lot. If we assume that the number of removed staff trips from the main lot arriving from each main route uses the same percentages for arrival and destination as the newly generated patient and staff trips due to the expansion, then it would make sense that the staff trips removed are replaced by the same number of patient trips. This essentially cancels the staff removals out with the new patient trips, moves the existing staff trips to the new lot and then adds new patient and staff trips over and above the estimated existing staff values to the network.

Simplifying this theory we can leave the existing entering and exiting trips in the network as they are, These now would include existing patient trips and new patient trips to the main lot. Any additional patient trips not accommodated to in the main EHC lot would need to travel to the auxiliary/staff lot. Existing staff trips and new staff trips would be assigned to the staff lot. We can then assume that the net change results in a higher percentage of vehicles going to the auxiliary/staff lot with a lower percentage going to the EHC main lot.

The trips calculated from the Trip Generation section were distributed entering and exiting the network according to the percentages in Table 7. Because the AM trips would mostly be staff arrivals, TERRA assumed 30% of the entering trips would enter the main lot, and 70% would enter the auxiliary lot. For AM exiting trips, most departures would be from patients in the main lot, thus TERRA assumed 95% of exiting trips occur at the main lot.

Vehicles that were unable to find a parking space at the main lot would then travel to the auxiliary lot. TERRA reasoned vehicles entering from the south driveway will travel north to search for a parking space, and vehicles entering from the north driveway will traverse southwardly to search for a parking space. Since during the AM peak hour of traffic, an estimated 72% of entering trips are entering from the south driveway, of the vehicles that still need to park, an estimated 72% will exit the north driveway to travel to the auxiliary lot. And since an estimated 28% of trips entering the EHC main lot are entering north driveway, of the vehicles that still need to park, an estimated 28% will exit the south driveway of the main lot to travel to the auxiliary lot. Similar calculations were done for the PM hour.

For PM entering trips, because the clinic is closing just after the PM peak hour, it is assumed less staff would be arriving for a shift. For this reason, TERRA assumed 90% of trips would enter the EHC main lot. For exiting trips, TERRA assumed 50% of exiting trips occurred at the main lot and 50% occurred at the auxiliary lot. In the PM peak there were also 17 vehicles which were assumed to not find a spot in the EHC main lot with 12 leaving to the north and 5 exiting to the south which need to travel to the auxiliary lot.

Finally, since the east driveway in the EHC main lot would be removed, existing trips using this driveway were reassigned from the existing east driveway to either the north or south driveway. Figure 6 shows the trip reassignment map for vehicles needing to choose another route due to the removal of the east driveway.

Figure 7 shows the trip assignment map that is generated by the new EHC building. These maps represent possible vehicle paths due to the new development. Trips for the midday peak hour of traffic were not analyzed since midday traffic volumes would be lower than both the AM and PM peak hours of traffic.

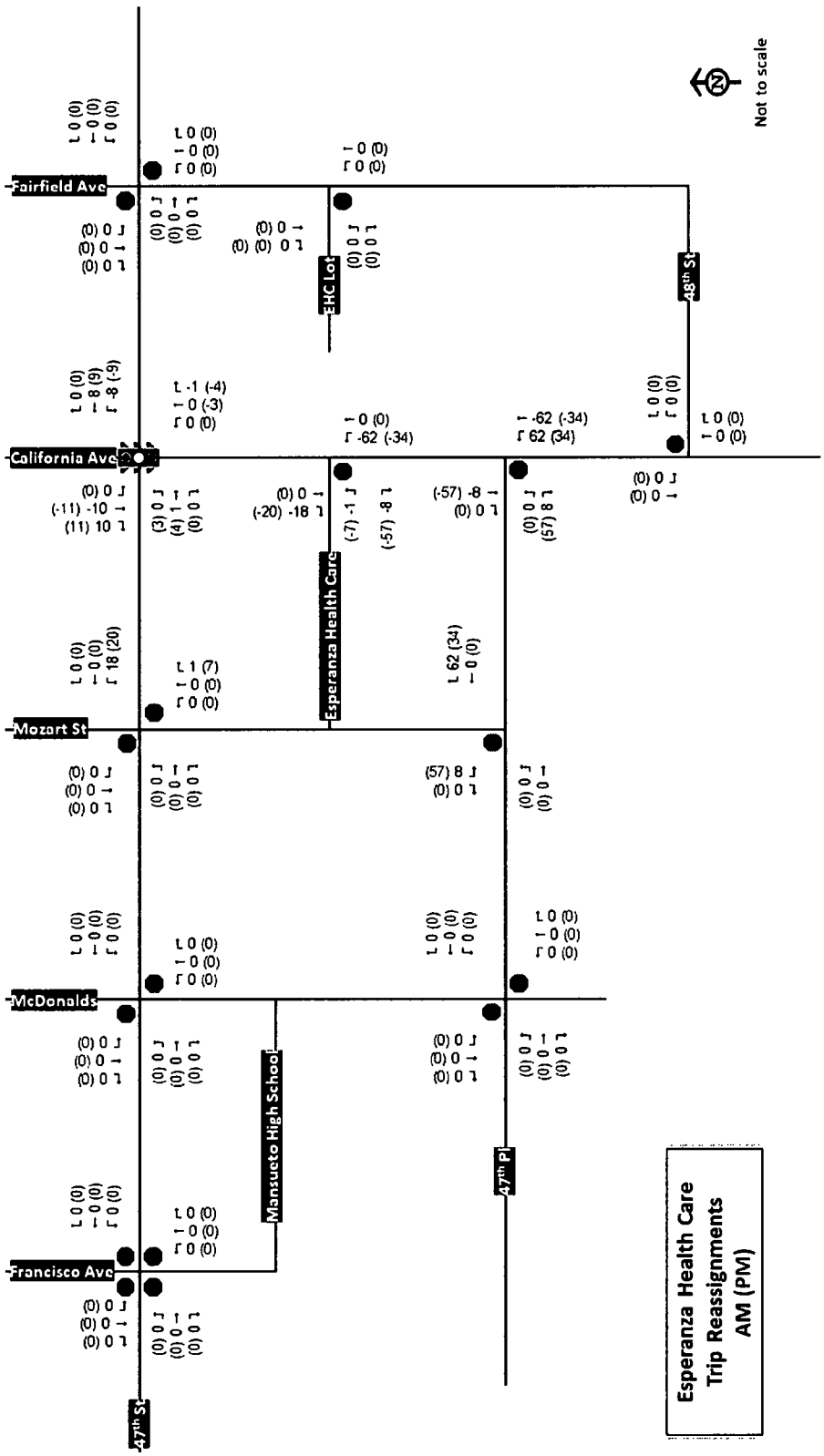

Figure 6 - Trip reassignments

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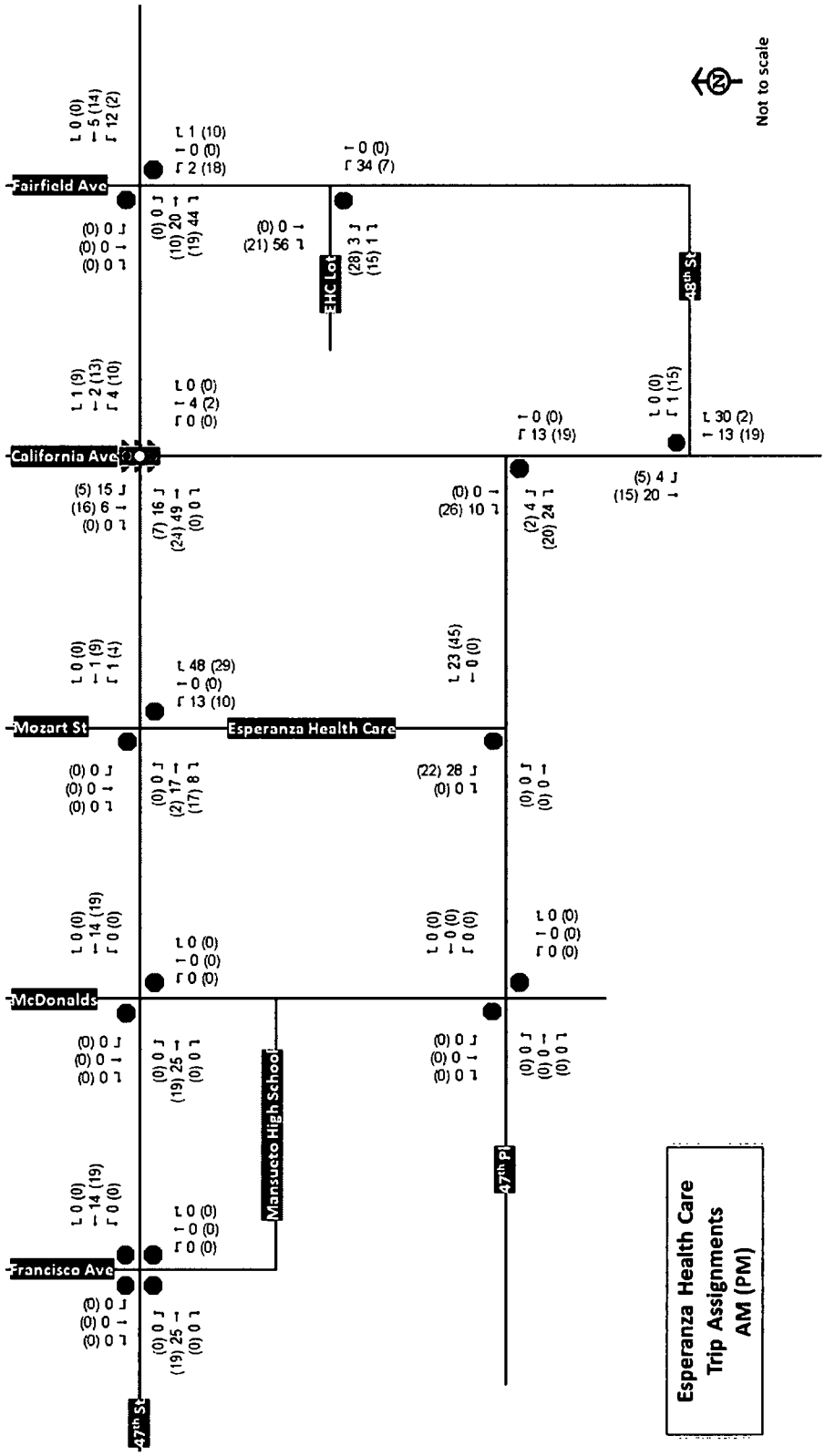

Figure 7 – Site generated trip assignments

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SECTION IX

OPENING DAY ANALYSIS

The newly generated trips, and the trip reassignments from the Trip Assignments section were then added to existing volumes to develop "Opening Day" traffic volumes which are shown in Figure 8. The opening day traffic model represents traffic around the study area with the new Esperanza Healthcare Center (EHC) building in operation.

The opening day traffic volumes were inserted into the Synchro traffic modeling software and compared with the existing traffic model to determine if there were any significant changes to the traffic delay or Level of Service (LOS) levels at the study intersections around the site. The modeled traffic performance of the intersection network for opening day is shown in Figure 8. The full Synchro analysis is included in Appendix D.

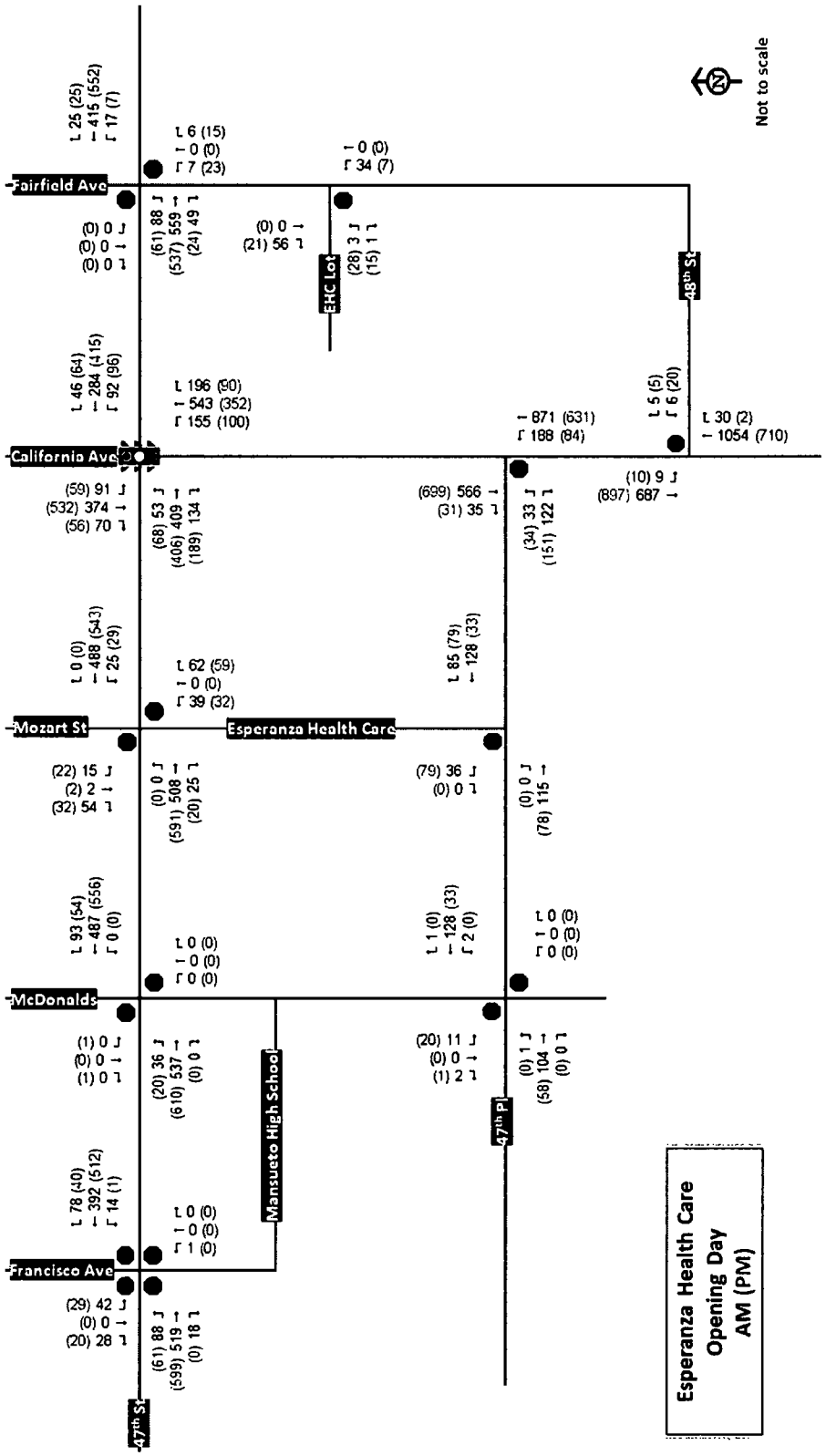

Figure 8 – Opening day traffic

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Table 8 – Opening Day Traffic Analysis						
	Weekday AM Peak			Weekday PM Peak		
	LOS	Delay	v/c	LOS	Delay	v/c
47th St & Francisco Ave						
Northbound	B	10.2	0.01	-	-	-
Eastbound	E	35.1	0.90	E	44.1	0.95
Westbound	C	18.8	0.71	D	25.2	0.81
Southbound	B	10.6	0.14	B	10.5	0.10
47th St & McDonald's						
Southbound	-	-	-	C	20.0	0.01
Eastbound Left	A	8.9	0.04	A	9.0	0.02
47th St & Mozart St						
Northbound	D	28.6	0.42	D	32.2	0.43
Westbound Left	A	8.7	0.03	A	9.0	0.03
Southbound	C	19.3	0.24	D	30.7	0.30
47th St & California Ave						
Signalized Intersection	E	76.1	1.97	E	66.4	2.09
California Ave & 47th Pl						
Northbound Left	A	9.9	0.22	A	9.9	0.11
Eastbound Left	F	234.2	1.28	F	64.1	0.81
47th Pl & Esperanza Driveway						
Southbound	B	10.6	0.06	A	9.9	0.10
47th St & Fairfield Ave						
Northbound	C	23.3	0.07	D	27.3	0.20
Eastbound Left	A	8.6	0.09	A	9.1	0.07
Westbound Left	A	9.0	0.02	A	8.7	0.01
California Avenue & 48th Street						
Westbound	E	44.1	0.12	F	50.9	0.26
Southbound Left	B	11.2	0.02	A	9.3	0.01
Fairfield Ave & Esperanza Auxiliary Lot						
Northbound Left	A	7.4	0.02	A	7.3	0.01
Eastbound	-	-	-	A	8.7	0.05

Comparing the existing scenario to the opening day model, the eastbound movement on at the intersection of 47th Street at Francisco Avenue degrades from a LOS D to a LOS E during the AM peak hour of traffic due to an approximately five (5) second increase in delay, and the westbound movement degrades from a LOS C to a LOS D during the PM peak hour of traffic due to an approximately three (3) second increase in delay.

The additional vehicles in the Esperanza Healthcare Center (EHC) lot also increases delay for the southbound movement for the EHC driveway on 47th Street at Mozart Street. During

the PM peak the LOS for the southbound movement degrades from a LOS C to a LOS D due to an approximately six (6) second increase in delay.

The eastbound left movement for the intersection of California Avenue at 47th Place also appears to be affected. For the AM peak hour of traffic, the LOS for the eastbound left movement remains LOS F because there no worse demarcations, but the delay increases by 152 seconds, and the volume-to-capacity ratio exceeds 1.0, indicating saturation. With long delays it is possible that vehicles for the Mansueto High School would use the new EHC driveway on 47th Street a drop-off point or as cut-through traffic.

During the PM peak hour of traffic, the LOS degrades from LOS E to LOS F due to an approximately 24 second increase in delay. It should be noted that TERRA analyzed the existing performance for the intersection during the peak hour in which the greatest number of vehicles was observed, which also coincides with the Mansueto High School dismissal time. The PM peak hour of the intersection began at 3:15 PM, however the PM peaks for most intersections in the study area began at 4:30 PM. It is likely on opening day that the peak number of vehicles discharged from the EHC would occur during traditional peak hours of traffic between 4:00 PM and 6:00 PM, and the vehicle volumes would not be combined with vehicles discharged from the high school. This implies the intersection would perform better during the PM peak hour of traffic than shown in the model.

It was noted in the site visit during school dismissal that the queue on 47th Place can back up to a point where it would block the south driveway from EHC onto 47th Place. It is worth considering that while this could impact site traffic which might be redirected to the north, it also provides an outlet for waiting vehicles from the high school to potentially cut through the EHC parking lot to avoid the traffic queues along 47th Place. This entrance could be signed to prohibit eastbound left turns into the EHC lot or for no cut-through traffic, but these measures may not be effective in deterring this behavior.

During the PM peak hour of traffic, when EHC staff begin to discharge from the auxiliary lot, the northbound movement on 47th Street and Fairfield Avenue degrade from a LOS C to a LOS D. The Westbound movement degrades from a LOS D to a LOS E.

SECTION X

PARKING AND PEDESTRIAN ANALYSIS

The installation of the parking lot along the east side of California Avenue is to allow for overflow parking for the EHC building site existing on the west side of the roadway. This parking area will create a need to cross California to reach the building. The parking lot will be located midblock between 47th Street and 47th Place along California Avenue. The approximate location along California Avenue is shown in Figure 9.

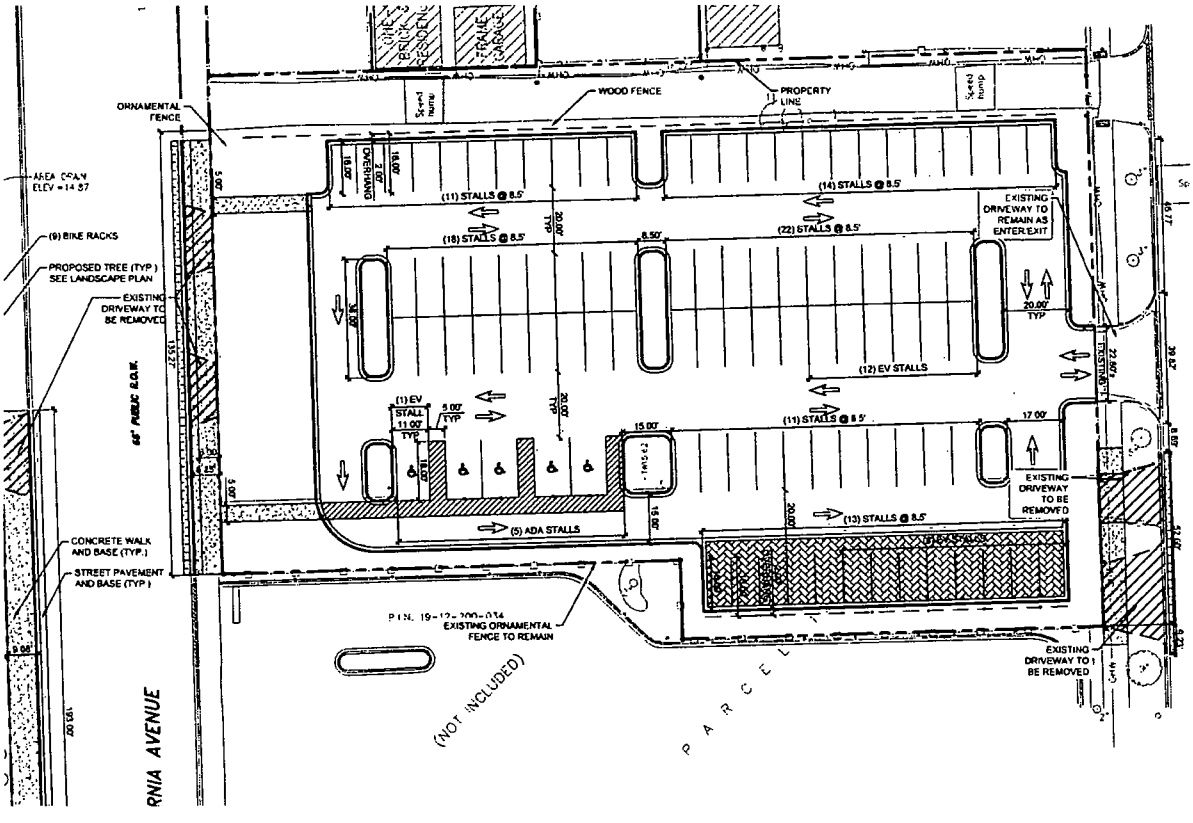

Figure 9 - Location of East Parking Lot in relation to EHC site

Chapter 16 of the Federal Highway Administration Course on Bicycle and Pedestrian Transportation covers Mid-Block Crossings. The information states that "Pedestrians will rarely go out of their way to cross at an intersection unless they are rewarded with a much improved crossing – most will take the most direct route possible to get to their destination, even if this means crossing several lanes of high-speed traffic." This implies that the natural desire line for pedestrians is likely to cause them to want to cross the roadway in the shortest

possible distance which would lead to crossings directly from the lot across California Avenue. There is not an existing pedestrian crosswalk at this location currently, making pedestrian movements at this location potentially hazardous. Suggestions for pedestrian improvements recommend considering medians, bump-outs or other pedestrian enhancement facilities to help improve the crossing.

It should be noted that design guidelines from mid-block crosswalks recommend that any such crossing be located a minimum of 300 feet from a signalized intersection. The intent of this is for safety reasons as it would be more beneficial to have pedestrians crossing at the signalized location.

The distance from the proposed east parking lot to the corner of 47th Street is approximately 175-200 feet. This intersection is signalized which provides a safe way for pedestrians to cross the California Avenue without having to contend with traffic. It was also noted at this location the northbound traffic queues generated by stopped vehicles at the intersection can be in excess of this 175-foot distance which means that pedestrians would be crossing between vehicles which could make them harder to observe for drivers traveling along California Avenue and would create the opportunity for pedestrians to step out unexpectedly in front of vehicles.

Similarly, the distance from the east parking lot to 47th Place to the south is about 200-225 feet. There is no striped crosswalk across California Avenue at the 47th Place intersection so this location also does not provide a protected crossing for pedestrians. The total distance from 47th Street to 47th Place is approximately 400 feet.

TERRA looked at the existing trips that were observed throughout the day at the existing EHC site. It was assumed that similar characteristics would apply to the new building as were seen within the old building. This included similar ratios of visitors to staff and similar rates of trips to and from the EHC campus based on the overall size of the building.

This began by trying to estimate the total number of vehicles at the site during any 15-minute period. This evaluation was done be considering the number of vehicles which entered the site driveways for the existing building beginning at 7:00 AM. If we assume there were no cars on site prior to this time (although it is likely there may have been vehicles on site) we can estimate a running total based on the number of cars in versus the number of cars out each 15-minute period. To estimate entering vehicles the total entering the California Avenue and 47th Street entrances were summed. In addition, it was noted that vehicles entered the south portion of the site for the COVID drive-thru testing, the difference in vehicles which entered the segment of 47th Place from California Avenue minus the number of vehicles

observed traveling westbound at the junction of Mansueto High School's exit drive and 47th Place was added to these entering values.

It was also noted during the site visits that there were a significant number of vehicles parked in the south area of the site near the COVID testing site. These were assumed to be staff members from the building or for the COVID testing facilities. It was estimated that 20-30 vehicles may have been parked in this area which expanded the total number of parking spots available within the site. It was also noted that some of these additional vehicles from estimated to be entering from 47th Place could be employees at the buildings on the south side of 47th Place which would mean that they were over counted for in the parking totals as parked because they would arrive but never be seen as leaving. With this in mind the total number of parked vehicles was less of a concern than the total number entering and exiting.

Vehicles were blocked from being able to return to exit onto 47th Place, so all parked cars and drive-thru COVID tests were required to exit through the parking lot via the California or 47th Street driveways. The number of vehicles existing at these two locations was then subtracted from the entering vehicles to get an estimate of vehicles on site.

It should also be noted that any cut-through traffic or vehicles unable to park due to the lot being full would be seen as an entering and exiting vehicle and would therefore not contribute to the total parking count.

Based on these totals the cumulative number of vehicles parked within the existing site boundary increased to around 100-110 vehicles by around 8:45 AM and stayed in this range until about 3:15 when the number edged up toward 129 and then reached a peak of 129 at 3:45 PM. It was noted that some of these additional vehicles from the south entrance could be employees at the building directly south of the proposed site expansion. Our site visit in the afternoon at the dismissal time for Mansueto High School noted several parents double parked within the EHC lot waiting to pick up students which likely led to this increase.

Based on the existing traffic data collected at the site, TERRA evaluated the total number of trips throughout the day in and out of the site. Estimates were made based on the arrivals in the morning of how many vehicles might be attributed to staff and the number of visitors. Staff totals were estimated to be in the range of around 45 vehicles per day at the existing site. Of these trips it was assumed that 35 vehicles would be attributed to the main building while 10 would be attributed to the COVID testing site.

The total vehicles arriving and departing the site throughout the entire day were summed for the existing site. These total trips were divided by the square feet of building space to get a daily rate of vehicles per square foot attributable to the existing building. The number of estimated staff members was also divided by the total square feet of building space to get

an estimated rate of staff per square foot of building space.

The rate of visitors and staff per square foot were then multiplied by the proposed square feet of the proposed building to get estimates of staff and visitors per 15-minute period throughout the day. The proposed staff rate was estimated to be 1.35 staff per 1,000 square feet which resulted in an additional 58 staff for a total of 93 staff between both buildings. The proposed visitor totals were estimated to be in the range of 35-45 entering vehicles for most of the 15-minute periods with values slightly above or below this throughout the day. The exiting values were in similar ranges which again left the parking lots at similar ratios of entering and exiting vehicles during any given 15-minute period.

TERRA then looked at how these trips could be assigned to the site throughout the day. The potential staff parking need of 93 vehicles is a key factor in this conversation. While this is just an estimated value, it is important to note that no matter the number of staff vehicles, with 118 total standard spaces within the west lot near the buildings, any number of staff occupying those spots leaves fewer spots for the visitors and patients to the building. The estimates for cumulative parking needs on the site typically fall within the range of 170-200 spaces at any given time based on the ratio of existing visits to when compared to proposed visits based on the building size. With 118 standard spaces in the west side lot, this could leave 80 or more vehicles who need to park in the lot east of California Avenue.

As an example, if we assume that 70 staff parked on the west side of California Avenue, this would leave only about 48 spaces for visitors on the building side of the site and would result in a significant number of visitors of in the range of 75-80 at any given time who would need to cross California throughout the day resulting in higher pedestrian crossing numbers in the area and more potential for conflicts. Visitors create more turnover throughout the day as they come and go from the site, so this would create a much different pedestrian condition than if the staff was required to park in the east lot.

If the staff is required to park in the east lot, they are likely to arrive at the beginning of their daily shift, potentially leave and return for a midday break and then leave again at the end of their shift. With estimated staff totals of up to 93 vehicles, staff parking to the east could free up most of the entire west lot for the patients and visitor use throughout the day and would result in fewer pedestrian crossings.

It would be preferred that pedestrians cross at the signalized intersection at 47th Street when possible, however it may be worth considering installing a crosswalk at 47th Place if pedestrians prefer to use this southern crossing. A midblock crossing location connecting the east lot to the west side of California Avenue would not be recommended due to the proximity to the signalized intersection at 47th Street.

SECTION XI

SUMMARY AND CONCLUSIONS

This study was undertaken to determine the impact of developing the adjacent south parcel at Esperanza Health Center (EHC) to expand the facility. The proposed building would add a new building with approximately 43,600 square feet to the existing 26,100 square feet of facility currently in place.

TERRA completed the original traffic study for the north portion of the site and for the adjacent Mansueto High School located just west of the site. Existing traffic data was collected around the site on December 14, 2021. This data was used in conjunction with data collected for the previous study to evaluate the changes in traffic patterns in the area.

The existing traffic volumes were inserted into Synchro modeling software to simulate and measure the performance of each intersection. In the existing condition, the Level of Service of all intersections perform at acceptable levels during peak hours of traffic, except for the eastbound left movement at California Avenue at 47th Place. The movement performs at Level of Service (LOS) F during the AM peak hour of traffic and LOS E during the PM peak hour of traffic and is largely driven by vehicles discharged from the Mansueto High School.

New vehicle trips generated by the EHC were estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual. The report used the estimation for Land Use (530) Clinic. Trip estimates were based on the Gross Floor Area (GFA) of the new building. These trip estimates were also compared to the collected data at the site. The existing data collected was divided by the square foot of building space in the existing building to establish an additional estimate of trips generated per square foot of building space. These two methods were then utilized to provide the peak hour and daily trip estimates and parking needs.

The new trips were distributed throughout the network and added to the existing trips to create an "Opening Day" model. The model was then inserted into Synchro to measure the performance of each intersection and compare to the existing condition.

Comparing the existing and opening day conditions, the LOS of the eastbound movement on 47th Street and Francisco Avenue appears to degrade from LOS D to LOS E during the AM peak hour of traffic, and from LOS C to LOS D during the PM peak hour of traffic. The additional vehicles in the main EHC lot creates additional delay and the LOS for the

northbound movement for 47th Street at the EHC driveway appears to degrade from LOS D to LOS E. The eastbound left movement on California Avenue at 47th Place during the AM peak hour of traffic remains at LOS F, the lowest LOS designation, but the additional vehicles from EHC increases the delay. Vehicles from the Mansueto High School may try to use the EHC driveway on 47th Place as a cut-through route to avoid the queue, and vehicles exiting from EHC may instead use the north driveway. During the PM peak hour of traffic, the LOS appears to degrade from LOS E to LOS F. However, this is because trips generated by the EHC were added to the PM peak at the intersection which coincides with school dismissal at 3:15PM. It is more likely the peak hour in which vehicles are discharged from the EHC main lot would occur during traditional peak hours between 4:00 PM and 6:00 PM, and there would not be a combined flow of vehicles queuing at the intersection, and the intersection would perform better.

The parking needs at the site were also evaluated to determine how the parking lot spaces would be expected to serve the need of the facility. The proposed 124 spaces on the site will be augmented by approximately 100 spaces proposed on the east side of California Avenue across from the site. This provides up to 224 spaces (218 Standard, 6 ADA) on the project site.

Based on the calculations of projected visitor and staff parking needs and the number of times that visitors would be expected to come and go throughout the course of a typical day it was reasoned that having large numbers of patients and visitors parking in the east lot would significantly increase the number of pedestrians crossing California Avenue throughout the day.

The proposed east parking lot is located roughly midway between 47th Street and 47th Place along California Avenue which would require pedestrians to walk about 200 feet to the north or south to cross California Avenue at an intersection. Of the two intersections, 47th Street is signalized with pedestrian crosswalks in place, while 47th Place is not marked for pedestrian crossings of California Avenue and traffic is free-flow and uncontrolled. Another consideration is that many pedestrians may choose the shortest route between the east parking lot and the buildings to cross which could result in a large number of midblock crossings at an uncontrolled location. These uncontrolled crossings would be considered dangerous and should be minimized if possible.

It is recommended that the east parking lot be designated as the primary lot for staff use and that visitor parking in this lot be only as an overflow when the west lot is full. This would help to reduce the number of pedestrian crossings in the vicinity of the site. A new crosswalk may still be necessary at the intersection of 47th Place and California Avenue at the south end of the site. If this crosswalk is installed it is expected that it would be at an uncontrolled crosswalk which may need upgraded treatments to make it safer for pedestrians.

The proposed development of the remainder of the parcel on the west side of California Avenue and the additional parcel to the east into an expanded Esperanza Health Center will increase the traffic in the area by drawing additional vehicle trips to this corner. However, these additional trips do not appear to cause significant impacts to the traffic along 47th Street or California Avenue near the project site.

It is noted that the reconfiguration of the parcel to move access directly to California on the east side of the site to the south via 47th Place, east to California Avenue will reroute the traffic flows entering and exiting the site. 47th Place is lightly used throughout most of the day but can experience significant congestion during peak times influenced by Mansueto High School which may impact site access. It may also provide an attractive cut through for congested traffic to and from the high school during these peak periods. It is expected that there could be additional impacts and delays on 47th Place during these times, however this is a vacated street and therefore the queues created impact private property and not City owned streets.

The expansion of the EHC site to provide additional medical facilities in this area and addresses a community need. It is expected that the expansion of this site with a similar use but with increased parking availability should be beneficial to the overall operation of the future site.

APPENDIX A
EXISTING TRAFFIC DATA

TERRA
ENGINEERING LTD.

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Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th Pl & MHS Driveway
Site Code
Start Date 12/14/2021

Turning Movement Data

Start Time	MHS East Driveway Southbound						47th Pl Westbound						Driveway Northbound						47th Pl Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
7 00 AM	1	0	0	0	2	1	0	7	0	0	2	7	0	0	0	0	0	0	0	9	0	0	0	9	17
7 15 AM	3	0	0	0	0	3	0	20	0	0	0	20	0	0	0	0	1	0	0	13	0	0	1	13	36
7 30 AM	3	0	2	0	3	5	1	41	0	1	3	43	0	0	0	0	0	0	0	30	0	0	0	30	78
7 45 AM	2	0	0	0	5	2	0	57	1	0	5	58	0	0	0	0	0	0	0	49	0	0	0	49	109
Hourly Total	9	0	2	0	10	11	1	125	1	1	10	128	0	0	0	0	1	0	0	101	0	0	1	101	240
8 00 AM	3	0	0	0	0	3	1	10	0	0	0	11	0	0	0	0	1	0	1	12	0	0	0	13	27
8 15 AM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1
8 30 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
8 45 AM	1	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Hourly Total	4	0	0	0	1	4	1	13	0	0	1	14	0	0	0	0	2	0	1	13	0	0	0	14	32
9 00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
9 15 AM	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
9 30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
9 45 AM	0	0	0	0	0	0	1	1	0	1	0	3	0	0	0	0	0	0	0	1	0	0	0	1	4
Hourly Total	0	0	1	0	0	1	1	3	0	1	0	5	0	0	0	0	0	0	0	2	0	0	0	2	8
10 00 AM	2	0	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	5
10 15 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
10 30 AM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	5
10 45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Hourly Total	2	0	0	0	0	2	0	4	0	0	0	4	0	0	0	0	0	0	0	7	0	0	0	7	13
11 00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
11 15 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
11 30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 45 AM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	4
Hourly Total	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	3	6
12 00 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	2	0	0	4	0	0	0	4	6
12 15 PM	0	0	1	0	0	1	0	4	0	0	0	4	0	0	0	0	0	0	0	3	0	0	0	3	8
12 30 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12 45 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	1	1	0	0	0	2	4
Hourly Total	2	0	1	0	0	3	0	7	0	1	0	8	0	0	0	0	2	0	1	8	0	0	0	9	20
1 00 PM	2	0	0	0	0	2	0	2	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	5
1 15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1 30 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
1 45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0	0	2	0	0	0	2	3
Hourly Total	3	0	0	0	0	3	1	3	0	0	0	4	0	0	0	0	2	0	0	4	0	0	0	4	11

2 00 PM	0	0	0	0	0	0	2	2	0	0	0	4	0	0	0	0	1	0	0	0	0	0	0	0	4
2 15 PM	0	0	0	0	0	0	2	2	0	0	0	4	0	0	0	0	2	0	0	0	1	0	0	1	5
2 30 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	4
2 45 PM	1	0	0	0	0	1	1	8	0	0	0	9	2	0	0	0	1	2	0	1	0	0	0	1	13
Hourly Total	1	0	0	0	0	1	5	14	0	0	0	19	2	0	0	0	4	2	0	3	1	0	0	4	26
3 00 PM	0	0	1	0	0	1	0	9	0	0	0	9	2	0	0	0	0	2	0	5	0	0	1	5	17
3 15 PM	0	0	0	0	0	0	0	8	0	1	0	9	0	0	0	0	0	0	0	2	0	0	0	2	11
3 30 PM	10	0	0	0	16	10	0	14	0	3	9	17	0	0	0	0	14	0	0	45	0	0	13	45	72
3 45 PM	10	0	0	0	1	10	0	2	0	1	0	3	0	0	0	0	4	0	0	6	0	0	4	6	19
Hourly Total	20	0	1	0	17	21	0	33	0	5	9	38	2	0	0	0	18	2	0	58	0	0	18	58	119
4 00 PM	5	0	0	0	1	5	0	1	0	0	2	1	0	0	0	0	2	0	0	11	0	0	0	11	17
4 15 PM	1	0	0	0	1	1	0	3	1	0	0	4	0	0	0	0	2	0	0	1	0	0	2	1	6
4 30 PM	10	0	0	0	0	10	0	5	0	0	0	5	0	0	0	0	4	0	0	11	0	0	1	11	26
4 45 PM	3	0	0	0	0	3	0	4	0	1	1	5	0	0	1	0	0	1	0	6	0	0	0	6	17
Hourly Total	19	0	0	0	2	19	0	13	1	1	3	15	0	0	1	0	8	1	0	31	0	0	3	31	66
5 00 PM	1	0	0	0	0	1	0	3	0	1	0	4	0	0	0	0	0	0	0	2	0	0	0	2	7
5 15 PM	2	0	0	0	0	2	0	3	0	0	0	3	0	0	0	0	0	0	0	4	0	0	0	4	9
5 30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	4	5
5 45 PM	0	0	0	0	0	0	0	2	0	0	0	2	1	0	0	0	0	1	0	1	0	0	0	1	4
Hourly Total	3	0	0	0	0	3	0	9	0	1	0	10	1	0	0	0	0	1	0	11	0	0	0	11	25
6 00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 15 PM	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
6 30 PM	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	1	9
6 45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	13	0	0	0	13	0	0	0	0	0	0	0	1	0	0	0	1	14
Grand Total	63	0	5	0	30	68	9	240	2	10	23	261	5	0	1	0	37	6	2	242	1	0	22	245	580
Approach %	92 6	0 0	7 4	0 0	-	-	3 4	92 0	0 8	3 8	-	-	83 3	0 0	16 7	0 0	-	-	0 8	98 8	0 4	0 0	-	-	-
Total %	10 9	0 0	0 9	0 0	-	11 7	1 6	41 4	0 3	1 7	-	45 0	0 9	0 0	0 2	0 0		1 0	0 3	41 7	0 2	0 0	-	42 2	-
Lights	63	0	5	0	-	68	3	234	2	9	-	248	0	0	1	0	-	1	2	238	1	0	-	239	558
% Lights	100 0	-	100 0	-		100 0	33 3	97 5	100 0	90 0	-	95 0	0 0	-	100 0	-	-	16 7	100 0	97 5	100 0	-	-	97 6	95 9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0		0	0	0	0	0	-	0	0
% Buses	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	0 0	-	0 0	0 0	-	0 0	-		0 0	0 0	0 0	0 0	-	-	0 0	0 0
Single-Unit Trucks	0	0	0	0	-	0	6	6	0	1	-	13	5	0	0	0		5	0	6	0	0	-	6	24
% Single-Unit Trucks	0 0	-	0 0	-	-	0 0	66 7	2 5	0 0	10 0	-	5 0	100 0	-	0 0	-	-	83 3	0 0	2 5	0 0	-	-	2 4	4 1
Articulated Trucks	0	0	0	0		0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	0 0	-	0 0	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	-	-	0 0	0 0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	0 0	-	0 0	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	-	-	0 0	0 0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	-	30	-	-	-	-	-	23	-	-	-	-	-	37	-	-	-	-	-	22	-	-
% Pedestrians	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-

TERRA
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Terra Engineering
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Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th Pl & MHS Driveway
Site Code
Start Date 12/14/2021
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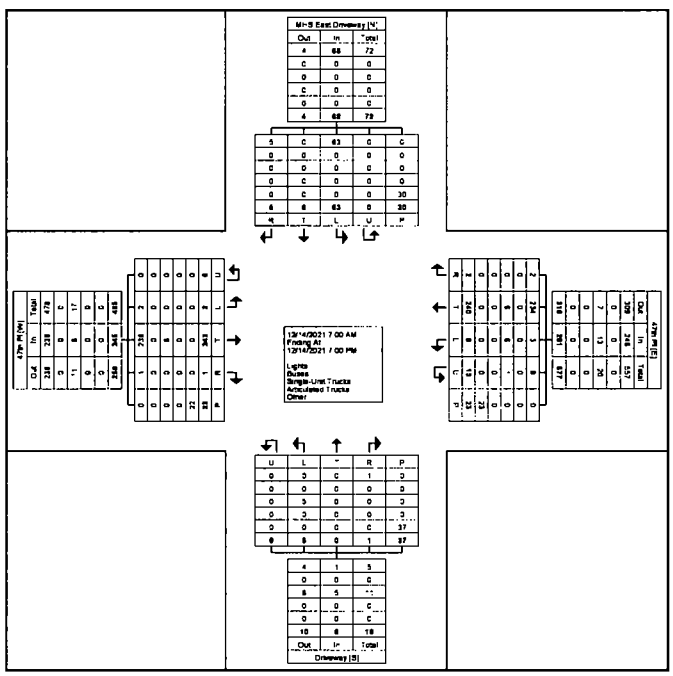

Turning Movement Data Plot

TERRA ENGINEERING LTD
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th Pl & MHS Driveway
Site Code
Start Date 12/14/2021

Turning Movement Peak Hour Data (7:15 AM)

Start Time	MHS East Driveway Southbound						47th Pl Westbound						Driveway Northbound						47th Pl Eastbound						Int Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
7 15 AM	3	0	0	0	0	3	0	20	0	0	0	20	0	0	0	0	1	0	0	13	0	0	1	13	36
7 30 AM	3	0	2	0	3	5	1	41	0	1	3	43	0	0	0	0	0	0	0	30	0	0	0	30	78
7 45 AM	2	0	0	0	5	2	0	57	1	0	5	58	0	0	0	0	0	0	0	49	0	0	0	49	109
8 00 AM	3	0	0	0	0	3	1	10	0	0	0	11	0	0	0	0	1	0	1	12	0	0	0	13	27
Total	11	0	2	0	8	13	2	128	1	1	8	132	0	0	0	0	2	0	1	104	0	0	1	105	250
Approach %	84 6	0 0	15 4	0 0	-	-	1 5	97 0	0 8	0 8	-	-	0 0	0 0	0 0	0 0		-	1 0	99 0	0 0	0 0	-	-	-
Total %	4 4	0 0	0 8	0 0	-	5 2	0 8	51 2	0 4	0 4	-	52 8	0 0	0 0	0 0	0 0	-	0 0	0 4	41 6	0 0	0 0	-	42 0	-
PHF	0 917	0 000	0 250	0 000	-	0 650	0 500	0 561	0 250	0 250	-	0 569	0 000	0 000	0 000	0 000	-	0 000	0 250	0 531	0 000	0 000	-	0 538	0 573
Lights	11	0	2	0	-	13	2	128	1	1	-	132	0	0	0	0		0	1	103	0	0	-	104	249
% Lights	100 0	-	100 0	-	-	100 0	100 0	100 0	100 0	100 0		100 0	-	-	-	-	-	-	100 0	99 0	-	-	-	99 0	99 6
Buses	0	0	0	0	-	0	0	0	0	0		0	0	0	0	0	-	0	0	0	0	0		0	0
% Buses	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	0 0		0 0	-	-	-	-	-	-	0 0	0 0	-	-	-	0 0	0 0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0		0	0	0	0	0	-	0	0	1	0	0		1	1
% Single-Unit Trucks	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	0 0	-	0 0	-	-	-	-	-	-	0 0	1 0	-	-	-	1 0	0 4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	0 0	-	0 0	-	-	-	-	-	-	0 0	0 0	-	-	-	0 0	0 0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0		0	0	0	0	0	-	0	0	0	0	0		0	0
% Bicycles on Road	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	0 0	-	0 0	-	-	-	-	-	-	0 0	0 0	-	-	-	0 0	0 0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	8	-	-	-	-	-	2	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-

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Count Name 47th Pl & MHS Driveway
Site Code
Start Date 12/14/2021
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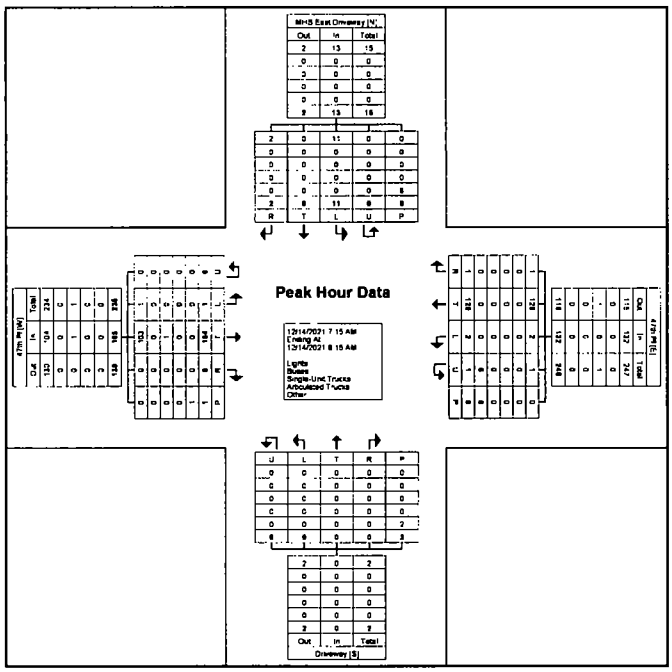

Turning Movement Peak Hour Data Plot (7:15 AM)

TERRA ENGINEERING LTD.
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th Pl & MHS Driveway
Site Code
Start Date 12/14/2021

Turning Movement Peak Hour Data (3 00 PM)

Start Time	MHS East Driveway Southbound						47th Pl Westbound						Driveway Northbound						47th Pl Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
3 00 PM	0	0	1	0	0	1	0	9	0	0	0	9	2	0	0	0	0	2	0	5	0	0	1	5	17
3 15 PM	0	0	0	0	0	0	0	8	0	1	0	9	0	0	0	0	0	0	0	2	0	0	0	2	11
3 30 PM	10	0	0	0	16	10	0	14	0	3	9	17	0	0	0	0	14	0	0	45	0	0	13	45	72
3 45 PM	10	0	0	0	1	10	0	2	0	1	0	3	0	0	0	0	4	0	0	8	0	0	4	8	19
Total	20	0	1	0	17	21	0	33	0	5	9	38	2	0	0	0	18	2	0	58	0	0	18	58	119
Approach %	95 2	0 0	4 8	0 0	-	-	0 0	86 8	0 0	13 2	-	-	100 0	0 0	0 0	0 0		-	0 0	100 0	0 0	0 0	-	-	-
Total %	16 8	0 0	0 8	0 0	-	17 6	0 0	27 7	0 0	4 2	-	31 9	1 7	0 0	0 0	0 0	-	1 7	0 0	48 7	0 0	0 0	-	48 7	-
PHF	0 500	0 000	0 250	0 000	-	0 525	0 000	0 589	0 000	0 417	-	0 559	0 250	0 000	0 000	0 000	-	0 250	0 000	0 322	0 000	0 000	-	0 322	0 413
Lights	20	0	1	0	-	21	0	33	0	5	-	38	0	0	0	0	-	0	0	58	0	0	-	58	117
% Lights	100 0	-	100 0	-	-	100 0	-	100 0	-	100 0	-	100 0	0 0	-	-	-	-	0 0	-	100 0	-	-	-	100 0	98 3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0 0	-	0 0	-	-	0 0	-	0 0	-	0 0	-	0 0	0 0	-	-	-	-	0 0	-	0 0	-	-	-	0 0	0 0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	2	0	0	0	-	2	0	0	0	0	-	0	2
% Single-Unit Trucks	0 0	-	0 0	-	-	0 0	-	0 0	-	0 0	-	0 0	100 0	-	-	-	-	100 0	-	0 0	-	-	-	0 0	1 7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0 0	-	0 0	-	-	0 0	-	0 0	-	0 0	-	0 0	0 0	-	-	-	-	0 0	-	0 0	-	-	-	0 0	0 0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0 0	-	0 0	-	-	0 0	-	0 0	-	0 0	-	0 0	0 0	-	-	-	-	0 0	-	0 0	-	-	-	0 0	0 0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	-	17	-	-	-	-	-	9	-	-	-	-	-	18	-	-	-	-	-	18	-	-
% Pedestrians	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-

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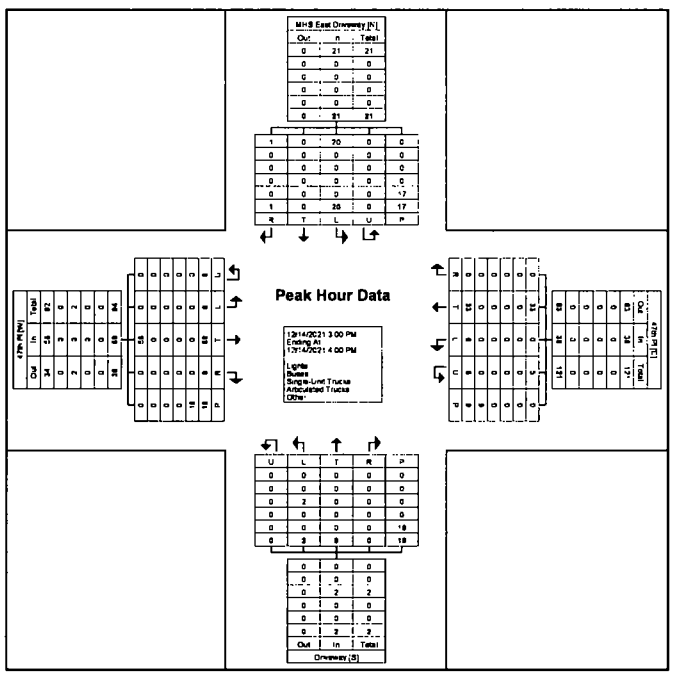

Turning Movement Peak Hour Data Plot (3:00 PM)

TERRA ENGINEERING LTD.
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & California Ave
Site Code
Start Date 12/14/2021
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Turning Movement Data

Start Time	California Ave Southbound						47th St Westbound						California Ave Northbound						47th St Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
7 00 AM	5	58	12	0	5	73	7	67	9	0	1	83	31	152	15	0	1	198	12	89	18	0	3	119	473
7 15 AM	11	82	9	0	18	102	11	67	8	0	14	86	36	136	52	0	21	224	5	97	28	0	5	130	542
7 30 AM	25	105	21	0	22	151	25	86	9	0	12	120	38	128	46	0	20	212	8	80	36	0	7	124	607
7 45 AM	20	109	13	0	11	142	30	51	13	0	7	94	37	139	50	0	22	226	12	88	39	0	1	139	601
Hourly Total	61	352	55	0	56	468	73	271	39	0	34	383	142	555	163	0	64	860	37	354	121	0	16	512	2223
8 00 AM	20	82	17	0	6	119	30	70	15	0	1	115	44	136	49	0	7	229	12	94	31	0	0	137	600
8 15 AM	7	81	18	0	3	106	13	63	12	0	1	88	18	110	19	0	3	147	11	74	20	0	2	105	446
8 30 AM	9	78	7	0	7	94	11	63	5	0	0	79	14	105	18	0	1	137	12	84	14	0	2	110	420
8 45 AM	7	54	12	0	3	73	9	74	4	0	2	87	20	94	16	0	2	130	9	81	28	0	1	118	408
Hourly Total	43	295	54	0	19	392	63	270	36	0	4	369	96	445	102	0	13	643	44	333	93	0	5	470	1874
9 00 AM	5	54	7	0	4	66	12	69	9	0	2	90	16	83	17	0	2	128	12	81	20	0	3	113	395
9 15 AM	12	63	6	0	3	81	14	58	7	0	2	79	13	76	6	0	2	95	6	63	18	0	3	89	344
9 30 AM	6	50	13	0	1	71	9	89	9	0	3	107	13	76	18	0	1	107	9	81	22	0	0	112	397
9 45 AM	9	69	6	0	4	84	9	67	13	0	2	89	25	57	19	0	1	101	10	69	24	0	1	103	377
Hourly Total	34	236	32	0	12	302	44	283	38	0	9	365	67	302	60	0	6	429	39	294	84	0	7	417	1513
10 00 AM	13	62	16	0	7	91	10	63	8	0	3	81	19	67	17	0	1	103	7	83	15	0	0	105	380
10 15 AM	9	80	12	0	0	101	17	62	13	0	0	92	28	63	14	0	0	105	8	83	19	0	1	110	408
10 30 AM	16	71	13	0	2	100	16	82	11	0	4	109	23	62	17	0	8	102	2	73	20	0	4	95	406
10 45 AM	13	66	10	0	5	89	11	87	13	0	2	111	9	58	15	0	2	82	9	73	19	0	0	101	383
Hourly Total	51	279	51	0	14	381	54	294	45	0	9	393	79	250	63	0	11	392	26	312	73	0	1	411	1577
11 00 AM	10	63	7	0	2	80	21	67	10	0	2	98	19	57	15	0	4	91	16	76	12	0	0	104	373
11 15 AM	13	64	14	0	5	91	15	73	10	0	1	98	14	58	19	0	4	91	13	73	13	0	2	99	379
11 30 AM	6	66	6	0	5	80	11	84	5	0	0	100	20	52	14	0	6	86	12	84	16	0	0	112	378
11 45 AM	10	74	16	0	4	100	12	67	9	0	3	108	19	69	14	0	4	102	11	81	21	0	0	113	423
Hourly Total	41	267	43	0	16	351	59	311	34	0	6	404	72	236	62	0	18	370	52	314	62	0	3	428	1553
12 00 PM	14	79	15	0	4	108	13	78	12	0	1	103	19	59	19	0	5	97	9	72	16	0	3	97	405
12 15 PM	9	85	19	0	7	93	16	84	14	0	1	114	26	71	9	0	0	106	16	83	20	0	0	119	432
12 30 PM	18	79	16	0	6	113	15	85	9	0	2	119	19	72	13	0	1	104	9	64	25	0	1	98	434
12 45 PM	10	67	11	0	7	88	18	80	5	0	0	103	21	70	16	0	0	107	14	99	24	0	0	137	435
Hourly Total	51	290	61	0	24	402	62	337	40	0	4	439	85	272	57	0	7	414	48	318	85	0	4	451	1706
1 00 PM	12	58	10	0	3	80	24	63	12	0	0	119	24	70	8	0	0	100	6	94	20	0	1	120	419
1 15 PM	13	81	15	0	5	109	9	65	8	0	2	82	23	79	16	0	1	118	8	92	26	0	2	126	435
1 30 PM	9	72	13	0	9	94	19	81	8	0	0	108	21	81	14	0	2	118	3	90	21	0	4	114	432
1 45 PM	10	68	19	0	3	97	16	85	19	0	1	120	14	79	24	0	0	117	10	86	22	0	2	118	452
Hourly Total	44	279	57	0	20	380	68	314	47	0	3	429	82	309	60	0	3	451	27	362	89	0	9	478	1738

2 00 PM	10	102	19	0	10	131	15	81	16	0	1	112	21	84	16	0	1	121	15	104	24	0	3	143	507
2 15 PM	10	95	11	0	3	116	19	97	16	0	3	132	23	90	22	0	4	135	13	94	16	0	0	123	506
2 30 PM	14	111	10	0	6	135	19	92	11	0	2	122	21	109	28	0	4	158	9	91	19	0	1	119	534
2 45 PM	17	136	12	0	11	165	28	99	12	0	13	139	26	94	26	0	12	148	7	84	26	0	6	117	567
Hourly Total	51	444	52	0	30	547	81	369	55	0	19	505	91	377	92	0	21	560	44	373	85	0	10	502	2114
3 00 PM	24	120	11	0	10	155	21	96	19	0	11	136	25	96	18	0	6	139	6	79	30	0	7	117	547
3 15 PM	11	117	9	0	14	137	23	102	11	0	6	138	33	135	26	0	9	194	11	80	26	0	0	117	584
3 30 PM	8	122	4	0	43	134	19	33	4	0	14	56	22	102	23	1	47	148	3	43	33	0	14	79	417
3 45 PM	11	131	12	0	30	154	14	89	8	0	9	91	21	125	33	0	42	179	9	83	58	0	14	150	574
Hourly Total	54	490	36	0	97	580	77	300	42	0	40	419	101	458	100	1	104	660	31	285	147	0	35	483	2122
4 00 PM	11	128	5	0	16	142	29	89	11	0	15	129	25	97	25	0	19	147	17	91	23	0	7	131	549
4 15 PM	8	142	10	0	7	160	19	81	18	0	7	118	24	88	21	0	11	133	7	103	34	0	3	144	555
4 30 PM	18	135	5	0	8	158	26	97	15	0	4	138	29	81	28	0	11	138	12	79	49	0	4	140	572
4 45 PM	11	142	9	0	7	162	26	99	13	0	2	138	20	98	26	0	6	144	18	109	45	0	3	170	614
Hourly Total	48	545	29	0	38	622	100	366	57	0	28	523	98	364	98	0	47	560	52	382	151	0	17	585	2290
5 00 PM	8	145	14	0	9	185	23	103	13	0	5	139	24	81	21	0	3	126	17	97	49	0	1	163	593
5 15 PM	19	105	17	0	8	141	20	94	14	0	1	128	27	93	21	0	6	141	13	93	46	0	3	152	562
5 30 PM	12	142	9	0	10	163	22	92	11	0	5	125	23	88	16	0	5	127	10	67	38	0	4	115	530
5 45 PM	17	139	6	0	2	182	21	93	11	0	1	125	28	73	17	0	2	118	8	104	40	0	0	150	555
Hourly Total	54	531	46	0	28	631	86	382	49	0	12	517	102	335	75	0	16	512	48	361	173	0	8	560	2240
6 00 PM	9	97	12	0	3	118	16	98	13	0	1	125	21	80	15	0	4	116	11	90	25	0	2	128	485
6 15 PM	11	89	11	0	4	111	23	94	20	0	1	137	22	85	16	0	0	123	20	85	29	0	2	134	505
6 30 PM	13	90	10	0	8	113	13	74	10	0	5	97	24	57	14	0	5	95	13	75	33	0	0	121	426
6 45 PM	16	107	10	0	1	133	14	65	7	0	2	86	21	59	14	0	3	94	5	75	27	0	0	107	420
Hourly Total	49	383	43	0	16	475	66	329	50	0	9	445	88	281	59	0	12	428	49	325	114	0	4	488	1836
Grand Total	581	4391	559	0	370	5531	833	3828	532	0	179	5191	1103	4184	991	1	322	6279	495	4013	1277	0	125	5785	22786
Approach %	10 5	79 4	10 1	0 0	-	-	16 0	73 7	10 2	0 0	-	-	17 6	66 6	15 8	0 0	-	-	8 6	69 4	22 1	0 0	-	-	-
Total %	2 5	19 3	2 5	0 0	-	24 3	3 7	16 8	2 3	0 0	-	22 8	4 8	18 4	4 3	0 0	-	27 6	2 2	17 6	5 6	0 0	-	25 4	-
Lights	513	4295	538	0	-	5346	797	3425	481	0	-	4683	1064	4068	958	1	-	6091	478	3574	1241	0	-	5293	21413
% Lights	88 3	97 8	96 2	-	-	96 7	95 7	89 5	90 7	-	-	90 2	96 5	97 2	96 7	100 0	-	97 0	96 6	89 1	97 2	-	-	91 5	94 0
Buses	55	18	5	0	-	78	4	70	57	0	-	131	7	26	5	0	-	38	4	70	10	0	-	84	331
% Buses	9 5	0 4	0 9	-	-	1 4	0 5	1 8	10 7	-	-	2 5	0 6	0 6	0 5	0 0	-	0 6	0 8	1 7	0 8	-		1 5	1 5
Single-Unit Trucks	11	69	14	0		94	26	172	12	0	-	210	24	80	22	0	-	126	12	175	18	0	-	205	635
% Single-Unit Trucks	1 9	1 6	2 5	-	-	1 7	3 1	4 5	2 3	-	-	4 0	2 2	1 9	2 2	0 0	-	2 0	2 4	4 4	1 4	-	-	3 5	2 8
Articulated Trucks	1	5	0	0	-	6	6	157	0	0	-	163	8	5	5	0	-	18	1	192	7	0	-	200	387
% Articulated Trucks	0 2	0 1	0 0	-	-	0 1	0 7	4 1	0 0	-	-	3 1	0 7	0 1	0 5	0 0	-	0 3	0 2	4 8	0 5	-	-	3 5	1 7
Bicycles on Road	1	4	2	0	-	7	0	2	2	0	-	4	0	5	1	0	-	6	0	2	1	0		3	20
% Bicycles on Road	0 2	0 1	0 4	-	-	0 1	0 0	0 1	0 4	-	-	0 1	0 0	0 1	0 1	0 0	-	0 1	0 0	0 0	0 1	-	-	0 1	0 1
Bicycles on Crosswalk	-	-	-	-	28	-	-	-	-	-	9	-	-	-	-	-	15	-	-	-	-	-	5	-	-
% Bicycles on Crosswalk	-	-	-	-	7 6	-	-	-	-	-	5 0	-	-	-	-	-	4 7	-	-	-	-	-	4 0	-	-
Pedestrians	-	-	-	-	342	-	-	-	-	-	170	-	-	-	-	-	307	-	-	-	-	-	120	-	-
% Pedestrians	-	-	-	-	92 4	-	-	-	-	-	95 0	-	-	-	-	-	95 3	-	-	-	-	-	96 0	-	-

TERRA
ENGINEERING LTD
Terra Engineering
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Saint Louis, Missouri, United States 63146
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Count Name 47th St & California Ave
Site Code
Start Date 12/14/2021
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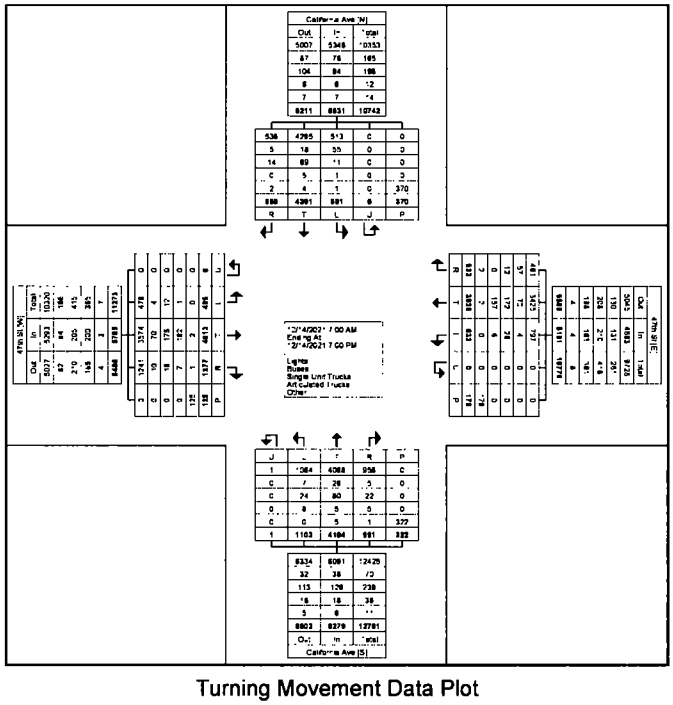

Turning Movement Data Plot

TERRA ENGINEERING LTD.
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & California Ave
Site Code
Start Date 12/14/2021

Turning Movement Peak Hour Data (7.15 AM)

Start Time	California Ave Southbound						47th St Westbound						California Ave Northbound						47th St Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
7 15 AM	11	82	9	0	18	102	11	67	8	0	14	86	36	136	52	0	2[illegible]	224	5	97	28	0	5	130	542
7 30 AM	25	105	21	0	22	151	25	86	9	0	12	120	36	128	46	0	20	212	8	80	36	0	7	124	607
7 45 AM	20	109	13	0	1[illegible]	142	30	51	13	0	7	94	37	139	50	0	22	226	12	88	39	0	[illegible]	139	601
8 00 AM	20	82	17	0	6	119	30	70	15	0	1	115	44	136	49	0	7	229	12	94	31	0	[illegible]	137	600
Total	76	378	60	0	57	514	96	274	45	0	34	415	155	539	197	0	70	891	37	359	134	0	1[illegible]	530	2350
Approach %	14 8	73 5	11 7	0 0	-	-	23 1	66 0	10 8	0 0	-	-	17 4	60 5	22 1	0 0	-	-	7 0	67 7	25 3	0 0	-	-	-
Total %	3 2	16 1	2 6	0 0	-	21 9	4 1	11 7	1 9	0 0	-	17 7	6 6	22 9	8 4	0 0	-	37 9	1 6	15 3	5 7	0 0	-	22 6	-
PHF	0 760	0 867	0 714	0 000	-	0 851	0 800	0 797	0 750	0 000	-	0 865	0 881	0 969	0 947	0 000	-	0 973	0 771	0 925	0 659	0 000	-	0 953	0 968
Lights	68	371	59	0	-	498	90	251	37	0	-	378	149	526	191	0	-	866	37	319	131	0	-	487	2229
% Lights	89 5	98 1	98 3	-	-	96 9	93 8	91 6	82 2	-	-	91 1	96 1	97 6	97 0	-	-	97 2	100 0	88 9	97 8	-	-	91 9	94 9
Buses	6	0	1	0	-	7	2	7	7	0	-	18	4	8	3	0	-	15	0	11	2	0	-	13	51
% Buses	7 9	0 0	1 7	-	-	1 4	2 1	2 6	15 6	-	-	3 9	2 6	1 5	1 5	-	-	1 7	0 0	3 1	1 5	-	-	2 5	2 2
Single-Unit Trucks	2	6	0	0	-	8	4	7	0	0	-	11	1	4	3	0	-	8	0	14	0	0		14	41
% Single-Unit Trucks	2 6	1 6	0 0	-	-	1 6	4 2	2 6	0 0	-	-	2 7	0 6	0 7	1 5	-	-	0 9	0 0	3 9	0 0	-	-	2 6	1 7
Articulated Trucks	0	0	0	0	-	0	0	9	0	0		9	1	0	0	0	-	1	0	15	0	0		15	25
% Articulated Trucks	0 0	0 0	0 0	-	-	0 0	0 0	3 3	0 0	-	-	2 2	0 6	0 0	0 0	-	-	0 1	0 0	4 2	0 0	-	-	2 8	1 1
Bicycles on Road	0	1	0	0	-	1	0	0	1	0	-	1	0	1	0	0	-	1	0	0	1	0	-	1	4
% Bicycles on Road	0 0	0 3	0 0	-	-	0 2	0 0	0 0	2 2	-	-	0 2	0 0	0 2	0 0	-	-	0 1	0 0	0 0	0 7	-	-	0 2	0 2
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	1 8	-	-	-	-	-	5 9	-	-	-	-	-	1 4	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	-	56	-	-	-	-	-	32	-	-	-	-	-	69	-	-	-	-	-	13	-	-
% Pedestrians	-	-	-	-	98 2	-	-	-	-	-	94 1	-	-	-	-	-	98 6	-	-	-	-	-	100 0	-	-

TERRA
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Count Name 47th St & California Ave
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Start Date 12/14/2021
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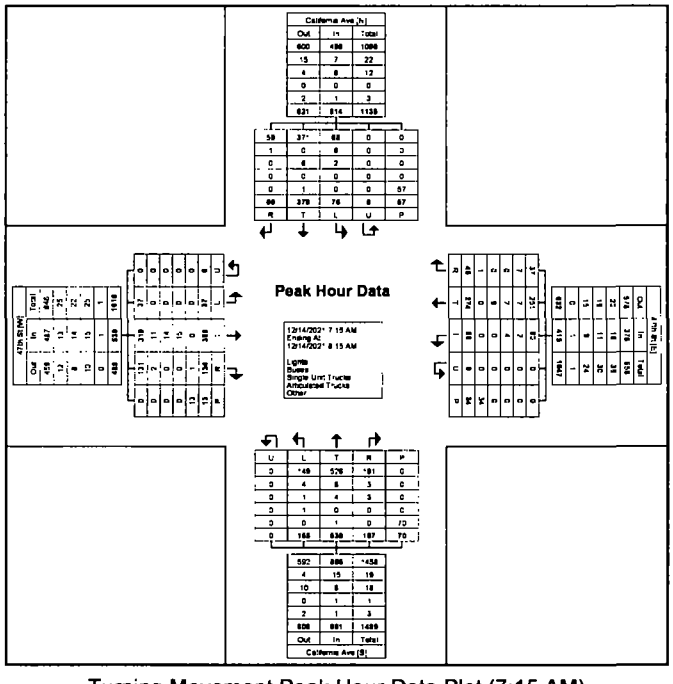

Turning Movement Peak Hour Data Plot (7:15 AM)

TERRA ENGINEERING LTD.
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & California Ave
Site Code
Start Date 12/14/2021

Turning Movement Peak Hour Data (4:30 PM)

Start Time	California Ave Southbound						47th St Westbound						California Ave Northbound						47th St Eastbound						Int Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
4 30 PM	18	135	5	0	8	158	26	97	15	0	4	138	29	81	26	0	11	136	12	79	49	0	4	140	572
4 45 PM	11	142	9	0	7	162	26	99	13	0	2	138	20	98	26	0	8	144	16	109	45	0	3	170	614
5 00 PM	6	145	14	0	8	165	23	103	13	0	0	139	24	81	21	0	3	126	17	97	49	0	0	163	593
5 15 PM	19	105	17	0	8	141	20	94	14	0	1	128	27	93	21	0	6	141	13	83	48	0	3	152	562
Total	54	527	45	0	31	626	95	393	55	0	12	543	100	353	94	0	28	547	58	378	189	0	10	625	2341
Approach %	8 6	84 2	7 2	0 0	-	-	17 5	72 4	10 1	0 0	-	-	18 3	64 5	17 2	0 0	-	-	9 3	60 5	30 2	0 0	-	-	-
Total %	2 3	22 5	1 9	0 0	-	26 7	4 1	16 8	2 3	0 0	-	23 2	4 3	15 1	4 0	0 0	-	23 4	2 5	16 1	8 1	0 0	-	26 7	-
PHF	0 711	0 909	0 662	0 000	-	0 948	0 913	0 954	0 917	0 000	-	0 977	0 862	0 901	0 904	0 000	-	0 950	0 853	0 867	0 964	0 000	-	0 919	0 953
Lights	48	519	43	0	-	610	95	377	47	0	-	519	98	351	92	0	-	541	56	358	188	0	-	604	2274
% Lights	88 9	98 5	95 6	-	-	97 4	100 0	95 9	85 5	-		95 6	98 0	99 4	97 9	-	-	98 9	100 0	94 7	99 5	-	-	96 6	97 1
Buses	6	1	0	0	-	7	0	4	6	0	-	10	0	1	0	0	-	1	0	4	0	0	-	4	22
% Buses	11 1	0 2	0 0	-	-	1 1	0 0	1 0	10 9	-	-	1 8	0 0	0 3	0 0	-	-	0 2	0 0	1 1	0 0	-	-	0 6	0 9
Single-Unit Trucks	0	7	2	0	-	9	0	6	2	0	-	8	2	1	1	0	-	4	0	7	1	0	-	8	29
% Single-Unit Trucks	0 0	1 3	4 4	-	-	1 4	0 0	1 5	3 6	-	-	1 5	2 0	0 3	1 1	-	-	0 7	0 0	1 9	0 5	-	-	1 3	1 2
Articulated Trucks	0	0	0	0	-	0	0	6	0	0		6	0	0	0	0	-	0	0	9	0	0	-	9	15
% Articulated Trucks	0 0	0 0	0 0	-	-	0 0	0 0	1 5	0 0	-	-	1 1	0 0	0 0	0 0	-	-	0 0	0 0	2 4	0 0	-	-	1 4	0 6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0		0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	0 0	0 0	0 0	-	-	0 0	0 0	0 0	0 0	-	-	0 0	0 0	0 0	1 1	-	-	0 2	0 0	0 0	0 0	-	-	0 0	0 0
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	6 5	-	-	-	-	-	16 7	-	-	-	-	-	3 6	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	-	29	-	-	-	-	-	10	-	-	-	-	-	25	-	-	-	-	-	11	-	-
% Pedestrians	-	-	-	-	93 5	-	-	-	-	-	83 3	-	-	-	-	-	96 2	-	-	-	-	-	100 0	-	-

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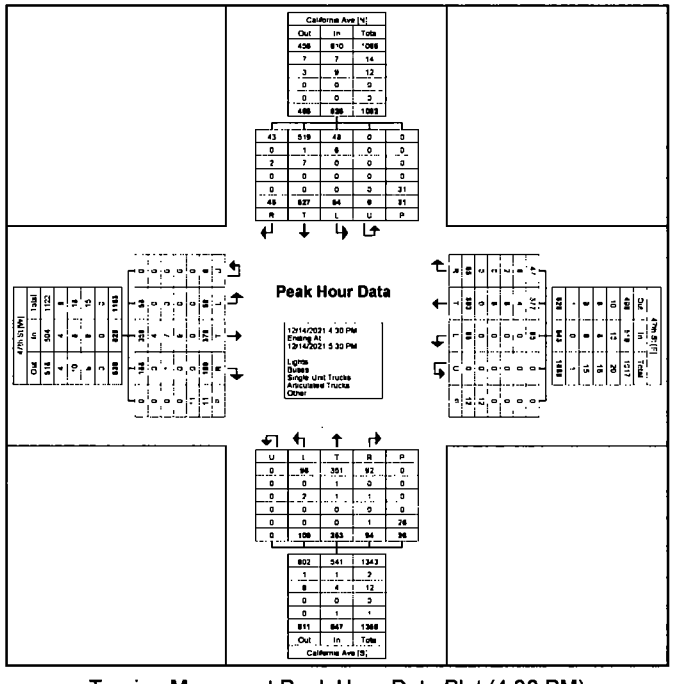


Turning Movement Peak Hour Data Plot (4:30 PM)

TERRA ENGINEERING LTD.
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & MHS East Driveway
Site Code
Start Date 12/14/2021

Turning Movement Data

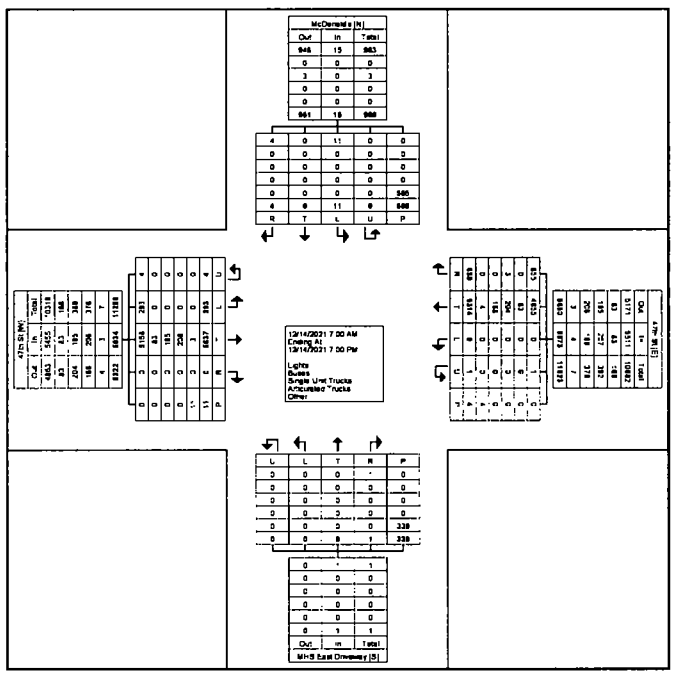
Start Time	McDonald's Southbound						47th St Westbound						MHS East Driveway Northbound						47th St Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
7 00 AM	0	0	1	0	6	1	0	109	8	0	0	117	0	0	0	0	2	0	7	127	0	0	0	134	252
7 15 AM	0	0	0	0	2	0	0	105	15	0	0	120	0	0	0	0	22	0	11	123	0	0	0	134	254
7 30 AM	0	0	0	0	24	0	0	131	33	0	0	164	0	0	0	0	30	0	7	118	0	0	0	125	289
7 45 AM	0	0	0	0	37	0	0	100	21	0	0	121	0	0	0	0	24	0	9	138	0	1	0	148	269
Hourly Total	0	0	1	0	88	1	0	445	77	0	0	522	0	0	0	0	78	0	34	506	0	1	0	541	1064
8 00 AM	0	0	0	0	9	0	0	137	24	0	0	161	0	0	0	0	8	0	9	133	0	0	0	142	303
8 15 AM	0	0	0	0	6	0	0	92	11	0	0	103	0	0	0	0	1	0	6	115	0	0	0	121	224
8 30 AM	0	0	0	0	8	0	0	66	21	0	0	87	0	0	0	0	1	0	5	96	0	0	0	101	188
8 45 AM	0	0	0	0	4	0	0	95	13	0	0	108	0	0	0	0	4	0	10	119	0	0	0	129	237
Hourly Total	0	0	0	0	27	0	0	390	69	0	0	459	0	0	0	0	12	0	30	463	0	0	0	493	952
9 00 AM	1	0	0	0	5	1	0	84	16	0	0	100	0	0	0	0	0	0	4	112	0	0	0	116	217
9 15 AM	1	0	0	0	6	1	0	77	13	0	0	90	0	0	0	0	2	0	2	86	0	0	0	88	179
9 30 AM	1	0	0	0	4	1	0	114	11	0	0	125	0	0	0	0	4	0	4	101	0	0	0	105	231
9 45 AM	1	0	0	0	1	1	0	97	10	0	0	107	0	0	0	0	2	0	2	94	0	0	0	96	204
Hourly Total	4	0	0	0	16	4	0	372	50	0	0	422	0	0	0	0	8	0	12	393	0	0	0	405	831
10 00 AM	0	0	0	0	5	0	0	95	12	0	0	107	0	0	0	0	3	0	8	109	0	0	0	117	224
10 15 AM	0	0	0	0	5	0	0	98	16	0	0	112	0	0	0	0	2	0	8	108	0	0	0	116	228
10 30 AM	1	0	1	0	3	2	0	121	9	0	1	130	0	0	0	0	4	0	5	96	0	2	0	103	235
10 45 AM	0	0	0	0	6	0	0	109	6	0	0	115	0	0	0	0	1	0	8	102	0	0	0	108	223
Hourly Total	1	0	1	0	19	2	0	421	43	0	2	464	0	0	0	0	10	0	27	415	0	2	0	444	910
11 00 AM	1	0	0	0	5	1	0	92	11	0	0	103	0	0	0	0	1	0	7	104	0	0	1	111	215
11 15 AM	0	0	0	0	3	0	0	103	6	0	0	109	0	0	0	0	6	0	1	95	0	0	0	96	205
11 30 AM	0	0	1	0	7	1	0	100	14	0	0	114	0	0	0	0	4	0	9	110	0	0	2	119	234
11 45 AM	0	0	0	0	9	0	0	116	8	0	0	124	0	0	0	0	5	0	5	119	0	0	1	124	248
Hourly Total	1	0	1	0	24	2	0	413	37	0	0	450	0	0	0	0	16	0	22	428	0	0	4	450	902
12 00 PM	0	0	0	0	9	0	0	107	10	0	1	117	0	0	0	0	9	0	9	96	0	0	1	105	222
12 15 PM	0	0	0	0	7	0	0	130	12	0	0	142	0	0	0	0	1	0	4	122	0	0	0	126	268
12 30 PM	0	0	0	0	8	0	0	130	14	0	0	144	0	0	0	0	1	0	10	95	0	0	0	105	249
12 45 PM	0	0	0	0	6	0	0	101	16	0	0	117	0	0	0	0	0	0	7	130	0	0	0	137	254
Hourly Total	0	0	0	0	30	0	0	468	52	0	1	520	0	0	0	0	11	0	30	443	0	0	1	473	993
1 00 PM	1	0	0	0	3	1	0	110	12	0	0	122	0	0	0	0	0	0	3	116	0	0	0	119	242
1 15 PM	0	0	0	0	4	0	0	103	9	0	0	112	0	0	0	0	3	0	5	127	0	0	0	132	244
1 30 PM	0	0	0	0	11	0	0	107	12	0	0	119	0	0	0	0	2	0	5	115	0	0	0	120	239
1 45 PM	1	0	0	0	4	1	0	116	10	0	0	126	0	0	0	0	0	0	9	117	0	0	0	126	253
Hourly Total	2	0	0	0	22	2	0	436	43	0	0	479	0	0	0	0	5	0	22	475	0	0	0	497	978

2 00 PM	0	0	0	0	14	0	0	118	13	0	1	131	0	0	0	0	3	0	4	141	0	0	2	145	276
2 15 PM	0	0	0	0	4	0	0	128	14	0	0	142	0	0	0	0	4	0	5	123	0	0	0	128	270
2 30 PM	0	0	0	0	12	0	0	121	14	0	0	135	0	0	0	0	1	0	10	120	0	0	0	130	265
2 45 PM	0	0	0	0	6	0	0	133	17	0	0	150	0	0	1	0	1	1	7	114	0	1	0	122	273
Hourly Total	0	0	0	0	36	0	0	500	58	0	1	558	0	0	1	0	9	1	26	498	0	1	2	525	1084
3 00 PM	1	0	0	0	15	1	0	116	26	1	0	143	0	0	0	0	3	0	6	113	0	0	0	119	262
3 15 PM	0	0	0	0	15	0	0	131	31	0	0	162	0	0	0	0	8	0	9	119	0	0	0	128	290
3 30 PM	0	0	0	0	35	0	0	52	17	0	0	69	0	0	0	0	104	0	2	76	0	0	2	78	147
3 45 PM	0	0	0	0	48	0	0	111	26	0	0	137	0	0	0	0	13	0	10	140	0	0	0	150	287
Hourly Total	1	0	0	0	177	1	0	410	100	1	0	511	0	0	0	0	134	0	27	448	0	0	2	475	987
4 00 PM	0	0	0	0	22	0	0	115	12	0	0	127	0	0	0	0	15	0	7	117	0	0	0	124	251
4 15 PM	0	0	0	0	16	0	0	110	20	0	0	130	0	0	0	0	6	0	9	138	0	0	1	145	275
4 30 PM	0	0	0	0	18	0	0	126	19	0	0	145	0	0	0	0	10	0	9	132	0	0	0	141	286
4 45 PM	0	0	1	0	12	1	0	131	9	0	0	140	0	0	0	0	7	0	5	157	0	0	0	162	303
Hourly Total	0	0	1	0	68	1	0	482	60	0	0	542	0	0	0	0	42	0	30	542	0	0	1	572	1115
5 00 PM	0	0	0	0	8	0	0	142	15	0	0	157	0	0	0	0	2	0	1	152	0	0	0	153	310
5 15 PM	1	0	0	0	10	1	0	138	11	0	0	149	0	0	0	0	1	0	5	150	0	0	0	155	305
5 30 PM	0	0	0	0	12	0	0	125	5	0	0	130	0	0	0	0	3	0	3	114	0	0	0	117	247
5 45 PM	0	0	0	0	9	0	0	123	10	0	0	133	0	0	0	0	2	0	5	138	0	0	0	143	276
Hourly Total	1	0	0	0	44	1	0	528	41	0	0	569	0	0	0	0	8	0	14	554	0	0	0	568	1138
6 00 PM	0	0	0	0	5	0	0	130	8	0	0	138	0	0	0	0	1	0	4	121	0	0	0	125	263
6 15 PM	0	0	0	0	5	0	0	115	10	0	0	125	0	0	0	0	0	0	5	131	0	0	0	136	261
6 30 PM	1	0	0	0	3	1	0	110	7	0	0	117	0	0	0	0	2	0	4	119	0	0	0	123	241
6 45 PM	0	0	0	0	1	0	0	84	5	0	0	89	0	0	0	0	3	0	6	101	0	0	0	107	208
Hourly Total	1	0	0	0	14	1	0	449	28	0	0	477	0	0	0	0	6	0	19	472	0	0	0	491	969
Grand Total	11	0	4	0	565	15	0	5314	658	1	4	5973	0	0	1	0	339	1	293	5637	0	4	11	5934	11923
Approach %	73 3	0 0	26 7	0 0		-	0 0	89 0	11 0	0 0	-	-	0 0	0 0	100 0	0 0	-	-	4 8	95 0	0 0	0 1	-	-	-
Total %	0 1	0 0	0 0	0 0	-	0 1	0 0	44 6	5 5	0 0	-	50 1	0 0	0 0	0 0	0 0	-	0 0	2 5	47 3	0 0	0 0		49 8	-
Lights	11	0	4	0	-	15	0	4855	655	1	-	5511	0	0	1	0	-	1	293	5158	0	4	-	5455	10982
% Lights	100 0	-	100 0	-	-	100 0	-	91 4	99 5	100 0		92 3	-	-	100 0	-	-	100 0	100 0	91 5	-	100 0	-	91 9	92 1
Buses	0	0	0	0	-	0	0	83	0	0	-	83	0	0	0	0	-	0	0	83	0	0		83	166
% Buses	0 0	-	0 0	-	-	0 0	-	1 6	0 0	0 0	-	1 4	-	-	0 0	-	-	0 0	0 0	1 5	-	0 0	-	1 4	1 4
Single-Unit Trucks	0	0	0	0	-	0	0	204	3	0	-	207	0	0	0	0	-	0	0	185	0	0		185	392
% Single-Unit Trucks	0 0	-	0 0	-	-	0 0	-	3 8	0 5	0 0	-	3 5	-	-	0 0	-	-	0 0	0 0	3 3	-	0 0		3 1	3 3
Articulated Trucks	0	0	0	0		0	0	168	0	0		168	0	0	0	0	-	0	0	208	0	0	-	208	376
% Articulated Trucks	0 0	-	0 0	-	-	0 0	-	3 2	0 0	0 0	-	2 8	-	-	0 0	-	-	0 0	0 0	3 7	-	0 0		3 5	3 2
Bicycles on Road	0	0	0	0	-	0	0	4	0	0		4	0	0	0	0		0	0	3	0	0		3	7
% Bicycles on Road	0 0	-	0 0	-		0 0	-	0 1	0 0	0 0	-	0 1	-	-	0 0	-		0 0	0 0	0 1	-	0 0	-	0 1	0 1
Bicycles on Crosswalk	-	-	-	-	27	-	-	-	-	-	0	-	-	-	-	-	10	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	4 9	-	-	-	-	-	0 0	-	-	-	-	-	2 9	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	-	538	-	-	-	-	-	4	-	-	-	-	-	329	-	-	-	-	-	11	-	-
% Pedestrians	-	-	-	-	95 2	-	-	-	-	-	100 0	-	-	-	-	-	97 1	-	-	-	-	-	100 0	-	-

TERRA
ENGINEERING LTD.
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & MHS East Driveway
Site Code
Start Date 12/14/2021



Turning Movement Data Plot

TERRA ENGINEERING LTD
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering com

Count Name 47th St & MHS East Driveway
Site Code
Start Date 12/14/2021

Turning Movement Peak Hour Data (7:15 AM)

Start Time	McDonald's Southbound						47th St Westbound						MHS East Driveway Northbound						47th St Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
7 15 AM	0	0	0	0	21	0	0	105	15	0	0	120	0	0	0	0	22	0	11	123	0	0	0	134	254
7 30 AM	0	0	0	0	24	0	0	131	33	0	0	164	0	0	0	0	30	0	7	118	0	0	0	125	289
7 45 AM	0	0	0	0	37	0	0	100	21	0	0	121	0	0	0	0	24	0	9	138	0	1	0	148	269
8 00 AM	0	0	0	0	9	0	0	137	24	0	0	161	0	0	0	0	6	0	9	133	0	0	0	142	303
Total	0	0	0	0	91	0	0	473	93	0	0	566	0	0	0	0	82	0	36	512	0	1	0	549	1115
Approach %	0 0	0 0	0 0	0 0	-	-	0 0	83 6	16 4	0 0	-	-	0 0	0 0	0 0	0 0	-	-	6 6	93 3	0 0	0 2	-	-	-
Total %	0 0	0 0	0 0	0 0	-	0 0	0 0	42 4	8 3	0 0	-	50 8	0 0	0 0	0 0	0 0	-	0 0	3 2	45 9	0 0	0 1	-	49 2	-
PHF	0 000	0 000	0 000	0 000	-	0 000	0 000	0 863	0 705	0 000	-	0 863	0 000	0 000	0 000	0 000	-	0 000	0 818	0 928	0 000	0 250	-	0 927	0 920
Lights	0	0	0	0	-	0	0	442	93	0	-	535	0	0	0	0	-	0	36	471	0	1	-	508	1043
% Lights	-	-	-	-	-	-	-	93 4	100 0	-	-	94 5	-	-	-	-	-	-	100 0	92 0	-	100 0	-	92 5	93 5
Buses	0	0	0	0	-	0	0	12	0	0	-	12	0	0	0	0	-	0	0	13	0	0	-	13	25
% Buses	-	-	-	-	-	-	-	2 5	0 0	-	-	2 1	-	-	-	-	-	-	0 0	2 5	-	0 0	-	2 4	2 2
Single-Unit Trucks	0	0	0	0	-	0	0	8	0	0	-	8	0	0	0	0	-	0	0	14	0	0		14	22
% Single-Unit Trucks	-	-	-	-	-	-	-	1 7	0 0	-	-	1 4	-	-	-	-	-	-	0 0	2 7	-	0 0	-	2 6	2 0
Articulated Trucks	0	0	0	0	-	0	0	10	0	0	-	10	0	0	0	0	-	0	0	14	0	0	-	14	24
% Articulated Trucks	-	-	-	-	-	-	-	2 1	0 0	-	-	1 8	-	-	-	-	-	-	0 0	2 7	-	0 0	-	2 6	2 2
Bicycles on Road	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	-	-	-	-	-	-	-	0 2	0 0	-	-	0 2	-	-	-	-	-	-	0 0	0 0	-	0 0	-	0 0	0 1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0 0	-	-	-	-	-	-	-	-	-	-	-	2 4	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	91	-	-	-	-	-	0	-	-	-	-	-	80	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	120 0	-	-	-	-	-		-	-	-	-	-	97 6	-	-	-	-	-		-	-

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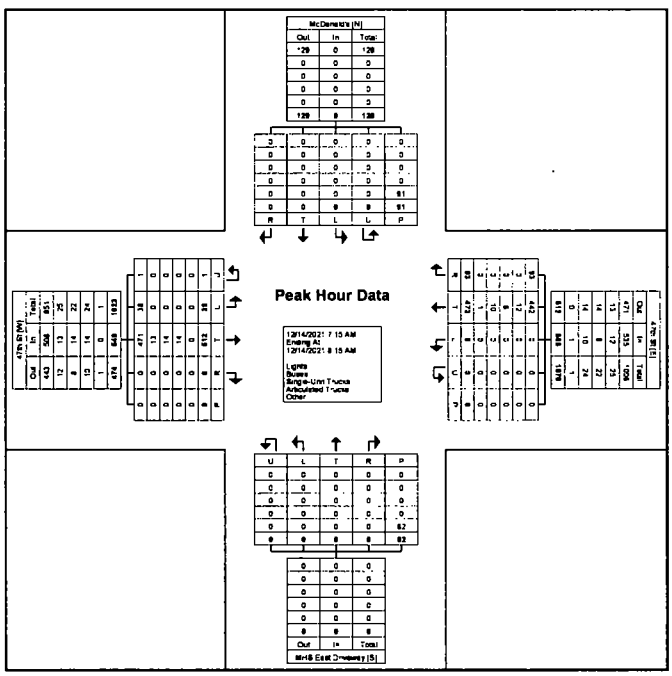
Count Name 47th St & MHS East Driveway
Site Code
Start Date 12/14/2021
Page No 5



Turning Movement Peak Hour Data Plot (7:15 AM)

TERRA ENGINEERING LTD
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & MHS East Driveway
Site Code
Start Date 12/14/2021

Turning Movement Peak Hour Data (4:30 PM)

Start Time	McDonald's Southbound						47th St Westbound						MHS East Driveway Northbound						47th St Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
4 30 PM	0	0	0	0	19	0	0	126	19	0	0	145	0	0	0	0	19	0	9	132	0	0	0	141	286
4 45 PM	0	0	1	0	12	1	0	131	9	0	0	140	0	0	0	0	2	0	5	157	0	0	0	162	303
5 00 PM	0	0	0	0	8	0	0	142	15	0	0	157	0	0	0	0	2	0	1	152	0	0	0	153	310
5 15 PM	1	0	0	0	10	1	0	138	11	0	0	149	0	0	0	0	1	0	5	150	0	0	0	155	305
Total	1	0	1	0	49	2	0	537	54	0	0	591	0	0	0	0	24	0	20	591	0	0	0	611	1204
Approach %	50 0	0 0	50 0	0 0	-	-	0 0	90 9	9 1	0 0	-	-	0 0	0 0	0 0	0 0	-	-	3 3	96 7	0 0	0 0		-	-
Total %	0 1	0 0	0 1	0 0	-	0 2	0 0	44 8	4 5	0 0	-	49 1	0 0	0 0	0 0	0 0	-	0 0	1 7	49 1	0 0	0 0	-	50 7	-
PHF	0 250	0 000	0 250	0 000	-	0 500	0 000	0 945	0 711	0 000	-	0 941	0 000	0 000	0 000	0 000	-	0 000	0 556	0 941	0 000	0 000	-	0 943	0 971
Lights	1	0	1	0	-	2	0	516	54	0	-	570	0	0	0	0	-	0	20	568	0	0	-	588	1160
% Lights	100 0	-	100 0	-	-	100 0	-	96 1	100 0	-	-	96 4	-	-	-	-	-	-	100 0	96 1	-	-	-	96 2	96 3
Buses	0	0	0	0	-	0	0	4	0	0	-	4	0	0	0	0	-	0	0	5	0	0		5	9
% Buses	0 0	-	0 0	-	-	0 0	-	0 7	0 0	-	-	0 7	-	-	-	-	-	-	0 0	0 8	-	-	-	0 8	0 7
Single-Unit Trucks	0	0	0	0		0	0	10	0	0	-	10	0	0	0	0	-	0	0	9	0	0		9	19
% Single-Unit Trucks	0 0	-	0 0	-	-	0 0	-	1 9	0 0	-	-	1 7	-	-	-	-	-	-	0 0	1 5	-	-	-	1 5	1 6
Articulated Trucks	0	0	0	0	-	0	0	7	0	0		7	0	0	0	0	-	0	0	9	0	0	-	9	16
% Articulated Trucks	0 0	-	0 0	-	-	0 0	-	1 3	0 0	-	-	1 2	-	-	-	-	-	-	0 0	1 5	-	-	-	1 5	1 3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0		0	0	0	0	0	-	0	0
% Bicycles on Road	0 0	-	0 0	-	-	0 0	-	0 0	0 0	-	-	0 0	-	-	-	-	-	-	0 0	0 0	-	-	-	0 0	0 0
Bicycles on Crosswalk	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	8 3	-	-	-	-	-	-	-	-	-	-	-	4 2	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	44	-	-	-	-	-	0	-	-	-	-	-	23	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	91 7	-	-	-	-	-	-	-	-	-	-	-	95 8	-	-	-	-	-	-	-	-

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Count Name 47th St & MHS East Driveway
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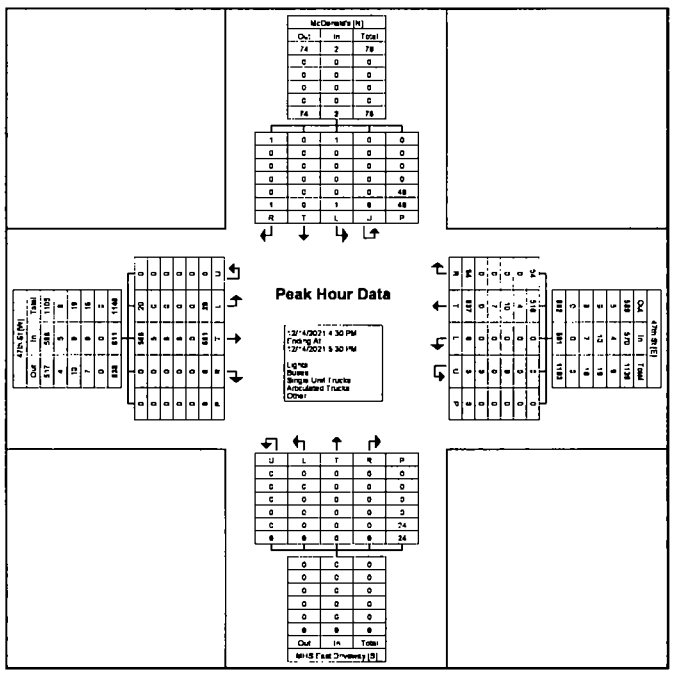


Turning Movement Peak Hour Data Plot (4:30 PM)

TERRA ENGINEERING LTD
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & MHS West Driveway
Site Code
Start Date 12/14/2021

Turning Movement Data

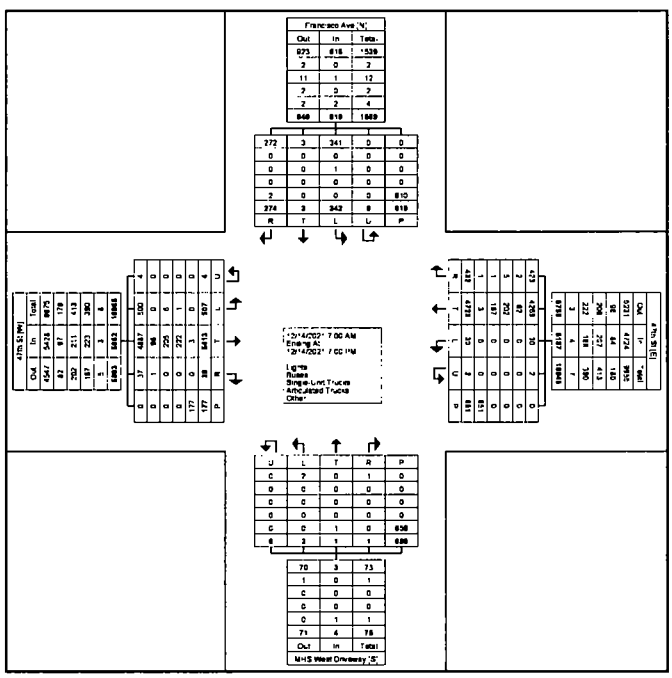
Start Time	Francisco Ave Southbound						47th St Westbound						MHS West Driveway Northbound						47th St Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
7 00 AM	4	0	5	0	0	9	0	68	3	0	[illegible]	71	0	0	0	0	[illegible]	0	3	64	1	0	0	68	148
7 15 AM	5	0	6	0	1	11	0	83	1	0	[illegible]	84	0	0	0	0	2	0	4	90	0	0	0	94	189
7 30 AM	6	0	8	0	1	14	1	85	3	0	0	89	0	0	0	0	[illegible]	0	3	82	1	0	[illegible]	86	189
7 45 AM	3	0	7	0	2	10	2	83	8	0	5	91	0	0	0	0	[illegible]	0	7	79	1	0	1	87	188
Hourly Total	18	0	26	0	4	44	3	299	13	0	7	315	0	0	0	0	7	0	17	315	3	0	3	335	684
8 00 AM	4	0	6	0	6	10	2	85	20	0	12	107	0	0	0	0	[illegible]	0	10	130	2	0	2	142	259
8 15 AM	9	0	6	0	14	15	3	78	23	1	33	105	0	0	0	0	32	0	23	122	5	0	9	150	270
8 30 AM	7	0	6	0	36	13	8	89	24	0	56	121	0	0	0	0	60	0	27	116	7	0	12	150	284
8 45 AM	18	0	10	0	35	28	2	88	11	0	94	101	1	0	0	0	37	1	20	129	5	1	11	155	285
Hourly Total	38	0	28	0	91	66	15	340	78	1	195	434	1	0	0	0	136	1	80	497	19	1	34	597	1098
9 00 AM	8	0	6	0	12	14	1	123	20	0	26	144	0	0	0	0	31	0	18	127	1	1	8	147	305
9 15 AM	5	0	10	0	5	15	0	81	10	0	2	91	0	0	0	0	3	0	10	118	1	0	[illegible]	129	235
9 30 AM	9	0	8	0	6	17	0	64	5	0	5	89	0	0	0	0	6	0	6	91	0	0	2	97	183
9 45 AM	13	0	9	0	5	22	1	90	4	0	4	95	0	0	0	0	5	0	6	115	0	0	3	121	238
Hourly Total	35	0	33	0	28	68	2	358	39	0	37	399	0	0	0	0	45	0	40	451	2	1	11	494	961
10 00 AM	7	0	5	0	[illegible]	12	0	81	3	0	0	84	0	0	0	0	0	0	9	109	0	0	0	118	214
10 15 AM	7	0	6	0	7	13	0	73	6	0	1	79	0	0	0	0	5	0	4	81	1	0	[illegible]	86	178
10 30 AM	11	0	4	0	[illegible]	15	0	100	7	0	10	107	0	0	0	0	0	0	9	93	2	0	[illegible]	104	226
10 45 AM	5	1	4	0	7	10	0	89	8	0	2	97	0	0	0	0	8	0	13	92	0	0	[illegible]	105	212
Hourly Total	30	1	19	0	16	50	0	343	24	0	13	367	0	0	0	0	18	0	35	375	3	0	3	413	830
11 00 AM	8	0	4	0	5	12	2	98	3	0	[illegible]	103	0	0	0	0	8	0	6	116	0	0	[illegible]	122	237
11 15 AM	3	0	6	0	6	9	0	90	3	0	[illegible]	93	0	0	0	0	5	0	3	107	1	0	[illegible]	111	213
11 30 AM	8	0	8	0	2	12	1	121	6	0	3	128	0	0	1	0	[illegible]	1	6	98	0	0	[illegible]	104	245
11 45 AM	9	0	4	0	5	13	0	100	5	0	4	105	0	0	0	0	5	0	10	97	0	0	[illegible]	107	225
Hourly Total	28	0	20	0	19	46	3	409	17	0	9	429	0	0	1	0	35	1	25	418	1	0	5	444	920
12 00 PM	5	0	6	0	2	11	0	93	4	0	0	97	0	0	0	0	5	0	11	106	0	1	[illegible]	118	226
12 15 PM	7	0	4	0	4	11	0	94	6	0	5	100	0	0	0	0	3	0	9	90	0	0	1	99	210
12 30 PM	4	0	6	0	6	10	0	99	4	0	4	103	0	0	0	0	15	0	8	114	0	0	1	122	235
12 45 PM	4	0	3	0	6	7	0	117	2	0	6	119	0	0	0	0	5	0	9	120	0	0	[illegible]	129	255
Hourly Total	20	0	19	0	18	39	0	403	16	0	15	419	0	0	0	0	28	0	37	430	0	1	4	468	926
1 00 PM	7	0	7	0	12	14	0	102	9	0	6	111	0	0	0	0	9	0	8	97	0	0	4	103	228
1 15 PM	5	1	4	0	5	10	0	123	5	0	[illegible]	128	0	0	0	0	[illegible]	0	5	120	1	0	0	126	264
1 30 PM	8	0	7	0	7	15	0	117	11	0	3	128	1	0	0	0	4	1	9	96	0	0	1	105	249
1 45 PM	6	0	9	0	6	15	0	101	4	0	3	105	0	0	0	0	3	0	10	131	0	0	0	141	261
Hourly Total	26	1	27	0	30	54	0	443	29	0	21	472	1	0	0	0	22	1	30	444	1	0	7	475	1002

2 00 PM	10	0	8	0	10	18	0	102	5	0	5	107	0	0	0	0	5	0	7	111	1	0	2	119	244
2 15 PM	8	0	5	0	9	13	1	90	13	0	4	104	0	0	0	0	4	0	4	121	0	0	3	125	242
2 30 PM	4	0	8	0	6	12	0	104	4	0	0	108	0	0	0	0	2	0	14	115	0	0	2	129	249
2 45 PM	8	0	4	0	7	10	1	106	11	0	0	118	0	0	0	0	1	0	2	118	0	0	2	120	248
Hourly Total	28	0	25	0	32	53	2	402	33	0	9	437	0	0	0	0	12	0	27	465	1	0	8	493	983
3 00 PM	3	0	2	0	8	5	0	110	4	0	0	114	0	0	0	0	2	0	11	143	0	0	0	154	273
3 15 PM	8	0	2	0	5	10	0	116	8	0	2	124	0	0	0	0	3	0	16	119	0	0	0	135	269
3 30 PM	7	0	3	0	5	10	2	108	13	0	3	121	0	0	0	0	2	0	9	123	0	0	0	132	263
3 45 PM	9	0	5	0	7	14	0	117	15	0	3	132	0	0	0	0	5	0	8	117	0	0	0	125	271
Hourly Total	27	0	12	0	25	39	2	449	40	0	8	491	0	0	0	0	12	0	44	502	0	0	0	546	1076
4 00 PM	7	1	4	0	14	12	0	97	18	1	0	116	0	0	0	0	6	0	12	120	3	0	2	135	263
4 15 PM	3	0	4	0	22	7	0	110	19	0	8	129	0	0	0	0	10	0	17	126	1	0	2	144	280
4 30 PM	15	0	10	0	192	25	0	45	9	0	216	54	0	1	0	0	182	1	7	84	1	0	52	72	152
4 45 PM	14	0	11	0	29	25	1	98	14	0	40	113	0	0	0	0	60	0	10	123	0	1	15	134	272
Hourly Total	39	1	29	0	256	69	1	350	60	1	264	412	0	1	0	0	258	1	46	433	5	1	71	485	967
5 00 PM	7	0	4	0	19	11	0	101	14	0	12	115	0	0	0	0	18	0	19	117	3	0	7	139	265
5 15 PM	9	0	5	0	9	14	1	111	4	0	4	116	0	0	0	0	4	0	17	137	0	0	2	154	284
5 30 PM	9	0	7	0	15	16	1	117	9	0	40	127	0	0	0	0	53	0	15	131	0	0	13	146	289
5 45 PM	6	0	5	0	10	11	0	115	10	0	6	125	0	0	0	0	6	0	24	157	0	0	4	181	317
Hourly Total	31	0	21	0	56	52	2	444	37	0	62	483	0	0	0	0	79	0	75	542	3	0	26	620	1155
6 00 PM	9	0	3	0	11	12	0	139	10	0	2	149	0	0	0	0	3	0	10	142	0	0	0	152	313
6 15 PM	5	0	5	0	8	10	0	122	11	0	2	133	0	0	0	0	3	0	12	150	0	0	2	162	305
6 30 PM	3	0	4	0	13	7	0	110	14	0	5	124	0	0	0	0	8	0	21	113	0	0	5	134	265
6 45 PM	7	0	3	0	3	10	0	112	11	0	2	123	0	0	0	0	5	0	8	136	0	0	0	144	277
Hourly Total	24	0	15	0	35	39	0	483	46	0	11	529	0	0	0	0	19	0	51	541	0	0	7	592	1160
Grand Total	342	3	274	0	610	619	30	4723	432	2	651	5187	2	1	1	0	659	4	507	5413	38	4	177	5982	11772
Approach %	55 3	0 5	44 3	0 0	-	-	0 6	91 1	8 3	0 0	-	-	50 0	25 0	25 0	0 0	-	-	8 5	90 8	0 6	0 1	-	-	-
Total %	2 9	0 0	2 3	0 0	-	5 3	0 3	40 1	3 7	0 0	-	44 1	0 0	0 0	0 0	0 0	-	0 0	4 3	46 0	0 3	0 0	-	50 8	-
Lights	341	3	272	0	-	616	30	4269	423	2	-	4724	2	0	1	0	-	3	500	4887	37	4	-	5428	10771
% Lights	99 7	100 0	99 3	-	-	99 5	100 0	90 4	97 9	100 0	-	91 1	100 0	0 0	100 0	-	-	75 0	98 6	90 3	97 4	100 0	-	91 0	91 5
Buses	0	0	0	0	-	0	0	82	2	0	-	84	0	0	0	0	-	0	0	96	1	0	-	97	181
% Buses	0 0	0 0	0 0	-		0 0	0 0	1 7	0 5	0 0	-	1 6	0 0	0 0	0 0	-	-	0 0	0 0	1 8	2 6	0 0	-	1 6	1 5
Single-Unit Trucks	1	0	0	0	-	1	0	202	5	0	-	207	0	0	0	0	-	0	6	205	0	0	-	211	419
% Single-Unit Trucks	0 3	0 0	0 0	-	-	0 2	0 0	4 3	1 2	0 0	-	4 0	0 0	0 0	0 0	-	-	0 0	1 2	3 8	0 0	0 0	-	3 5	3 6
Articulated Trucks	0	0	0	0		0	0	167	1	0	-	168	0	0	0	0	-	0	1	222	0	0	-	223	391
% Articulated Trucks	0 0	0 0	0 0	-	-	0 0	0 0	3 5	0 2	0 0	-	3 2	0 0	0 0	0 0	-	-	0 0	0 2	4 1	0 0	0 0	-	3 7	3 3
Bicycles on Road	0	0	2	0		2	0	3	1	0	-	4	0	1	0	0	-	1	0	3	0	0	-	3	10
% Bicycles on Road	0 0	0 0	0 7	-	-	0 3	0 0	0 1	0 2	0 0	-	0 1	0 0	100 0	0 0	-	-	25 0	0 0	0 1	0 0	0 0	-	0 1	0 1
Bicycles on Crosswalk	-	-	-	-	27	-	-	-	-	-	1	-	-	-	-	-	12	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	4 4	-	-	-	-	-	0 2	-	-	-	-	-	1 8	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	-	583	-	-	-	-	-	650	-	-	-	-	-	647	-	-	-	-	-	177	-	-
% Pedestrians	-	-	-	-	95 6	-	-	-	-	-	99 8	-	-	-	-	-	98 2	-	-	-	-	-	100 0	-	-

TERRA
ENGINEERING LTD.
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & MHS West Driveway
Site Code
Start Date 12/14/2021



Turning Movement Data Plot

TERRA ENGINEERING LTD
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & MHS West Drveway
Site Code
Start Date 12/14/2021

Turning Movement Peak Hour Data (8:15 AM)

Start Time	Francesco Ave Southbound						47th St Westbound						MHS West Drveway Northbound						47th St Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
8 15 AM	9	0	6	0	14	15	3	78	23	1	33	105	0	0	0	0	30	0	23	122	5	0	9	150	270
8 30 AM	7	0	6	0	36	13	8	89	24	0	56	121	0	0	0	0	60	0	27	116	7	0	12	150	284
8 45 AM	18	0	10	0	35	28	2	88	11	0	94	101	1	0	0	0	37	1	20	129	5	1	11	155	285
9 00 AM	8	0	6	0	12	14	1	123	20	0	26	144	0	0	0	0	31	0	18	127	1	1	5	147	305
Total	42	0	28	0	97	70	14	378	78	1	209	471	1	0	0	0	158	1	88	494	18	2	37	602	1144
Approach %	60 0	0 0	40 0	0 0	-	-	3 0	80 3	16 6	0 2	-	-	100 0	0 0	0 0	0 0	-	-	14 6	82 1	3 0	0 3	-	-	-
Total %	3 7	0 0	2 4	0 0	-	6 1	1 2	33 0	6 8	0 1	-	41 2	0 1	0 0	0 0	0 0	-	0 1	7 7	43 2	1 6	0 2	-	52 6	-
PHF	0 583	0 000	0 700	0 000	-	0 625	0 438	0 768	0 813	0 250	-	0 818	0 250	0 000	0 000	0 000	-	0 250	0 815	0 957	0 643	0 500	-	0 971	0 938
Lights	42	0	28	0	-	70	14	350	77	1	-	442	1	0	0	0	-	1	88	453	18	2	-	561	1074
% Lights	100 0	-	100 0	-	-	100 0	100 0	92 6	98 7	100 0	-	93 8	100 0	-	-	-	-	100 0	100 0	91 7	100 0	100 0	-	93 2	93 9
Buses	0	0	0	0	-	0	0	10	1	0	-	11	0	0	0	0	-	0	0	12	0	0	-	12	23
% Buses	0 0	-	0 0	-	-	0 0	0 0	2 6	1 3	0 0	-	2 3	0 0	-	-	-	-	0 0	0 0	2 4	0 0	0 0	-	2 0	2 0
Single-Unit Trucks	0	0	0	0	-	0	0	8	0	0	-	8	0	0	0	0	-	0	0	15	0	0	-	15	23
% Single-Unit Trucks	0 0	-	0 0	-	-	0 0	0 0	2 1	0 0	0 0	-	1 7	0 0	-	-	-	-	0 0	0 0	3 0	0 0	0 0	-	2 5	2 0
Articulated Trucks	0	0	0	0		0	0	10	0	0		10	0	0	0	0	-	0	0	14	0	0	-	14	24
% Articulated Trucks	0 0	-	0 0	-	-	0 0	0 0	2 6	0 0	0 0	-	2 1	0 0	-	-	-	-	0 0	0 0	2 8	0 0	0 0	-	2 3	2 1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	0 0	-	0 0	0 0	-	-	-	-	0 0	0 0	0 0	0 0	0 0	-	0 0	0 0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-	-	-	-	0 6	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	-	97	-	-	-	-	-	209	-	-	-	-	-	157	-	-	-	-	-	37	-	-
% Pedestrians	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-	-	-	-	99 4	-	-	-	-	-	100 0	-	-

TERRA ENGINEERING LTD.
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Saint Louis, Missouri, United States 63146
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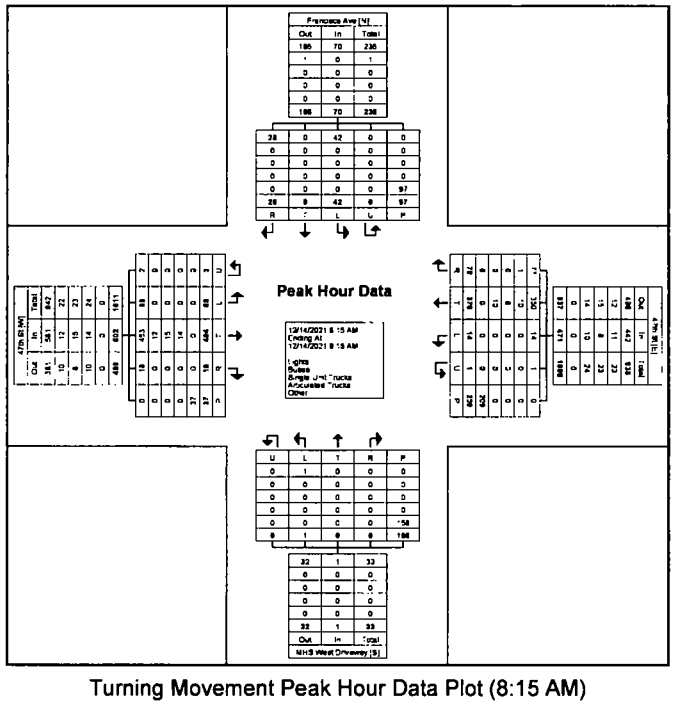
Count Name 47th St & MHS West Driveway
Site Code
Start Date 12/14/2021
Page No 5



Turning Movement Peak Hour Data Plot (8:15 AM)

TERRA ENGINEERING LTD
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & MHS West Driveway
Site Code
Start Date 12/14/2021

Turning Movement Peak Hour Data (5:30 PM)

Start Time	Francisco Ave Southbound						47th St Westbound						MHS West Driveway Northbound						47th St Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
5 30 PM	9	0	7	0	18	16	1	117	9	0	40	127	0	0	0	0	53	0	15	131	0	0	13	146	289
5 45 PM	6	0	5	0	10	11	0	115	10	0	6	125	0	0	0	0	6	0	24	157	0	0	4	181	317
6 00 PM	9	0	3	0	11	12	0	139	10	0	2	149	0	0	0	0	3	0	10	142	0	0	0	152	313
6 15 PM	5	0	5	0	8	10	0	122	11	0	2	133	0	0	0	0	3	0	12	150	0	0	2	162	305
Total	29	0	20	0	47	49	1	493	40	0	50	534	0	0	0	0	65	0	61	580	0	0	19	641	1224
Approach %	59 2	0 0	40 8	0 0	-	-	0 2	92 3	7 5	0 0		-	0 0	0 0	0 0	0 0	-	-	9 5	90 5	0 0	0 0	-	-	-
Total %	2 4	0 0	1 6	0 0	-	4 0	0 1	40 3	3 3	0 0	-	43 6	0 0	0 0	0 0	0 0	-	0 0	5 0	47 4	0 0	0 0	-	52 4	-
PHF	0 806	0 000	0 714	0 000	-	0 766	0 250	0 887	0 909	0 000	-	0 898	0 000	0 000	0 000	0 000		0 000	0 635	0 924	0 000	0 000	-	0 885	0 985
Lights	29	0	20	0	-	49	1	471	40	0	-	512	0	0	0	0	-	0	61	557	0	0	-	618	1179
% Lights	100 0	-	100 0	-		100 0	100 0	95 5	100 0	-	-	95 9	-	-	-	-	-	-	100 0	96 0	-	-	-	96 4	96 3
Buses	0	0	0	0	-	0	0	4	0	0	-	4	0	0	0	0	-	0	0	5	0	0	-	5	9
% Buses	0 0	-	0 0	-	-	0 0	0 0	0 8	0 0	-	-	0 7	-	-	-	-		-	0 0	0 9	-	-	-	0 8	0 7
Single-Unit Trucks	0	0	0	0	-	0	0	11	0	0	-	11	0	0	0	0		0	0	9	0	0	-	9	20
% Single-Unit Trucks	0 0	-	0 0	-	-	0 0	0 0	2 2	0 0	-	-	2 1	-	-	-	-	-	-	0 0	1 6	-	-	-	1 4	1 6
Articulated Trucks	0	0	0	0	-	0	0	7	0	0		7	0	0	0	0	-	0	0	9	0	0		9	16
% Articulated Trucks	0 0	-	0 0	-	-	0 0	0 0	1 4	0 0	-	-	1 3	-	-	-	-	-	-	0 0	1 6	-	-	-	1 4	1 3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0		0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0 0	-	0 0	-	-	0 0	0 0	0 0	0 0	-	-	0 0	-	-	-	-	-	-	0 0	0 0	-	-	-	0 0	0 0
Bicycles on Crosswalk	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	8 5	-	-	-	-	-	0 0	-	-	-	-	-	1 5	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	-	43	-	-	-	-	-	50	-	-	-	-	-	64	-	-	-	-	-	19	-	-
% Pedestrians	-	-	-	-	91 5	-	-	-	-	-	100 0	-	-	-	-	-	98 5	-	-	-	-	-	100 0	-	-

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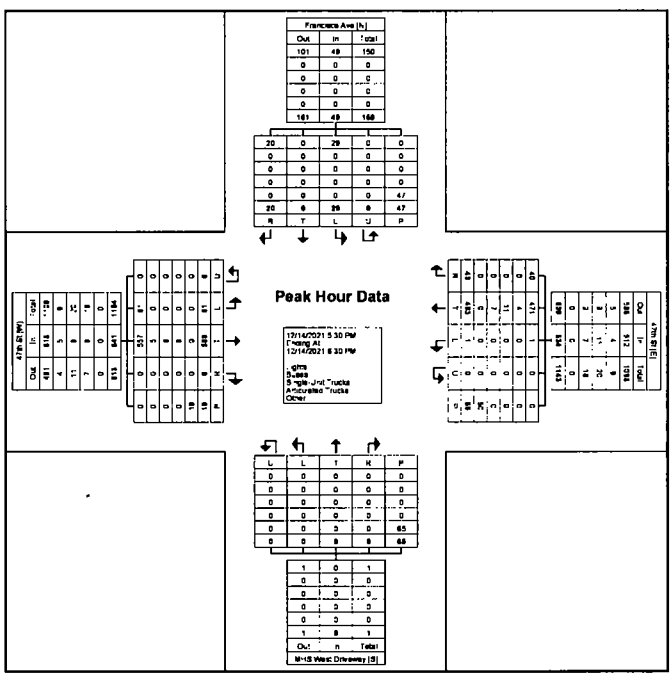
Count Name 47th St & MHS West Driveway
Site Code
Start Date 12/14/2021
Page No 7



Turning Movement Peak Hour Data Plot (5:30 PM)

TERRA ENGINEERING LTD
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1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
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Count Name 47th St & Mozart St
Site Code
Start Date 12/14/2021
Page No 1

Turning Movement Data

Start Time	Mozart St Southbound						47th St Westbound						EHC Northbound						47th St Eastbound						Int Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
7 00 AM	4	0	6	0	7	10	0	111	0	0	0	111	0	0	0	0	2	0	0	124	2	0	2	126	247
7 15 AM	4	0	9	0	17	13	0	110	0	0	0	110	1	0	2	0	18	3	0	122	1	0	0	123	249
7 30 AM	5	0	15	0	21	20	2	145	0	0	0	147	8	0	5	0	27	11	0	111	5	0	0	116	294
7 45 AM	3	2	22	0	27	27	1	90	0	0	1	91	12	0	4	0	23	16	0	135	1	0	0	136	270
Hourly Total	16	2	52	0	72	70	3	456	0	0	1	458	19	0	11	0	70	30	0	492	9	0	2	501	1060
8 00 AM	3	0	8	0	8	11	3	142	0	0	0	145	7	0	2	0	6	9	0	123	10	0	0	133	298
8 15 AM	2	2	5	0	5	9	1	97	0	0	0	98	1	0	0	0	1	1	0	111	4	0	0	115	223
8 30 AM	4	0	4	0	6	8	0	83	0	0	0	83	0	0	1	0	1	1	0	95	2	0	0	97	189
8 45 AM	2	2	1	0	5	5	1	108	0	0	1	107	2	0	6	0	3	8	0	114	5	0	0	119	239
Hourly Total	11	4	18	0	24	33	5	428	0	0	1	433	10	0	9	0	11	19	0	443	21	0	0	464	949
9 00 AM	1	0	2	0	4	3	0	93	0	0	0	93	6	0	3	0	3	9	0	109	5	0	0	114	219
9 15 AM	2	0	6	0	6	8	1	82	0	0	0	83	3	0	7	0	2	10	0	85	2	0	0	87	188
9 30 AM	1	0	7	0	3	8	1	113	0	0	0	114	5	0	4	0	4	9	0	102	0	0	0	102	233
9 45 AM	7	0	6	0	5	13	1	99	0	0	0	100	2	0	5	0	2	7	0	94	1	0	0	95	215
Hourly Total	11	0	21	0	13	32	3	387	0	0	0	390	16	0	19	0	9	35	0	390	8	0	0	398	855
10 00 AM	1	0	5	0	5	6	0	98	0	0	0	98	2	0	3	0	3	5	0	106	1	0	0	107	216
10 15 AM	2	0	6	0	7	8	1	104	0	0	0	105	2	0	5	0	3	7	0	107	3	0	0	110	230
10 30 AM	1	0	3	0	3	4	0	123	0	0	0	123	3	0	1	0	5	4	0	95	5	0	1	100	231
10 45 AM	1	0	4	0	7	5	2	107	0	0	0	109	5	0	3	0	1	8	0	100	2	0	0	102	224
Hourly Total	5	0	18	0	18	23	3	432	0	0	0	435	12	0	12	0	12	24	0	408	11	0	1	419	901
11 00 AM	0	0	2	0	5	2	0	94	0	0	0	94	5	0	4	0	0	9	0	101	4	0	0	105	210
11 15 AM	1	0	3	0	3	4	0	99	0	0	0	99	2	0	4	0	1	6	0	92	2	0	0	94	203
11 30 AM	0	0	5	0	6	5	0	109	0	0	0	109	1	0	3	0	7	4	0	110	1	0	0	111	229
11 45 AM	2	0	2	0	6	4	2	119	0	0	0	121	2	0	1	0	3	3	0	117	3	0	0	120	248
Hourly Total	3	0	12	0	20	15	2	421	0	0	0	423	10	0	12	0	11	22	0	420	10	0	1	430	890
12 00 PM	2	0	2	0	6	4	3	108	0	0	0	111	8	0	5	0	8	13	0	93	3	0	0	98	224
12 15 PM	1	0	9	0	7	10	0	134	0	0	0	134	2	0	4	0	1	6	0	119	2	0	0	121	271
12 30 PM	1	1	9	0	7	11	1	130	0	0	0	131	5	0	5	0	5	10	0	91	4	0	0	95	247
12 45 PM	8	1	4	0	5	11	2	112	0	0	1	114	1	0	9	0	9	10	0	124	6	0	0	130	265
Hourly Total	10	2	24	0	25	36	6	484	0	0	1	490	16	0	23	0	11	39	0	427	15	0	1	442	1007
1 00 PM	5	1	3	0	3	9	0	118	0	0	0	118	3	0	4	0	3	7	0	115	2	0	0	117	251
1 15 PM	1	0	4	0	4	5	1	103	0	0	0	104	3	0	2	0	2	5	0	123	4	0	0	127	241
1 30 PM	4	1	3	0	10	8	0	113	0	0	0	113	2	0	1	0	2	3	0	112	2	0	0	114	238
1 45 PM	3	0	6	0	4	9	2	118	0	0	0	120	4	0	1	0	0	5	0	116	3	0	0	119	253
Hourly Total	13	2	16	0	21	31	3	452	0	0	0	455	12	0	8	0	4	20	0	466	11	0	0	477	993

2 00 PM	3	0	4	0	12	7	0	123	0	0	0	123	2	0	5	0	4	7	0	140	0	0	0	140	277
2 15 PM	1	0	7	0	3	8	2	131	0	0	0	133	5	0	6	0	3	11	0	117	6	0	0	123	275
2 30 PM	2	0	7	0	12	9	2	123	0	0	2	125	5	0	7	0	1	12	0	113	7	0	0	120	266
2 45 PM	7	1	4	0	6	12	1	140	0	0	0	141	5	0	1	0	1	6	0	110	1	1	0	112	271
Hourly Total	13	1	22	0	33	36	5	517	0	0	2	522	17	0	19	0	9	36	0	480	14	1	0	495	1089
3 00 PM	3	1	11	0	14	15	2	127	0	0	0	129	7	0	4	0	4	11	0	115	2	0	0	117	272
3 15 PM	3	0	15	0	12	18	0	142	0	0	0	142	1	0	4	0	7	5	0	115	4	0	0	119	284
3 30 PM	10	2	19	0	60	31	3	43	0	0	1	46	6	0	2	0	105	8	0	73	3	0	0	76	161
3 45 PM	8	1	18	0	33	27	2	114	0	0	0	116	5	0	5	0	19	10	0	129	17	0	0	146	299
Hourly Total	24	4	63	0	119	91	7	426	0	0	1	433	19	0	15	0	136	34	0	432	26	0	0	458	1016
4 00 PM	7	1	6	0	14	14	2	116	0	0	0	118	5	0	10	0	20	15	0	110	8	0	0	118	265
4 15 PM	4	0	8	0	10	12	0	120	0	0	0	120	3	0	6	0	8	9	0	134	3	0	0	137	278
4 30 PM	3	2	11	0	13	16	1	128	0	0	1	129	8	0	10	0	19	18	0	132	1	0	0	133	298
4 45 PM	9	0	8	0	11	17	4	124	0	0	0	128	6	0	4	0	1	10	0	158	1	0	0	159	314
Hourly Total	23	3	33	0	48	59	7	488	0	0	1	495	22	0	30	0	47	52	0	534	13	0	0	547	1153
5 00 PM	7	0	8	0	8	15	0	143	0	0	0	143	4	0	7	0	3	11	0	150	1	0	0	151	320
5 15 PM	3	0	5	0	8	8	0	139	0	0	0	139	4	0	2	0	1	6	0	149	0	0	0	149	302
5 30 PM	4	0	5	0	16	9	0	124	0	0	0	124	1	0	3	0	3	4	0	113	0	0	0	113	250
5 45 PM	5	0	5	0	8	10	0	129	0	0	0	129	0	0	1	0	2	1	0	141	1	0	0	142	282
Hourly Total	19	0	23	0	41	42	0	535	0	0	0	535	9	0	13	0	9	22	0	553	2	0	0	555	1154
6 00 PM	4	0	2	0	5	6	0	132	0	0	0	132	4	0	3	0	0	7	0	119	1	0	0	120	265
6 15 PM	1	0	3	0	5	4	3	122	0	0	0	125	1	0	0	0	0	1	0	128	0	0	0	128	258
6 30 PM	2	0	4	0	3	6	0	111	0	0	0	111	0	0	0	0	0	0	0	122	0	0	0	122	239
6 45 PM	1	0	4	0	2	5	0	85	0	0	0	95	1	0	0	0	1	1	0	102	0	0	0	102	203
Hourly Total	8	0	13	0	15	21	3	460	0	0	0	463	6	0	3	0	1	9	0	471	1	0	0	472	965
Grand Total	156	18	315	0	447	489	47	5486	0	0	7	5533	168	0	174	0	329	342	0	5518	141	1	5	5658	12022
Approach %	31 9	3 7	64 4	0 0	-	-	0 8	99 2	0 0	0 0	-	-	49 1	0 0	50 9	0 0	-	-	0 0	97 5	2 5	0 0	-	-	-
Total %	1 3	0 1	2 6	0 0	-	4 1	0 4	45 6	0 0	0 0	-	46 0	1 4	0 0	1 4	0 0	-	2 8	0 0	45 9	1 2	0 0	-	47 1	-
Lights	153	18	312	0	-	483	46	5030	0	0	-	5076	168	0	169	0	-	337	0	5038	141	1	-	5180	11076
% Lights	98 1	100 0	99 0	-	-	98 8	97 9	91 7	-	-	-	91 7	100 0	-	97 1	-	-	98 5	-	91 3	100 0	100 0	-	91 6	92 1
Buses	0	0	0	0	-	0	0	82	0	0	-	82	0	0	0	0	-	0	0	84	0	0	-	84	166
% Buses	0 0	0 0	0 0	-	-	0 0	0 0	1 5	-	-	-	1 5	0 0	-	0 0	-	-	0 0	-	1 5	0 0	0 0	-	1 5	1 4
Single-Unit Trucks	3	0	3	0	-	6	1	207	0	0	-	208	0	0	4	0	-	4	0	183	0	0	-	183	401
% Single-Unit Trucks	1 9	0 0	1 0	-	-	1 2	2 1	3 8	-	-	-	3 8	0 0	-	2 3	-	-	1 2	-	3 3	0 0	0 0	-	3 2	3 3
Articulated Trucks	0	0	0	0	-	0	0	184	0	0	-	184	0	0	1	0	-	1	0	209	0	0	-	209	374
% Articulated Trucks	0 0	0 0	0 0	-	-	0 0	0 0	3 0	-	-	-	3 0	0 0	-	0 6	-	-	0 3	-	3 8	0 0	0 0	-	3 7	3 1
Bicycles on Road	0	0	0	0	-	0	0	3	0	0	-	3	0	0	0	0	-	0	0	2	0	0	-	2	5
% Bicycles on Road	0 0	0 0	0 0	-	-	0 0	0 0	0 1	-	-	-	0 1	0 0	-	0 0	-	-	0 0	-	0 0	0 0	0 0	-	0 0	0 0
Bicycles on Crosswalk	-	-	-	-	25	-	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	5 6	-	-	-	-	-	0 0	-	-	-	-	-	2 7	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	-	422	-	-	-	-	-	7	-	-	-	-	-	320	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	94 4	-	-	-	-	-	100 0	-	-	-	-	-	97 3	-	-	-	-	-	100 0	-	-

TERRA
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Terra Engineering
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Saint Louis, Missouri, United States 63146
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Count Name 47th St & Mozart St
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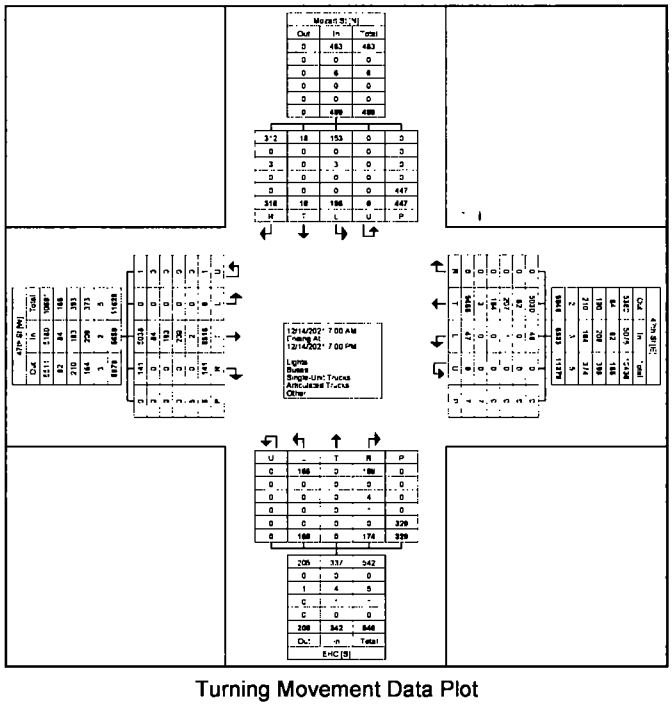
Start Date 12/14/2021
Page No 3



Turning Movement Data Plot

TERRA ENGINEERING LTD.
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name 47th St & Mozart St
Site Code
Start Date 12/14/2021

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Mozart St Southbound						47th St Westbound						EHC Northbound						47th St Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
7 15 AM	4	0	9	0	17	13	0	110	0	0	0	110	1	0	2	0	18	3	0	122	1	0	0	123	249
7 30 AM	5	0	15	0	21	20	2	145	0	0	0	147	6	0	5	0	27	11	0	111	5	0	0	116	294
7 45 AM	3	2	22	0	27	27	1	90	0	0	1	91	12	0	4	0	23	16	0	135	1	0	0	136	270
8 00 AM	3	0	8	0	8	11	3	142	0	0	0	145	7	0	2	0	6	9	0	123	10	0	0	133	298
Total	15	2	54	0	73	71	6	487	0	0	1	493	26	0	13	0	74	39	0	491	17	0	0	508	1111
Approach %	21 1	2 8	76 1	0 0	-	-	1 2	98 8	0 0	0 0	-	-	66 7	0 0	33 3	0 0	-	-	0 0	96 7	3 3	0 0	-	-	-
Total %	1 4	0 2	4 9	0 0	-	6 4	0 5	43 8	0 0	0 0	-	44 4	2 3	0 0	1 2	0 0	-	3 5	0 0	44 2	1 5	0 0	-	45 7	-
PHF	0 750	0 250	0 614	0 000	-	0 657	0 500	0 840	0 000	0 000	-	0 838	0 542	0 000	0 650	0 000	-	0 609	0 000	0 909	0 425	0 000	-	0 934	0 932
Lights	15	2	54	0	-	71	6	457	0	0	-	463	26	0	13	0	-	39	0	449	17	0	-	466	1039
% Lights	100 0	100 0	100 0	-	-	100 0	100 0	93 8	-	-	-	93 9	100 0	-	100 0	-	-	100 0	-	91 4	100 0	-		91 7	93 5
Buses	0	0	0	0	-	0	0	12	0	0	-	12	0	0	0	0	-	0	0	13	0	0		13	25
% Buses	0 0	0 0	0 0	-	-	0 0	0 0	2 5	-	-	-	2 4	0 0	-	0 0	-	-	0 0	-	2 6	0 0	-	-	2 6	2 3
Single-Unit Trucks	0	0	0	0	-	0	0	7	0	0	-	7	0	0	0	0		0	0	15	0	0	-	15	22
% Single-Unit Trucks	0 0	0 0	0 0	-	-	0 0	0 0	1 4	-	-	-	1 4	0 0	-	0 0	-	-	0 0	-	3 1	0 0	-	-	3 0	2 0
Articulated Trucks	0	0	0	0	-	0	0	10	0	0		10	0	0	0	0	-	0	0	14	0	0		14	24
% Articulated Trucks	0 0	0 0	0 0	-	-	0 0	0 0	2 1	-	-	-	2 0	0 0	-	0 0	-	-	0 0	-	2 9	0 0	-	-	2 8	2 2
Bicycles on Road	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0		0	0	0	0	0	-	0	1
% Bicycles on Road	0 0	0 0	0 0	-	-	0 0	0 0	0 2	-	-	-	0 2	0 0	-	0 0	-	-	0 0	-	0 0	0 0	-	-	0 0	0 1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-	-	-	-	0 0	-	-	-	-	-		-	-
Pedestrians	-	-	-	-	73	-	-	-	-	-	1	-	-	-	-	-	74	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-	-	-	-	100 0	-	-	-	-	-	-	-	-

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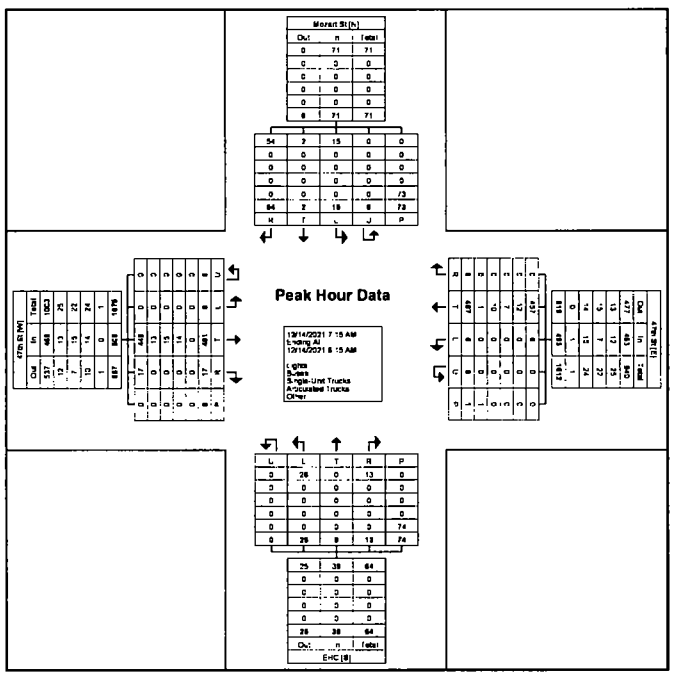

Turning Movement Peak Hour Data Plot (7:15 AM)

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Turning Movement Peak Hour Data (4.30 PM)

Start Time	Mozart St Southbound						47th St Westbound						EHC Northbound						47th St Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	Left	Thru	Right	U-Turn	Peds	App Total	
4 30 PM	3	2	11	0	13	16	1	128	0	0	1	129	8	0	10	0	15	18	0	132	1	0	0	133	296
4 45 PM	9	0	8	0	11	17	4	124	0	0	0	128	6	0	4	0	1	10	0	158	1	0	0	159	314
5 00 PM	7	0	8	0	8	15	0	143	0	0	0	143	4	0	7	0	3	11	0	150	1	0	0	151	320
5 15 PM	3	0	5	0	9	8	0	139	0	0	0	139	4	0	2	0	1	6	0	149	0	0	0	149	302
Total	22	2	32	0	41	56	5	534	0	0	1	539	22	0	23	0	23	45	0	589	3	0	0	592	1232
Approach %	39 3	3 6	57 1	0 0	-	-	0 9	99 1	0 0	0 0	-	-	48 9	0 0	51 1	0 0	-	-	0 0	99 5	0 5	0 0	-	-	-
Total %	1 6	0 2	2 6	0 0	-	4 5	0 4	43 3	0 0	0 0	-	43 8	1 8	0 0	1 9	0 0	-	3 7	0 0	47 8	0 2	0 0	-	48 1	-
PHF	0 611	0 250	0 727	0 000	-	0 824	0 313	0 934	0 000	0 000	-	0 942	0 688	0 000	0 575	0 000	-	0 625	0 000	0 932	0 750	0 000	-	0 931	0 983
Lights	22	2	32	0	-	56	5	513	0	0	-	518	22	0	23	0	-	45	0	566	3	0	-	569	1188
% Lights	100 0	100 0	100 0	-	-	100 0	100 0	96 1	-	-	-	96 1	100 0	-	100 0	-	-	100 0	-	96 1	100 0	-	-	96 1	96 4
Buses	0	0	0	0	-	0	0	4	0	0	-	4	0	0	0	0	-	0	0	5	0	0	-	5	9
% Buses	0 0	0 0	0 0	-	-	0 0	0 0	0 7	-	-		0 7	0 0	-	0 0	-	-	0 0	-	0 8	0 0	-	-	0 8	0 7
Single-Unit Trucks	0	0	0	0	-	0	0	11	0	0	-	11	0	0	0	0		0	0	9	0	0	-	9	20
% Single-Unit Trucks	0 0	0 0	0 0	-	-	0 0	0 0	2 1	-	-	-	2 0	0 0	-	0 0	-	-	0 0	-	1 5	0 0	-		1 5	1 6
Articulated Trucks	0	0	0	0	-	0	0	8	0	0		8	0	0	0	0	-	0	0	9	0	0	-	9	15
% Articulated Trucks	0 0	0 0	0 0	-	-	0 0	0 0	1 1	-	-	-	1 1	0 0	-	0 0	-	-	0 0	-	1 5	0 0	-	-	1 5	1 2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0 0	0 0	0 0	-	-	0 0	0 0	0 0	-	-	-	0 0	0 0	-	0 0	-	-	0 0	-	0 0	0 0	-	-	0 0	0 0
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	7 3	-	-	-	-	-	0 0	-	-	-	-	-	8 7	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	38	-	-	-	-	-	1	-	-	-	-	-	21	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	92 7	-	-	-	-	-	100 0	-	-	-	-	-	91 3	-	-	-	-	-	-	-	-

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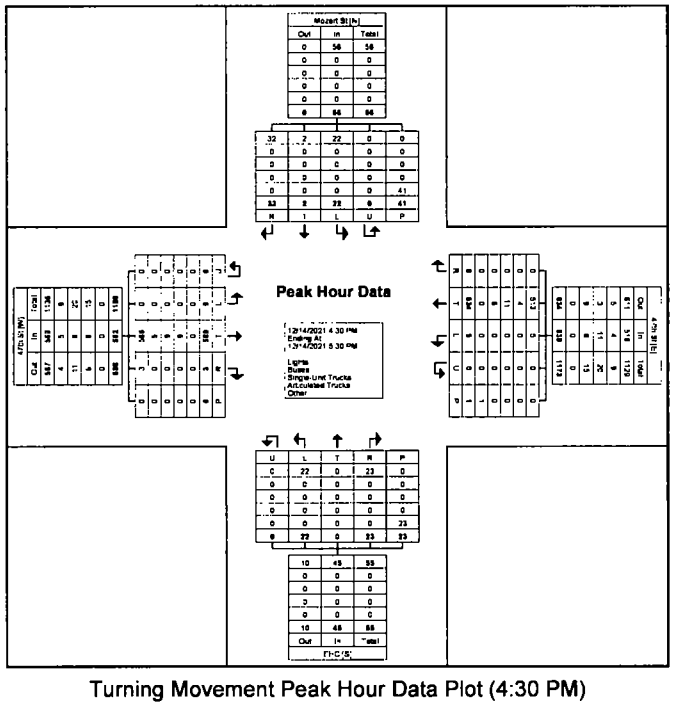

Turning Movement Peak Hour Data Plot (4:30 PM)

TERRA ENGINEERING LTD
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name California Ave & 47th Pl
Site Code
Start Date 12/14/2021

Turning Movement Data

Start Time	California Ave Southbound					California Ave Northbound					47th Pl Eastbound					
	Thru	Right	U-Turn	Peds	App Total	Left	Thru	U-Turn	Peds	App Total	Left	Right	U-Turn	Peds	App Total	Int Total
7 00 AM	84	2	0	0	86	5	201	0	2	206	1	8	0	1	9	301
7 15 AM	117	3	0	0	120	17	231	0	3	248	6	10	0	0	16	384
7 30 AM	155	9	0	0	164	38	224	0	0	262	7	26	0	0	33	459
7 45 AM	172	7	0	0	179	52	257	0	0	309	10	42	0	1	52	540
Hourly Total	528	21	0	0	549	112	913	0	0	1025	24	86	0	2	110	1684
8 00 AM	130	6	0	0	136	6	221	0	0	227	6	12	0	0	18	381
8 15 AM	118	1	0	0	119	3	148	0	0	151	1	0	0	0	1	271
8 30 AM	104	3	1	0	108	2	135	0	0	137	1	0	0	0	1	246
8 45 AM	81	5	0	0	86	2	138	0	0	140	1	0	0	0	1	227
Hourly Total	433	15	1	0	449	13	642	0	0	655	9	12	0	0	21	1125
9 00 AM	83	3	0	0	86	1	129	0	0	130	0	0	0	1	0	216
9 15 AM	87	5	1	0	93	0	101	0	0	101	1	2	0	0	3	197
9 30 AM	82	2	0	0	84	1	103	0	0	104	1	0	0	1	1	189
9 45 AM	102	5	0	0	107	1	114	0	0	115	3	0	0	0	3	225
Hourly Total	354	15	1	0	370	3	447	0	0	450	5	2	0	1	7	827
10 00 AM	92	1	0	0	93	2	101	0	0	103	3	3	0	0	6	202
10 15 AM	112	4	0	0	116	0	98	0	0	98	3	0	0	0	3	215
10 30 AM	101	2	0	0	103	0	104	0	0	104	3	1	0	0	4	211
10 45 AM	98	2	0	0	100	1	88	0	0	89	1	1	0	0	2	191
Hourly Total	403	9	0	0	412	3	389	0	0	392	10	5	0	0	15	819
11 00 AM	98	0	0	0	98	0	93	0	0	93	1	0	0	0	1	192
11 15 AM	89	2	0	0	91	0	101	0	0	101	2	0	0	0	2	194
11 30 AM	96	0	0	0	96	1	87	0	0	88	0	0	0	0	0	184
11 45 AM	112	2	0	0	114	0	103	0	0	103	1	1	0	0	2	219
Hourly Total	395	4	0	0	399	1	384	0	0	385	4	1	0	0	5	789
12 00 PM	105	2	0	0	107	2	95	0	0	97	3	2	0	0	5	209
12 15 PM	102	6	0	0	108	2	108	0	0	110	7	0	0	0	7	225
12 30 PM	113	3	0	0	116	0	101	0	0	101	2	0	0	0	2	219
12 45 PM	105	2	0	0	107	3	108	0	0	111	1	0	0	0	1	219
Hourly Total	425	13	0	0	438	7	412	0	0	419	13	2	0	0	15	872
1 00 PM	98	4	0	0	102	0	104	0	0	104	2	1	0	1	3	209
1 15 PM	115	3	0	0	118	0	114	0	0	114	1	0	0	0	1	233
1 30 PM	112	1	1	0	114	0	115	0	0	115	1	0	0	0	1	230
1 45 PM	98	5	0	0	103	0	113	0	0	113	2	3	0	1	5	221
Hourly Total	423	13	1	0	437	0	446	0	0	446	6	4	0	2	10	893
2 00 PM	142	2	0	1	144	3	121	0	0	124	1	0	0	2	1	269

2 15 PM	128	3	0	0	131	1	143	0	0	144	0	0	0	0	0	275
2 30 PM	145	5	0	0	150	3	165	0	0	168	2	2	0	0	4	322
2 45 PM	188	5	0	0	193	4	142	1	0	147	3	0	0	0	3	343
Hourly Total	603	15	0	1	618	11	571	1	0	583	6	2	0	2	8	1209
3 00 PM	168	5	0	0	173	6	138	1	0	145	2	1	0	3	3	321
3 15 PM	164	1	0	0	165	10	201	1	0	212	1	2	0	1	3	380
3 30 PM	179	1	0	0	180	17	165	0	0	182	9	46	0	10	55	417
3 45 PM	224	2	0	0	226	3	164	0	0	167	11	19	0	0	30	423
Hourly Total	735	9	0	0	744	36	668	2	0	706	23	68	0	23	91	1541
4 00 PM	189	1	0	0	190	1	135	0	0	136	11	7	0	2	18	344
4 15 PM	194	2	0	0	196	2	135	0	0	137	1	1	0	1	2	335
4 30 PM	231	0	0	0	231	5	135	0	0	140	6	15	0	3	21	392
4 45 PM	212	1	0	0	213	4	124	0	0	128	13	9	0	1	22	363
Hourly Total	826	4	0	0	830	12	529	0	0	541	31	32	0	7	63	1434
5 00 PM	223	2	0	0	225	2	127	0	0	129	5	1	0	1	6	360
5 15 PM	171	0	0	0	171	3	127	0	0	130	5	5	0	2	10	311
5 30 PM	204	1	0	0	205	0	128	0	0	128	1	3	0	1	4	337
5 45 PM	203	1	0	0	204	2	118	0	0	120	2	0	0	1	2	326
Hourly Total	801	4	0	0	805	7	500	0	0	507	13	9	0	5	22	1334
6 00 PM	139	0	0	0	139	0	115	0	0	115	0	0	0	2	0	254
6 15 PM	143	3	0	0	146	1	129	0	0	130	0	0	0	0	0	276
6 30 PM	135	3	0	0	138	5	93	0	0	98	0	1	0	0	1	237
6 45 PM	148	1	0	0	147	1	92	0	0	93	0	0	0	0	0	240
Hourly Total	563	7	0	0	570	7	429	0	0	436	0	1	0	2	1	1007
Grand Total	6489	129	3	1	6621	212	6330	3	0	6545	144	224	0	59	368	13534
Approach %	98 0	1 9	0 0	-	-	3 2	96 7	0 0	-	-	39 1	60 9	0 0		-	-
Total %	47 9	1 0	0 0		48 9	1 6	46 8	0 0	-	48 4	1 1	1 7	0 0		2 7	-
Lights	6339	116	3	-	6458	207	6150	3	-	6360	128	221	0	-	349	13167
% Lights	97 7	89 9	100 0	-	97 5	97 6	97 2	100 0	-	97 2	88 9	98 7	-	-	94 8	97 3
Buses	31	0	0	-	31	0	39	0	-	39	2	0	0	-	2	72
% Buses	0 5	0 0	0 0	-	0 5	0 0	0 6	0 0	-	0 6	1 4	0 0	-	-	0 5	0 5
Single-Unit Trucks	100	10	0	-	110	4	119	0	-	123	7	3	0	-	10	243
% Single-Unit Trucks	1 5	7 8	0 0	-	1 7	1 9	1 9	0 0	-	1 9	4 9	1 3	-	-	2 7	1 8
Articulated Trucks	13	3	0	-	16	1	12	0	-	13	6	0	0	-	6	35
% Articulated Trucks	0 2	2 3	0 0	-	0 2	0 5	0 2	0 0	-	0 2	4 2	0 0	-	-	1 6	0 3
Bicycles on Road	6	0	0	-	6	0	10	0	-	10	1	0	0	-	1	17
% Bicycles on Road	0 1	0 0	0 0	-	0 1	0 0	0 2	0 0	-	0 2	0 7	0 0	-	-	0 3	0 1
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	0 0	-	-	-	-	-	-	-	-	-	5 1	-	-
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	56	-	-
% Pedestrians	-	-	-	100 0	-	-	-	-	-	-	-	-	-	94 9	-	-

TERRA ENGINEERING LTD.
Terra Engineering
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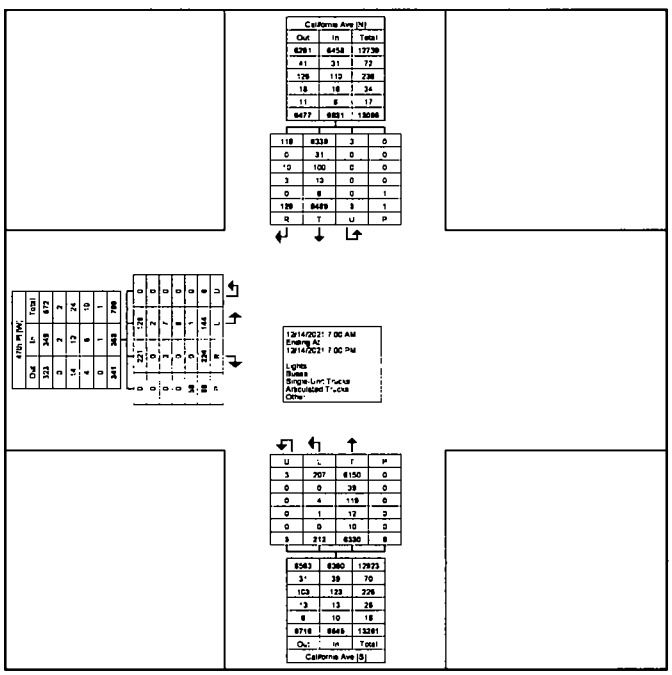
Count Name California Ave & 47th Pl
Site Code
Start Date 12/14/2021



Turning Movement Data Plot

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Count Name California Ave & 47th Pl
Site Code
Start Date 12/14/2021
Page No 4

Turning Movement Peak Hour Data (7:15 AM)

Start Time	California Ave Southbound					California Ave Northbound					47th Pl Eastbound					Int. Total
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	
7:15 AM	117	3	0	0	120	17	231	0	0	248	8	10	0	0	16	384
7:30 AM	155	9	0	0	164	38	224	0	0	262	7	26	0	0	33	459
7:45 AM	172	7	0	0	179	52	257	0	0	309	10	42	0	1	52	540
8:00 AM	130	6	0	0	136	6	221	0	0	227	6	12	0	0	18	381
Total	574	25	0	0	599	113	933	0	0	1046	29	90	0	1	119	1764
Approach %	95.8	4.2	0.0	-	-	10.8	89.2	0.0	-	-	24.4	75.6	0.0	-	-	-
Total %	32.5	1.4	0.0	-	34.0	6.4	52.9	0.0	-	59.3	1.6	5.1	0.0	-	6.7	-
PHF	0.834	0.694	0.000	-	0.837	0.543	0.908	0.000	-	0.846	0.725	0.536	0.000	-	0.572	0.817
Lights	559	25	0	-	584	113	909	0	-	1022	27	90	0	-	117	1723
% Lights	97.4	100.0	-	-	97.5	100.0	97.4	-		97.7	93.1	100.0	-	-	98.3	97.7
Buses	4	0	0	-	4	0	15	0	-	15	0	0	0	-	0	19
% Buses	0.7	0.0	-	-	0.7	0.0	1.6	-	-	1.4	0.0	0.0	-	-	0.0	1.1
Single-Unit Trucks	9	0	0	-	9	0	8	0	-	8	1	0	0	-	1	18
% Single-Unit Trucks	1.6	0.0	-	-	1.5	0.0	0.9	-	-	0.8	3.4	0.0	-	-	0.8	1.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	1	0	0	-	1	1
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	3.4	0.0	-	-	0.8	0.1
Bicycles on Road	2	0	0	-	2	0	1	0	-	1	0	0	0	-	0	3
% Bicycles on Road	0.3	0.0	-	-	0.3	0.0	0.1	-	-	0.1	0.0	0.0	-	-	0.0	0.2
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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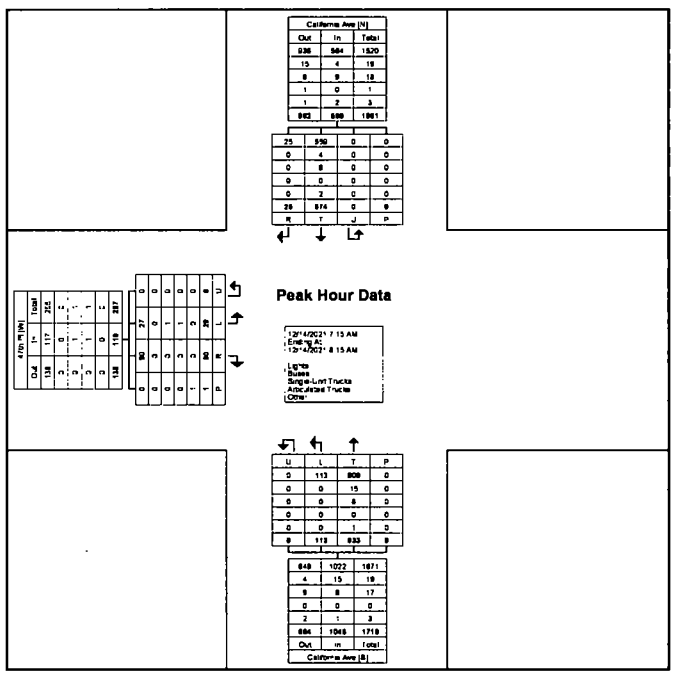
Page No 5



Turning Movement Peak Hour Data Plot (7:15 AM)

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Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering com

Count Name California Ave & 47th Pl
Site Code
Start Date 12/14/2021

Turning Movement Peak Hour Data (3:15 PM)

Start Time	California Ave Southbound					California Ave Northbound					47th Pl Eastbound					Int. Total
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	
3:15 PM	164	1	0	0	165	10	201	1	0	212	1	2	0	1	3	380
3:30 PM	179	1	0	0	180	17	165	0	0	182	9	46	0	10	55	417
3:45 PM	224	2	0	0	226	3	164	0	0	167	11	19	0	9	30	423
4:00 PM	189	1	0	0	190	1	135	0	0	136	11	7	0	7	18	344
Total	756	5	0	0	761	31	665	1	0	697	32	74	0	22	106	1564
Approach %	99 3	0 7	0 0	-	-	4 4	95 4	0 1	-	-	30 2	69 8	0 0	-	-	-
Total %	48 3	0 3	0 0	-	48 7	2 0	42 5	0 1	-	44 6	2 0	4 7	0 0	-	6 8	-
PHF	0 844	0 625	0 000	-	0 842	0 456	0 827	0 250		0 822	0 727	0 402	0 000	-	0 482	0 924
Lights	743	5	0	-	748	31	641	1		673	30	74	0	-	104	1525
% Lights	98 3	100 0	-	-	98 3	100 0	96 4	100 0	-	96 6	93 8	100 0	-	-	98 1	97 5
Buses	4	0	0		4	0	10	0	-	10	1	0	0	-	1	15
% Buses	0 5	0 0	-	-	0 5	0 0	1 5	0 0	-	1 4	3 1	0 0	-	-	0 9	1 0
Single-Unit Trucks	8	0	0	-	8	0	9	0	-	9	0	0	0	-	0	17
% Single-Unit Trucks	1 1	0 0	-	-	1 1	0 0	1 4	0 0	-	1 3	0 0	0 0	-	-	0 0	1 1
Articulated Trucks	1	0	0	-	1	0	1	0	-	1	1	0	0	-	1	3
% Articulated Trucks	0 1	0 0	-	-	0 1	0 0	0 2	0 0		0 1	3 1	0 0	-	-	0 9	0 2
Bicycles on Road	0	0	0	-	0	0	4	0		4	0	0	0	-	0	4
% Bicycles on Road	0 0	0 0	-	-	0 0	0 0	0 6	0 0	-	0 6	0 0	0 0	-	-	0 0	0 3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	22	-	-
% Pedestrians	-	-	-	-	-	-	-	-		-	-	-	-	100 0	-	-

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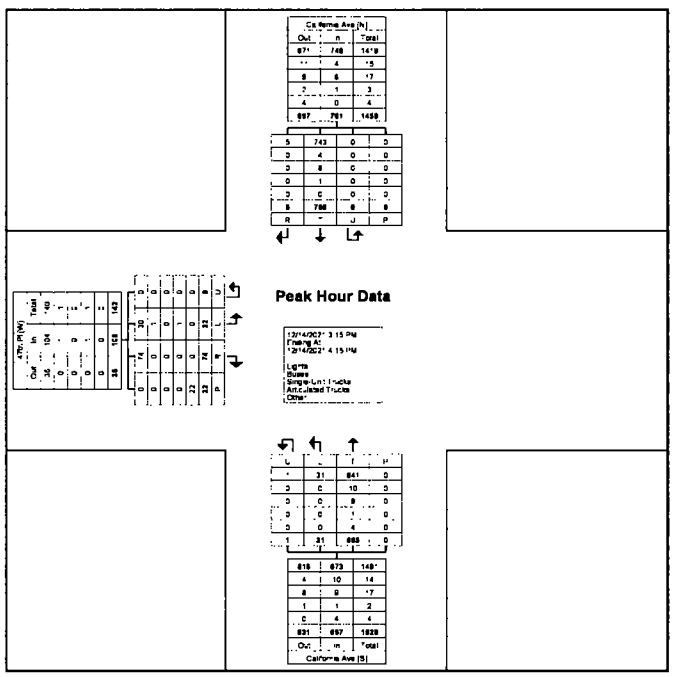

Turning Movement Peak Hour Data Plot (3:15 PM)

TERRA
ENGINEERING LTD.
Terra Engineering
1804 Borman Circle Drive

Saint Louis, Missouri, United States 63146
314-395-9899 song@terraengineering.com

Count Name California Ave & EHC
Site Code
Start Date 12/14/2021
Page No 1

Turning Movement Data

Start Time	California Ave Southbound					California Ave Northbound					EHC Eastbound					
	Thru	Right	U-Turn	Peds	App Total	Left	Thru	U-Turn	Peds	App Total	Left	Right	U-Turn	Peds	App Total	Int. Total
7 00 AM	85	0	0	0	85	1	199	0	0	200	0	0	0	1	0	285
7 15 AM	120	2	0	0	122	6	228	0	0	234	1	2	0	0	3	359
7 30 AM	164	2	0	0	166	17	214	0	0	231	0	0	0	0	0	397
7 45 AM	180	6	0	0	186	31	236	1	0	268	0	4	0	1	4	480
Hourly Total	549	12	0	0	561	55	877	1	0	933	1	6	0	2	7	1501
8 00 AM	135	6	0	0	141	8	219	0	0	227	0	2	0	0	2	370
8 15 AM	111	5	0	0	116	2	145	0	0	147	0	6	0	0	6	269
8 30 AM	102	4	0	0	106	6	132	0	0	138	5	6	0	1	11	255
8 45 AM	87	4	0	0	91	9	129	0	0	138	0	1	0	1	1	230
Hourly Total	435	19	0	0	454	25	625	0	0	650	5	15	0	2	20	1124
9 00 AM	80	7	0	0	87	8	122	0	0	130	1	6	0	1	7	224
9 15 AM	90	4	0	0	94	5	98	0	0	103	1	6	0	2	7	204
9 30 AM	81	1	0	0	82	4	99	0	0	103	5	3	0	1	8	193
9 45 AM	100	3	0	0	103	11	104	0	0	115	1	7	0	0	8	226
Hourly Total	351	15	0	0	366	28	423	0	0	451	8	22	0	4	30	847
10 00 AM	87	2	0	0	89	4	99	0	0	103	2	6	0	0	8	200
10 15 AM	109	6	1	0	116	1	98	0	0	99	1	5	0	2	6	221
10 30 AM	102	5	0	0	107	6	102	0	0	108	2	3	0	0	5	220
10 45 AM	95	1	0	0	96	6	79	1	0	86	2	4	0	3	6	188
Hourly Total	393	14	1	0	408	17	378	1	0	396	7	18	0	5	25	829
11 00 AM	94	3	0	0	97	4	89	0	0	93	1	4	0	2	5	195
11 15 AM	89	3	0	0	92	6	97	0	0	103	0	1	0	0	1	196
11 30 AM	92	2	0	1	94	6	81	0	0	87	4	4	0	1	8	189
11 45 AM	104	6	0	0	110	6	96	0	0	102	3	11	0	0	14	226
Hourly Total	379	14	0	1	393	22	363	0	0	385	8	20	0	3	28	806
12 00 PM	102	5	0	0	107	4	94	0	0	98	3	4	0	1	7	212
12 15 PM	101	1	0	0	102	5	108	0	0	113	0	7	0	1	7	222
12 30 PM	114	4	0	1	118	3	101	0	0	104	0	4	0	0	4	226
12 45 PM	105	5	0	0	110	9	102	0	0	111	3	3	0	0	6	227
Hourly Total	422	15	0	1	437	21	405	0	0	426	6	18	0	2	24	887
1 00 PM	98	4	0	0	102	2	104	0	0	106	2	6	0	1	8	216
1 15 PM	110	7	0	0	117	3	111	0	1	114	7	6	0	2	13	244
1 30 PM	107	4	0	0	111	7	109	0	0	116	3	7	0	0	10	237
1 45 PM	103	4	0	0	107	3	114	0	0	117	2	2	0	0	4	228
Hourly Total	418	19	0	0	437	15	438	0	1	453	14	21	0	5	35	925
2 00 PM	138	4	0	0	142	5	120	0	0	125	1	5	0	0	6	273

2 15 PM	127	3	0	0	130	5	139	0	0	144	2	4	0	0	6	280
2 30 PM	143	5	0	0	148	1	163	0	0	164	1	7	0	-	8	320
2 45 PM	186	7	0	1	193	4	145	0	0	149	2	9	0	0	11	353
Hourly Total	594	19	0	1	613	15	567	0	0	582	6	25	0	3	31	1226
3 00 PM	167	5	0	0	172	9	130	0	0	139	3	5	0	3	8	319
3 15 PM	159	5	0	0	164	7	193	1	0	201	2	9	0	-	11	376
3 30 PM	169	4	0	0	173	11	153	0	0	164	2	13	1	17	16	353
3 45 PM	200	6	0	0	206	13	170	0	0	183	1	23	0	9	24	413
Hourly Total	695	20	0	2	715	40	646	1	0	687	8	50	1	30	59	1461
4 00 PM	178	5	0	2	183	3	145	0	0	148	2	12	0	4	14	345
4 15 PM	192	5	0	0	197	6	129	0	0	135	4	4	0	1	8	340
4 30 PM	213	0	0	0	213	7	133	0	0	140	3	14	0	4	17	370
4 45 PM	208	1	0	1	209	2	135	0	0	137	5	5	0	1	10	356
Hourly Total	791	11	0	3	802	18	542	0	0	560	14	35	0	10	49	1411
5 00 PM	218	1	0	1	219	3	130	0	0	133	2	6	0	2	8	360
5 15 PM	172	1	0	0	173	0	134	0	0	134	1	0	0	1	1	308
5 30 PM	201	1	0	0	202	2	128	0	0	130	1	4	0	1	5	337
5 45 PM	200	2	0	-	202	1	116	0	0	117	3	3	0	1	6	325
Hourly Total	791	5	0	2	796	6	508	0	0	514	7	13	0	5	20	1330
6 00 PM	136	0	0	0	136	0	117	0	0	117	1	1	0	1	2	255
6 15 PM	143	0	0	0	143	2	124	0	0	126	0	4	0	0	4	273
6 30 PM	137	0	0	0	137	1	90	0	0	91	1	0	0	0	1	229
6 45 PM	146	0	0	0	146	0	95	0	0	95	0	2	0	0	2	243
Hourly Total	562	0	0	0	562	3	426	0	0	429	2	7	0	1	9	1000
Grand Total	6380	163	1	10	6544	265	6198	3	1	6466	66	250	1	72	337	13347
Approach %	97 5	2 5	0 0	-	-	4 1	95 9	0 0	-	-	25 5	74 2	0 3	-	-	-
Total %	47 8	1 2	0 0	-	49 0	2 0	46 4	0 0	-	48 4	0 6	1 9	0 0	-	2 5	-
Lights	6210	163	1	-	6374	259	6017	3	-	6279	65	248	0	-	333	12986
% Lights	97 3	100 0	100 0	-	97 4	97 7	97 1	100 0	-	97 1	98 8	99 2	0 0	-	98 8	97 3
Buses	31	0	0	-	31	4	40	0	-	44	0	2	0	-	2	77
% Buses	0 5	0 0	0 0	-	0 5	1 5	0 6	0 0	-	0 7	0 0	0 8	0 0	-	0 6	0 6
Single-Unit Trucks	114	0	0	-	114	2	118	0	-	120	1	0	1	-	2	236
% Single-Unit Trucks	1 8	0 0	0 0	-	1 7	0 8	1 9	0 0	-	1 9	1 2	0 0	100 0	-	0 6	1 8
Articulated Trucks	19	0	0	-	19	0	17	0	-	17	0	0	0	-	0	36
% Articulated Trucks	0 3	0 0	0 0	-	0 3	0 0	0 3	0 0	-	0 3	0 0	0 0	0 0	-	0 0	0 3
Bicycles on Road	6	0	0	-	6	0	6	0	-	6	0	0	0	-	0	12
% Bicycles on Road	0 1	0 0	0 0	-	0 1	0 0	0 1	0 0	-	0 1	0 0	0 0	0 0	-	0 0	0 1
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	0 0	-	-	-	-	0 0	-	-	-	-	4 2	-	-
Pedestrians	-	-	-	10	-	-	-	-	1	-	-	-	-	69	-	-
% Pedestrians	-	-	-	100 0	-	-	-	-	100 0	-	-	-	-	95 8	-	-

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Saint Louis, Missouri, United States 63146
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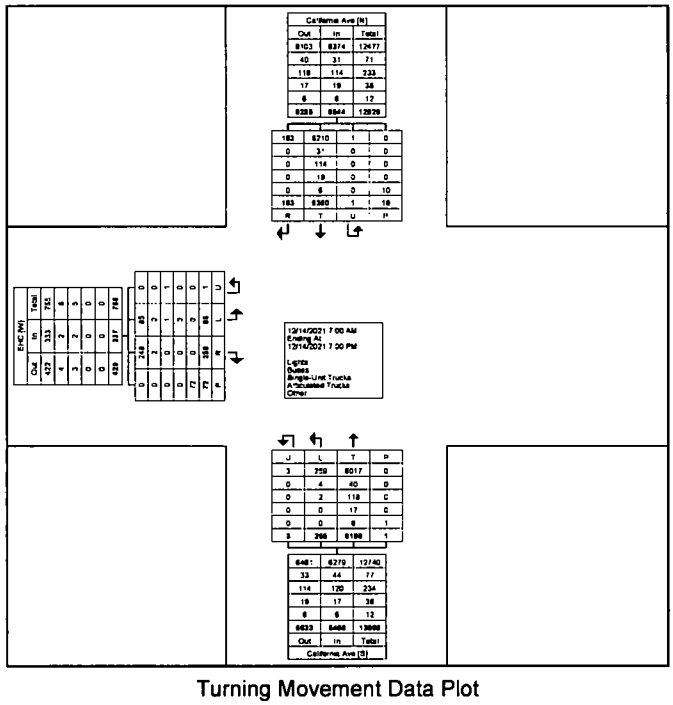
Start Date 12/14/2021
Page No 3



Turning Movement Data Plot

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Turning Movement Peak Hour Data (7:15 AM)

Start Time	California Ave Southbound					California Ave Northbound					EHC Eastbound					
	Thru	Right	U-Turn	Peds	App Total	Left	Thru	U-Turn	Peds	App Total	Left	Right	U-Turn	Peds	App Total	Int. Total
7 15 AM	120	2	0	0	122	6	228	0	0	234	1	2	0	0	3	359
7 30 AM	164	2	0	0	166	17	214	0	0	231	0	0	0	0	0	397
7 45 AM	180	8	0	0	188	31	236	1	0	268	0	4	0	-	4	460
8 00 AM	135	6	0	0	141	8	219	0	0	227	0	2	0	0	2	370
Total	599	18	0	0	617	62	897	1	0	960	1	8	0	1	9	1586
Approach %	97 1	2 9	0 0	-	-	6 5	93 4	0 1	-	-	11 1	88 9	0 0	-	-	-
Total %	37 8	1 1	0 0	-	38 9	3 9	56 6	0 1	-	60 5	0 1	0 5	0 0	-	0 6	-
PHF	0 832	0 563	0 000	-	0 820	0 500	0 950	0 250	-	0 898	0 250	0 500	0 000		0 563	0 862
Lights	583	18	0	-	601	58	873	1	-	932	1	6	0	-	7	1540
% Lights	97 3	100 0	-	-	97 4	93 5	97 3	100 0		97 1	100 0	75 0	-	-	77 8	97 1
Buses	4	0	0	-	4	4	15	0	-	19	0	2	0		2	25
% Buses	0 7	0 0	-	-	0 6	6 5	1 7	0 0	-	2 0	0 0	25 0	-	-	22 2	1 6
Single-Unit Trucks	10	0	0	-	10	0	7	0	-	7	0	0	0	-	0	17
% Single-Unit Trucks	1 7	0 0	-	-	1 6	0 0	0 8	0 0	-	0 7	0 0	0 0	-	-	0 0	1 1
Articulated Trucks	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Articulated Trucks	0 0	0 0	-	-	0 0	0 0	0 1	0 0	-	0 1	0 0	0 0	-	-	0 0	0 1
Bicycles on Road	2	0	0	-	2	0	1	0	-	1	0	0	0	-	0	3
% Bicycles on Road	0 3	0 0	-	-	0 3	0 0	0 1	0 0	-	0 1	0 0	0 0	-	-	0 0	0 2
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100 0	-	-

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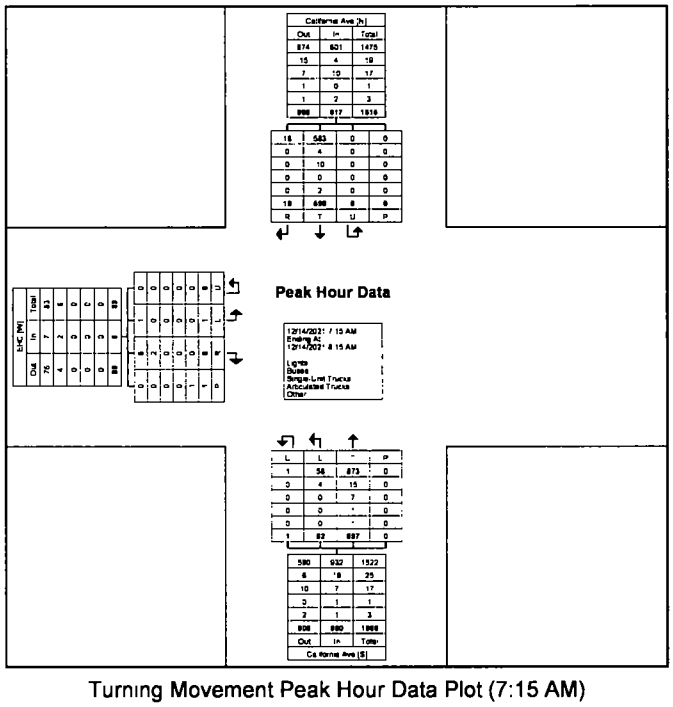

Turning Movement Peak Hour Data Plot (7:15 AM)

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Turning Movement Peak Hour Data (3 15 PM)

Start Time	California Ave Southbound					California Ave Northbound					EHC Eastbound					
	Thru	Right	U-Turn	Peds	App Total	Left	Thru	U-Turn	Peds	App Total	Left	Right	U-Turn	Peds	App Total	Int Total
3 15 PM	159	5	0	0	164	7	193	1	0	201	2	9	0	[illegible]	11	376
3 30 PM	169	4	0	0	173	11	153	0	0	164	2	13	1	[illegible]	16	353
3 45 PM	200	6	0	0	206	13	170	0	0	183	1	23	0	9	24	413
4 00 PM	178	5	0	2	183	3	145	0	0	148	2	12	0	[illegible]	14	345
Total	706	20	0	2	726	34	661	1	0	696	7	57	1	3[illegible]	65	1487
Approach %	97 2	2 8	0 0	-	-	4 9	95 0	0 1	-	-	10 8	87 7	1 5		-	-
Total %	47 5	1 3	0 0	-	48 8	2 3	44 5	0 1	-	46 8	0 5	3 8	0 1	-	4 4	-
PHF	0 883	0 833	0 000		0 881	0 654	0 856	0 250	-	0 866	0 875	0 620	0 250		0 677	0 900
Lights	693	20	0	-	713	34	638	1	-	673	7	57	0		64	1450
% Lights	98 2	100 0	-	-	98 2	100 0	96 5	100 0	-	96 7	100 0	100 0	0 0	-	98 5	97 5
Buses	4	0	0	-	4	0	10	0	-	10	0	0	0	-	0	14
% Buses	0 6	0 0	-	-	0 6	0 0	1 5	0 0	-	1 4	0 0	0 0	0 0	-	0 0	0 9
Single-Unit Trucks	7	0	0	-	7	0	8	0	-	8	0	0	1	-	1	16
% Single-Unit Trucks	1 0	0 0	-	-	1 0	0 0	1 2	0 0	-	1 1	0 0	0 0	100 0	-	1 5	1 1
Articulated Trucks	2	0	0	-	2	0	2	0	-	2	0	0	0	-	0	4
% Articulated Trucks	0 3	0 0	-	-	0 3	0 0	0 3	0 0	-	0 3	0 0	0 0	0 0	-	0 0	0 3
Bicycles on Road	0	0	0	-	0	0	3	0	-	3	0	0	0	-	0	3
% Bicycles on Road	0 0	0 0	-	-	0 0	0 0	0 5	0 0	-	0 4	0 0	0 0	0 0	-	0 0	0 2
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0 0	-	-	-	-	-	-	-	-	-	0 0	-	-
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	[illegible]	-	-
% Pedestrians	-	-	-	100 0	-	-	-	-	-	-	-	-	-	[illegible]	-	-

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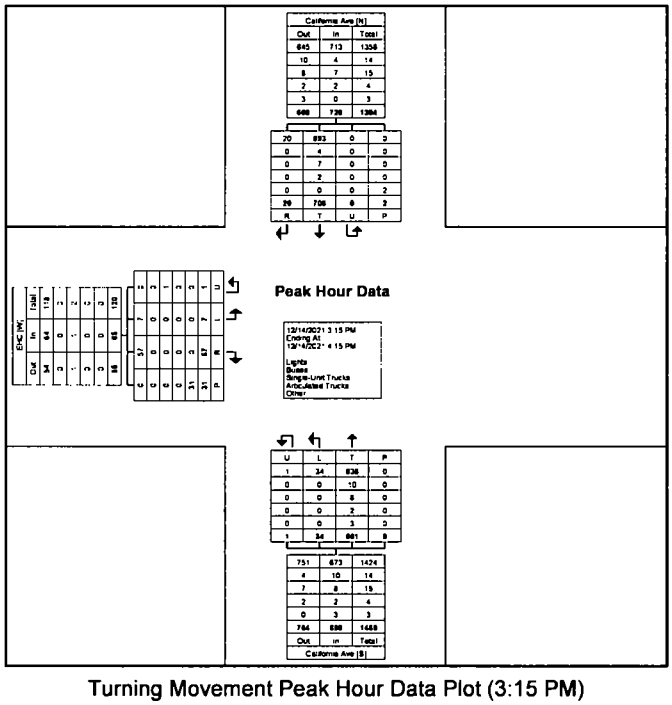


Turning Movement Peak Hour Data Plot (3:15 PM)

APPENDIX B
EXISTING SYNCHRO OUTPUT

TERRA
ENGINEERING LTD.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	359	134	96	274	45	155	539	197	76	378	60
Future Volume (vph)	37	359	134	96	274	45	155	539	197	76	378	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		70	65		80	65		110	65		150
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96			0.96			0.99			0.99	1.00	
Frt			0.850			0.850			0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1817	0
Flt Permitted	0.502			0.403			0.350			0.253		
Satd. Flow (perm)	895	1863	1583	718	1863	1583	648	1863	1583	465	1817	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84			84			109		16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		331			330			247			662	
Travel Time (s)		7.5			7.5			5.6			15.0	
Confl. Peds. (#/hr)	57		70	70		57	13		34	34		13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	390	146	104	298	49	168	586	214	83	411	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	390	146	104	298	49	168	586	214	83	476	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	31.0	31.0		31.0	31.0		34.0	34.0		34.0	34.0	
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0		34.0	34.0	
Total Split (%)	47.7%	47.7%		47.7%	47.7%		52.3%	52.3%		52.3%	52.3%	
Maximum Green (s)	27.0	27.0		27.0	27.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	17.0	17.0		17.0	17.0		20.0	20.0		20.0	20.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	27.0	27.0	0.0	27.0	27.0	0.0	30.0	30.0	0.0	30.0	30.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.42	0.42	0.00	0.42	0.42	0.00	0.46	0.46	0.00	0.46	0.46	
v/c Ratio	0.11	0.50	1.74	0.35	0.39	0.58	0.56	0.68	1.96	0.39	0.56	
Control Delay	12.7	16.9	393.8	17.2	15.1	33.6	21.8	18.8	480.9	18.3	15.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	12.7	16.9	393.8	17.2	15.1	33.6	21.8	18.8	480.9	18.3	15.5	
LOS	B	B	F	B	B	C	C	B	F	B	B	
Approach Delay		112.1			17.6			121.5			15.9	
Approach LOS		F			B			F			B	
Stops (vph)	25	254	36	66	180	1	118	409	64	52	296	
Fuel Used(gal)	0	4	11	1	3	0	2	5	20	1	5	
CO Emissions (g/hr)	23	249	789	66	178	30	114	375	1399	67	369	
NOx Emissions (g/hr)	4	48	154	13	35	6	22	73	272	13	72	
VOC Emissions (g/hr)	5	58	183	15	41	7	27	87	324	16	85	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	
Queue Length 50th (ft)	9	110	~53	27	79	0	46	172	~89	20	125	
Queue Length 95th (ft)	26	182	#154	64	135	#32	109	279	#208	57	207	
Internal Link Dist (ft)		251			250			167			582	
Turn Bay Length (ft)	65		70	65		80	65		110	65		
Base Capacity (vph)	371	773	84	298	773	84	299	859	109	214	847	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.11	0.50	1.74	0.35	0.39	0.58	0.56	0.68	1.96	0.39	0.56	

Intersection Summary
Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Pretimed
Maximum v/c Ratio: 1.96
Intersection Signal Delay: 77.9 Intersection LOS: E
Intersection Capacity Utilization 74.7% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: California Ave & 47th Street

Intersection	
Intersection Delay, s/veh	23.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	88	494	18	14	378	78	1	0	0	42	0	28
Future Vol, veh/h	88	494	18	14	378	78	1	0	0	42	0	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	96	537	20	15	411	85	1	0	0	46	0	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	29.8	17.6	10.1	10.4
HCM LOS	D	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	15%	3%	60%
Vol Thru, %	0%	82%	80%	0%
Vol Right, %	0%	3%	17%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	600	470	70
LT Vol	1	88	14	42
Through Vol	0	494	378	0
RT Vol	0	18	78	28
Lane Flow Rate	1	652	511	76
Geometry Grp	1	1	1	1
Degree of Util (X)	0.002	0.86	0.681	0.136
Departure Headway (Hd)	7.031	4.747	4.796	6.432
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	512	757	746	561
Service Time	5.038	2.824	2.878	4.432
HCM Lane V/C Ratio	0.002	0.861	0.685	0.135
HCM Control Delay	10.1	29.8	17.6	10.4
HCM Lane LOS	B	D	C	B
HCM 95th-tile Q	0	10.3	5.4	0.5

Intersection												
Int Delay, s/veh	0.6											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	104	0	2	128	1	0	0	0	11	0	2
Future Vol, veh/h	1	104	0	2	128	1	0	0	0	11	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	113	0	2	139	1	0	0	0	12	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	140	0	0	113	0	0	260	259	113	259	259	140
Stage 1	-	-	-	-	-	-	115	115	-	144	144	-
Stage 2	-	-	-	-	-	-	145	144	-	115	115	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1443	-	-	1476	-	-	693	645	940	694	645	908
Stage 1	-	-	-	-	-	-	890	800	-	859	778	-
Stage 2	-	-	-	-	-	-	858	778	-	890	800	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1443	-	-	1476	-	-	690	644	940	693	644	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	690	644	-	693	644	-
Stage 1	-	-	-	-	-	-	889	799	-	858	777	-
Stage 2	-	-	-	-	-	-	855	777	-	889	799	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	0	10.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1443	-	-	1476	-	-	719
HCM Lane V/C Ratio	-	0.001	-	-	0.001	-	-	0.02
HCM Control Delay (s)	0	7.5	0	-	7.4	0	-	10.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	8	62	897	599	18
Future Vol, veh/h	1	8	62	897	599	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	9	67	975	651	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1770	661	671	0	-	0
Stage 1	661	-	-	-	-	-
Stage 2	1109	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	92	462	919	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	77	462	919	-	-	-
Mov Cap-2 Maneuver	77	-	-	-	-	-
Stage 1	432	-	-	-	-	-
Stage 2	316	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.5	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	919	-	297	-	-
HCM Lane V/C Ratio	0.073	-	0.033	-	-
HCM Control Delay (s)	9.2	0	17.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.1	-	-

Intersection												
Int Delay, s/veh	0.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕				
Traffic Vol, veh/h	25	602	5	5	410	25	5	0	5	0	0	0
Future Vol, veh/h	25	602	5	5	410	25	5	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	654	5	5	446	27	5	0	5	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	473	0	0	659	0	0	1181	1194	657
Stage 1	-	-	-	-	-	-	711	711	-
Stage 2	-	-	-	-	-	-	470	483	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1089	-	-	929	-	-	210	187	465
Stage 1	-	-	-	-	-	-	487	436	-
Stage 2	-	-	-	-	-	-	629	553	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1089	-	-	929	-	-	200	0	465
Mov Cap-2 Maneuver	-	-	-	-	-	-	200	0	-
Stage 1	-	-	-	-	-	-	468	0	-
Stage 2	-	-	-	-	-	-	625	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.3	0.1	18.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	280	1089	-	-	929	-	-
HCM Lane V/C Ratio	0.039	0.025	-	-	0.006	-	-
HCM Control Delay (s)	18.4	8.4	0	-	8.9	0	-
HCM Lane LOS	C	A	A	-	A	A	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⋎	
Traffic Vol, veh/h	36	512	473	93	0	0
Future Vol, veh/h	36	512	473	93	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	557	514	101	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	615	0	-	0	1200	565
Stage 1	-	-	-	-	565	-
Stage 2	-	-	-	-	635	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	965	-	-	-	204	524
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	528	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	965	-	-	-	192	524
Mov Cap-2 Maneuver	-	-	-	-	192	-
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	528	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	965	-	-	-	-
HCM Lane V/C Ratio	0.041	-	-	-	-
HCM Control Delay (s)	8.9	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	90	113	933	574	25
Future Vol, veh/h	29	90	113	933	574	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	98	123	1014	624	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1898	638	651	0	-	0
Stage 1	638	-	-	-	-	-
Stage 2	1260	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	76	477	935	-	-	-
Stage 1	526	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	53	477	935	-	-	-
Mov Cap-2 Maneuver	53	-	-	-	-	-
Stage 1	368	-	-	-	-	-
Stage 2	267	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	82.1	1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	935	-	162	-	-
HCM Lane V/C Ratio	0.131	-	0.798	-	-
HCM Control Delay (s)	9.4	0	82.1	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.5	-	5.2	-	-

Intersection						
Int Delay, s/veh	0.3					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	1041	5	5	659
Future Vol, veh/h	5	5	1041	5	5	659
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	1132	5	5	716

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1861	1135	0	0	1137	0
Stage 1	1135	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	80	246	-	-	614	-
Stage 1	307	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	79	246	-	-	614	-
Mov Cap-2 Maneuver	79	-	-	-	-	-
Stage 1	307	-	-	-	-	-
Stage 2	472	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	120	614	-
HCM Lane V/C Ratio	-	-	0.091	0.009	-
HCM Control Delay (s)	-	-	38	10.9	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection												
Int Delay, s/veh	2.1											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↕			↕			↕	
Traffic Vol, veh/h	0	491	17	6	487	0	26	0	13	15	2	54
Future Vol, veh/h	0	491	17	6	487	0	26	0	13	15	2	54
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	534	18	7	529	0	28	0	14	16	2	59

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	552	0	0	1117	1086	543	1093	1095	529
Stage 1	-	-	-	-	-	-	543	543	-	543	543	-
Stage 2	-	-	-	-	-	-	574	543	-	550	552	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1018	-	-	185	216	540	192	214	550
Stage 1	0	-	-	-	-	-	524	520	-	524	520	-
Stage 2	0	-	-	-	-	-	504	520	-	519	515	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	1018	-	-	163	214	540	185	212	550
Mov Cap-2 Maneuver	-	-	-	-	-	-	163	214	-	185	212	-
Stage 1	-	-	-	-	-	-	524	520	-	524	515	-
Stage 2	-	-	-	-	-	-	444	515	-	505	515	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	26.2	17
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	212	-	-	1018	-	-	376
HCM Lane V/C Ratio	0.2	-	-	0.006	-	-	0.205
HCM Control Delay (s)	26.2	-	-	8.6	0	-	17
HCM Lane LOS	D	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.7	-	-	0	-	-	0.8

Intersection	
Intersection Delay, s/veh	17.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	444	1	0	443	78	1	0	0	26	1	27
Future Vol, veh/h	30	444	1	0	443	78	1	0	0	26	1	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	483	1	0	482	85	1	0	0	28	1	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	17.2	18.7	9.7	9.8
HCM LOS	C	C	A	A

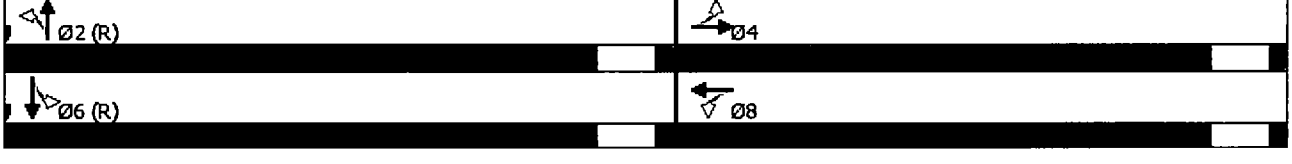
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	6%	0%	48%
Vol Thru, %	0%	93%	85%	2%
Vol Right, %	0%	0%	15%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	475	521	54
LT Vol	1	30	0	26
Through Vol	0	444	443	1
RT Vol	0	1	78	27
Lane Flow Rate	1	516	566	59
Geometry Grp	1	1	1	1
Degree of Util (X)	0.002	0.677	0.721	0.1
Departure Headway (Hd)	6.73	4.72	4.583	6.133
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	535	759	787	588
Service Time	4.734	2.778	2.637	4.133
HCM Lane V/C Ratio	0.002	0.68	0.719	0.1
HCM Control Delay	9.7	17.2	18.7	9.8
HCM Lane LOS	A	C	C	A
HCM 95th-tile Q	0	5.3	6.3	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	362	89	68	314	47	82	309	60	44	279	57
Future Volume (vph)	27	362	89	68	314	47	82	309	60	44	279	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		70	65		80	65		110	65		150
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99			1.00			0.99			1.00	1.00	
Frt			0.850			0.850			0.850		0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1809	0
Flt Permitted	0.455			0.400			0.455			0.483		
Satd. Flow (perm)	836	1863	1583	744	1863	1583	843	1863	1583	898	1809	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84			84			84		21	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		331			333			247			662	
Travel Time (s)		7.5			7.6			5.6			15.0	
Confl. Peds. (#/hr)	20		3	3		20	9		3	3		3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	393	97	74	341	51	89	336	65	48	303	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	393	97	74	341	51	89	336	65	48	365	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	31.0	31.0		31.0	31.0		34.0	34.0		34.0	34.0	
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0		34.0	34.0	
Total Split (%)	47.7%	47.7%		47.7%	47.7%		52.3%	52.3%		52.3%	52.3%	
Maximum Green (s)	27.0	27.0		27.0	27.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	17.0	17.0		17.0	17.0		20.0	20.0		20.0	20.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	27.0	27.0	0.0	27.0	27.0	0.0	30.0	30.0	0.0	30.0	30.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.42	0.42	0.00	0.42	0.42	0.00	0.46	0.46	0.00	0.46	0.46	
v/c Ratio	0.08	0.51	1.15	0.24	0.44	0.61	0.23	0.39	0.77	0.12	0.43	
Control Delay	12.4	17.0	164.3	15.0	15.9	36.2	12.6	13.2	61.8	10.9	13.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	12.4	17.0	164.3	15.0	15.9	36.2	12.6	13.2	61.8	10.9	13.0	
LOS	B	B	F	B	B	D	B	B	E	B	B	
Approach Delay		44.2			18.0			19.6			12.8	
Approach LOS		D			B			B			B	
Stops (vph)	19	258	9	45	215	1	48	192	2	26	202	
Fuel Used(gal)	0	4	3	1	3	0	1	2	1	0	4	
CO Emissions (g/hr)	17	252	228	44	211	33	44	174	62	33	262	
NOx Emissions (g/hr)	3	49	44	9	41	6	9	34	12	6	51	
VOC Emissions (g/hr)	4	58	53	10	49	8	10	40	14	8	61	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	
Queue Length 50th (ft)	7	111	~11	18	93	0	20	83	0	10	86	
Queue Length 95th (ft)	21	184	#95	46	156	#34	47	139	#54	28	147	
Internal Link Dist (ft)		251			253			167			582	
Turn Bay Length (ft)	65		70	65		80	65		110	65		
Base Capacity (vph)	347	773	84	309	773	84	389	859	84	414	846	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.08	0.51	1.15	0.24	0.44	0.61	0.23	0.39	0.77	0.12	0.43	

Intersection Summary
Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Pretimed
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 24.5 Intersection LOS: C
Intersection Capacity Utilization 69.1% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: California Ave & 47th Street



Intersection												
Int Delay, s/veh	1.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	9	0	0	7	0	0	0	0	2	0	1
Future Vol, veh/h	0	9	0	0	7	0	0	0	0	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	10	0	0	8	0	0	0	0	2	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	8	0	0	10	0	0	19	18	10	18	18	8
Stage 1	-	-	-	-	-	-	10	10	-	8	8	-
Stage 2	-	-	-	-	-	-	9	8	-	10	10	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1612	-	-	1610	-	-	995	876	1071	996	876	1074
Stage 1	-	-	-	-	-	-	1011	887	-	1013	889	-
Stage 2	-	-	-	-	-	-	1012	889	-	1011	887	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1612	-	-	1610	-	-	994	876	1071	996	876	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	994	876	-	996	876	-
Stage 1	-	-	-	-	-	-	1011	887	-	1013	889	-
Stage 2	-	-	-	-	-	-	1011	889	-	1011	887	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1612	-	-	1610	-	-	1021
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.003
HCM Control Delay (s)	0	0	-	-	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	21	15	438	418	19
Future Vol, veh/h	14	21	15	438	418	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	23	16	476	454	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	973	465	475	0	-	0
Stage 1	465	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	280	597	1087	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	274	597	1087	-	-	-
Mov Cap-2 Maneuver	274	-	-	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	604	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1087	-	406	-	-
HCM Lane V/C Ratio	0.015	-	0.094	-	-
HCM Control Delay (s)	8.4	0	14.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕				
Traffic Vol, veh/h	25	436	5	5	424	25	5	0	5	0	0	0
Future Vol, veh/h	25	436	5	5	424	25	5	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	474	5	5	461	27	5	0	5	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	488	0	0	479	0	0	1016	1029	477
Stage 1	-	-	-	-	-	-	531	531	-
Stage 2	-	-	-	-	-	-	485	498	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1075	-	-	1083	-	-	264	234	588
Stage 1	-	-	-	-	-	-	590	526	-
Stage 2	-	-	-	-	-	-	619	544	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1075	-	-	1083	-	-	253	0	588
Mov Cap-2 Maneuver	-	-	-	-	-	-	253	0	-
Stage 1	-	-	-	-	-	-	570	0	-
Stage 2	-	-	-	-	-	-	615	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.5	0.1	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	354	1075	-	-	1083	-	-
HCM Lane V/C Ratio	0.031	0.025	-	-	0.005	-	-
HCM Control Delay (s)	15.5	8.4	0	-	8.3	0	-
HCM Lane LOS	C	A	A	-	A	A	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⋎	
Traffic Vol, veh/h	24	463	471	54	1	0
Future Vol, veh/h	24	463	471	54	1	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	503	512	59	1	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	571	0	-	0	1097	542
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	555	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1002	-	-	-	236	540
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	575	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1002	-	-	-	228	540
Mov Cap-2 Maneuver	-	-	-	-	228	-
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	575	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1002	-	-	-	228
HCM Lane V/C Ratio	0.026	-	-	-	0.005
HCM Control Delay (s)	8.7	0	-	-	20.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	4	0	446	423	13
Future Vol, veh/h	6	4	0	446	423	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	4	0	485	460	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	952	467	474	0	-	0
Stage 1	467	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	288	596	1088	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	288	596	1088	-	-	-
Mov Cap-2 Maneuver	288	-	-	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	619	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1088	-	363	-	-
HCM Lane V/C Ratio	-	-	0.03	-	-
HCM Control Delay (s)	0	-	15.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.3					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	1041	5	5	659
Future Vol, veh/h	5	5	1041	5	5	659
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	1132	5	5	716

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1861	1135	0	0	1137	0
Stage 1	1135	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	80	246	-	-	614	-
Stage 1	307	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	79	246	-	-	614	-
Mov Cap-2 Maneuver	79	-	-	-	-	-
Stage 1	307	-	-	-	-	-
Stage 2	472	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	120	614	-
HCM Lane V/C Ratio	-	-	0.091	0.009	-
HCM Control Delay (s)	-	-	38	10.9	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↕			↕			↕	
Traffic Vol, veh/h	0	449	14	3	494	0	11	0	22	13	3	25
Future Vol, veh/h	0	449	14	3	494	0	11	0	22	13	3	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	488	15	3	537	0	12	0	24	14	3	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	503	0	0	1054	1039	496	1051	1046	537
Stage 1	-	-	-	-	-	-	496	496	-	543	543	-
Stage 2	-	-	-	-	-	-	558	543	-	508	503	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1061	-	-	204	231	574	205	228	544
Stage 1	0	-	-	-	-	-	556	545	-	524	520	-
Stage 2	0	-	-	-	-	-	514	520	-	547	541	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	1061	-	-	191	230	574	196	227	544
Mov Cap-2 Maneuver	-	-	-	-	-	-	191	230	-	196	227	-
Stage 1	-	-	-	-	-	-	556	545	-	524	518	-
Stage 2	-	-	-	-	-	-	483	518	-	524	541	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	16.7	17.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	344	-	-	1061	-	-	327
HCM Lane V/C Ratio	0.104	-	-	0.003	-	-	0.136
HCM Control Delay (s)	16.7	-	-	8.4	0	-	17.7
HCM Lane LOS	C	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	-	-	0	-	-	0.5

Intersection	
Intersection Delay, s/veh	30.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	580	0	1	493	40	0	0	0	29	0	20
Future Vol, veh/h	61	580	0	1	493	40	0	0	0	29	0	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	630	0	1	536	43	0	0	0	32	0	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	38	22.7	0	10.3
HCM LOS	E	C	-	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	10%	0%	59%
Vol Thru, %	100%	90%	92%	0%
Vol Right, %	0%	0%	7%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	641	534	49
LT Vol	0	61	1	29
Through Vol	0	580	493	0
RT Vol	0	0	40	20
Lane Flow Rate	0	697	580	53
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.92	0.776	0.098
Departure Headway (Hd)	6.983	4.755	4.813	6.629
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	759	743	544
Service Time	4.988	2.825	2.887	4.629
HCM Lane V/C Ratio	0	0.918	0.781	0.097
HCM Control Delay	10	38	22.7	10.3
HCM Lane LOS	N	E	C	B
HCM 95th-tile Q	0	12.7	7.6	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	378	189	95	393	55	100	353	94	54	527	45
Future Volume (vph)	58	378	189	95	393	55	100	353	94	54	527	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		70	65		80	65		110	65		150
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98			0.98			1.00			0.99	1.00	
Frt			0.850			0.850			0.850		0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1836	0
Flt Permitted	0.365			0.381			0.222			0.436		
Satd. Flow (perm)	668	1863	1583	699	1863	1583	412	1863	1583	807	1836	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			84			84		9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		331			330			247			662	
Travel Time (s)		7.5			7.5			5.6			15.0	
Confl. Peds. (#/hr)	31		26	26		31	11		12	12		11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	411	205	103	427	60	109	384	102	59	573	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	411	205	103	427	60	109	384	102	59	622	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	31.0	31.0		31.0	31.0		34.0	34.0		34.0	34.0	
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0		34.0	34.0	
Total Split (%)	47.7%	47.7%		47.7%	47.7%		52.3%	52.3%		52.3%	52.3%	
Maximum Green (s)	27.0	27.0		27.0	27.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	17.0	17.0		17.0	17.0		20.0	20.0		20.0	20.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	27.0	27.0	0.0	27.0	27.0	0.0	30.0	30.0	0.0	30.0	30.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.42	0.42	0.00	0.42	0.42	0.00	0.46	0.46	0.00	0.46	0.46	
v/c Ratio	0.23	0.53	1.95	0.36	0.55	0.71	0.57	0.45	1.21	0.16	0.73	
Control Delay	15.0	17.4	477.3	17.5	17.8	51.4	28.4	14.0	185.0	11.6	20.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	15.0	17.4	477.3	17.5	17.8	51.4	28.4	14.0	185.0	11.6	20.3	
LOS	B	B	F	B	B	D	C	B	F	B	C	
Approach Delay		156.0			21.2			45.9			19.5	
Approach LOS		F			C			D			B	
Stops (vph)	40	273	61	65	286	2	76	228	11	32	442	
Fuel Used(gal)	1	4	19	1	4	1	1	3	4	1	8	
CO Emissions (g/hr)	38	267	1341	66	281	51	83	206	264	41	542	
NOx Emissions (g/hr)	7	52	261	13	55	10	16	40	51	8	105	
VOC Emissions (g/hr)	9	62	311	15	65	12	19	48	61	9	126	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	
Queue Length 50th (ft)	15	117	~85	27	123	0	30	97	~15	13	186	
Queue Length 95th (ft)	41	193	#201	64	203	#48	#100	162	#101	34	305	
Internal Link Dist (ft)		251			250			167			582	
Turn Bay Length (ft)	65		70	65		80	65		110	65		
Base Capacity (vph)	277	773	105	290	773	84	190	859	84	372	852	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.23	0.53	1.95	0.36	0.55	0.71	0.57	0.45	1.21	0.16	0.73	

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Pretimed

Maximum v/c Ratio: 1.95

Intersection Signal Delay: 62.5 Intersection LOS: E

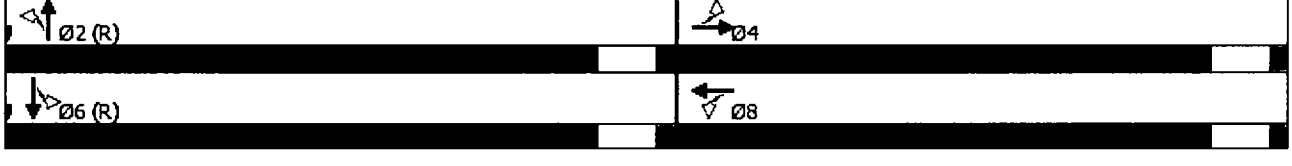
Intersection Capacity Utilization 77.2% ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: California Ave & 47th Street



Intersection												
Int Delay, s/veh	1.7											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	58	0	0	33	0	0	0	0	20	0	1
Future Vol, veh/h	0	58	0	0	33	0	0	0	0	20	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	63	0	0	36	0	0	0	0	22	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	36	0	0	63	0	0	100	99	63	99	99	36
Stage 1	-	-	-	-	-	-	63	63	-	36	36	-
Stage 2	-	-	-	-	-	-	37	36	-	63	63	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1575	-	-	1540	-	-	881	791	1002	883	791	1037
Stage 1	-	-	-	-	-	-	948	842	-	980	865	-
Stage 2	-	-	-	-	-	-	978	865	-	948	842	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1575	-	-	1540	-	-	880	791	1002	883	791	1037
Mov Cap-2 Maneuver	-	-	-	-	-	-	880	791	-	883	791	-
Stage 1	-	-	-	-	-	-	948	842	-	980	865	-
Stage 2	-	-	-	-	-	-	977	865	-	948	842	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1575	-	-	1540	-	-	889
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.026
HCM Control Delay (s)	0	0	-	-	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	57	34	661	706	20
Future Vol, veh/h	7	57	34	661	706	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	62	37	718	767	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1570	778	789	0	-	0
Stage 1	778	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	122	396	831	-	-	-
Stage 1	453	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	113	396	831	-	-	-
Mov Cap-2 Maneuver	113	-	-	-	-	-
Stage 1	419	-	-	-	-	-
Stage 2	446	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.9	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	831	-	311	-	-
HCM Lane V/C Ratio	0.044	-	0.224	-	-
HCM Control Delay (s)	9.5	0	19.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕				
Traffic Vol, veh/h	25	496	5	5	358	25	5	0	5	0	0	0
Future Vol, veh/h	25	496	5	5	358	25	5	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	539	5	5	389	27	5	0	5	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	416	0	0	544	0	0	1009	1022	542
Stage 1	-	-	-	-	-	-	596	596	-
Stage 2	-	-	-	-	-	-	413	426	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1143	-	-	1025	-	-	266	236	540
Stage 1	-	-	-	-	-	-	550	492	-
Stage 2	-	-	-	-	-	-	668	586	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1143	-	-	1025	-	-	255	0	540
Mov Cap-2 Maneuver	-	-	-	-	-	-	255	0	-
Stage 1	-	-	-	-	-	-	531	0	-
Stage 2	-	-	-	-	-	-	664	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.4	0.1	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	346	1143	-	-	1025	-	-
HCM Lane V/C Ratio	0.031	0.024	-	-	0.005	-	-
HCM Control Delay (s)	15.7	8.2	0	-	8.5	0	-
HCM Lane LOS	C	A	A	-	A	A	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	20	591	537	54	1	1
Future Vol, veh/h	20	591	537	54	1	1
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	642	584	59	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	643	0	-	0	1300	614
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	686	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	942	-	-	-	178	492
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	500	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	942	-	-	-	172	492
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	521	-
Stage 2	-	-	-	-	500	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	19.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	942	-	-	-	255
HCM Lane V/C Ratio	0.023	-	-	-	0.009
HCM Control Delay (s)	8.9	0	-	-	19.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	74	31	665	756	5
Future Vol, veh/h	32	74	31	665	756	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	80	34	723	822	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1616	825	827	0	-	0
Stage 1	825	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	114	372	804	-	-	-
Stage 1	430	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	106	372	804	-	-	-
Mov Cap-2 Maneuver	106	-	-	-	-	-
Stage 1	399	-	-	-	-	-
Stage 2	447	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	40.5	0.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	804	-	212	-	-
HCM Lane V/C Ratio	0.042	-	0.543	-	-
HCM Control Delay (s)	9.7	0	40.5	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0.1	-	2.9	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	691	5	5	825
Future Vol, veh/h	5	5	691	5	5	825
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	751	5	5	897

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1661	754	0	0	756	0
Stage 1	754	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	107	409	-	-	855	-
Stage 1	465	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	106	409	-	-	855	-
Mov Cap-2 Maneuver	106	-	-	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	389	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.9	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	168	855	-
HCM Lane V/C Ratio	-	-	0.065	0.006	-
HCM Control Delay (s)	-	-	27.9	9.2	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↕			↕			↕	
Traffic Vol, veh/h	0	589	3	5	534	0	22	0	23	22	2	32
Future Vol, veh/h	0	589	3	5	534	0	22	0	23	22	2	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	640	3	5	580	0	24	0	25	24	2	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	643	0	0	1251	1232	642	1244	1233	580
Stage 1	-	-	-	-	-	-	642	642	-	590	590	-
Stage 2	-	-	-	-	-	-	609	590	-	654	643	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	942	-	-	149	177	474	151	177	514
Stage 1	0	-	-	-	-	-	463	469	-	494	495	-
Stage 2	0	-	-	-	-	-	482	495	-	456	468	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	942	-	-	137	176	474	142	176	514
Mov Cap-2 Maneuver	-	-	-	-	-	-	137	176	-	142	176	-
Stage 1	-	-	-	-	-	-	463	469	-	494	491	-
Stage 2	-	-	-	-	-	-	444	491	-	432	468	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	26.6	24.5
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	215	-	-	942	-	-	245
HCM Lane V/C Ratio	0.228	-	-	0.006	-	-	0.248
HCM Control Delay (s)	26.6	-	-	8.8	0	-	24.5
HCM Lane LOS	D	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.8	-	-	0	-	-	1

APPENDIX C
TRIP GENERATION CALCULATIONS

TERRA
ENGINEERING LTD.

Land Use: 630
Clinic

Description

A clinic is any facility that provides limited diagnostic and outpatient care but is unable to provide prolonged in-house medical and surgical care. Clinics commonly have lab facilities, supporting pharmacies, and a wide range of services (compared to the medical office, which may only have specialized or individual physicians). Hospital (Land Use 610), free-standing emergency room (Land Use 650), and medical-dental office building (Land Use 720) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the three general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 10:30 and 11:30 a.m. and 3:30 and 4:30 p.m., respectively.

The average numbers of person trips per vehicle trip at the five general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.40 during Weekday, AM Peak Hour of Generator
- 1.69 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.52 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, New Hampshire, Texas, and Vermont.

Source Numbers

440, 734, 878, 926, 972

	Average Rate		Fitted Curve	
	Enter	Exit	Enter	Exit
AM Peak 7-9 Adjacent	125	35		
PM Peak 4-6 Adjacent	41	101	32	32
AM Peak Generator	132	96	87	87
PM Peak Generator	93	109	68	68

Trip Generation Calculations
TERRA Project 21-216-001 EHC Brighton Park

ITE Trip Generation Manual 10th Edition

Land Use Code (630) Clinic

Independent Variable:	1000 Sq. Ft. GFA
Value of Independent Varible:	43.572
Setting/Location:	General Urban/Suburban

Trip Generation Calculations
TERRA Project 21-216-001 EHC Brighton Park

ITE Trip Generation Manual 10th Edition

Land Use Code (630) Clinic

Average Vehicle Trip Ends vs:	1000 Sq. Ft. GFA
Time Period:	Peak Hour of Adjacent Street Traffic, Weekday
Setting/Location:	General Urban/Suburban
Directional Distribution:	50% Entering 50% Exiting
Average Rate:	38.16 trips per 1000 Sq. Ft. GFA
Value of 1000 Sq. Ft. GFA:	43.572

Average Rate Method

Number of Trips:	831 Entering
	831 Exiting

Clinic
(630)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

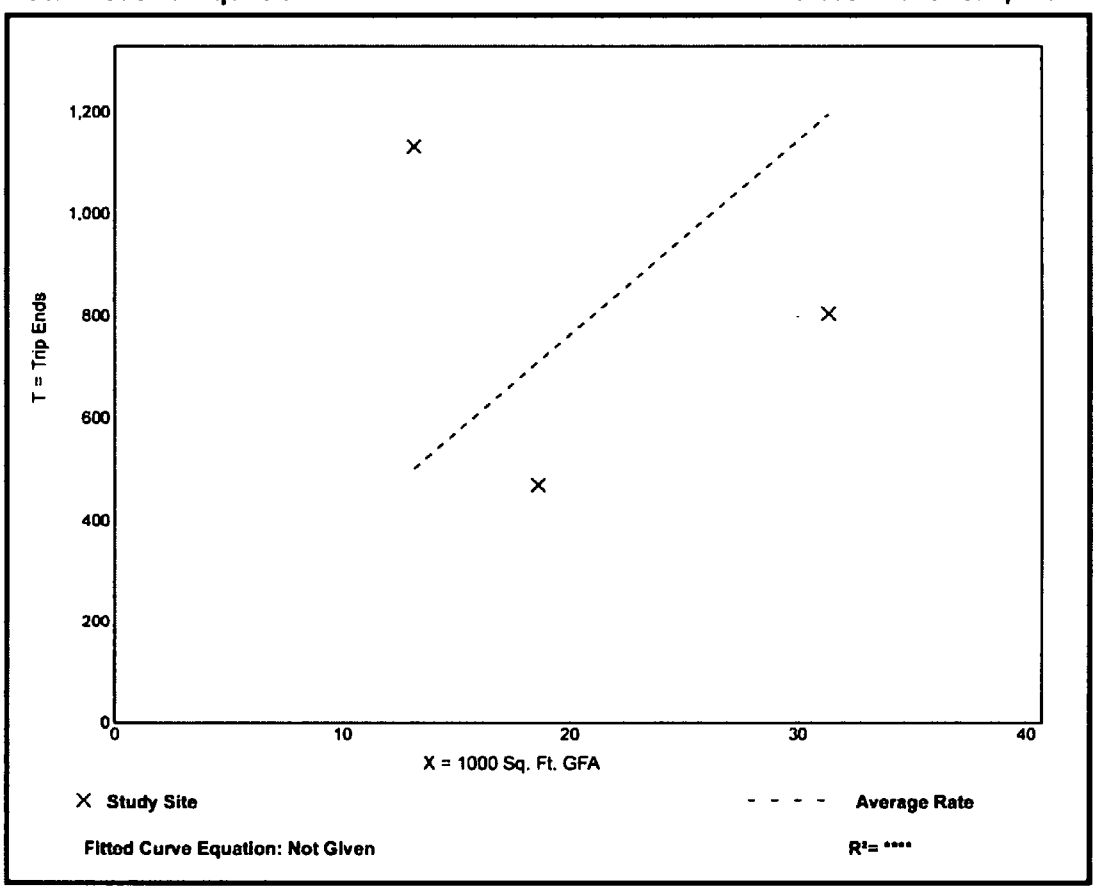
Setting/Location: General Urban/Suburban
Number of Studies: 3
1000 Sq. Ft. GFA: 21
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
38.16	25.25 - 86.21	66.06

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Trip Generation Calculations
TERRA Project 21-216-001 EHC Brighton Park

ITE Trip Generation Manual 10th Edition

Land Use Code (630) Clinic

Average Vehicle Trip Ends vs:	1000 Sq. Ft. GFA
Time Period:	Peak Hour of Adjacent Street Traffic, One Hour between 7 and 9 a.m.
Setting/Location:	General Urban/Suburban
Directional Distribution:	78% Entering 22% Exiting
Average Rate:	3.69 trips per 1000 Sq. Ft. GFA
Value of 1000 Sq. Ft. GFA:	43.572

Average Rate Method

Number of Trips:	125 Entering 35 Exiting

Clinic
(630)

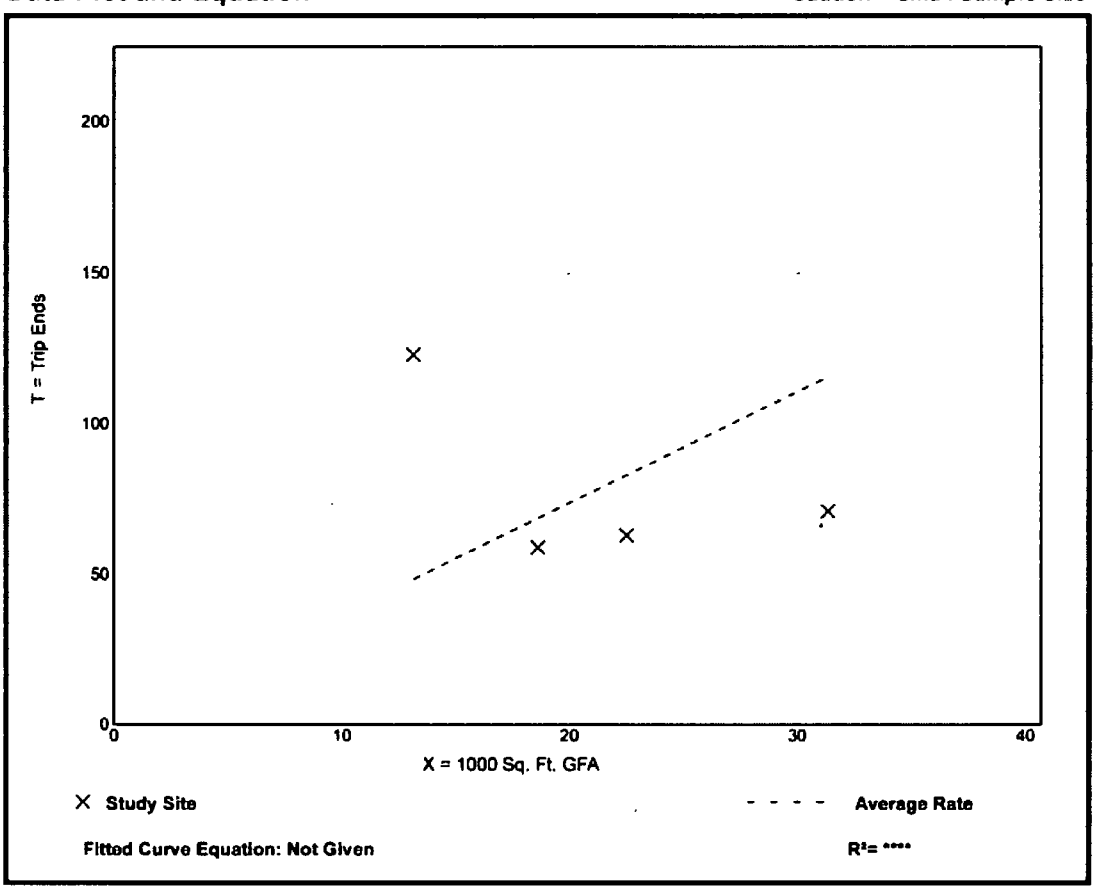
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 4
1000 Sq. Ft. GFA: 21
Directional Distribution: 78% entering, 22% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.69	2.27 - 9.36	2.82

Data Plot and Equation

Caution – Small Sample Size



Trip Generation Calculations
TERRA Project 21-216-001 EHC Brighton Park

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Land Use Code (630) Clinic

Average Vehicle Trip Ends vs:	1000 Sq. Ft. GFA
Time Period:	Peak Hour of Adjacent Street Traffic, One Hour between 4 and 6 p.m.
Setting/Location:	General Urban/Suburban
Directional Distribution:	29% Entering
	71% Exiting
Average Rate:	3.28 trips per 1000 Sq. Ft. GFA
Fitted Curve Equation:	Ln(T) = 0.72 Ln(X) + 1.97
Value of 1000 Sq. Ft. GFA:	43.572

Average Rate Method

Number of Trips:	41 Entering
	101 Exiting

Fitted Curve Equation

Number of Trips:	32 Entering
	32 Exiting

Clinic
(630)

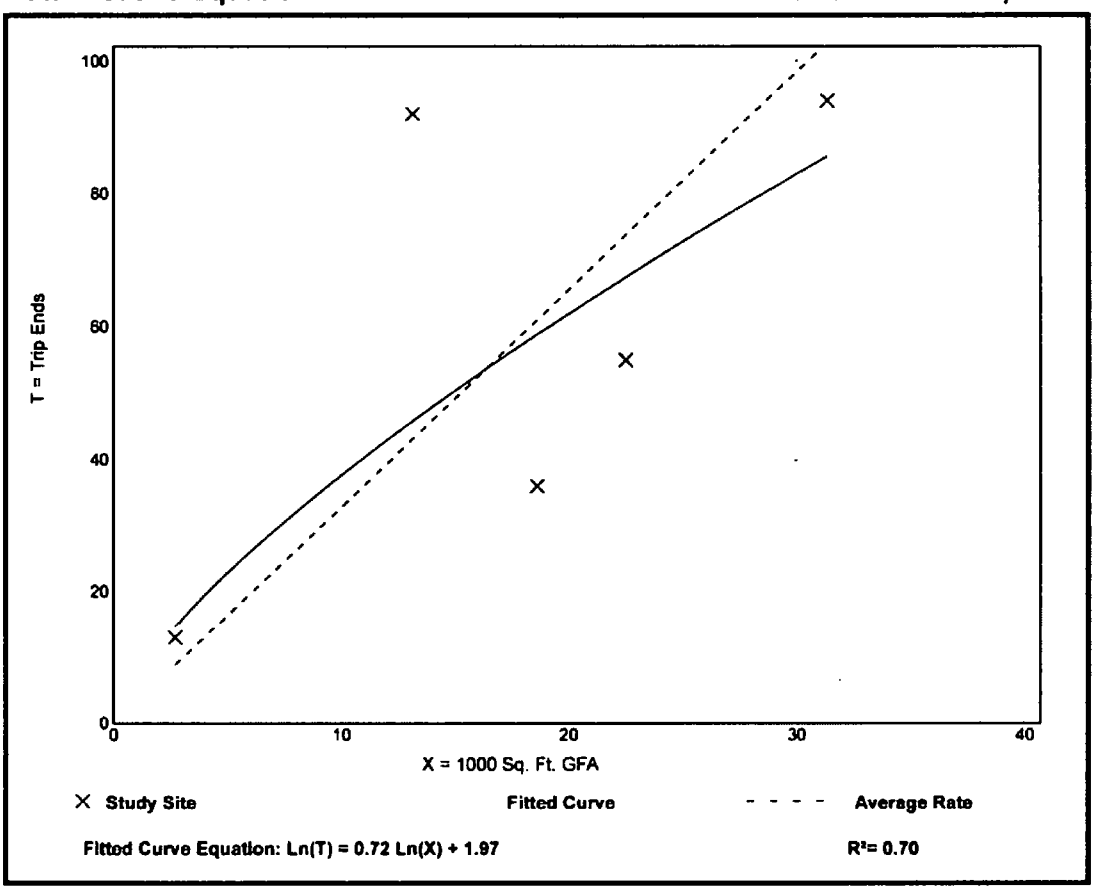
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
1000 Sq. Ft. GFA: 18
Directional Distribution: 29% entering, 71% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.28	1.93 - 7.00	1.84

Data Plot and Equation

Caution – Small Sample Size



Trip Generation Calculations
TERRA Project 21-216-001 EHC Brighton Park

ITE Trip Generation Manual 10th Edition

Land Use Code (630) Clinic

Average Vehicle Trip Ends vs:	1000 Sq. Ft. GFA
Time Period:	AM Peak Hour of Generator
Setting/Location:	General Urban/Suburban
Directional Distribution:	58% Entering
	42% Exiting
Average Rate:	5.22 trips per 1000 Sq. Ft. GFA
Fitted Curve Equation:	Ln(T) = 0.71 Ln(X) + 2.33
Value of 1000 Sq. Ft. GFA:	43.572

Average Rate Method

Number of Trips:	132 Entering
	96 Exiting

Fitted Curve Equation

Number of Trips:	87 Entering
	87 Exiting

Clinic
(630)

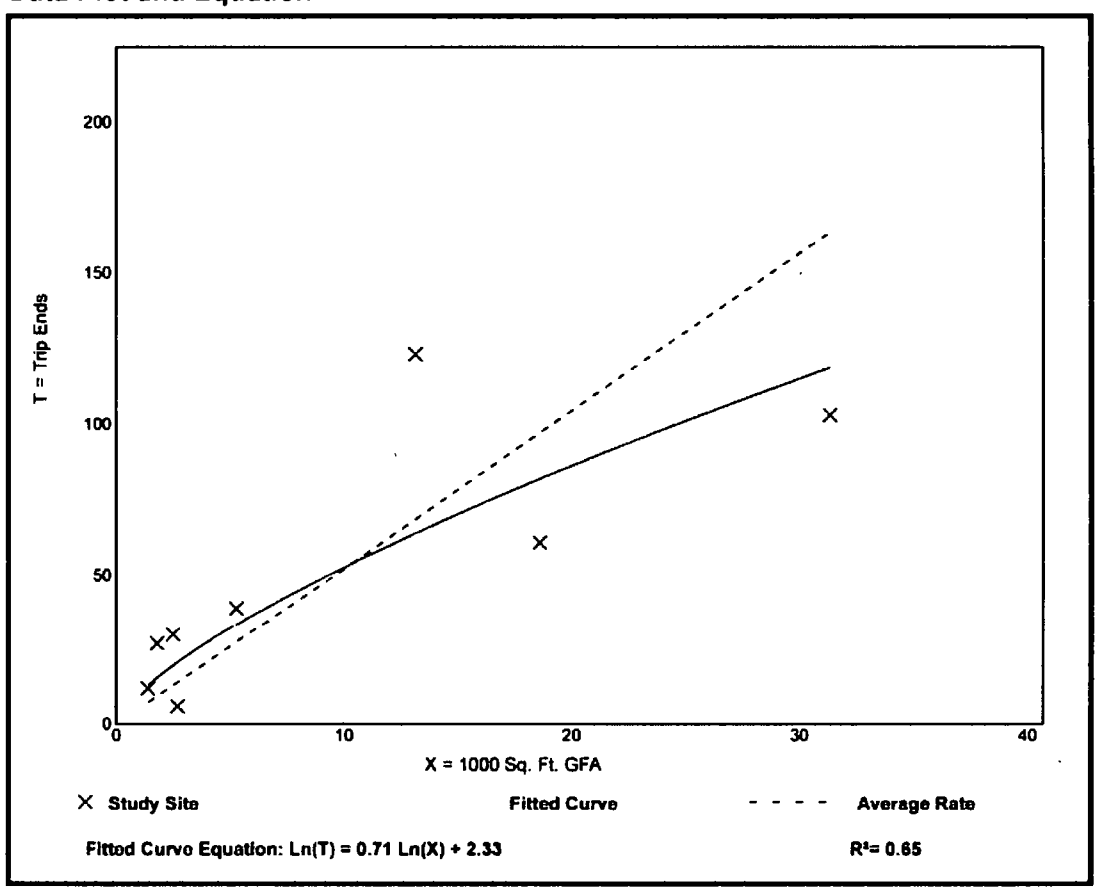
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 8
1000 Sq. Ft. GFA: 10
Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
5.22	2.22 - 15.00	3.37

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.71 Ln(X) + 2.33 **R^2= 0.65**

Trip Generation Calculations
TERRA Project 21-216-001 EHC Brighton Park

ITE Trip Generation Manual 10th Edition

Land Use Code (630) Clinic

Average Vehicle Trip Ends vs:	1000 Sq. Ft. GFA
Time Period:	PM Peak Hour of Generator
Setting/Location:	General Urban/Suburban
Directional Distribution:	46% Entering
	54% Exiting
Average Rate:	4.64 trips per 1000 Sq. Ft. GFA
Fitted Curve Equation:	Ln(T) = 0.82 Ln(X) + 1.9
Value of 1000 Sq. Ft. GFA:	43.572

Average Rate Method

Number of Trips:	93 Entering
	109 Exiting

Fitted Curve Equation

Number of Trips:	68 Entering
	68 Exiting

Clinic
(630)

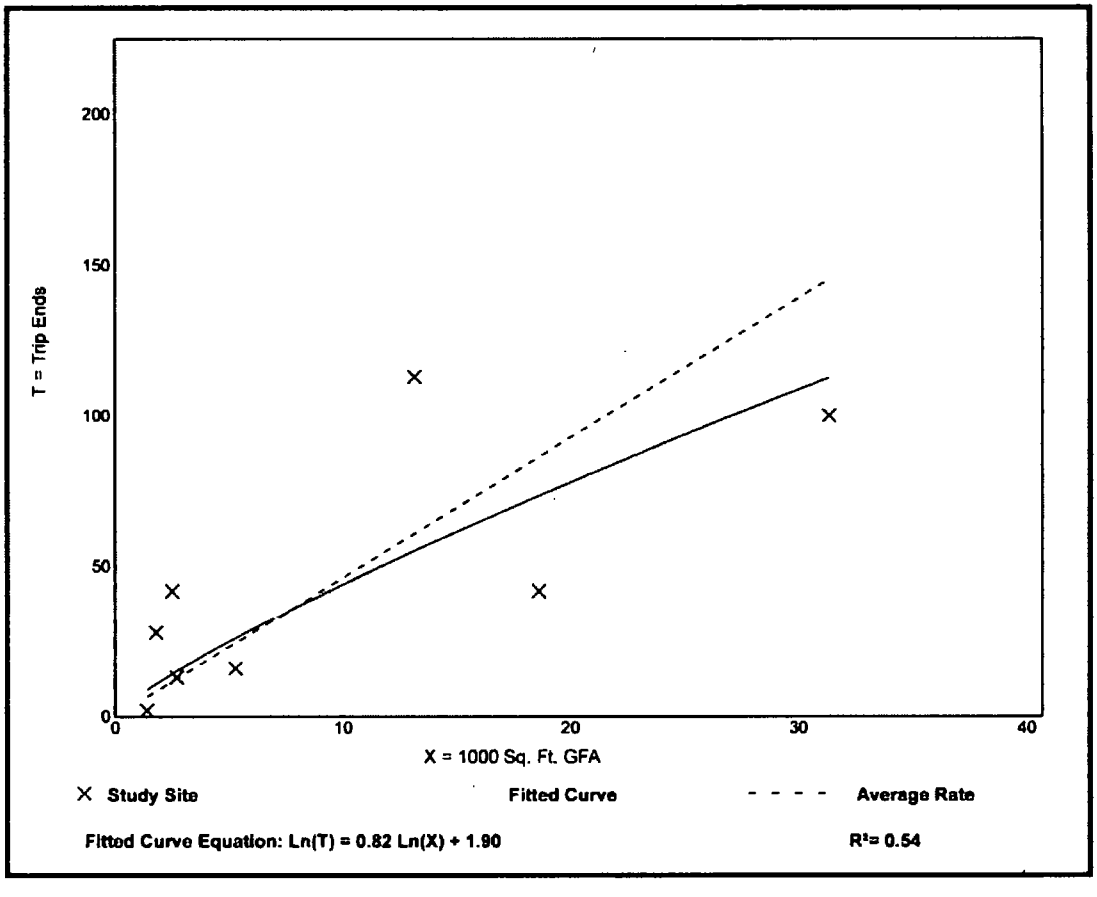
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 8
1000 Sq. Ft. GFA: 10
Directional Distribution: 46% entering, 54% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.64	1.43 - 16.80	3.84

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.82 Ln(X) + 1.90

R^2= 0.54

APPENDIX D
OPENING DAY SYNCHRO OUTPUT

TERRA
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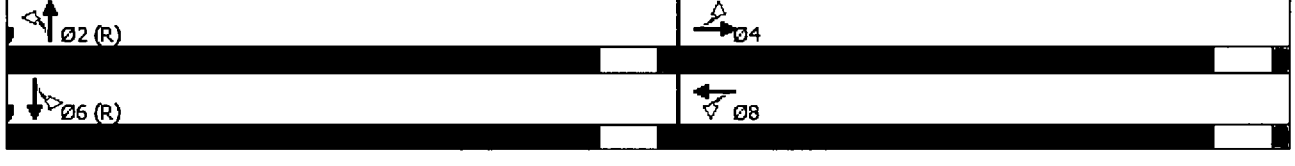
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	409	134	92	284	46	155	543	196	91	374	70
Future Volume (vph)	53	409	134	92	284	46	155	543	196	91	374	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		70	65		80	65		110	65		150
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96			0.96			0.99			0.99	0.99	
Frt			0.850			0.850			0.850		0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1808	0
Flt Permitted	0.490			0.346			0.344			0.249		
Satd. Flow (perm)	875	1863	1583	620	1863	1583	637	1863	1583	458	1808	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84			84			108		19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		331			330			247			662	
Travel Time (s)		7.5			7.5			5.6			15.0	
Confl. Peds. (#/hr)	57		70	70		57	13		34	34		13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	58	445	146	100	309	50	168	590	213	99	407	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	445	146	100	309	50	168	590	213	99	483	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	31.0	31.0		31.0	31.0		34.0	34.0		34.0	34.0	
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0		34.0	34.0	
Total Split (%)	47.7%	47.7%		47.7%	47.7%		52.3%	52.3%		52.3%	52.3%	
Maximum Green (s)	27.0	27.0		27.0	27.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	17.0	17.0		17.0	17.0		20.0	20.0		20.0	20.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	27.0	27.0	0.0	27.0	27.0	0.0	30.0	30.0	0.0	30.0	30.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.42	0.42	0.00	0.42	0.42	0.00	0.46	0.46	0.00	0.46	0.46	
v/c Ratio	0.16	0.58	1.74	0.39	0.40	0.60	0.57	0.69	1.97	0.47	0.57	
Control Delay	13.4	18.3	393.8	18.9	15.3	34.8	22.3	18.9	485.0	21.3	15.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	13.4	18.3	393.8	18.9	15.3	34.8	22.3	18.9	485.0	21.3	15.6	
LOS	B	B	F	B	B	C	C	B	F	C	B	
Approach Delay		102.3			18.2			121.8			16.6	
Approach LOS		F			B			F			B	
Stops (vph)	35	302	36	65	189	1	119	414	64	66	301	
Fuel Used(gal)	0	4	11	1	3	0	2	6	20	1	5	
CO Emissions (g/hr)	33	297	789	66	186	31	134	441	1426	86	375	
NOx Emissions (g/hr)	6	58	154	13	36	6	26	86	277	17	73	
VOC Emissions (g/hr)	8	69	183	15	43	7	31	102	331	20	87	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	
Queue Length 50th (ft)	14	130	~53	27	82	0	46	174	~89	26	127	
Queue Length 95th (ft)	36	213	#154	66	140	#33	110	281	#208	71	211	
Internal Link Dist (ft)		251			250			167			582	
Turn Bay Length (ft)	65		70	65		80	65		110	65		
Base Capacity (vph)	363	773	84	257	773	84	294	859	108	211	844	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.16	0.58	1.74	0.39	0.40	0.60	0.57	0.69	1.97	0.47	0.57	

Intersection Summary
Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Pretimed
Maximum v/c Ratio: 1.97
Intersection Signal Delay: 76.1 Intersection LOS: E
Intersection Capacity Utilization 74.6% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: California Ave & 47th Street



Intersection	
Intersection Delay, s/veh	26.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	88	519	18	14	392	78	1	0	0	42	0	28
Future Vol, veh/h	88	519	18	14	392	78	1	0	0	42	0	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	96	564	20	15	426	85	1	0	0	46	0	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	35.1	18.8	10.2	10.6
HCM LOS	E	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	14%	3%	60%
Vol Thru, %	0%	83%	81%	0%
Vol Right, %	0%	3%	16%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	625	484	70
LT Vol	1	88	14	42
Through Vol	0	519	392	0
RT Vol	0	18	78	28
Lane Flow Rate	1	679	526	76
Geometry Grp	1	1	1	1
Degree of Util (X)	0.002	0.9	0.706	0.138
Departure Headway (Hd)	7.139	4.769	4.833	6.525
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	504	754	742	553
Service Time	5.146	2.851	2.921	4.525
HCM Lane V/C Ratio	0.002	0.901	0.709	0.137
HCM Control Delay	10.2	35.1	18.8	10.6
HCM Lane LOS	B	E	C	B
HCM 95th-tile Q	0	11.9	5.9	0.5

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	104	0	2	128	1	0	0	0	11	0	2
Future Vol, veh/h	1	104	0	2	128	1	0	0	0	11	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	113	0	2	139	1	0	0	0	12	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	140	0	0	113	0	0	260	259	113	259	259	140
Stage 1	-	-	-	-	-	-	115	115	-	144	144	-
Stage 2	-	-	-	-	-	-	145	144	-	115	115	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1443	-	-	1476	-	-	693	645	940	694	645	908
Stage 1	-	-	-	-	-	-	890	800	-	859	778	-
Stage 2	-	-	-	-	-	-	858	778	-	890	800	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1443	-	-	1476	-	-	690	644	940	693	644	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	690	644	-	693	644	-
Stage 1	-	-	-	-	-	-	889	799	-	858	777	-
Stage 2	-	-	-	-	-	-	855	777	-	889	799	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	0	10.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1443	-	-	1476	-	-	719
HCM Lane V/C Ratio	-	0.001	-	-	0.001	-	-	0.02
HCM Control Delay (s)	0	7.5	0	-	7.4	0	-	10.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	0	115	128	85	36	0
Future Vol, veh/h	0	115	128	85	36	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	125	139	92	39	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	231	0	-	0	310	185
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	125	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1337	-	-	-	682	857
Stage 1	-	-	-	-	847	-
Stage 2	-	-	-	-	901	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1337	-	-	-	682	857
Mov Cap-2 Maneuver	-	-	-	-	682	-
Stage 1	-	-	-	-	847	-
Stage 2	-	-	-	-	901	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1337	-	-	-	682
HCM Lane V/C Ratio	-	-	-	-	0.057
HCM Control Delay (s)	0	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection												
Int Delay, s/veh	1											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕				
Traffic Vol, veh/h	88	559	49	17	415	25	7	0	6	0	0	0
Future Vol, veh/h	88	559	49	17	415	25	7	0	6	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	96	608	53	18	451	27	8	0	7	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	478	0	0	661	0	0	1328	1341	635
Stage 1	-	-	-	-	-	-	827	827	-
Stage 2	-	-	-	-	-	-	501	514	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1084	-	-	927	-	-	171	152	478
Stage 1	-	-	-	-	-	-	430	386	-
Stage 2	-	-	-	-	-	-	609	535	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1084	-	-	927	-	-	143	0	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	143	0	-
Stage 1	-	-	-	-	-	-	369	0	-
Stage 2	-	-	-	-	-	-	593	0	-

Approach	EB	WB	NB
HCM Control Delay, s	1.1	0.3	23.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	211	1084	-	-	927	-	-
HCM Lane V/C Ratio	0.067	0.088	-	-	0.02	-	-
HCM Control Delay (s)	23.3	8.6	0	-	9	0	-
HCM Lane LOS	C	A	A	-	A	A	-
HCM 95th %tile Q(veh)	0.2	0.3	-	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⋎	
Traffic Vol, veh/h	36	537	487	93	0	0
Future Vol, veh/h	36	537	487	93	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	584	529	101	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	630	0	-	0	1242	580
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	662	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	952	-	-	-	193	514
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	513	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	952	-	-	-	181	514
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	513	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	952	-	-	-	-
HCM Lane V/C Ratio	0.041	-	-	-	-
HCM Control Delay (s)	8.9	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	21.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	122	188	871	566	35
Future Vol, veh/h	33	122	188	871	566	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	133	204	947	615	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1989	634	653	0	-	0
Stage 1	634	-	-	-	-	-
Stage 2	1355	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	67	479	934	-	-	-
Stage 1	529	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	36	479	934	-	-	-
Mov Cap-2 Maneuver	36	-	-	-	-	-
Stage 1	285	-	-	-	-	-
Stage 2	240	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	234.2	1.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	934	-	132	-	-
HCM Lane V/C Ratio	0.219	-	1.276	-	-
HCM Control Delay (s)	9.9	0	234.2	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.8	-	10.5	-	-

Intersection						
Int Delay, s/veh	0.3					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	5	1054	30	9	687
Future Vol, veh/h	6	5	1054	30	9	687
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	5	1146	33	10	747

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1930	1163	0	0	1179	0
Stage 1	1163	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	73	237	-	-	592	-
Stage 1	297	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	71	237	-	-	592	-
Mov Cap-2 Maneuver	71	-	-	-	-	-
Stage 1	297	-	-	-	-	-
Stage 2	445	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	44.1	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	104	592	-
HCM Lane V/C Ratio	-	-	0.115	0.017	-
HCM Control Delay (s)	-	-	44.1	11.2	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Intersection						
Int Delay, s/veh	3.1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	1	34	0	0	56
Future Vol, veh/h	3	1	34	0	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	1	37	0	0	61

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	105	31	61	0	-	0
Stage 1	31	-	-	-	-	-
Stage 2	74	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	893	1043	1542	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	872	1043	1542	-	-	-
Mov Cap-2 Maneuver	872	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	7.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1542	-	909	-	-
HCM Lane V/C Ratio	0.024	-	0.005	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↕			↕			↕	
Traffic Vol, veh/h	0	508	25	25	488	0	39	0	62	15	2	54
Future Vol, veh/h	0	508	25	25	488	0	39	0	62	15	2	54
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	552	27	27	530	0	42	0	67	16	2	59

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	579	0	0	1181	1150	566	1183	1163	530
Stage 1	-	-	-	-	-	-	566	566	-	584	584	-
Stage 2	-	-	-	-	-	-	615	584	-	599	579	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	995	-	-	167	198	524	166	195	549
Stage 1	0	-	-	-	-	-	509	507	-	498	498	-
Stage 2	0	-	-	-	-	-	479	498	-	488	501	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	995	-	-	144	190	524	140	188	549
Mov Cap-2 Maneuver	-	-	-	-	-	-	144	190	-	140	188	-
Stage 1	-	-	-	-	-	-	509	507	-	498	479	-
Stage 2	-	-	-	-	-	-	410	479	-	425	501	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	28.6	19.3
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	260	-	-	995	-	-	328
HCM Lane V/C Ratio	0.422	-	-	0.027	-	-	0.235
HCM Control Delay (s)	28.6	-	-	8.7	0	-	19.3
HCM Lane LOS	D	-	-	A	A	-	C
HCM 95th %tile Q(veh)	2	-	-	0.1	-	-	0.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	406	189	96	415	64	100	352	90	59	532	56
Future Volume (vph)	68	406	189	96	415	64	100	352	90	59	532	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		70	65		80	65		110	65		150
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98			0.99			1.00			0.99	1.00	
Frt			0.850			0.850			0.850		0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1831	0
Flt Permitted	0.340			0.351			0.207			0.437		
Satd. Flow (perm)	623	1863	1583	644	1863	1583	384	1863	1583	808	1831	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98			84			84		11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		331			330			455			662	
Travel Time (s)		7.5			7.5			10.3			15.0	
Confl. Peds. (#/hr)	31		26	26		31	11		12	12		11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	441	205	104	451	70	109	383	98	64	578	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	441	205	104	451	70	109	383	98	64	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	31.0	31.0		31.0	31.0		34.0	34.0		34.0	34.0	
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0		34.0	34.0	
Total Split (%)	47.7%	47.7%		47.7%	47.7%		52.3%	52.3%		52.3%	52.3%	
Maximum Green (s)	27.0	27.0		27.0	27.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	17.0	17.0		17.0	17.0		20.0	20.0		20.0	20.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	27.0	27.0	0.0	27.0	27.0	0.0	30.0	30.0	0.0	30.0	30.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.42	0.42	0.00	0.42	0.42	0.00	0.46	0.46	0.00	0.46	0.46	
v/c Ratio	0.29	0.57	2.09	0.39	0.58	0.83	0.62	0.45	1.17	0.17	0.75	
Control Delay	16.4	18.2	540.1	18.8	18.4	73.8	32.7	14.0	168.4	11.8	21.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	16.4	18.2	540.1	18.8	18.4	73.8	32.7	14.0	168.4	11.8	21.2	
LOS	B	B	F	B	B	E	C	B	F	B	C	
Approach Delay		166.6			24.7			43.1			20.4	
Approach LOS		F			C			D			C	
Stops (vph)	46	299	70	68	308	3	75	227	9	35	456	
Fuel Used(gal)	1	4	22	1	4	1	1	4	3	1	8	
CO Emissions (g/hr)	46	294	1514	69	303	80	100	245	241	45	566	
NOx Emissions (g/hr)	9	57	295	13	59	16	20	48	47	9	110	
VOC Emissions (g/hr)	11	68	351	16	70	19	23	57	56	10	131	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	0	0	0	0	
Queue Length 50th (ft)	19	129	~91	28	132	0	31	97	~12	14	194	
Queue Length 95th (ft)	48	211	#207	67	217	#60	#105	162	#96	36	#319	
Internal Link Dist (ft)		251			250			375			582	
Turn Bay Length (ft)	65		70	65		80	65		110	65		
Base Capacity (vph)	258	773	98	267	773	84	177	859	84	372	851	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.29	0.57	2.09	0.39	0.58	0.83	0.62	0.45	1.17	0.17	0.75	

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Pretimed

Maximum v/c Ratio: 2.09

Intersection Signal Delay: 66.4 Intersection LOS: E

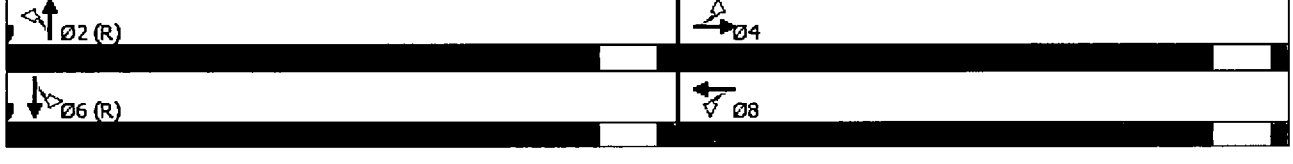
Intersection Capacity Utilization 78.2% ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: California Ave & 47th Street



Intersection	
Intersection Delay, s/veh	34.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	599	0	1	512	40	0	0	0	29	0	20
Future Vol, veh/h	61	599	0	1	512	40	0	0	0	29	0	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	651	0	1	557	43	0	0	0	32	0	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	44.1	25.2	0	10.5
HCM LOS	E	D	-	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	9%	0%	59%
Vol Thru, %	100%	91%	93%	0%
Vol Right, %	0%	0%	7%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	660	553	49
LT Vol	0	61	1	29
Through Vol	0	599	512	0
RT Vol	0	0	40	20
Lane Flow Rate	0	717	601	53
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.953	0.808	0.099
Departure Headway (Hd)	7.082	4.782	4.842	6.718
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	753	739	537
Service Time	5.087	2.855	2.92	4.718
HCM Lane V/C Ratio	0	0.952	0.813	0.099
HCM Control Delay	10.1	44.1	25.2	10.5
HCM Lane LOS	N	E	D	B
HCM 95th-tile Q	0	14.2	8.5	0.3

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	58	0	0	33	0	0	0	0	20	0	1
Future Vol, veh/h	0	58	0	0	33	0	0	0	0	20	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	63	0	0	36	0	0	0	0	22	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	36	0	0	63	0	0	100	99	63	99	99	36
Stage 1	-	-	-	-	-	-	63	63	-	36	36	-
Stage 2	-	-	-	-	-	-	37	36	-	63	63	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1575	-	-	1540	-	-	881	791	1002	883	791	1037
Stage 1	-	-	-	-	-	-	948	842	-	980	865	-
Stage 2	-	-	-	-	-	-	978	865	-	948	842	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1575	-	-	1540	-	-	880	791	1002	883	791	1037
Mov Cap-2 Maneuver	-	-	-	-	-	-	880	791	-	883	791	-
Stage 1	-	-	-	-	-	-	948	842	-	980	865	-
Stage 2	-	-	-	-	-	-	977	865	-	948	842	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1575	-	-	1540	-	-	889
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.026
HCM Control Delay (s)	0	0	-	-	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	15	7	0	0	21
Future Vol, veh/h	28	15	7	0	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	16	8	0	0	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	28	12	23	0	-	0
Stage 1	12	-	-	-	-	-
Stage 2	16	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	987	1069	1592	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1007	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	982	1069	1592	-	-	-
Mov Cap-2 Maneuver	982	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1007	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1592	-	1011	-	-
HCM Lane V/C Ratio	0.005	-	0.046	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	1.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕				
Traffic Vol, veh/h	61	537	24	7	552	25	23	0	15	0	0	0
Future Vol, veh/h	61	537	24	7	552	25	23	0	15	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	584	26	8	600	27	25	0	16	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	627	0	0	610	0	0	1359	1372	597
Stage 1	-	-	-	-	-	-	729	729	-
Stage 2	-	-	-	-	-	-	630	643	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	955	-	-	969	-	-	164	146	503
Stage 1	-	-	-	-	-	-	477	428	-
Stage 2	-	-	-	-	-	-	531	468	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	955	-	-	969	-	-	145	0	503
Mov Cap-2 Maneuver	-	-	-	-	-	-	145	0	-
Stage 1	-	-	-	-	-	-	427	0	-
Stage 2	-	-	-	-	-	-	524	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.9	0.1	27.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	202	955	-	-	969	-	-
HCM Lane V/C Ratio	0.204	0.069	-	-	0.008	-	-
HCM Control Delay (s)	27.3	9.1	0	-	8.7	0	-
HCM Lane LOS	D	A	A	-	A	A	-
HCM 95th %tile Q(veh)	0.7	0.2	-	-	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⅄	
Traffic Vol, veh/h	20	610	556	54	1	1
Future Vol, veh/h	20	610	556	54	1	1
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	663	604	59	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	663	0	-	0	1341	634
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	707	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	926	-	-	-	168	479
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	489	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	926	-	-	-	162	479
Mov Cap-2 Maneuver	-	-	-	-	162	-
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	489	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	20
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	926	-	-	-	242
HCM Lane V/C Ratio	0.023	-	-	-	0.009
HCM Control Delay (s)	9	0	-	-	20
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection						
Int Delay, s/veh	7.8					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	151	84	631	699	31
Future Vol, veh/h	34	151	84	631	699	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	164	91	686	760	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1645	777	794	0	-	0
Stage 1	777	-	-	-	-	-
Stage 2	868	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	109	397	827	-	-	-
Stage 1	453	-	-	-	-	-
Stage 2	411	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	90	397	827	-	-	-
Mov Cap-2 Maneuver	90	-	-	-	-	-
Stage 1	372	-	-	-	-	-
Stage 2	411	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	64.1	1.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	827	-	244	-	-
HCM Lane V/C Ratio	0.11	-	0.824	-	-
HCM Control Delay (s)	9.9	0	64.1	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.4	-	6.4	-	-

Intersection						
Int Delay, s/veh	0.8					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	5	710	2	10	897
Future Vol, veh/h	20	5	710	2	10	897
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	5	772	2	11	975

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1770	773	0	0	774	0
Stage 1	773	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	92	399	-	-	842	-
Stage 1	455	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	89	399	-	-	842	-
Mov Cap-2 Maneuver	89	-	-	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	347	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	50.9	0	0.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	105	842	-
HCM Lane V/C Ratio	-	-	0.259	0.013	-
HCM Control Delay (s)	-	-	50.9	9.3	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	1	0	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⋎	
Traffic Vol, veh/h	0	78	33	79	79	0
Future Vol, veh/h	0	78	33	79	79	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	85	36	86	86	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	122	0	-	0	164	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	85	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1465	-	-	-	827	981
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	938	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1465	-	-	-	827	981
Mov Cap-2 Maneuver	-	-	-	-	827	-
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	938	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1465	-	-	-	827
HCM Lane V/C Ratio	-	-	-	-	0.104
HCM Control Delay (s)	0	-	-	-	9.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection												
Int Delay, s/veh	3.7											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↕			↕			↕	
Traffic Vol, veh/h	0	591	20	29	543	0	32	0	59	22	2	32
Future Vol, veh/h	0	591	20	29	543	0	32	0	59	22	2	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	642	22	32	590	0	35	0	64	24	2	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	664	0	0	1326	1307	653	1339	1318	590
Stage 1	-	-	-	-	-	-	653	653	-	654	654	-
Stage 2	-	-	-	-	-	-	673	654	-	685	664	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	925	-	-	133	160	467	130	157	508
Stage 1	0	-	-	-	-	-	456	464	-	456	463	-
Stage 2	0	-	-	-	-	-	445	463	-	438	458	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	925	-	-	118	152	467	108	149	508
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	152	-	108	149	-
Stage 1	-	-	-	-	-	-	456	464	-	456	439	-
Stage 2	-	-	-	-	-	-	391	439	-	378	458	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	32.2	30.7
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	229	-	-	925	-	-	200
HCM Lane V/C Ratio	0.432	-	-	0.034	-	-	0.304
HCM Control Delay (s)	32.2	-	-	9	0	-	30.7
HCM Lane LOS	D	-	-	A	A	-	D
HCM 95th %tile Q(veh)	2	-	-	0.1	-	-	1.2

PROJECT NARRATIVE

APPLICANT: ESPERANZA HEALTH CENTERS, an Illinois not-for-profit corporation

SUBJECT PROPERTY: 2833 W. 47th Street; 2759-2757 and 2749-2745 W. 47th Street; and 4717-4723 S. California Avenue

The Applicant is Esperanza Health Centers, an Illinois not-for-profit corporation ("Esperanza") and a Federally Qualified Health Center. In 2004, residents of the neighborhoods of Pilsen and Little Village on Chicago's Southwest Side joined to address the critical lack of accessible health services in the area. They opened a community health center on South California Avenue called Esperanza, the Spanish word for "hope." Since then, Esperanza has provided bilingual, high quality primary care, behavioral health and wellness services to the community, regardless of immigration status, insurance status, or ability to pay. Esperanza operates five sites in Brighton Park, Gage Park, Little Village, Marquette Park, and South Lawndale to deliver care to over 35,000 patients each year from communities across the Southwest Side.

In 2019, Esperanza opened its health center in Brighton Park to serve an additional 20,000 patients each year with high quality healthcare. In 2021, it welcomed Esperanza at VIDA Pediatrics, a thriving pediatrics practice in Gage Park, to its network of clinics that offers a full array of pediatric services exclusively.

Esperanza's commitment to offering care of the highest quality is made clear by its designation as a National Quality Leader by HRSA in 2016, 2017, 2019, and 2020, which ranks Esperanza among the top 3% of health centers in the nation and the top two in Illinois for our quality of care.

Esperanza is planning a significant expansion of health care services at its flagship location, Esperanza Brighton Park ("BP1"), located at 4700 S. California Ave. Esperanza plans to construct a separate second building ("BP2") immediately south of and adjacent to BP1. Both buildings will be located on the same zoning lot.

BP2 will provide more needed healthcare and social services to Chicago's Southwest side. The 43,000-square-foot annex will offer expanded medical and behavioral health services, comprehensive senior programming, a family medicine residency program with Rush University Medical Center (to train the next generation of community-based physicians), and multiple indoor and outdoor spaces for health, learning, and recreation. With a community "superlobby," full-service café and public plaza, BP1 and BP2 will be a new vision for a 21st-century town square, the likes of which the Southwest side has never seen. The new facility together with BP1 has been designed to fit well within the surrounding physical and cultural context. Sparked by the desire to unify the health-focused facilities, the massing defines a civic plaza that extends from the existing green spaces to the north, making all components of the site cohere. Visitors are drawn into the protected and landscaped plaza, which serves as a flexible, approachable, safe public forum for a multitude of activities year-round. A linked pathway unites BP1 and BP2, not

only providing safety for pedestrians but doubling as a 1/4 mile walking track that encourages movement and physical activity.

Taking cues from the nearby buildings, BP2 is scaled as a two-story complex with a translucent base topped by an elegantly detailed perforated metal screen. The screen, silver-toned where visible from the street and vivid orange where facing the new plaza, both shelters and shades the spaces inside, while unifying the campus within a cohesive architectural expression. Inside the building, a welcoming lobby receives guests in a double-height, light-filled space. Inside, spaces are arranged along clear circulation patterns that guide those coming for medical care, gatherings, or activities like a cooking class, a workout, or a healthy café snack. Public spaces can expand to the outdoors, allowing the energy from indoor activities to spill out to the courtyard when the weather permits. Also, Esperanza plans to host social service agencies within the building so that patients can receive assistance addressing their non-medical needs without having to make a separate trip across town. Esperanza will invite local arts organizations to offer on-site programming, and create flexible spaces where local residents can launch their own social clubs, building bridges among neighbors and decreasing social isolation. In essence, BP1 and BP2 will offer more than high quality medical care. It will be a welcoming and much-needed center for civic engagement on the Southwest side.

Esperanza has entered into a contract to purchase approximately 53,443 feet of land on the east side of S. California Ave. and the south side of E. 47th Street. The land is comprised of the following:

South Side of E. 47th Street

ADDRESS	PIN	LOT SIZE (SF)
2759 W 47TH ST	19-12-200-001-0000	2,439
2757 W 47TH ST	19-12-200-002-0000	2,448
2749 W 47TH ST	19-12-200-005-0000	2,448
2745 W 47TH ST	19-12-200-006-0000	2,448
		9,783

East Side of S. California Ave

ADDRESS	PIN	LOT SIZE (SF)
4717 S CALIFORNIA AVE	19-12-200-031-0000	33,641
UNKNOWN ADDRESS (SOUTH OF 4717 S CALIFORNIA AVE)	19-12-200-033-0000	10,019
		43,660

To serve BP1 and BP2, Esperanza proposes to construct a 104 space landscaped surface parking lot on the vacant lots on the east side of S. California Ave. At this time, Esperanza does not have a development plan for the vacant lots on the south side of E. 47th Street.

The proposed planned development area is comprised of (a) the lot on which BP1 is located and on which BP2 will be located and (b) the lots on the south side of E. 47th Street and the east side of S. California Ave. The approximate net site area is 216,357 square feet. The gross site area is approximately 249,323 square feet.

All of the subject property, except for the vacant lots on the south side of E. 47th Street are located in the Brighton Park Industrial Corridor.

According to the Chicago Metropolitan Agency for Planning, the subject property is located in the Brighton Park Community Area. The following is the demographic data for this area as of August 2021:

- Total Population: 45,053
- Average Household size: 3.3
- Median household income: $41,650
- Per Capita Income: $17,389

Based on the following table, the subject property is located in three different zoning districts:

ADDRESS	PIN	SF (PER COUNTY GIS)	ZONING DISTRICT
4700 S CALIFORNIA AVE	19-12-101-041-0000	162,914	C3-3
2759 W 47TH ST	19-12-200-001-0000	2,439	B3-1
2757 W 47TH ST	19-12-200-002-0000	2,448	B3-1
2749 W 47TH ST	19-12-200-005-0000	2,448	B3-1
2745 W 47TH ST	19-12-200-006-0000	2,448	B3-1
4717 S CALIFORNIA AVE	19-12-200-031-0000	33,641	M1-2
UNKNOWN ADDRESS (SOUTH OF 4717 S CALIFORNIA AVE)	19-12-200-033-0000	10,019	M1-2
		216,357	

Esperanza requests a rezoning of the subject property from C3-1, B3-1 and M1-2 to Business Planned Development to create a four-subarea planned development. Subarea A will be comprised of the existing BP1. Subarea B will be comprised of BP2.[1] Subarea C will be comprised of the proposed accessory parking lot. A reciprocal easement agreement will ensure that the parking lot serves Subarea A and B (i.e. BP1 and BP2). At this time, Esperanza does not have a development plan for Subarea D. The overall planned development will have an FAR of .30.

[1] Esperanza proposes subareas for BP1 and BP2 for financing purposes.

SUBAREA SUMMARY

SUBAREA	LOCATION	LOT SIZE (SF)	BUILDING SIZE (SF)	BUILDING HEIGHT	FAR	USE
A	4700 S. California Ave.	69,758	26,100	34' to top of parapet	.37	BP1 (Existing): Medical Service and accessory parking (69 total spaces of which 5 will be accessible) and 18 bike stalls.
B	4700 S. California Ave.	68,962	43,527	37' to top of parapet	.63	BP2 (Proposed): -Medical Service and accessory parking (66 total spaces) -Day Care (Adult) -Restaurant, Limited; -Outdoor patio (if located at grade level) -Retail Sales, General
C	4717-4723 S. California Ave.	43,620	Vacant lot	Vacant lot	N/A	Accessory parking (94 total spaces of which 5 will be accessible)
D	2759-2757 and 2749-2745 W. 47th Street	9,584	Vacant lot	Vacant lot	N/A	No development plan at this time.